

**Review of the Ottawa Region MISA/PNC
Teacher Collaborative Inquiry Initiative from 2005 to 2012
Final Report**

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I. Context and Purpose

The Ottawa Region MISA Professional Network Centre (PNC) was established by the Ontario Ministry of Education in the first year of the Managing Information for Student Achievement (MISA) initiative in 2005. Since that time, the Ottawa Region MISA PNC has provided funds for “action research”, “teacher inquiry”, and “teacher collaborative inquiry” projects with a view to building the capacity of teachers, administrators, and system personnel to gather and use data for evidence informed decision-making (EIDM). Though over \$500,000 has been invested in these inquiry projects, little has been done to describe the types of projects that have taken place, how decisions were made regarding the projects conducted in each of the nine participating school boards, or the impacts of these projects on boards and participants.

Acting at the request of the Ottawa Region MISA/PNC, we conducted this review in order to help the Ottawa Region MISA/PNC answer some questions they had about the inquiry projects conducted from 2005 to 2012.

The review has three specific purposes:

- To provide a historical overview of the evolution of the MISA initiative and the kinds of inquiry projects that have taken place in participating school boards from 2005 to 2012.
- To describe the evolution and variety of approaches that have been used in various boards to establish and support their inquiry teams and decide on their inquiry questions from 2005 to 2012.
- To summarize the perceptions of a range of participants in these inquiry projects (i.e. teachers, principals, instructional coaches, board-level personnel, MISA leads etc.) with regard to (a) the benefits of their involvement in these projects, (b) the characteristics of projects that make them more effective, and (c) the impact of these projects within and across school boards.

This report provides a summary and analysis of the data that was gathered through document analysis, an online survey, and case studies in three school boards. We have organized the sections of the report to align with the three purposes indicated above.

II. Methodology

Three data sources were collected for this review: a document analysis, an online survey of inquiry project participants, and case studies in three school boards. Ethics approval was obtained from the University of Toronto research ethics board and from the eight school boards that participated in the online survey including the three case study boards. In this section we provide a summary of the data collection and analyses for each data source.

Document Analysis

The document analysis began with a review of available final project reports for inquiry projects funded by the Ottawa Region MISA/PNC between September 2005 and June 2012. Where final reports were particularly brief or could not be located, information was gathered from other documents such as project proposals, presentation or poster materials prepared by inquiry teams, and financial reports. The documents were obtained from the Eastern Ontario Staff Development Network (EOSDN) and included projects from all nine Ottawa Region MISA school boards. A total of 84 projects were included in the analysis. We suspect there are a few additional projects (approximately 5-7) that were conducted in various years of the initiative for which there is no available documentation.

The first stage of the analysis was to write a synopsis of each inquiry project. This synopsis included: the project title and/or research question, the origin of the question, an estimate of the team size, the number and grade level of schools involved, whether funds from other sources were also used, the types of data gathered in the inquiry and a description of the nature of the collaboration that took place. Not all pieces of information were available for each project. In the second stage of the analysis we created a summary table of the projects for each year (see Appendix A). The yearly summary tables provide an indication of the inquiry topics (e.g. Mathematics, Literacy, Technology etc.), grade levels (elementary, secondary, cross panel), if MISA/PNC funds were integrated with other sources of funding, and the approximate number of individuals who participated in each project that year. The third stage of the analysis was to create an overall summary table for the period from 2005 to 2012 (see Appendix A). The overall summary table indicates the topics, grade levels, and if MISA/PNC funds were integrated with other sources of funding across all 84 projects. An additional analysis was conducted using the reported and/or estimated team sizes to show the range and frequency of team sizes across projects (see Section IV).

In conducting the document analysis, we found that the level of detail included in the project reports varied considerably over the years and from board to board. The two difficulties we sometimes encountered were: (a) final reports could not be located and (b) the level of detail in final reports was limited. The least amount of information was available for 2008-2009 as a number of reports seem to be missing and the level of detail in the reports that were available was quite limited. For 2009-2010 all reports seem to be available but the level of detail reported was quite limited. Finally, for 2010-2011 the level of detail was adequate but reports for three boards could not be located. Further discussion of the findings from the document analysis is provided in subsequent sections of this report.

Online Survey

A 12-item survey was administered to inquiry project participants using Survey Monkey, an open source, online survey tool. The items for the survey were developed to align with the three purposes of the review. The survey items went through a number of revisions to ensure that the wording was clear, that the survey could be completed in a reasonable amount of time and that we were gathering as much information as possible. In the final version, three selected-response items were included to gather demographic data and nine open-response items were included to gather participants' views (see Appendix B).

The survey was deployed in eight of the nine Ottawa Region MISA school boards from February 1, 2013 to June 30, 2013. An email was sent to inquiry project participants to invite them to respond to the survey. Email addresses for participants were collected from the final project reports and, in some cases, from MISA leads. Approximately 80 individual email invitations were sent to inquiry project participants by the researchers. In addition, three school boards chose to send email invitations to current and past inquiry participants on their own. Responses were received from a total of 68 individuals across the eight participating boards. Given the approach used to invite participants, it is not possible to determine a survey response rate.

With regard to analysis, responses to the demographic items have been summarized as frequency counts and percentages (see Appendix C). Responses to item 3 in which participants were asked to identify their school board have been suppressed for this report to help ensure the anonymity of participants. For each open-response item, a content analysis of the responses was conducted in which participants' comments were coded into categories that emerged from the comments themselves. Thus, different coding categories were used for each survey item. Once the categories were identified for an item, frequency counts, percentages and examples of comments for each category were recorded in tables. A separate table was created for each item (see Appendix C). Subsequent analysis of these responses could be conducted for specific roles. For instance, responses to an item could be analysed for classroom teachers as compared with co-ordinators/consultants or school administrators. Discussion of the findings from the online survey is provided in subsequent sections of this report.

Case Studies

To gather more detailed information about topic choices, team member selection, the kinds of support provided for inquiry teams and the perceptions of participants with regard to the benefits of participating in inquiry projects, we conducted three case studies in three different boards. To protect the anonymity of participants we refer the case studies using the letters A, B, and C. We developed an interview guide to ensure that the interview questions addressed the three purposes of this review (see Appendix D).

In each case study, once approval had been obtained from the school board we contacted the MISA lead to gain their assistance in selecting interview participants and arranging interview times. There was some variation in the interviews conducted in each case study. All interviews

were audio recorded to facilitate subsequent analysis. The interview participants and duration of each interview are summarized as follows.

Case Study A

- MISA lead (21 min.)
- a teacher who had participated on two inquiry teams (19 min.)

Case Study B

- MISA lead (14 min.)
- a teacher who has participated on three inquiry teams (36 min.)

Case Study C

- MISA lead (22 min.),
- a teacher who had participated on two inquiry teams (37 min.),
- a teacher who had participated on three inquiry teams (44 min.)
- an individual at the board office who had participated on two inquiry teams (27 min.).

Analysis of the case study interviews began with listening to each interview and writing a summary of each participant's responses to the interview questions. In addition, selective transcription was conducted to provide quotations from participants. The information from the interviews was combined with data from online survey responses from the same board and with information about the inquiry projects conducted in the board from the document analysis. A summary of the key observations from each case study is provided (see Appendices E, F and G).

Further analysis of the case study observations could be conducted including comparison of the experiences of individuals such as MISA leads or classroom teachers across school boards. Additional discussion of the observations from the case studies is provided in subsequent sections of this report.

III. Evolution of the MISA Teacher Collaborative Inquiry Initiative

In the years since the MISA initiative began, a number of changes have taken place. From the documents we reviewed and our consultation with EOSDN personnel, we observed changes in the name of the initiative and requirements for getting funding, in the amount of funding requested, and in the forms of support available to teams.

Changing Names and Requirements

In the first three years (2005/06, 2006/07, 2007/08) the projects were referred to as "Action Research Projects". In 2008/09 the projects were referred to as "Research Projects". In the last three years included in this review (2009/10, 2010/11, 2011/12) the projects were referred to as "Teacher Collaboration Projects". Finally, in the 2012/13 year the projects were referred to as "Teacher Collaborative Inquiry Projects". The gradual shift in the name of the initiative was intended to reduce teachers' uncertainty or possible discomfort with "research" and to increase

emphasis on the value of teachers working together and using a collaborative process to address various topics.

The description of the characteristics of suitable inquiry projects on the proposal submission form has also changed over the years. The potential impact of this change in wording on the topics that are chosen for inquiry projects is discussed in a subsequent section of this report.

Amount of Funding Requested

The amount of funding available from the MISA PNC has remained constant at \$10,000 per school board. In the first few years of the initiative a few participating boards submitted more than one project proposal and requested funds in excess of \$10,000. In a few cases this meant that the MISA PNC had to review the proposals submitted to decide which projects to fund and what amount of funds would be provided for each project. In the later years, participating boards have submitted one or more projects with a total budget that does not exceed \$10,000 for all proposals within one board. As a result, the MISA PNC does not need to choose among projects. That is, as long as the project proposal satisfies the requirements of the initiative that are indicated on the proposal submission form it receives funding.

Forms of Support

The addition of a fall orientation for inquiry teams began in 2011. This event began as a result of feedback from team members and board representatives who felt that it would be helpful for teams to have an overview of expectations and a review of the inquiry process prior to beginning their project. In 2011 and 2012 two orientations were held each fall, one in Ottawa and another in Kingston. Teams attended the session that was most convenient to them. The sessions were planned as opportunities for teams to meet with external coaches to refine their question, determine what data collection methods might be appropriate, finalize their proposals, and network with teacher collaborative inquiry teams from other school boards. Several participants in the survey and case study interviews observed that the inquiry questions have become "tighter" or "more focused" in recent years. We suspect that this may be, in part, due to the time spent developing inquiry questions at the fall orientation sessions.

Another form of support is to ensure that each school board has access to an external research coach. This approach began in January, 2010. The coaches provide support to teams for activities such as: refining inquiry questions, initial inquiry design, selection of appropriate forms of evidence, data analysis, preparation of presentation materials and writing final reports. Support is provided by email, telephone, Skype conference calls, and face-to-face meetings. Evidence of the value of external coaches is presented in subsequent sections.

In 2009 the MISA PNC began funding an annual symposium to bring teacher collaborative inquiry teams together from the nine school boards to celebrate the work of the inquiry teams, and provide opportunities for networking and sharing inquiry project processes and findings. As will be shown later in the report, we received a number of comments from survey and case study participants regarding the value of these symposia.

IV. Overview of Completed Inquiry Projects

Using the document analysis as the principal source of data, in this section we describe several aspects of the many inquiry projects that have taken place since 2005.

Composition of Inquiry Teams

We were able to get a sense of the diversity of inquiry team members from information provided in the final reports. Participants fall into three relatively distinct groups:

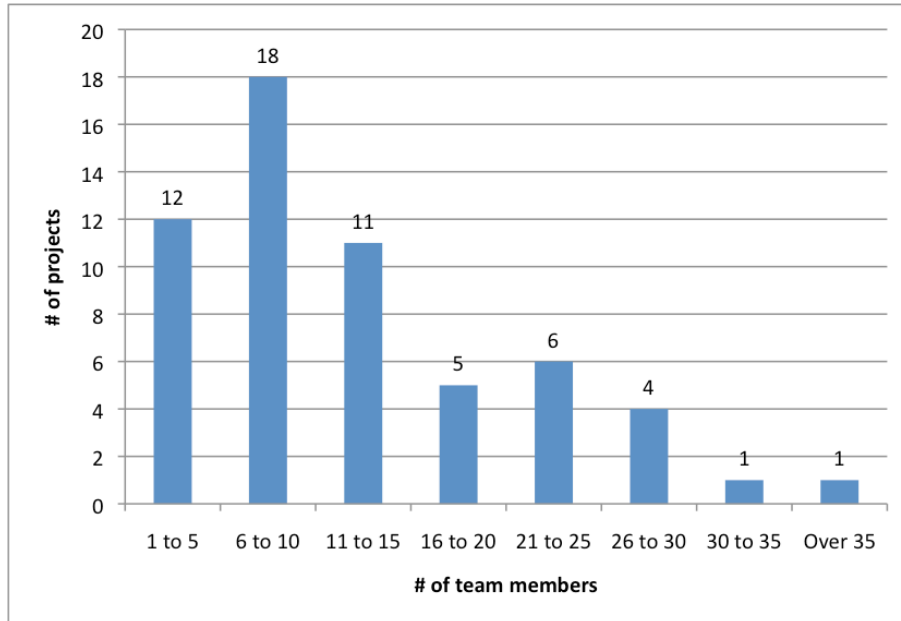
- **Participants from schools:** classroom teachers, guidance counselors, principals, vice principals, secondary department heads, special education teachers, resource teachers, educational assistants, and student teachers.
- **Participants from school boards:** information technologists, special assignment teachers, curriculum coordinators, instructional coaches, curriculum consultants, research officers, quality assurance managers, assistive technology team members, principals/coordinators of student services, special education board personnel, aboriginal services personnel and numeracy resource teachers.
- **Other participants:** application specialists for specific software (e.g. StudentsAchieve etc.), university professors/researchers (not including the external coach), parents, and private/commercial consultants.

Having diversity among team members is often seen as a desirable feature in teacher collaborative inquiry projects. Cochran-Smith and Lytle note diverse team members "*are differently positioned from one another and bring distinctive kinds of knowledge and experience to bear on the collective enterprise*" (2009, p. 142). Somewhat unexpected in our observations is the inclusion of student teachers, parents, application specialists and commercial consultants in some projects. We suspect that the degree of diversity among team members in many MISA PNC projects substantially enriches the outcomes of the projects.

