# MASTER'S DIMENSION

# HANDBOOK

**To be read in conjunction with the OPC Leadership**

**Inquiry Practicum Handbook**

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## Introduction

The Ontario Principals' Council (OPC) has established agreements with a number of universities for the accreditation of the PQP Master's Dimension within their respective university degrees. The purpose of the Master's Dimension Handbook, therefore, is to provide all parties with an understanding of the additional requirements, processes, and responsibilities that lead to the accreditation.

## What are the Differences for Master's Dimension?

### 1. Academic Rigor

Modifications to the requirements for the Leadership Inquiry Practicum proposal and reports have been made to elevate the research base and the academic level of the reports. The proposal and reports must be scholarly pieces, demonstrating effective writing skills and conventions, while meeting APA standards (formatting and citations) and linking theory, research, and practice. In addition, the proposal and reports must be assessed at Level 4 in all categories, as set out in the LIP Handbook.

### 2. Academic Advisor

Master's Dimension candidates will be assigned an Academic Advisor to assist in meeting the standards and to assess the proposal and reports. The Academic Advisors are senior educational leaders who hold a doctoral degree.

In guiding candidates, Academic Advisors may provide some direction in terms of theorists, articles, and books; however, as is the case for Master's courses, students are ultimately responsible for setting out the bibliography to support their reports.

### 3. Registration Fee

The additional cost is $500. The fee covers the support of the Academic Advisors, the additional support of the PQP Part I Facilitator, and the administration and record keeping by the OPC.

### 4. Leadership Inquiry Practicum Proposal

The PQP Part I Facilitator is the lead person in working with the candidate to establish a focus for the practicum; however, the PQP Facilitator and the Academic Advisor must approve the proposal. The structure of the Master's proposal is guided by the following:

The proposal must address the following questions using proper sentence and paragraph structure. The proposal should be submitted in a WORD file, appropriately titled with your name.

1. What is the collaborative inquiry/problem of practice?

2. What are the learning goals of the practicum?

3. What is the context of your practicum? (school, staff, community, length of tenure in current role, etc.)

4. What are your personal learning goals?

5. The application of theory to practice is a critical element of the Master's Dimension.

   a. How will concepts, theories, and ideas presented in PQP Part 1 influence your actions?

   b. What legislation, board policies, and Ministry guidelines will influence your actions?

   c. What additional readings have you identified to support your practicum? (Use proper APA standards.)

6. What are the inquiry links to the Standard of Practice for the Teaching Profession and The Ethical Standards for the Teaching Profession?

7. What are your specific plans? (You may use the organizing chart with month, activity and hours.)

8. How will you assess the success of your inquiry? Candidates need to collect and analyze data.

9. How will you assess your leadership skills in executing the inquiry? Candidates need to collect and analyze data.

10. To what extent have you received the approval of your OPC Facilitator and site mentor?

## 5. LIP Summative Report

The report is expected to be 15 to 20 pages, with double spacing and 12 font, exclusive of appendices (WORD file). The bibliography must include 6 to 8 substantive references (only 50% may come from PQP course material) and all references listed must be cited within the text. The structure of the report is guided by the following:

1. Introduction – to the report
2. Statement of the collaborative inquiry question and theories of action
3. Design and evolution of the collaborative inquiry; cite references and sources of data
4. Review of literature related to the content of the collaborative inquiry: legislation, policies, information, and literature. This is not an annotated bibliography. The structure of the section should be guided by the collaborative question and theories of action.
5. Demonstration of application of theory to practice: How and to what extent did the literature influence your actions? What worked? What did not work? How do you know?
6. Results and recommendations – specific reference to benefits to teaching and learning, the inquiry question, and the theories of action.
7. Relationship of LIP to the Ontario Leadership Framework – School Level Leadership and the k-12 School Effectiveness Framework
8. Relationship of LIP to school and board plans
9. Conclusion

   Bibliography

## 6. LIP Personal Reflections Report

The report is expected to be 10 to 12 pages, with double spacing and 12 font, exclusive of appendices (WORD file). The bibliography must include 6 to 8 substantive references (only 50% may come from PQP course material) and all references listed must be cited within the text.