An additional insight about the composition of inquiry teams came from Case Study B. Interview participants from this school board indicated that it was helpful to have at least one participant who worked at the board office to support the project through planning and communication with board-level decision makers, etc. Coordinating projects at the school level sometimes lead to logistic challenges in areas such as scheduling and managing financial aspects of an inquiry. These are tasks that may be better overseen by board level personnel.

Size of Inquiry Teams

The data gathered in the document analysis indicates that the size of inquiry teams varied considerably. The smallest inquiry team reported had three members while the largest inquiry involved 55 people. We were able to get a reasonable estimate of the team size for 58 of the 84 projects we reviewed. The graph below presents the team sizes for these 58 projects. The majority of inquiry teams (71%; 41 of the 58 projects where we had inquiry team size data) had 15 or fewer members.



Topics of Inquiry Projects

In this section we summarize the topics that were the focus of the 84 inquiry projects reviewed in the document analysis. For each project, we recorded one or more topics using information provided in the final reports. The general topic areas we tallied were: Mathematics, Technology, Literacy, Special Education, Teacher Collaboration, and Other. While collaboration was presumably an element of every project, we counted collaboration as a topic if it was explicitly mentioned in the title or inquiry question. For instance, the question: *“In what ways does bringing teachers together regularly to share observations and experiences impact their use of read alouds of rich mentor texts as a means of enhancing students' abilities to listen actively and to make relevant questions through oral discussion?”* would be coded as both Literacy and Teacher Collaboration. Some projects involved as many as three topics. For example, a project that looked at the use of iPads to increase word recognition for special needs students was recorded as involving Literacy, Technology and Special Education.

The category of “Other” captured the wide range of inquiry topics beyond the five listed above. “Other” topics included: ELL, science, bullying, kindergarten, secondary at-risk students, aspects of assessment, evaluation and reporting, school climate and culture, learning skills, second

language teaching, character education, the experience of First Nations students, differentiated instruction, and the use of data to improve classroom practice or data literacy.

Topic	# of Projects	Percent of Projects
Literacy	35	42%
Technology	24	29%
Teacher Collaboration	23	27%
Mathematics	17	20%
Special Education	14	17%

A discussion of the approaches used to identify inquiry topics is presented in the next section of the report.

V. Establishing Inquiry Topics and Identifying Team Members

In this section we draw on the document analysis, survey responses and case studies to summarize the wide variety of approaches that have been used to establish inquiry topics and identify team members.

Establishing Inquiry Topics

The document analysis highlights the fact that the name of the initiative and the requirements associated with submitting a proposal and obtaining funding have changed somewhat over the years. These changes may have influenced the choice of topic for inquiry projects. For instance, in order to obtain funding in the early years, teams were required to work on a project that contributed to evidence informed decision-making. Later, the focus of the project was required to have an impact on classroom practice. In the last two years of the initiative (i.e. 2011/12 and 2012/13) there was a more explicit indication that collaboration among educators should be a focus of the inquiry. These requirements, which have been indicated in the brief instructions accompanying the proposal submission form, may partially account for shifts in the inquiry topics chosen over the years.

Across all three data sources, we observed a wide variety of approaches to choosing a topic such as: board initiated, teacher initiated, lead teacher or department head initiated, further inquiry into the topic from a previous inquiry etc. In fact, even within one category such as "board initiated" there was a lot of variation in how the topic was chosen. For instance, in some cases the school board chose the topic based on a specific aspect of the board improvement plan while in other cases the project was chosen to align with another project that was taking place in order to combine MISA PNC funds with funds from other sources.

Responses to Item 4 from the survey, as summarized in the table below, provide a sense of the variety of approaches reported and the relative frequency of each approach. Examples of participant comments for each response category can be found in Appendix C.

Response Category	Count (%)
A non-specific indication that the topic was collaboratively chosen.	16 (27.6%)
Topic was identified by someone at board level	12 (20.7%)
Unsure where topic came from	3 (5.2%)
Topic was a follow-up from a previous project or study (e.g. a MISA project, a professional learning community etc.)	4 (6.9%)
Topic was identified by classroom teacher(s)	3 (5.2%)
Topic was identified by a lead teacher or department head	5 (8.6%)
Topic was in response to EQAO scores/achievement data/needs assessment	4 (6.9%)
Connected to a board or Ministry goal or objective	6 (10.3%)
Other, off topic and/or meaning of response not clear	5 (8.6%)

One way of analyzing these responses is in terms of whether the topic choice was primarily top-down and board directed or teacher-directed and practice based. The table shows that while only 5.2% of participants indicated that the topic of their inquiry was identified by classroom teachers, just over a quarter of the participants indicated that the topic was collaboratively chosen. These responses need to be interpreted with some caution because for those participants who made comments such as "*We worked as a team and developed our questions*" it is not clear who they were including in their use of "team". For instance, one MISA lead interviewed in a case study indicated that the inquiry topic was decided "as a team" but when asked to explain who was included on the team that made the decision the MISA lead explained that it was composed of board level people only even though many teachers were involved in the project itself. We also observed in several boards and across several years that many inquiry teams have consisted of a coordinating or planning team made up of board level personnel and a larger group of teacher participants. Moreover, some board level team members identify as teachers though they are in board level positions. For these reasons, responses to Item 4 provide only a general sense of how inquiry topics were chosen.

It is also interesting to note that three respondents to Item 4 explicitly stated that there had been a shift in the way the topic was chosen over years toward a more teacher-directed approach. For example, one participant stated, "*I believe that this [choosing the topic] has changed over time. Initially, it was more informed by administration and this year it was more teacher driven.*" These observations can be interpreted in light of the fact that there is no explicit requirement to have classroom teachers lead the projects and, particularly in the early years of the initiative, inquiry teams were often made up of mostly board personnel. In later years, there has been a greater influence on teacher participation in various aspects of the inquiry projects. The extent of the shift toward greater levels of teacher participation in choosing the topic and in other aspects of the inquiry process varies considerably from one board to another.

From the case study data we gained some additional insights into how inquiry topics have been chosen. In Case Study A we saw that initially, projects were designed as a way to obtain funds to explore topics of interest to the board. Funding for these projects was limited to the amount provided by the MISA PNC and the projects could not have run without this funding. Later, the

projects were attached to board improvement plans and MISA PNC funds were used to enhance or supplement existing projects. Throughout the initiative, projects were typically selected and facilitated by board level personnel.

Similarly, in Case Study B we saw that projects were initially seen as opportunities to investigate innovative solutions identified at the board level and to find funding to implement solutions where no other funding was available. Later, MISA PNC funding was attached to projects already taking place in the board. More recently, a topic identified by a teacher and supported by board personnel became the inquiry theme over several years. As one teacher commented, *"I believe this [the choice of topic] has changed over time. Initially, it was more informed by administration and this year it was more teacher driven. The focus has always addressed BIPSA and there appears to be a greater focus on teacher collaboration ... understanding how to develop a more authentic process that meets the needs of teachers and students"*.

In Case Study C we saw the influence that MISA leads sometimes have on the topic. In this board the focus of the last two years' projects was related to the area of interest/expertise of the MISA lead. In addition, an interview with a teacher involved in an inquiry project many years earlier in the same board but under a different MISA lead indicated that the topic of that inquiry was an area of particular interest for the MISA lead at that time. When asked how the topic was chosen she stated, *"the principal and the MISA lead were, that was where their interest was."* Revisiting the final project reports from other school boards suggests that MISA leads may have had a role in choosing the topic for a number of other inquiry projects.

Identifying Team Members

Insights about how team members were identified come from Items 5 and 7 on the survey as well as the case study interviews. Item 5 asked participants to indicate how team members were chosen. The responses received are summarized in the table below. Examples of participant comments for each response category can be found in Appendix C.

Response Category	Count (%)
Board personnel selects individuals or teams	10 (20.8%)
Board personnel selects teachers who are advanced in an area	8 (16.7%)
Request by a group of teachers to participate	6 (12.5%)
School lead or department invites teachers, or a particular grade	5 (10.4%)
Last year's team invited to participate	4 (8.3%)
Open invitation to schools	3 (6.3%)
Unknown	2 (4.2%)
Team leader/team member invites others to participate	3 (6.3%)
Board personnel select specific school(s) to participate	2 (4.2%)
Principal requests the participation of individuals	2 (4.2%)
Other (i.e. varied methods over years, an application process, selecting from existing teams)	3 (6.3%)
<i>Total</i>	48 (100.0%)

Analysis of the responses to Item 5 reveals that a total of 41.7% of participants indicated that board personnel selected the individuals, teams or schools for the inquiry. At the same time, 12.5% of participants indicate that team members were chosen as a result of a request made by a group of teachers to participate in the MISA PNC initiative.

Item 7 asked participants to indicate how they had become a member of the inquiry team. Responses to this item provide additional insights into how inquiry teams have been chosen over the years. The responses received are summarized in the table below and examples of participant comments for each response category can be found in Appendix C. Analysis of the responses to Item 7 are fairly consistent with those for Item 5 in that a total of 34.7% of participants indicated they had been invited to participate either by board level personnel or by the MISA lead.

Response Category	Count (%)
Invitation from board personnel	9 (18.4%)
Invitation from MISA Lead	8 (16.3%)
Personal interest	8 (16.3%)
Invitation from a colleague/team leader/principal	6 (12.2%)
Invitation from department or department head	4 (8.2%)
Volunteered to participate	3 (6.1%)
Asked to be team lead	3 (6.1%)
Teaching in the area of interest so invited to participate	3 (6.1%)
Existing group or past project became focus of a MISA project	2 (4.1%)
Told they would participate	1 (2.0%)
Other (hired to help)	2 (4.1%)
	49 (100%)

Additional insights about how team members have been chosen emerged from the case studies. In Case Study A we found that the method used to choose the topic typically originated at the board office but the method for identifying participants has varied. In some years potential participants were "shoulder tapped" to participate, in at least one year an application process was used, while in other years the project was opened up to anyone who was interested by sending an email from the board out to schools. As one teacher responded on the survey, *"The process for selecting participants varied, from soliciting applications via system communications to selecting specific sites that had classroom settings that would be best suited to examine the present need or area of investigation."* In at least two years, a general topic was determined by board personnel, and then individual projects related to the overarching theme were implemented in individual classrooms. This method and structure was more challenging for board personnel to support since release time was used to talk more about individual projects than the general topic that had been identified. This focus on individual projects was not always considered to be an effective use of collaborative time.

Similarly, in Case Study B a variety of methods have been used to identify teachers interested in participating in the projects. In the earliest years board personnel developed the questions and invited teacher participants who were considered a good "fit" for the project. Later, word of mouth led to identifying participants and/or emails were sent to invite possible participants. At times, the selection process has been based on the interest of teachers, "*Team members have been selected based on interest or awareness of interest of particular teachers. The person selecting the teachers involved has been a school principal in 2 of the 3 years I have been involved. In the other year, it was board staff.*" Other teachers were less sure of how participants had been recruited, "*It seemed to be a couple of core people and then by word of mouth of interested or like-minded professionals, people were invited to join.*"

In Case Study C we found that in some year's the topic was chosen by the board to dovetail with another initiative but the project participants were invited by way of an email that was sent to all elementary and secondary principals to see if teachers in their schools were interested in participating. In the second year of the project, the previous years' participants were invited to return and a few new people were added. For projects that span more than one year in other school boards, a similar approach to team member selection (i.e. beginning with previous participants and adding a few new members) was observed.

VI. Supporting Inquiry Teams

Information about how inquiry teams are supported was gained from responses to one survey item and the case study interviews.

Item 6 on the survey asked participants to describe how they had been supported in the various phases of the inquiry or inquiries they had participated in. Participants could identify as many sources of support as they wished and were not given a list of supports to choose from. Their responses are summarized in the table below and examples of participant comments for each response category can be found in Appendix C.

Response Category	Count (%)
Support within the board	12 (20.7%)
External coaches	8 (13.8%)
MISA lead	6 (10.3%)
Support from within the team, other teachers and/or principal	9 (15.5%)
No support	1 (1.7%)
Release time/team meetings	13 (22.4%)
MISA meetings	3 (5.2%)
Worked independently	4 (6.9%)
Other (not applicable, general statement)	2 (3.4%)
Total*	58 (100.0%)

An analysis of the responses to Item 6 reveals several interesting observations. An initial review of the responses indicates that only one participant felt that there was no support. This suggests that, in general, team members felt well supported. However, this observation may also be related to the characteristics of individuals who chose to respond to our survey invitation. That is, we may have received survey responses from individuals who were particularly enthusiastic and positive about their experience on the inquiry team. Those who did not find the experience beneficial or did not feel well supported may not have chosen to respond to the questionnaire. Nonetheless, responses to Item 6 demonstrate the wide variety of sources of support that were identified by the survey participants. The most frequent type of support that was identified was in the form of release time and/or team meetings. Other forms of support that seem to have been seen as valuable include support from within the board, support from within the team, and the support from external coaches.

The level of detail provided by interview participants in the case studies provided a richer and more nuanced understanding of the kinds of support team members received and found valuable. In Case Study A, interview participants indicate that teams had received a variety of sources of support over the years and generally felt well supported by the MISA Lead, board staff, and the external research coach. Participants felt supported through being provided with release time away from their schools as well as a space to collaborate and refreshments during the collaboration time. Board personnel were available for academic support, IT support was available, and the research coach was also available. Some teachers also identified that everyone, from IT staff to senior administrators were had been helpful. Board level personnel and project leads indicated that it was helpful to be able to reach out to the external coach throughout the process with questions, and to seek feedback and support.

Similarly, in Case Study B we learned that the sources of support have varied over the years. In the early years board personnel supported the projects but this has decreased somewhat over time. Overall teachers have felt supported through release time, IT support, and the project lead, which in more recent years has been a person located in a school. As one respondent stated, "*Early on there was a research officer and central staff (consultant) to help us but not in later years.*" In recent years, the lead teacher has felt supported by the MISA Lead and has relied on the external research coach for guidance and support.

In Case Study C, the MISA lead and board-level team members we interviewed felt the support they received from the MISA PNC, the school board and the external coach was sufficient. The MISA lead noted that the task of being a MISA lead in smaller boards that do not have research officers may be more challenging than in larger boards because MISA leads in smaller boards often have multiple roles to fulfill. One of the teachers that was interviewed who had participated in two inquiry projects indicated that she felt that the support and collaboration in the project was a bit limited in the first year but was much more effective in the second year of the project. She stated "*that was my concern the first year, I felt I was just on my own, doing things on my own . . . you could go and check in but it didn't feel like we were learning together. We were learning together but separately.*" However, by the second year of the project she noted that teachers were able to support one another much more effectively so that less

support was required from board-level team members. She felt that this was one advantage of participating in a MISA inquiry that spanned two years. Her comment provides strong evidence of the capacity building with regard to the inquiry process that has taken place over the years of the MISA PNC initiative. We discuss this point in greater detail in subsequent sections of the report.

VII. Perceptions of Inquiry Project Participants

In this section we summarize the perceptions of participants with regard to their involvement in inquiry projects. We draw on the document analysis, survey responses and case studies to describe the benefits, characteristics of effective projects, and perceived impact of projects. While we make a distinction between the *benefits* participants experienced themselves by being involved in the inquiry and their perceptions of the *impact* that their inquiry project might have had on students, schools, and boards, we acknowledge that some participants may not have made the same distinction. Moreover, this distinction is a bit fuzzy as the notions of benefits and impacts can, at times, overlap.

For each section, we summarize the responses to survey items to provide an overview of the perception of participants across roles (i.e. teachers, school administrators, board-level personnel etc.) and then provide a few examples of responses to suggest the differing perspectives of teachers, board level team members, and MISA leads using the case study observations. A more detailed cross-tabulation analysis of the responses to each survey item for each role is possible but could not be conducted given the available funds for the review.

Benefits of Being Involved in Collaborative Inquiry

A wide range of benefits were described by both survey and case study participants. To begin to get a sense of the benefits that were experienced we can consider the responses to survey Item 8 that asked participants to describe the benefits they experienced as a result of participating in the inquiry. The item was open-ended rather than providing a list of benefits for participants to choose from. Using an open-ended item format ensured that we gathered a broad range of benefits beyond the kinds of benefits we could conceive of before the review began. In addition, participants could indicate as many benefits as they wanted. A summary of their responses is provided in the following table and examples of participant comments for each response category can be found in Appendix C.

Response Category	Count (%)
Opportunities to problem solve and collaborate	19 (32.8%)
Release time/networking time	8 (13.8%)
Meeting with other schools	6 (10.3%)
Research component	6 (10.3%)
Direct application to classroom/ improved personal practice	4 (6.9%)
Student improvement or benefit	3 (5.2%)
Receiving resources	3 (5.2%)
Chance to lead a team/ opportunity to work on a team	2 (3.4%)
Classroom visits, lesson study	2 (3.4%)
Other (All, access to support, not applicable, helped with decisions)	5 (8.6%)
<i>Total*</i>	58 (100.0%)

Analysis of these responses clearly indicates that the most frequently reported benefit relates to opportunities to collaborate, network, and meet with other teachers and schools. In fact, over 50% of individuals who responded to this item included this as one of the benefits they experienced. This observation is not particularly surprising in that numerous studies of other teacher professional development initiatives have shown that teachers place a high value on time to collaborate and engage in dialogue about their teaching practice (see, for example, Dekker & Feeijs, 2005; Fullan, 2001; and Suurtamm, Koch & Arden, 2010). However, our observation does suggest the value of continuing to provide funding for teacher collaborative inquiry projects through the MISA PNC. A variety of other benefits were reported including the opportunity to receive resources, to assume a leadership role, and to visit other classrooms etc.

Additional insights about the different benefits perceived by individuals with specific roles can be discerned from the case study data. We have provided a few examples of comments that were made by teachers, board-level personnel and MISA leads who participated in interviews.

Classroom teachers.

- *"The biggest benefit for us, for students and the teachers, is that sharing of information" (Case Study C, classroom teacher).*

Board level team members.

- *"It's one of the best things that I've done, asking to be a part of the project. I was so excited about it and it really made a difference" (Case Study C, board level team member)*
- *"It's [the inquiry experience] changing the way we are practicing. It's a big difference for use. It's a shift but a really positive one" (Case Study C, board level team member).*

MISA leads.

- *"[it has] provided them with opportunities to learn and to share with each other, certainly opportunities for networking between sites" (Case Study B, MISA lead).*

- *"The funding has helped us to be able to run the projects"* (Case Study C, MISA lead)

Some Characteristics of Effective Projects

We asked survey participants to indicate the factors they felt contributed to the success of their inquiry project or made it more effective (Item 9). The item was open-ended to enable participants to focus on any aspects they chose and so that they could provide multiple answers. A summary of their responses is included in the table below and examples of comments for each response category can be found in Appendix C.

Response Category	Count (%)
Teacher-led, inquiry focus that is relevant to the needs of participating teachers	10 (13.5%)
Guidance from MISA lead, project lead, and/or curriculum consultant	6 (8.1%)
Exemplary qualities of team members (open minded, enthusiastic, intelligent etc.)	16 (21.6%)
Funding for release time/time to collaborate	13 (17.6%)
Opportunity to learn from colleagues, hear multiple perspectives including across elementary/secondary panels	13 (17.6%)
Learning from other teams/getting feedback from others to progress	4 (5.4%)
Support of school admin and/or board, having admin as member of team	5 (6.8%)
Access to high quality readings/resources	2 (2.7%)
Other (i.e. external coach, observations in classrooms etc.)	5 (6.8%)
Total*	74 (100%)

While participants identified many interesting factors that make an inquiry more effective, the most frequently identified characteristic was the exemplary qualities of team members, which was reported by 21.6% of individuals that responded to this item. Funding for release time and the opportunity to collaborate with colleagues were also seen as key characteristics of effective inquiry. These responses are consistent with the comments provided in response to the benefits of participating in an inquiry project as noted in the previous section. It was also interesting to note that 13.5% of participants felt that having the inquiry be teacher-led and focused on a topic relevant to the needs of participating teachers was a key aspect of an effective inquiry.

Additional insights about the characteristics of effective projects as perceived by individuals in specific roles within an inquiry team can be discerned from the case study data. We have provided a few examples of comments that were made by teachers, board-level personnel and MISA leads that participated in the interviews we conducted as follows.

Classroom teachers.

- *"A key would be to have participants that truly want to participate. The application process has been the best method for soliciting participants. Those*

who were involved via the application process tended to be the most engaged in their projects" (Case Study A, Teacher).

- *"Teacher Inquiry requires that teachers have a problem that they want to change. Having it top down creates a problem around interest and commitment. Picking the question can be problematic" (Case Study B, Teacher).*
- *"This year there was a bit more interaction [among inquiry team members] and that could be a carry-over because it was the second year [of the inquiry]" (Case Study C, Teacher).*
- *"The group that was set up was diverse. There were high school teachers and elementary teachers as well" (Case Study C, Teacher).*

Board level team members.

- *"The school questions were tighter this year than last . . . so the data will be easier to analyze" (Case Study C, board-level team member).*
- *"We can't stand at the front and teach them [teachers on the inquiry team] anymore. They need to stand up and teach each other because they are beyond us" (Case Study C board-level team member).*

MISA leads.

- *"I would like the chance to share with others outside the board....to have these opportunities outside the board might be relevant to others." (Case Study B, MISA lead).*
- *"The research component adds a bit of a, what's the right way to say this, credibility or pressure maybe to it [the inquiry process] in the sense that the teachers know that they have to be accountable to reporting back in some way, shape or form" (Case Study C, MISA lead).*

Perceived Impact of Inquiry Projects

We asked the survey participants to identify what they felt were the most important impacts of the inquiry they had participated in (Item 10). The item was open-ended to enable participants to focus on any aspects they chose and so that they could provide multiple answers. A summary of their responses is included in the table below and examples of participant comments for each response category can be found in Appendix C.

Category	Count (%)
Improved student outcomes (i.e. achievement, engagement, etc.)	8 (12.1%)
General indication of improved/changed classroom practice	11 (16.7%)
Increased understanding of inquiry process	4 (6.1%)
Indication of increased understanding/greater comfort with topic of the inquiry (i.e. problem solving, writing, use of tech. etc)	8 (12.1%)
Established or further developed culture of collaboration within a school or across schools	14 (21.2%)
Enhanced teacher's ability to assess and evaluate students	7 (10.6%)
Non specific comment about teacher's improved personal and/or professional development	10 (15.1%)
Meaning of comment not clear	2 (3.0%)
Other	2 (3.0%)
Total*	66 (100%)

An analysis of these responses indicates that the most frequently identified impact is that inquiry projects help to establish or further develop a culture of collaboration within a school or across schools within a board. Other frequently reported impacts were changes in classroom practice and teachers improved personal or professional development.

Additional insights about the impact of inquiry projects as perceived by individuals in specific roles within an inquiry team can be discerned from the case study data. We have provided a few examples of comments that were made by teachers, board-level personnel and MISA leads that participated in the interviews we conducted.

Classroom teachers.

- *"Professionally it provides great opportunities about what other teachers are doing in their classrooms, trying to solve some problems in classrooms across the board. Two heads are better than one"* (Case Study B, Classroom teacher).
- *"Really, for him [an intermediate student], it's opened up a new world for him. He is working independently. He is actually gaining more confidence . . . he has participated more in the class than he ever has . . . it's amazing . . . the benefit is huge for him"* (Case Study C, classroom teacher).

Board level team members.

- two board-level team members (a case study participant and a survey participant) indicated that they will use an inquiry approach more broadly in their work as a result of participating in MISA inquiry projects. *"We're changing some things we're doing in other areas and we are going with this [inquiry] model for those initiatives"* (Case Study C, board-level team member)
- *"I think I'm kind of wired for collaboration"* (Case Study C, board-level team member)

MISA leads.

- *" To share their expertise with others who may not have their expertise, to motivate students and learning and increase student achievement"* (Case Study B, MISA lead).
- *"We've definitely succeeded in building capacity around the use of technology and when we get together with teachers there's certainly lots of great stories that come from them about the progress that students have made. I mean that's why we're here so I'd say that's the number one benefit, for sure"* (Case Study C, MISA lead).

VIII. Findings and Recommendations

In this section we offer a summary of some key findings and make some recommendations based on the data gathered. We begin with our findings and recommendations as researchers, then highlight the suggestions made by the inquiry project team members who contributed to this review, and offer some closing comments.

Researcher Findings & Recommendations

These findings and the related recommendations come from our analysis of the three data sources and are presented according to each of the three purposes of this review.

Purpose 1: Overview of inquiry projects.

(i) A wide variety of topics have been investigated by diverse inquiry teams

- review of 84 project reports from 2005 to 2012 reveals broad range of inquiry topics
- 42% of topics have focused on literacy, 29% on technology but many other areas such as mathematics, special education, assessment & evaluation, second language learning, Aboriginal education, and bullying have been investigated
- teams have included individuals from a wide variety of educator roles within the school, at the board level and in a few cases from outside agencies
- estimated team sizes ranged from 3 to 55 individuals, 71% of projects had 15 or fewer team members

(ii) Capacity to conduct collaborative inquiry is growing across all boards

- in many boards the scope of inquiry questions has become more focused and the questions are more appropriate and feasible for investigation using a teacher collaborative inquiry approach
- in several boards the inquiry process is becoming more collaborative with greater involvement of teachers throughout various stages of the project

- team members, especially those who participated in an inquiry for more than one year, are better able to support one another, require less support from board-level personnel, and have a better understanding of the data collection and analysis processes that are appropriate in teacher collaborative inquiry

(iii) Final reports are a valuable resource to share experiences & document the initiative

- the MISA PNC should continue to move toward a standardized final report format and provide an indication of the level of detail teams should provide in each section on the report, this could be achieved by creating an exemplar or sharing a report from a previous year (with the consent of the inquiry team members)
- a more systematic approach to gathering and storing reports at the end of each year would facilitate future evaluations or reviews of the initiative including converting files to standard "Word" documents which are more likely to continue to be readable as technology changes
- the MISA PNC should find opportunities for teachers to share their work outside of the symposium in their own school boards, with other boards in the region, or provincially.
- external coaches or board research staff could approach the teams and/or provide support for teams who are interested in publishing their research in other forums (i.e. online, conferences etc.) in journals that focus on "action research"
- the MISA PNC or individual boards could provide an opportunity to teams who would like to have web-space or easily accessible areas to showcase their work and to enable them to be contacted without an interested person having to sift through final report documents on the MISA East website

Purpose 2: Approaches to selecting topics, establishing & supporting inquiry teams.

(i) A variety of effective ways of choosing inquiry topics were demonstrated

- research suggests that bottom-up approaches to topic choice may lead to greater participant engagement and greater impact on classroom practice (Cochran-Smith & Lytle, 2009; Elliott, 2009); we saw evidence in survey and interview responses that choice of topic is gradually becoming more collaborative in several school boards
- one way to approach topic choice and enable the combination of funds from MISA PNC with other available funds is for board level personnel to choose a general topic for which funds from another source are available but then give school-level participants an opportunity to develop more specific inquiry questions that are relevant to their specific context. This approach has been used sporadically in a few boards and may be worthwhile for other boards to consider.

(ii) Selection of inquiry team members has been approached in a variety of ways

- some boards "shoulder tap" or invite individual participants that they think are well-suited, sometimes a more wide-spread email invitation is sent out, in other cases the principal or MISA lead identifies interested people or last year's team is invited back and

a few new members are added to the team. All methods appear to work in terms of forming viable teams but due to the variations in approaches used many teachers were uncertain of the method for getting involved, how they were identified in the first place, or what to tell others who might want to get involved in future inquiry projects

- projects are more effective and meaningful if teachers need to/want to participate than if they have been "volunteered" by their principals, department heads, or others.
- as the benefits of participating in inquiry projects are experienced by more teachers, boards may want to consider a more systematic or equitable approach to identifying team members to avoid the perception that a few select individuals have been chosen

(iii) Support for inquiry teams must be maintained

- while the capacity to conduct various parts of an inquiry has definitely grown there is still a tendency for data analysis to be conducted at the board level and for participants to see this as the most challenging part of the inquiry process (i.e. *"The scary part for us right now will be the data collection and analysis"*, Case Study C, board-level team member) thus there is a specific need to ensure that external research coach support for board-level personnel and teachers is available particularly in boards without a research officer
- encouraging boards to involve school-level team members in the analysis process will continue to build capacity in data collection & analysis
- external coaches are seen as a valuable resource for MISA Leads, board-level project team leaders, and classroom teachers
- finding ways of having previous years' participants share their knowledge of the inquiry process with the current years' participants would be beneficial (perhaps inviting a few of the previous years' participants to share their experiences at the fall orientation session would be a starting point)
- consider identifying "critical friends" across inquiry teams at the outset of the year so that one inquiry team can provide feedback to another

Purpose 3: Perceptions of inquiry team participants.

(i) Inquiry is beginning to be used for other PD initiatives in some boards

- two board level team members indicated that as a result of their experience in MISA PNC funded inquiry projects they were adopting an inquiry model as the basis for other PD initiatives in their board, this suggests that an important impact of this MISA PNC initiative is greater awareness and appreciation of inquiry. The value of adopting an inquiry stance for professional growth has been widely documented (Cochran-Smith & Lytle, 2009; Elliott, 2009; Hargreaves & Fullan, 2012)

(ii) Release time is highly valued as a means of collaboration within & between schools

- release time was identified as a benefit of participating in inquiry projects and as a characteristic of effective inquiry projects by many of the participants in this review, similar findings have been reported for many other PD initiatives
- 56.9% of survey participants identified opportunities to collaborate, network and meet with other teachers and schools as an important benefit of their participation in an inquiry project

(iii) Teachers recognize and appreciate the high caliber of their team members

- survey and case study interview participants identified an impressive list of positive attributes of their team members and saw these characteristics as key to the success of their inquiry projects

(iv) Teacher collaborative inquiry participants experience significant growth

- significant professional and personal growth was experienced through participating in the inquiry projects, participants have indicated that subsequent leadership opportunities and even their selection for new positions in the board were in part related to their participation in a MISA PNC inquiry project

Summary of Suggestions from Review Participants

The participants in the survey and case study interviews offered a number of suggestions with regard to improving the MISA PNC initiative. All of the suggestions offered in response to survey Item 11 (i.e. What aspects of the collaborative inquiry process would you change? In your opinion, what would help other teams undertaking a collaborative inquiry project?) and Item 12 which asked participants to provide additional comments are included in Appendix C. These tables may be something the MISA PNC would like to review more closely as plans are being made for the teacher collaborative inquiry initiative in subsequent years. While 21.3% of participants indicated that they were satisfied with the process and did not want to make *any* changes, the remaining participants had a number of insightful ideas for improvements. The two most common suggestions were to make the inquiry process more teacher-directed and to provide more time for teachers to meet.

Closing Remarks

In closing we would like to acknowledge the valuable input of the board personnel, MISA leads, classroom teachers and other educators who participated in this review. Needless to say, there would be little to report without their willingness to share their time and experiences. We would also like to express our appreciation to the MISA PNC for the opportunity that this review has provided for us to collaborate as researchers and reflect on our experiences as external coaches. We have learned a great deal by reviewing various aspects of the initiative and feel the review provides some important insights into the teacher collaborative inquiry process. We hope that the MISA PNC teacher collaborative inquiry initiative will be able to continue its seven year tradition of improving education in eastern Ontario one inquiry at a time!

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Appendix A Summary of Data from Document Analysis

Yearly Project Summary Tables

A project summary table has been created for each year of the initiative. The names of the school boards associated with each project have been removed to maintain anonymity. Information in each table was gathered by reviewing final project reports, proposals, financial statements and presentation documents submitted to the MISA PNC by each board.

For each topic, we looked for an explicit mention of a feature in order to indicate the feature in the table. In some cases this approach may have resulted in an underestimate of the frequency of an activity. For instance, the integration of MISA funds with funds from other sources may have taken place but may not have been mentioned in the final report or in other documents. For this reason, the frequency counts and percentages reported can be best interpreted as lower limit estimates.

A brief explanation of each column in the table is provided as follows.

Topics Based on the project title, the inquiry question and the description of the project in the report, one or more topics are indicated for each project. The most common inquiry topics are included in the first five columns of the table (Math, Technology, Literacy, Special Ed., Collaboration). While all projects included some degree of collaboration, we used the designation 'Collaboration' for those projects where the title or research question included a specific focus on teacher collaboration. The category 'Other' was used to capture the wide variety of other topics beyond the five most common topics that have been the focus of inquiry projects over the years. Examples of these topics are listed in Section IV of the final report.

Panel The designation 'Elementary' was used for projects that involved Grades JK/K to 8, 'Secondary' was used for projects that involved Grades 9-12, and 'Cross Panel' was used for studies that involved both elementary and secondary schools. In a few cases the project report did not clearly indicate the grade level or school panel. For this reason, the percentages may not add to 100% within the Panel category.

Integrated \$ This designation was given if the document explicitly mentioned that MISA funding was integrated with funds from other sources. This approach may mean that the extent of use of funds from other sources is underestimated and the percentages reported should be viewed as a lower limit estimate.

Multi-School This designation was given if the documents for an inquiry provided explicit evidence that the inquiry took place in more than one school.

Team Size In some cases the team size was indicated or a list of individuals involved in the inquiry was provided, in other cases we estimated the team size based on information included in the final report or other documents. In a few cases the team size was not indicated and there was not enough information in the documents to estimate the team size.

2011/12 Projects

2011/12	Math	Technology	Literacy	Spec Ed	Collaboration.	Other	Elementary	Secondary	Cross Panel	Integrated \$	Multi-School	Team Size
1	x	x		x	x		x			x	x	9
2	x				x		x				x	10
3				x				x			x	5
4			x					x			x	9
5						x			x		x	20
6	x							x				-
7			x			x			x	x	x	16
8		x	x	x		x	x			x		6
9		x	x	x		x	x			x	x	5
10		x				x		x				5
11		x		x	x				x		x	30
12			x		x		x			x	x	55
13					x	x	x				x	12

2010/11 Projects

2010/11*	Math	Technology	Literacy	Spec Ed	Collaboration	Other	Elementary	Secondary	Cross Panel	Integrated \$	Multi-School	Team Size
1		x	x	x	x			x		x	x	28
2		x	x						x	x	x	10
3			x						x		x	16
4	x							x			x	9
5			x			x	x					8
6	x			x					x		x	32
7	x	x		x			x			x	x	30
8		x			x		x				x	-
9		x							x		x	14

* final reports for some boards could not be located for this year and/or some boards did not participate in the initiative

2009/10 Projects

2009/10**	Math	Technology	Literacy	Spec Ed	Collaboration	Other	Elementary	Secondary	Cross Panel	Integrated \$	Multi-School	Team Size
1		x		x	x		x				x	-
2			x	x							x	-
3			x		x		x			x	x	28
4			x		x				x		x	-
5	x							x			x	12
6			x				x					-
7	x						x			x	x	-
8			x						x		x	-
9	x								x		x	14
10						x	x				x	-
11		x										-
12						x		x			x	6
13			x		x		x				x	8
14					x	x					x	-

** final reports for this year were less detailed than other years

2008/09 Projects

2008/09*	Math	Technology	Literacy	Spec Ed	Collaboration	Other	Elementary	Secondary	Cross Panel	Integrated \$	Multi-School	Team Size
1				x								-
2		x	x				x					-
3						x			x		x	-
4	x	x					x					4
5			x				x					-
6	x	x				x		x				-
7						x					x	12

* final reports for some boards could not be located for this year and/or some boards did not participate in the initiative

2007/2008 Projects

2007/08	Math	Technology	Literacy	Spec Ed	Collaboration	Other	Elementary	Secondary	Cross Panel	Integrated \$	Multi-School	Team Size
1		x				x			x		x	25
2						x			x		x	-
3	x	x		x			x				x	7
4			x				x				x	12
5						x		x				5
6			x			x		x				4
7						x		x				4
8			x				x					7
9			x				x			x		15
10			x				x					5
11			x				x					7
12	x	x			x		x					8
13			x	x	x		x					5
14						x	x				x	8
15					x			x			x	-
16						x		x				5
17		x	x			x	x				x	21

2006/07 Projects

2006/07	Math	Technology	Literacy	Spec Ed	Collaboration	Other	Elementary	Secondary	Cross Panel	Integrated \$	Multi-School	Team Size
1		x						x				15
2		x		x	x				x		x	10
3						x						-
4					x		x				x	13
5			X				X					-
6			X		x		X					-
7			X				X					-
8			X				X					-

9	x				x			x			x	10
10	x		x					x			x	11
11	x		x					x			x	9
12			x				x					3
13							x				x	18

2005/06 Projects

2005/06	Math	Technology	Literacy	Spec Ed	Collaboration	Other	Elementary	Secondary	Cross Panel	Integrated \$	Multi-School	Team Size
1			x		x		x					25
2			x									-
3						x						-
4		x				x	x				x	9
5		x				x						-
6					x	x			x		x	21
7					x	x			x	x	x	24
8						x	x			x	x	16
9					x	x		x				12
10						x			x		x	24
11	x	x	x						x		x	4

Overall Project Summary Table

The table below provides the frequency count and percentage for each characteristic reported in the yearly summary tables. For example, for the 2009-10 school year documents for 14 projects were analysed and 12 of these 14 projects (86%) involved multiple schools within boards. In some cases, a final report did not clearly indicate if the project took place in elementary or secondary schools. For this reason the values provided for 'Panel' for a particular year may not add up to 100%.

The values reported for the integration of funds from the MISA project with other sources of funding likely under represent the frequency of this practice as the final report may not have mentioned this aspect even though it did take place.

	Topic of Inquiry						Panel			Integrated \$	Multi-school
	# Reports	Mathematics	Technology	Literacy	Special ed	Collaboration	Elementary	Secondary	Cross panel		
2005-06	11	1 9%	3 27%	3 27%	0 0%	4 36%	3 27%	1 9%	4 36%	2 18%	6 55%
2006-07	13	3 23%	2 15%	7 54%	1 0.6%	4 31%	7 54%	4 31%	1 0.6%	0 0%	6 46%
2007-08	17	2 12%	4 24%	8 47%	2 12%	3 18%	10 59%	5 29%	2 12%	1 6%	7 41%
2008-09	7	2 29%	3 43%	2 29%	1 14%	0 0%	3 43%	1 14%	1 14%	0 0%	2 29%
2009-10	14	3 21%	2 14%	6 43%	2 14%	5 36%	6 43%	2 14%	3 21%	2 14%	12 86%
2010-11	9	3 33%	5 56%	4 44%	3 33%	2 22%	3 33%	2 22%	4 44%	3 33%	8 89%
2011-12	13	3 23%	5 38%	5 38%	5 38%	5 38%	6 46%	4 31%	3 23%	5 38%	10 77%
Total	84	17 20%	24 29%	35 42%	14 17%	23 27%	38 45%	19 23%	18 21%	13 15%	51 61%

Appendix B
Online Survey Questions

Teacher Collaborative Inquiry – Participant Survey

Section 1 - Demographics

The following questions are to let us know a little more about who is completing the survey.

1. What positions have you held in a MISA-funded collaborative inquiry project? Check all that apply:
 - Classroom teacher
 - Special education/Resource teacher
 - Consultant/Coordinator
 - School Administrator
 - MISA Lead
 - IT Support
 - Other _____

2. What year (s) did you participate in a MISA-funded collaborative inquiry project? Check all that apply:
 - 2005-06 school year
 - 2006-07 school year
 - 2007-08 school year
 - 2009-10 school year
 - 2010-11 school year
 - 2011-12 school year
 - 2012-13 school year

3. Please select your school board:
 - Algonquin & Lakeshore Catholic District School Board
 - Catholic District School Board of Eastern Ontario
 - Hastings & Prince Edward District School Board
 - Limestone District School Board
 - Ottawa Catholic District School Board
 - Ottawa-Carleton District School Board
 - Renfrew County Catholic District School Board
 - Renfrew County District School Board
 - Upper Canada District School Board

Section 2 – The Teacher Collaborative Inquiry Process

The following questions are intended to help us better understand how school boards determine their inquiry project questions and select teams for the collaborative inquiry process. We are interested in understanding the similarities and differences in processes in school boards, and the benefits of each approach.

1. What is the process for identifying projects or research questions in your board? For instance, did you work with other team members to identify the topic of the project and/or the research question(s), or did someone else make these decisions? If you have been involved in more than one project, how has this process evolved over the years?
2. What is the process for selecting the team members to conduct MISA-funded collaborative inquiries in your board? For instance, did one person select the team, or did a group of people come forward with a project? If you have been involved in more than one project, how has this process evolved over the years?
3. How were you and your research team supported throughout the project (i.e. in developing the inquiry question, conducting the inquiry, and/or completing the analysis and presentation of results etc.)? If you have been involved in more than one project, how has this support evolved over the years?
4. How did you get involved in the project?
5. What aspects of participating in the collaborative inquiry process did you find beneficial?
6. In your opinion, what factors contributed to the success of the inquiry project(s) or made it more effective?
7. What do you see as the most important impacts of the inquiry project(s) you have participated in?
8. What aspects of the collaborative inquiry process would you change? In your opinion, what would help other teams undertaking a collaborative inquiry project?
9. Please use this space for any additional comments regarding your participation in the MISA-funded inquiry projects.

Thank you for taking time to answer this survey!

Please do not hesitate to contact one of the researchers (Martha Koch at martha.koch@utoronto.ca or Theresa Dostaler at tdostaler@gmail.com) if you have any questions or would like additional information about this research.

If you would like to receive a short summary of the research findings once the study is complete, please send an email to one of the researchers.

Appendix C
Summary of Online Survey Results

Item 1 (67 participants responded, 1 skipped)

Question: *What positions have you had in a MISA-funded collaborative inquiry project? (check all that apply)*

Position	% of responding participants*	frequency count
Classroom Teacher	66.7%	44
Special Education/Resource teacher	9.0%	6
Consultant/Coordinator	20.9%	14
School Administrator	4.5%	3
MISA Lead	9.0%	6
IT Support Person	1.5%	1
Other (please specify)	4.5%	3
Total	n/a	77

*the percent of responding participants totals more than 100% since participants were asked to check all the positions they had held. Thus, 67 participants resulted in a total frequency count of 77 positions.

Researcher Comments

Responses to item 1 indicate that 66.7% of individuals (i.e. 44 of the 67 who answered the item) were in the position of classroom teacher in at least one of the collaborative inquiry projects in which they participated. In contrast, 20.9% of individuals who responded to this item (i.e. 14 of 67) were in the position of consultant or coordinator in at least one of the collaborative inquiry projects in which they participated. Only 3 individuals chose the 'Other' option and the positions they specified were all at the board level (i.e. instructional coach, assistive technology resource teacher, principal of school effectiveness). This distribution of positions is what might be expected given that each inquiry team typically includes several teachers but may or may not include individuals such as a school administrator or an IT support person.

Nonetheless, the pattern of responses means that the survey provides greater insights about teachers' views than it does for some of the other positions. Responses to the nine open-ended questions could be analyzed separately for each position if there was an interest in better understanding the experiences and views of participants in particular positions.

Item 2 (68 participants responded, 0 skipped)

What year(s) did you participate in a MISA-funded collaborative inquiry project? Check all that apply:

Year	% of responding participants**	count
2005-06 school year	10.3 %	7
2006-07 school year	17.6 %	12
2007-08 school year	19.1 %	13
2008-09 school year*	-	-
2009-10 school year	29.4 %	20
2010-11 school year	41.2 %	28
2011-12 school year	39.7 %	27
2012-13 school year	47.1 %	32
Total	n/a	139

*2008-09 was mistakenly omitted from the version of the survey that was deployed on Survey Monkey

**the percent of responding participants totals more than 100% as participants were asked to check all years in which they had participated (68 participants with a total frequency count of 139).

Researcher Comments

Responses to item 2 indicate that 47.1% of individuals who responded to the item (32 of 68) had been involved in an inquiry project in the 2012-13 school year whereas only 10.3% of individuals who responded to the item had been involved in the 2005-06 school year. We were pleased to see that responses were received across the entire span of the initiative. However, responses to this item reveal that the responses to the other items primarily relate to the three most recent years of the initiative. The data also show the number of years each individual had been involved in a MISA project.

total # yrs involved	count	percent
1 year	33	48.5 %
2 years	11	16.2 %
3 years	15	22.1 %
4 years	8	11.8 %
5 years	0	0 %
6 years	0	0 %
7 years	1	1.5 %
Total	68	100.1%

It is interesting to note that over half the individuals who participated in the survey had been involved in more than one MISA project - and one participant had been involved continuously (i.e. had selected every year included on the survey). While this observation may suggest that those who participate in MISA inquiry projects find the experience positive and choose to participate again, it may also be the case that those who chose to respond to the survey invitation were more enthusiastic about their experiences and the initiative than those who did not respond to the survey. However, we can conclude that the survey responses reflect the opinions of many individuals (51.5% of respondents) who have been involved in more than one MISA inquiry.

Item 3 (68 participants responded, 0 skipped)

Please select your school board.

Researcher Comments

Responses to this item are not reported to protect the anonymity of non-participating school boards and reduce the chances of identifying MISA leads and other individuals in key positions who responded to the survey.

Item 4 (44 participants responded, 24 skipped)

What is the process for identifying projects or research questions in your board? For instance, did you work with other team members to identify the topic of the project and/or the research question(s), or did someone else make these decisions? If you have been involved in more than one project, how has this process evolved over the years?

Responses were coded in categories that emerged from the participants' comments. The table provides a description of each coding category as well as the frequency counts and percentages for each category. Examples of comments illustrate the meaning of each category. We have avoided examples that might identify an individual or board.

Category	Example(s)	Count (%)
A non-specific indication that the topic was collaboratively chosen.	"Worked as a team to develop the collaborative inquiry"; "We worked as a team and came up with our questions."	16 (27.6%)
Topic was identified by board personnel	"Central staff identified some priority areas and then tried to make action research projects out of them to obtain funding"; "A very dynamic board consultant did all the work. She found an area that she thought we would be interested in."	12 (20.7%)
Unsure where topic came from	"Someone else identified the project"; "Mostly was developed by someone else."	3 (5.2%)
Topic was a follow-up from a previous project or study (e.g. a MISA project, a professional learning community etc.)	"Collaborative inquiry projects created by professional learning teams. We presented to our board network and were asked to gather more info and become part of the [MISA] project."; "Our topic came from questions that arose during our [name of study] project last year."	4 (6.9%)
Topic was identified by classroom teacher(s)	"Focus came from teachers within participating schools"; "Submission by classroom teachers to board personnel."	3 (5.2%)
Topic was identified by a lead teacher or department head	"Department head was the genesis. And the group members then worked with him."; "The first year I joined an established team of professionals where the lead teacher had determined the focus of the inquiry"	5 (8.6%)
Topic was in response to EQAO scores/achievement data/needs assessment	"These decisions have been based on achievement data and needs assessments"; "Project came about to speak to the EQAO scores."	4 (6.9%)
Connected to a board or Ministry goal or objective	"We focused our inquiries from needs identified through aligned board and school success plan goals"; "Under the board's essential question about collaborative planning, assessment and instruction."	6 (10.3%)
Other, off topic and/or meaning of response not clear	"I was invited to participate in the project by the team leader"; "By invitation from the SO"	5 (8.6%)
Total*		58 (100%)

*the number of responses is greater than 44 as some participants provided a response for each year they had participated, 44 participants generated 58 responses

Item 5 (44 participants responded, 24 skipped)

What is the process for selecting the team members to conduct MISA-funded collaborative inquiries in your board? For instance, did one person select the team, or did a group of people come forward with a project? If you have been involved in more than one project, how has this process evolved over the years?

Responses were coded in categories that emerged from the participants' comments. The table provides a description of each coding category as well as the frequency counts and percentages for each category. Examples of comments illustrate the meaning of each category. We have avoided examples that might identify an individual or board.

Category	Example(s)	Count (%)
Board personnel selects individuals or teams	<i>"I believe this has been a collaborative process with an individual or group at the board supporting and encouraging individuals in the classroom to participate"; "Senior admin and central staff selected a couple key players who then recruited a team"</i>	10 20.8%
Board personnel selects teachers advanced in an area	<i>"I picked 'early adopters' who brought along 'critical friends'"</i>	8 16.7%
Request by a group of teachers to participate	<i>"A group of people came forward with the project. The same team members continued the following year."</i>	6 12.5%
School lead/department invites teachers, or particular grade	<i>"Our department head asked us if we were interested in taking part. Everyone in the math department was invited."; "Our team members were the instructional coaches and classroom teachers of ELD (English Literacy Development) in our board, both elementary and secondary panels. There was no "selection" per se, as all those (a total of 13 people) involved in ELD were invited to participate."</i>	5 10.4%
Last year's team invited to participate	<i>"Members of last year's [name of group] were invited to participate, if they were still teaching ...math this year."</i>	4 8.3%
Open invitation to schools	<i>"We opened it up to all of our secondary schools"</i>	3 6.3%
Unknown	<i>"I have no idea"</i>	2 4.2%
Team leader/team member invites others to participate	<i>"The [name] teacher was responsible for the direction of the project."; "A team member asked me"</i>	3 6.3%
Board personnel selected specific school(s)	<i>"Once the school has been identified by the SO, the principal often selects the team"</i>	2 4.2%
Principal request	<i>"My Principal asked myself and another teacher to be leads on the project."</i>	2 4.2%
Other (i.e. varied methods over years, an application process, selecting from existing teams)	<i>"The project had an application process for staff to which staff could apply"; "One project began invitationally to a division and has progressed to be non- invitationally ..."</i>	3 6.3%
<i>Total</i>		48 100.0%

*the number of responses is greater than 44 as some participants provided a response for each year they had participated, 44 participants generated 48 responses

Item 6 (43 participants responded, 23 skipped)

How were you and your research team supported throughout the project (i.e. in developing the inquiry question, conducting the inquiry, and/or completing the analysis and presentation of results etc.)? If you have been involved in more than one project, how has this support evolved over the years?

Responses were coded in categories that emerged from the participants' comments. The table provides a description of each coding category as well as the frequency counts and percentages for each category. Examples of comments illustrate the meaning of each category. We have avoided examples that might identify an individual or board.

Category	Example(s)	Count (%)
Support within the board	<i>"We had support from teachers and employees from the board to guide us and help organize our finding"; Board personnel were available for academic and IT support. All equipment and necessary people were available to support the production of the supporting video."</i>	12 20.7%
External coaches	<i>"With the introduction of the Research Coaches through the PNC, we have tried to rely on support from them as much as possible, due to other workload pressures on existing staff."</i>	8 13.8%
MISA lead	<i>"MISA Lead was an invaluable support, helping keep us focused."</i>	6 10.3%
Support from within the team, other teachers or principal	<i>"We were able to discuss certain issues via email or direct contact with each other."; "Our small project team worked collaboratively."</i>	9 15.5%
No support	<i>"First year little support, actually no support"</i>	1 1.7%
Release time/team meetings	<i>"We were given a day a month to meet and discuss our question."; We had release time that [was] valuable with our fellow MISA. This allowed us to collaborative[sic] together."</i>	13 22.4%
MISA meetings	<i>"We went to an introductory conference where the program and expectations were outlined for us."; "Meeting with MISA people prompted."</i>	3 5.2%
Worked independently	<i>"We worked more or less independently."</i>	4 6.9%
Other (not applicable, general statement)	<i>"Not applicable,"; "We were very supported throughout the project".</i>	2 3.4%
Total*		58 100.0%

*the number of responses is greater than 43 as some participants provided a response for each year they had participated, 43 participants generated 58 responses

Item 7 (45 participants responded, 23 skipped)

How did you get involved in the project?

Responses were coded in categories that emerged from the participants' comments. The table provides a description of each coding category as well as the frequency counts and percentages for each category. Examples of comments illustrate the meaning of each category. We have avoided examples that might identify an individual or board.

Category	Example(s)	Count (%)
Invitation from board personnel	"I was asked by someone at the board level."	9 18.4%
Invitation from MISA Lead	"I happen to hear [the MISA Lead] speak at a Networking session and approached her with a question regarding a Math software we were using at our school. She was very inviting and spoke about MISA and how they could help."	8 16.3%
Personal interest	" I am interested in doing research, I am always interested in improving my practice and I look for a variety of ways to do that." ; " I was a lead as a program resource teacher (system level) and then inquired into being involved as a school administrator."	8 16.3%
Invitation from a colleague/team leader/principal	"I was approached by a colleague to join," ; "I was approached by the team leader to get involved"	6 12.2%
Invitation from department or department head	"My department head told me about it." ; "All members of our math department became members of the group."	4 8.2%
Volunteered to participate	"I was invited in 05/06 and 06/07. I volunteered in 07/08."	3 6.1%
Asked to be team lead	"I was leading projects in District Wide Evaluations of student work. I was asked by my manager if I might be interested in leading an inquiry project with teachers in the area of mathematics."	3 6.1%
Teaching in the area of interest so invited to participate	" I was teaching in the area the board chose to focus on for this project."	3 6.1%
Existing group or past project became focus of a MISA project	"As part of our school professional learning team"; "I was made aware of MISA funding after I had completed a [different] project."	2 4.1%
Told they would participate	" Told I was part of [a] project started year before."	1 2.0%
Other (hired to help)	"I was hired at the onset to assist"	2 4.1%
		49 100%

*the number of responses is greater than 45 as some participants provided a response for each year they had participated, 45 participants generated 49 responses

Item 8 (44 participants responded, 24 skipped)

What aspects of participating in the collaborative inquiry process did you find beneficial?

Responses were coded in categories that emerged from the participants' comments. The table provides a description of each coding category as well as the frequency counts and percentages for each category. Examples of comments illustrate the meaning of each category. We have avoided examples that might identify an individual or board.

Category	Example(s)	Count (%)
Opportunities to problem solve and collaborate.	<i>"Having various perspectives on the question and having a forum or an opportunity to discuss the question and any problems with the process."; "Very teacher-centred [sic] and led. Enables us to focus on things collaboratively that are critical to us rather than things that are pushed on us from above."</i>	19 32.8%
Release time/ networking time	<i>"Having the funds to collaborate with school staff - without release funds there are limitations for networking etc."; "The support and networking opportunities at the district and regional level."</i>	8 13.8%
Meeting with other schools	<i>"I found that meeting with the other school gave me so much information and confidence to use this technology."</i>	6 10.3%
Research component	<i>"I really enjoyed working on a project that would be used throughout our school and had a research component to it to measure its success."</i>	6 10.3%
Direct application to classroom/ improved personal practice	<i>" The direct application to the classroom. This was not an add-on but a real application of ideas."; "It helped me understand the importance of researching my students progress or work in progress. It also gave me more time with my students who could benefit from it - as I feel they may not get that close support in the classroom."</i>	4 6.9%
Student improvement or benefit	<i>"It was rewarding seeing the improvement of the students."</i>	3 5.2%
Receiving resources	<i>"I also had the opportunity to receive current resources."</i>	3 5.2%
Chance to lead a team/ opportunity to work on a team	<i>"I had the opportunity to lead the group of intermediate teachers at my school as well."</i>	2 3.4%
Classroom visits, lesson study	<i>"Sharing of the different ways technology was used in the various classroom. As well as the class visits."</i>	2 3.4%
Other (All, access to support, not applicable, helped with decisions)	<i>"It helped our school with an important decision that we needed to make in regards to paying for a product and which grades to focus on."; "All."; "Meeting with [MISA Lead]"</i>	5 8.6%
<i>Total*</i>		58 100.0%

*the number of responses is greater than 44 as some participants provided a response for each year they had participated and/or indicated more than one benefit, 44 participants generated 58 responses

Item 9 (43 participants responded, 25 skipped)

In your opinion, what factors contributed to the success of the inquiry project(s) and or made it more effective?

Responses were coded in categories that emerged from the participants' comments. The table provides a description of each coding category as well as the frequency counts and percentages for each category. Examples of comments illustrate the meaning of each category. We have avoided examples that might identify an individual or board.

Category	Example(s)	Count (%)
Teacher-led, inquiry focus relevant to the needs of participating teachers	"Freedom to define own focus, work, evidence etc."; "Bottom-up initiative and led by teachers"; "Flexibility of adapting project to needs and realities of teachers within the group"; "No input from any professional who was not directly working within the inquiry (ie: administrator looking for quotable quotes/observations to put into a school improvement plan document, etc.)".	10 13.5%
Guidance from MISA lead, project lead, and/or curriculum consultant	"Having the support from the curriculum coordinators"; "The enthusiasm and expertise of the project leader"; "Being in contact with [name of MISA lead] when questions arose"	6 8.1%
Exemplary qualities of team members (open minded, enthusiastic, intelligent etc.)	"Fantastic enthusiasm from my fellow colleagues"; "Highly motivated, intelligent and forward thinking peers to work with"; "Working with dedicated team members"	16 21.6%
Funding for release time/time to collaborate	"The release times were crucial"; "Release time to have important discussions with members of the team"	13 17.6%
Opportunity to learn from colleagues, hear multiple perspectives including across elementary/secondary panels	"Multiple perspectives at the table including senior staff, principals, teachers and non-teaching staff"; "Having a range of teachers from different grades and assignments (JK to high school)"	13 17.6%
Learning from other teams/getting feedback from others to progress	"Using teacher feedback to progress"; "Guidance from previous MISA team members"	4 5.4%
Support of school admin and/or board, having admin as member of team	"It was having the support of our principal that made the difference"; "Central support"; "Support from the principal"	5 6.8%
Access to high quality readings/resources	"use of professional reading to guide learning (e.g. monographs, videos and articles)"	2 2.7%
Other (i.e. external coach, observations in classrooms etc.)	"The support of the outside coach was extremely helpful. I certainly would have liked to meet her earlier in the process"; "Going into classrooms to observe students"	5 6.8%
Total*		74 100.1%

*the number of responses is greater than 43 as some participants provided a response for each year they had participated and/or indicated more than one factor, 44 participants generated 74 responses

Item 10 (42 participants responded, 26 skipped)

What do you see as the most important impacts of the inquiry project(s) you have participated in?

Responses were coded in categories that emerged from the participants' comments. The table provides a description of each coding category as well as the frequency counts and percentages for each category. Examples of comments illustrate the meaning of each category. We have avoided examples that might identify an individual or board.

Category	Example(s)	Count (%)
Improved student outcomes (i.e. achievement, engagement, etc.)	"Better student engagement, inclusion and achievement of special needs students"; "The impact at our school was proved to us in our students confidence as well as their overall marks"; "Students ability to think more and ask higher level questions"	8 12.1%
General indication of improved/changed classroom practice	"I have put into practice new learning I acquired from the research process"; "The impact on teaching practice at different levels within our board"	11 16.7%
Increased understanding of inquiry process	<i>"Co-learning and co-constructing our learning, proving and disproving things for ourselves rather than being told 'what research says'."; "Different ways of recognizing challenges and approaches for solutions"; "Awareness of the whole of the system and the complexity of inquiry is developed"</i>	4 6.1%
Indication of increased understanding/greater comfort with topic of the inquiry (i.e. problem solving, writing, use of tech. etc)	"I feel more comfortable teaching critical inquiry skills"; "Growing understanding of the importance of technology in the classroom"; "A deepening of the teachers' understanding of mathematics"	8 12.1%
Established or further developed culture of collaboration within a school or across schools	<i>"I have had the opportunity to work with and get support from colleagues in a subject area where we often work alone (Secondary Core French)."; "Relationship building that has resulted in a community of learners"; "Developed a supportive network of like-minded professionals for me"</i>	14 21.2%
Enhanced teacher's ability to assess and evaluate students	<i>"Assisting teachers to assess writing more easily and effectively"; "More precise evaluation and assessment"; "I have found my approach to assessment has greatly been impacted. The projects I was involved in allowed me to reflect on how I can better assess my students."</i>	7 10.6%
Non specific comment about teacher's improved personal and/or professional development	<i>"I met my personal goal"; "Great learning opportunity for participants (teachers and researchers alike"; "Personally it has made be a better teacher"</i>	10 15.1%
Meaning of comment not clear	<i>"Choice of participants"; "Play based learning videos in real class setting"</i>	2 3.0%
Other	<i>"Helping to consistently set high expectations for all teachers and students across the system"; "Many in the group moved on to higher positions"</i>	2 3.0%
Total*		66 99.9%

*the number of responses is greater than 42 as some participants provided a response for each year they had participated and/or indicated more than one factor, 42 participants generated 66 responses

Item 11 (37 participants responded, 31 skipped)

What aspects of the collaborative inquiry process would you change? In your opinion, what would help other teams undertaking a collaborative inquiry project?

The summary of responses for Item 11 was done a bit differently than the other items because many participants made unique suggestions that did not fit into a category but seemed valuable to share with MISA members. Thus, those suggestions made by two or more participants are grouped at the top of the table and all individual suggestions are listed under "Other"; each response in the other category was made by one participant.

Category	Example(s)	Count (%)
Nothing/satisfied with how it works now	<i>"Nothing comes to mind"; "At this time I wouldn't make any changes"; "I like how it works now".</i>	10 21.3%
Make the process more teacher directed; less board or administrator directed	<i>"Come up with their own problems/process"; "It needs to be teacher directed, not administrative or board level initiative. There needs to be buy in by the staff rather than being voluntold."; "Continue to use teacher input in the planning and follow through"</i>	5 10.6%
More time/ more opportunity to meet	<i>"More time."; "More meeting time to get the overall presentation together."; "Providing more opportunity to meet to report and adjust the project moving forward."</i>	5 10.6%
More effective ways of sharing projects with other schools/boards	<i>"A way to share materials with other schools or boards quicker and easier"; "For more teachers to have access to the fruits of the inquiry"</i>	4 8.5%
Increase efforts to make more educators aware of inquiry project initiative so they might decide to get involved	<i>"Wider and more extensive promotion throughout the system"; "There needs to be more local board 'advertising'. Most of my colleagues would say 'MISA who?', or they would be interested in what we were looking at ... but wondered why they hadn't heard about it."; "More people would get involved if they realized just how much they could learn from one another . . . because most teachers have not had this kind of opportunity and inquiry is not really modeled at the school level."</i>	3 6.4%
Improve/change process of selecting inquiry participants	<i>"Prior to the project if teachers submitted their areas of expertise and they were able to work together"; "Use an application process. Be sure participants know up front that they are involved in a 'research' project."</i>	3 6.4%
More support at board level	<i>"It is important to have support from curriculum services and program team (which may include SAOs especially at the outset of the process"; "I would like the board to be more supportive of the inquiry."</i>	2 4.3%
Funding multi-year projects, allowing earlier projects to continue rather than starting with a new topic	<i>"Multi year project as real change takes time and sustained focus"; "Our collaborative inquiry was changed/redirected rather arbitrarily by administration (as I understand it) and now I am no longer a part of it. I would prefer that I be given the option to continue with the new focus - rather than the original group dissolved [sic] and a new one formed."</i>	2 4.3%
Other		13 27.7%
<i>"Waste [sic] on money going to conference"</i>		
<i>"Balance of quantitative [sic] data and use of qualitative data --support collecting qualitative data and validating it as a source of data."</i>		

<i>"I would try and connect project to school and board improvement [sic] plans so the fruit of the MISA project could be real and lasting within a school and school board."</i>	
<i>"Make external coach more available to us earlier in the process. We could have collected much more targeted [sic] data had we designed the research project with more expertise. We were all very new to the process, as classroom teachers."</i>	
<i>"This [study] was far more respectful of teachers than the study we did last year."</i>	
<i>"Keep the teams smaller. Larger teams too hard to manage. I would suggest school-based."</i>	
<i>"More time on the day where all the projects were shared to talk and collaborate, come up with another idea, then share what was found."</i>	
<i>"Co-teaching helps everyone on board".</i>	
<i>"I think that a team should look to publishing results or some sort of document outlining successes and failures and perhaps recommendations so that it could be used by other professionals. If our inquiry could be referred to and built on rather than discarded and replaced we would not be 'reinventing the wheel'."</i>	
<i>"It is almost impossible to change...but the time away from the classroom is more work to prepare for than the apparent benefits on some days. You know it is important to learn, but being out of the classroom is difficult."</i>	
<i>"The process is crucial, it is important that teachers be allowed time to immerse themselves in the process. While productivity may be low, initially, I think that in the end, deeper and richer understanding will be fostered. Time is the greatest asset. Maybe teams should be encouraged to have monthly meetings."</i>	
<i>"Time lines are always an issue... the sooner the teams can get started, the better."</i>	
<i>"More capacity building with respect to data collection is required."</i>	
Total*	47
.	100.1%

*the number of responses is greater than 37 as some participants provided a response for each year they had participated and/or indicated more than one factor, 37 participants generated 47 responses

Item 12 (23 participants responded, 45 skipped)

Please use this space for any additional comments regarding your participation in the MISA-funded inquiry projects.

For this item we have provided complete participant responses but have removed anything that might identify an individual, school or board. Of the 23 responses, several are suggestions for changes to the project. These comments are reflected in the body of the report where we summarize participant recommendations.

<i>"Much improved Symposium this year!!! Thank you"</i>
<i>"I really enjoyed the MISA day in Kingston - lots of time to network and learn about others projects."</i>
<i>"Thank you for your support these past years. It has helped transform teaching and learning in our school"</i>
<i>"I really liked that my team members [were] interested with my students. I would have liked more opportunity to visit others' classrooms."</i>
<i>"I found the over night conference a waste of time for our specific topic, but it did help explain what MISA was all about. I had no idea other schools from around the province were doing completely different projects. I thought everyone in MISA had the same focus we did in our board. I didn't really enjoy hearing about the other projects. I was focused on learning about our project."</i>
<i>"Very useful support for teams to build capacity in a relevant, authentic and student-driven way."</i>
<i>"Thank you! I have thoroughly enjoyed my involvement with MISA funded inquiries and I feel like I am a much better teacher because of them."</i>
<i>"I thought the process was INCREDIBLY valuable for a classroom teacher and instructional coach who has for years been interested in action research. I undertook such a project about 8 years ago at my school, but, without the kind of support MISA provided last year, we were able to make only a very limited gain. The project had just gotten off the ground one year with a principal, and was cut by the next principal the following September. Very frustrating for us. Could MISA support be offered directly to schools, so that grassroots inspiration and experience could have a chance to pursue research interests as well as those that are determined by centrally-determined priorities?"</i>
<i>"A wonderful experience to help me build capacity around the devices, engaging in collaboration [sic] with other teachers across our school board."</i>
<i>"I enjoyed it so much."</i>
<i>"I would happily participate in another. It was one of the most rewarding learning opportunities of my career."</i>
<i>"Thank you for this opportunity to extend our understanding!"</i>
<i>"This has been my third year involved in the MISA projects and I've learned many things over that time: develop a good question and you can always change things up as you go! It's also been a wonderful professional development for me personally. Thank you."</i>
<i>"It was an honour to be a part of this project."</i>
<i>"The conference was amazing, so many great learning opportunities."</i>
<i>"For the teams that have had an opportunity to be involved in these kinds of projects to-date, it has been a great learning experience and enabled staff to begin to develop capacity in using data/ information in a meaningful way. The challenge, particularly in a large school district, is how to build that capacity throughout the system in a timely way, so that there is not a huge gap between those who have had an opportunity like this, and those who have not."</i>
<i>"It will be great for funding to continue in the future."</i>
<i>"I know that MISA changed me professionally. It would be great for all teachers to be given the opportunity!"</i>
<i>"Everyone involved learned from this inquiry and learned how to share when they got back to the school. This type of learning is superior in every way to the one day workshop model. It is economical and has</i>

direct impact on student learnin [sic]. There should be more."

"I always found these projects to be a great environment to enhance my teaching practices. Thank you for the opportunities and I hope that their [sic] will be more chances in the future."

"The importance of including central program team also serves to let the program team see into the classrooms, and to find pockets of innovation. These pockets of innovation can then be spread."

"It was a long time ago."

"The work has been amazing!"

Appendix D

Case Study Interview Guide

These questions will be used as a guide for the semi-structured interviews. Depending on the level of detail provided in a participant's response, some follow-up questions seeking clarification or additional information may be asked.

Phase I: Establishing rapport and gathering background information

1. How many times have you been involved in a MISA-funded inquiry project since the initiative began in 2005?
2. What role(s) have you had in those projects?
3. Why did you decide to participate in one or more MISA-funded inquiry projects?

Phase II: The process of conducting inquiry projects

4. How was the project topic/inquiry questions decided in your experience? Has this process changed over time in your board? If so, can you describe the evolution of the process?
5. How was the inquiry team formed?
6. What specific tasks did you contribute to during the inquiry process?
7. What sort of support was provided throughout the process?

Phase III: Benefits of participation and impact within & across boards

8. In your experience, what were the benefits of participating in the inquiry project?
9. In your opinion, what sorts of impacts did the inquiry project you participated in have within your school and board? Do you think your inquiry project has had any impact in other school boards?
10. Have you ever attended the MISA symposium where the inquiry projects from the nine participating boards are displayed? If so, what was your impression of this event?

Appendix E

Summary of Case Study A

Data Collection and Analysis

Three sources of data were gathered for Case Study A. In the document analysis we were able to review project reports for 7 projects conducted in this board between 2005 and 2012, and thirteen individuals responded to the survey. Two interviews were conducted in April 2013 as follows:

- MISA Lead and former board consultant participant - 7 years experience with MISA inquiry projects (20 minute interview);
- Classroom teacher and board-level team member - two years experience with MISA inquiry projects (20 18 minute interview)

Each interview was audio-recorded and selectively transcribed and a summary of each interview was written.

Observations

Purpose 1: Overview of the inquiry projects from 2005 to 2012

For Case Study A we reviewed 7 project reports. Four projects were conducted at the elementary level, one was secondary, one was cross panel and the level for one project was not indicated. In addition, for one year of the initiative we were unable to locate any project reports. At least 86% of the projects reviewed took place in more than one school. Over the years a range of topics has been studied including: the use of digital technology in assessment for learning, the use of digital technology for professional development, the use of digital technology to improve student writing, the use of digital technology with special education students, the impact of teacher collaboration on teachers' capacity to use data, the impact of teacher collaboration on student achievement and strategies for reducing the gender gap in literacy. It is interesting to note that the use of digital technology for various purposes has often been the focus of the inquiry projects undertaken in this board.

Purpose 2: Evolution and variety of approaches to establish and support inquiry teams and decide on inquiry questions.

There have been a variety of approaches to both establishing inquiry questions and teams and the approach has evolved over time. Survey information told us that in at least one instance classroom teachers came up with an idea for a project and took it to central staff, while in other instances questions were developed based on Board Improvement Plans. Projects tend to be related to other activities taking place. *"Projects are based on a system need and then teachers are brought together to determine a question that best suits their classroom environments and student demographics"*.

Based on survey information, the process for inviting teachers to participate has not been consistent over the years. One teacher suggested that teachers who participated in the past are

always invited to participate, while others mentioned an application process for staff, and another mentioned a lead person having an idea for a project and then asking other key teachers to participate.

Teachers mentioned a variety of sources of support throughout the project, including the MISA lead, and teacher inquiry external coach. Other survey respondents mentioned support from Superintendents to curriculum coordinators. Still others mentioned the importance of "release time" as a key source of support.

Based on the case study interviews, the consistent trend has been that if there was a question identified at the board level, a project was then developed to learn more about it. Projects have typically started with a central board problem. However, though the questions used to be more centrally determined, now there might be a general area and participants are able to reflect on the problem and determine a project that best fits with their own teaching. Though central staff might have an idea of where they would like the project to focus, projects are structured to allow participants to determine what is meaningful for them so they can be more a part of the inquiry process.

Purpose 3: Perceptions of participants

(a) the benefits of their involvement in these projects

Survey respondents and interview participants named several benefits to being involved in the project. Survey respondents mentioned "having the funds to collaborate with school staff," sharing resources, and the networking opportunities between schools, and at the board and regional levels.

Case study interviews revealed that the main benefits come from bringing people together from different schools and providing an opportunity to share some of the learning so that learning is not all in one place. Other benefits mentioned include becoming more familiar with the inquiry process and the use of data collection methods, including the use of qualitative data.

(b) the characteristics of projects that make them more effective

Survey respondents indicated that several characteristics of projects make them more effective, including funding (especially for release time), and guidance from previous participants. Teachers appreciated the time to meet with people and the support and guidance they received from curriculum staff. In terms of ensuring successful projects, one teacher suggests: *"A key would be to have participants that truly want to participate. The application process has been the best method for soliciting participants. Those who were involved via the application process tended to be the most engaged in their projects."*

(c) the impact of these projects within and across school boards

Teachers who had been involved in projects named a variety of impacts specifically within their school and their own board. Impacts included changes in personal practice including more precise evaluation and assessment, and the impact of different teaching practices at different levels within our board.

Teachers were less able to articulate how their research may or may not have impacted other teachers outside of their boards, although some teachers have had opportunities to discuss their projects outside of the MISA Symposium.

"Personally, it has made me a better teacher....other than that I don't know if these were shared with any other than our presentation at the Eastern Ontario (Teacher's Association?). Who knows how we impacted them."

One interview participant mentioned that the opportunity to celebrate and share and network has been invaluable, and that she is aware that findings from the inquiry projects have had an impact on teaching practice. As well, even if projects that take place are not funded by MISA the following year, these projects often are a "stepping stone" for other projects that are then sustained by alternative funding.

As well, the final report is a kind of "forced reflection" about what teams have learned. The requirement for a final report encourages the teams to come together to think about where they have been with their project.

(d) Other comments

- Past participants offered suggestions for change, including:
 - projects need to be teacher directed (not administrative level or board level initiatives)
 - more meeting time with team; more meeting time at Symposium
 - use an application process
 - more capacity building with respect to data collection

Appendix F

Summary of Case Study B

Data Collection and Analysis

Three sources of data were gathered for Case Study B. In the document analysis we were able to review project reports for 9 projects conducted in this board between 2005 and 2012, and 8 individuals responded to the survey. Two interviews were conducted in April 2013 as follows:

- MISA Lead, and current principal - 2 years of experience with MISA inquiry projects (14 minute interview)
- school-level team member - four years experience with MISA inquiry projects (35 minute interview)

Each interview was audio-recorded and selectively transcribed and a summary of each interview was written.

Observations

Purpose 1: Overview of the inquiry projects from 2005 to 2012

For Case Study B we reviewed a total of nine project reports. Three of the projects were conducted at the elementary level, one was secondary, three were cross panel and for two projects the level was not clearly indicated. In addition, for one year of the initiative we were unable to locate any project reports. At least 56% of the projects reviewed took place in more than one school. Over the years a range of topics has been studied including: the impact of teacher collaboration on capacity to use data for decision-making, impact of teacher collaboration on students' literacy achievement, use of digital technology in assessment for learning, use of digital technology in mathematics classrooms and strategies for improving learning for special needs students. We also noticed from the document analysis that in the early years of the MISA initiative this board decided to investigate the same topic across two years. A similar observation was made for Case Study C though their decision to investigate the same topic across two years was in the later years of the initiative.

Purpose 2: Evolution and variety of approaches to establish and support inquiry teams and decide on inquiry questions.

The participants who were interviewed were most familiar with the past two to four years of MISA teacher collaboration projects. According to both interviews and survey data there have been a variety of methods for determining both questions and teams that has been largely determined by who is "leading" the project.

Surveys told us that in the early years projects were established when central staff identified priority areas and then tried to make action research projects out of these ideas in order to obtain funding. As one classroom teacher said, *"I believe this has changed over time. Initially, it was more informed by administration and this year it was more teacher driven. The focus has*

always addressed BIPSA and there appears to be a greater focus on teacher collaboration...understanding how to develop a more authentic process that meets the needs of teachers and students."

Interviews told us that even within the last couple of years there has been variation in how questions and teams have been determined. This year, a topic area was determined centrally, and a team was formed around the project by finding classroom teachers across panels that had an interest in the topic. For the previous three years a teacher had identified an area of focus that had received previous funding, and this idea was taken to central staff. The principal at the lead teacher's school then used word of mouth and networking with other principals to identify other teachers for whom this project would be a "fit". This past year, a board IT staff was asked what teachers were using technology as the project had a technology focus. An email was then sent asking these teachers of their interest in participating.

Surveys told us that teachers felt supported through the initial MISA teacher collaboration orientation meeting with other boards and team members, and by receiving release time that allowed them to collaborate. Other opportunities for support have wavered over the years, "Early on there was a research officer and central staff to help us, but not in later years".

We learned through the interviews that coaches have been considered important sources of support throughout the projects. As one principal we interviewed mentioned, *"support from [coaches] when the teachers have questions . . . having someone available has been good for them"*. Also, flexibility from principals around release time and time out of the classroom to work on the project has been imperative. The lead teacher who has had several years of experience with teacher collaboration projects has also been a key source of support for other teachers through the process. The lead teacher's role changed this year when she also became responsible for dealing with the Accounting Department, and schedule meetings. The teacher indicated that, *"I am running a project but I am also a classroom teacher, and there is no time allocation for that, so a lot of it is on the fly"*.

Purpose 3: Perceptions of participants

(a) the benefits of their involvement in these projects

Participants in teacher collaboration mentioned several benefits of participating in the collaborative inquiry projects. We learned from surveys that teachers appreciated meeting with other teachers to share different ideas, ways technology was used in the classroom, and class visits. One classroom teacher found beneficial, *"like-minded professionals having the opportunity to develop and explore an inquiry in a positive and effective way. The expectation that we all demonstrated our growth/knowledge. The sharing of resources/ideas and hands-on experience directly related to our common interest"*.

Teachers also felt they grew as a teacher/researcher, and found learning from peers to be exciting.

We learned from interviews that teacher collaboration projects have *"given teachers an opportunity to share their expertise in whatever areas they have chosen."* Professional development and opportunities to meet and build relationships with other teachers through networking were also benefits of teacher inquiry projects.

(b) the characteristics of projects that make them more effective

We learned about important characteristics from both surveys and interviews. Surveys told us that "common interest and enthusiasm" was necessary to sustain teachers, and that the inquiry needed to start where the teachers are "To have inquiry driven by others, does not start where the teachers are in their own professional development." Also important are enthusiasm and expertise of the team leader. Central support and clear guidelines were also mentioned.

From interviews we also learned about the importance of the inquiry being driven by teacher's interests. However, one teacher lead also mentioned to us the importance of having central support, and the support of administrators to undertake a project. In this case, the classroom-teacher was the lead on a multi-school, multi-panel project, and found it difficult to schedule meetings around board activities and each individual participant's schedule.

From an in-depth interview we heard the differences experienced when teachers with common interests are brought together for a teacher inquiry project compared to a group of teachers with fewer interests. For example, this year, teachers were brought together under the *"larger umbrella of technology but not necessarily having common interests."* This made developing a common question that was meaningful to everyone more difficult, and also made collaboration more difficult.

(c) the impact of these projects within and across school boards

Participants identified impact of these projects within their schools and their own teaching, but were less able to identify impacts across other school boards. Survey respondents told us about their improved use of technology in the classroom that impacts on student learning, about improved collaboration, and networking and bringing teachers together in ways they have not worked together before. This collaboration had impacts on personal growth, *"The greatest impact it had on me personally was making me more self-sufficient as it applies to integration of technology into my teaching, developed a supportive network of like-minded professionals to me"*.

Participants, particularly during interviews, were less able to identify impact across school boards.

"That is a question we struggle with...how do we share information with other boards? We have our website and our symposium but I'm not sure how effective it is."

Interview participants also suggested that providing teachers with more opportunities to share their projects and network with other teachers would benefit everyone, and suggested a province wide symposium.

A second interview participant indicated that "The project has had an impact on students significantly". The project also impacted on teacher practice and gave students opportunities that they would not otherwise have had. This teacher was less certain about what impact the project has had on different boards. Both interview participants at this board hoped that their projects had had an impact but could not be certain.

(d) Other comments

Both interview participants and survey respondents mentioned the value of teacher collaboration projects and the need to continue funding.

" Everyone involved learned from this inquiry and learned how to share when they got back to the school. This type of learning is superior in every way to the one day workshop model. It is economical and has direct impact on student learning. There should be more."

Through one interview it was suggested that often, teachers are not familiar with "research" or the teacher inquiry model and its components such as determining a question, data collection methods, and analysis. The teacher suggested that in such instances, projects tend to be more about the "product" than the "process". Her suggestion was to ensure that the fundamentals of research/inquiry design were embedded so that collaboration and the process became the focus, instead of presenting a positively viewed "final product".

There was a suggestion that every team should have their own web-space to post information about the project after the year is up. The thought is that the current MISA website does not showcase the reports nor allow others to follow up.

Appendix G

Summary of Case Study C

Data Collection & Analysis

Three sources of data were gathered for Case Study C. In the document analysis we were able to review project reports for 12 projects conducted in this board from 2005 to 2012 (no project report was available for one year of the initiative). While this board consented to participate in the survey, only one individual actually responded to the survey. As a result, our observations for this case study are based principally on the document analysis and the interviews. A total of four interviews were conducted in April, 2013 as follows:

- MISA lead - two years experience with MISA inquiry projects (22 min. interview);
- board-level team member - two years experience with MISA inquiry projects (27 min. interview);
- teacher & board-level team member - two years experience with MISA inquiry projects, first year as a teacher and 2nd year as a board-level team member (37 min. interview); and
- classroom teacher - involved in three MISA projects including one from 2006/07 (45 min. interview).

Each interview was audio-recorded and selectively transcribed. In addition, as part of the analysis a summary of each interview was written.

Observations

Observations from this case study have been organized according to the three purposes of the review.

Purpose 1: Overview of the inquiry projects from 2005 to 2012

For Case Study C we reviewed 12 project reports and found that 5 projects were elementary, 5 were secondary and two were cross panel. At least 50% of the projects reviewed took place in more than one school. Over the years a range of topics has been studied including: the use of digital technology in science & mathematics classrooms, the use of assistive technology, student engagement, various aspects of reading & writing at a range of grade levels, differentiated instruction for secondary students, and using data for school improvement planning. For the two most recent school years, team members at the board level established a central question and then participating schools were asked to develop their own more specific inquiry question aligned with the central question. This gave school-level team members an opportunity to develop an inquiry question and data gathering strategy relevant to their school context. Additional funding both from the school board and from one other source helped make the participation of teachers at many different schools possible.

Purpose 2: Evolution and variety of approaches to establish and support inquiry teams and decide on inquiry questions.

The individuals interviewed were mostly familiar with the two most recent years of the MISA initiative. During these two years, the board-level team members established the overall topic of the inquiry and individual school teams developed a specific inquiry question within the overall topic. With respect to choosing the topic for the inquiry, the MISA lead stated "What we try to do as much as possible is to bring initiatives together so that you don't feel you are being pulled in five different directions". Thus, in this board one element of deciding on an inquiry topic was to find a question that fit with one or more other initiatives taking place in the board. The other three individuals that were interviewed indicated that they felt the choice of topic was also significantly influenced by the interests and areas of expertise of the MISA lead. This was observed with regard to the topic of the inquiry for the two most recent years but it was also mentioned by the teacher who had participated in the 2006/07 inquiry project. At that time there was a different MISA lead than the one we interviewed but the topic of the inquiry once again was something that that MISA lead was interested in and concerned about.

With regard to establishing the inquiry teams, once the topic and overall board question had been written an email was sent out to elementary and secondary principals inviting schools to participate in the first year of the two-year project. In the second year of the project, schools that had participated in the first year were invited to continue to participate and a few additional schools were brought into the project.

With regard to support for inquiry team members, the MISA lead and board-level team members that were interviewed felt the support they received from MISA and from the external coach was sufficient. The MISA lead noted that the task of being a MISA lead in a smaller school board without a research officer is a bit more challenging than it might be in a larger board because MISA leads in smaller boards often have multiple roles (i.e. school principal, IT support etc.) to fulfill. The teacher that was interviewed indicated that she felt that the degree of support and collaboration in the project was a bit limited in the first year but was much more effective in the second year of the project. She stated "that was my concern the first year, I felt I was just on my own, doing things on my own . . . you could go and check in but it didn't feel like we were learning together. We were learning together, separately." However, by the second year of the project she noted that the teachers were able to support one another much more effectively so that less support was required from the board-level team members. She felt that this was one advantage of participating in a MISA inquiry that spanned two years. She also noted that the level of involvement of the teachers with regard to developing inquiry questions and making plans for data collection was greater in the second year of the project than it had been in the first year.

Purpose 3: Perceptions of participants

(a) the benefits of their involvement in these projects

MISA Lead: without the MISA funding it would have been difficult to run this project in the board, the external coaching support has been beneficial for the quality of the inquiry

Board-level Team Member: appreciated the opportunity to have different perspectives around the table and to hear other people's thinking, though she had not previously participated in a collaborative inquiry having done so she stated "I think I'm kind of wired for collaboration"

Teacher & Board-level Team Member: Very enthusiastic about her participation in the project, stated "It's one of the best things that I've done, asking to be a part of the project. I was so excited about it and it really made a difference.", felt that working collaboratively built her confidence with using technology as well as the confidence of other teachers, appreciated the opportunity to further develop her teaching practice and to add a new dimension to her students classroom experience

Classroom Teacher Team Member: felt the greatest benefits of the project were the sharing of information among teachers and how well the topic fit with the needs of her classroom, she stated "it wasn't an add-on to the program that we were involved in, it wasn't a make work project, it wasn't something that wouldn't benefit us",

(b) the characteristics of projects that make them more effective

MISA Lead: having the inquiry component in the project helps to make the participating teachers more accountable and increases the credibility of the project in that teachers are more thoughtful about how they are using the technology and more inclined to record their observations, the opportunity for teachers to share their experiences with one another at the symposium seen as valuable

Board-level Team Member: having teams work on related questions within one overall topic contributes to greater collaboration among team members than if they were all working on different topics, having the same topic over two years led to more focused questions in the second year, as teams become more experienced they are able to involve teachers to a greater degree in deciding on questions & analysing data

Teacher & Board-level Team Member: combining funds from several sources has meant that more schools, teachers and students could be involved; having the inquiry dimension to the project is particularly important in that it helps to make the participating teachers more accountable and more likely to use the technology and gather data about their use than if the technology had been introduced only as a PD initiative

Classroom Teacher Team Member: emphasized the importance of the project fitting well with the needs of classroom teachers rather than being an additional responsibility, found attending the symposium valuable as a way to see the approaches other boards were taking, found the face-to-face meetings more effective for collaboration than the use of email or other online collaboration tools

(c) the impact of these projects within and across school boards

MISA Lead: major benefit has been significant capacity building across the board in terms of the use of technology as well as a positive impact on students in terms of achievement and engagement,

Board-level Team Member: has found the collaborative inquiry process so beneficial that she is going to use this approach in some of her other PD initiatives working with teachers (i.e. rather than "standing and delivering" teachers will engage in inquiry and come to their own understandings), impressed by the degree to which teachers come together and support one another at the face-to-face team meetings

Teacher & Board-level Team Member: has shared her experience with individuals in a similar position to her in other Eastern Ontario school boards

Classroom Teacher Team Member: felt that students at her school had become more independent, had better academic achievement (improved reading & writing) and greater levels of interaction with one another as a result of the inquiry, she provided a detailed description of the particular impact on one student as an example

(d) Other comments

- while they indicated that they had learned a great deal in their first year, three of the four participants in this case study indicated they still feel a bit uncertain about the data analysis process particularly how to summarize and present qualitative data, they found achievement data fairly easy to report but the qualitative observations were seen as very important but much more difficult to analyse
- all four interview participants expressed their appreciation for the support they received from the external coach during the development of the question and the analysis process
- "The scary part for us right now will be the data collection and analysis" (board-level team member)

Appendix H
Research Summary of
A Review of Teacher Collaborative Inquiry in Eastern Ontario from 2005 to 2012

Purpose of the Review

Earlier this year you agreed to participate in a research project conducted by Dr. Martha Koch and Theresa Dostaler. The project was an investigation of the teacher collaborative inquiry initiative in the 9 school boards in the Ottawa Region MISA/PNC. The study had three purposes:

- I. To provide a historical overview of the evolution of the MISA initiative and the kinds of inquiry projects that have taken place in participating school boards from 2005 to 2012.
- II. To describe the evolution and variety of approaches that have been used in various boards to establish and support their inquiry teams and decide on their inquiry questions from 2005 to 2012.
- III. To summarize the perceptions of a range of participants in these inquiry projects (i.e. teachers, principals, instructional coaches, board-level personnel, MISA leads etc.) with regard to (a) the benefits of their involvement in these projects, (b) the characteristics of projects that make them more effective, and (c) the impact of these projects within and across school boards.

Data Collection & Analysis

To address the three purposes, we conducted a document analysis, an online survey of participants and case studies in three school boards. Each data source and the analysis approaches used is briefly summarized:

Document Analysis

The documents reviewed include: MISA collaborative inquiry project proposals, final project reports, symposium presentation materials and financial reports. Documentation was available for 84 projects conducted between Sept. 2005 and June 2012. Approximately 5 - 7 additional projects may have taken place for which no documentation could be located. To analyse these documents, tables were created to record topics, the origin of topics, the number and grade level of schools participating in projects and the approximate number of team members. In addition, some reports included comments from participants about the value of participating in the teacher collaborative inquiry. The data from the document analysis provided information for all three purposes of the study.

Online Survey

A 12-item survey was administered to inquiry project team members using Survey Monkey. The survey contained 3 selected-response items that provided demographic details and 9 open-response items to gather participants' views. Invitations to respond to the survey were sent by email to individuals who had been a part of an inquiry project any time since 2005. Responses were received from 68 participants including 44 classroom teachers, 6 special education/resource teachers, 14 consultants/coordinators, 3 school administrators, 6 MISA leads, 1 information technology support person and 4 individuals in other roles. A number of

people who responded to the survey had multiple roles over the years and some had participated in several MISA inquiry projects. While the majority of survey participants were involved in inquiry projects in the last 2 years, responses were received from 7 individuals who had been involved during the first year of the initiative. Analysis of the survey responses included frequency counts, percentages, and content coding of open-response items. The survey data was used to provide information for the second and third purposes of the review.

Case Studies

To gather more detailed information, interviews were conducted with inquiry project participants in 3 school boards. The three boards were selected based on the researchers' knowledge of the varied approaches each board was using to identify inquiry topics and select participants. Given the funds for the project, it was only possible to conduct a few interviews in each board (Case Study A - 2 interviews, Case Study B - 2 interviews, Case Study C - 4 interviews). Interviews were conducted with MISA leads, board level inquiry team members and classroom teachers. For each case study, interview data was combined with survey responses from the same board as well as information from the document analysis to form an impression of how the MISA initiative unfolded in the board.

Overview of Findings & Recommendations

- (i) A wide variety of topics have been investigated by diverse inquiry teams
 - review of 84 project reports from 2005 to 2012 reveals a broad range of inquiry topics (42% focused on literacy, 29% on technology but many other areas such as mathematics, special education, assessment & evaluation, second language learning, Aboriginal education, and bullying have been investigated)
 - estimated team sizes ranged from 3 to 55 individuals with a diverse variety of educator roles on many teams, 71% of projects had 15 or fewer team members

- (ii) Capacity to conduct collaborative inquiry is growing across all boards
 - in many boards the scope of inquiry questions has become more focused and the questions are more appropriate and feasible for investigation
 - in several boards the inquiry process is becoming more collaborative with greater involvement of teachers throughout various stages of the project
 - team members are better able to support one another, require less support from board-level personnel, and have a better understanding of the data collection and analysis processes that are appropriate in teacher collaborative inquiry

- (iii) Final reports are a valuable resource to share experiences & document the initiative
 - the MISA PNC should continue to use a standardized final report format and provide an indication of the level of detail teams should provide in the report
 - a more systematic approach to gathering and storing reports at the end of each year would facilitate future evaluations or reviews of the initiative
 - the MISA PNC should find opportunities for teachers to share their work outside of the symposium in their own school boards, with other boards in the region, or provincially

- external coaches or board research staff could approach the teams and/or provide support for teams who are interested in publishing their research in other forums
- (iv) A variety of effective ways of choosing inquiry topics were demonstrated
- choice of topic is gradually becoming more collaborative in several school boards
 - one way to approach topic choice and enable the combination of funds from MISA PNC with other funds is for board level personnel to choose a general topic but then give school-level participants an opportunity to develop specific inquiry questions that are relevant to their specific context
- (v) Selection of inquiry team members has been approached in a variety of ways
- some boards "shoulder tap" or invite individual participants that they think are well-suited, sometimes a more wide-spread email invitation is sent out, the principal or MISA lead identifies interested people or last year's team is invited back
 - projects are more effective and meaningful if teachers need to/want to participate than if they have been "volunteered" by their principals, department heads, or others.
 - as the benefits of participating in inquiry projects are experienced by more teachers, boards may want to consider a more systematic or equitable approach to identifying team members
- (vi) Support for inquiry teams must be maintained
- while the capacity to conduct various parts of an inquiry has definitely grown there is still a tendency for data analysis to be conducted at the board level and for participants to see this as the most challenging part of the inquiry process thus there is a need to ensure that external research coach support for board-level personnel and teachers is available particularly in boards without a research officer
 - encouraging boards to involve school-level team members in the analysis process will continue to build capacity in data collection & analysis
 - external coaches are seen as a valuable resource for MISA Leads, board-level project team leaders, and classroom teachers
 - finding ways of having previous years' participants share their knowledge of the inquiry process with the current years' participants would be beneficial
- (vii) Inquiry is beginning to be used for other PD initiatives in some boards
- two board level team members indicated that as a result of their experience in MISA PNC funded inquiry projects they were adopting an inquiry model as the basis for other PD initiatives in their board
- (viii) Release time is highly valued as a means of collaboration within & between schools
- release time was identified as a benefit of participating in inquiry projects and as a characteristic of effective inquiry projects by many participants
 - 56.9% of survey participants identified opportunities to collaborate, network and meet with other teachers and schools as an important benefit of their participation

- (ix) Teachers recognize and appreciate the high caliber of their team members
 - survey and case study interview participants identified an impressive list of positive attributes of team members and saw these characteristics as key to the success of their inquiry projects
- (x) Teacher collaborative inquiry participants experience significant growth
 - participants indicated that subsequent leadership opportunities and selection for new positions in the board were in part related to their participation in a MISA PNC inquiry
- (xi) Participants made valuable suggestions for improving the initiative
 - 21.3% of participants were satisfied with the process and did not want to make *any* changes but remaining participants insightful ideas for improvements
 - the two most frequent suggestions were to make the inquiry process more teacher-directed and to provide more time for teachers to meet

Limitations of the Study

It is difficult to know who decided to participate in the survey. Often those who choose to participate in these kinds of research projects are either very unsatisfied with their experience or are very satisfied and wish to share their experience. In our survey we did not seem to get responses from those who were not satisfied or who did not find participation in the inquiry project to be beneficial. Hearing their perspectives would be quite valuable. Therefore, while some participants made valuable suggestions for improving aspects of the initiative, the observations from this review primarily reflect the views of satisfied participants