The LIP Reflective Journal referenced in the PQP LIP Handbook is a resource for the writing of the Personal Reflections Report. In most cases, the Journal will not meet the requirements of this report. The Personal Reflections Report requires candidates to synthesize the information contained in the journal, to reflect on the entire experience and to deepen their reflections by writing an academic report.

The structure of the report is guided by the following:

1. Introduction – to the paper
2. Leadership style: What is your leadership style? How does this influence your leadership? How does your style affect those you are leading? – use
   the results of self-assessments from PQP, literature, feedback
   from inquiry participants.
3. Strengths and areas for growth – use the literature, Ontario Leadership Framework (specifically the School-Level Leadership Personal Leadership Resources) data collected and other evidence from the LIP.
4. Challenges experienced – use the School-Level Leadership Personal Leadership Resources of the OLF
5. Collaborative Inquiry Process: What did you learn about the process and the leadership required for success?
6. Relationship of your LIP to the Standards of Practice for the Teaching Profession and the Ethical Standards for the Teaching Profession.
7. Role of Principal and/or Vice-Principal: What did you learn about the role?
8. Evolution of a personal philosophy of education: How has this experience affected your philosophy?
9. Conclusion – to the paper
   Bibliography (6 to 8 substantive references, only 50% from PQP1)

## What are APA Standards?

Many different writing style guides are available free and online; however, candidates are encouraged to purchase The Publication Manual of the American Psychological Association – APA. It deals with more than quotes, citations, and bibliography entries. Here is the table of contents:

- Manuscript Structure and Content
- Writing Clearly and Concisely
- The Mechanics of Style
- Displaying Results
- Crediting Sources
- Reference Examples
- The Publication Process.

Over the course of a master's degree, candidates will find the resource very valuable. Having a copy, even if it is an earlier edition, will be important.

Appendix A sets out some APA examples and explanations. It is worth reading.

## What are the Anticipated Steps in the Process?

### Registration

- Registration Fee: $500
- Registration Deadline:
  Candidates must register in the Master's Dimension prior to OPC being notified by the OPC Facilitator of the completion of PQP Part 1 **and** prior to the commencement of the practicum (no recorded hours).
  The Registration Deadline is established to ensure candidates receive the full benefit of the guidance and support of the Academic Advisor throughout the process. Furthermore, the Academic Advisor will ensure the program requirements are achievable within the context of the LIP Proposal, thereby ensuring overall success.
- Late Registration Fee: $75 (Total of $575):
- With the approval of the Master's Dimension Lead, candidates **may** be accepted into the program after the deadline where the following conditions are met: (1) PQP 1 has been taken with OPC; (2) under 20 practicum hours have been recorded; (3) the original, approved LIP Proposal and the LIP log are submitted to the Master's Dimension Lead for review; (4) the candidate submits a recently prepared paper or assignment that demonstrates his/her writing ability; and (5) the Master's Dimension Lead finds that the evidence supports program entry and the potential for success.
- The late registration is provided in order to accommodate candidates who, over the course of the PQP Program, develop an interest in a master's degree. However, as a result of late registration, candidates will not experience the full benefit of the support provided by the Academic Advisor. The Master's Dimension Lead, therefore, must be satisfied that the candidate is likely to be successful.

### Upon registration, candidates will receive an email from OPC:

- confirming the application was received and registration has been completed
- providing a PQP Master's Dimension Handbook and
- including the name and contact information for the assigned Academic Advisor.

### Contact with Your Academic Advisor

- It is the responsibility of the candidate to make the initial contact with the Academic Advisor via email.
- A brief introduction should be included in the email.

### Working with Your OPC Facilitator

- The PQP facilitator is the lead in working with the candidates to establish a LIP focus and plan.
- Candidates may wish to explore the LIP focus and plan with the Academic Advisor.

### Submission of LIP Proposal to Your Academic Advisor

- After preparing the proposal in consultation with their OPC Facilitator and onsite mentor, the LIP Proposal should be emailed to the Academic Advisor in a WORD file.
- The Academic Advisor, in a timely manner, will review, comment, and, if necessary, set out changes that are necessary for approval.
- The Academic Advisor will advise candidates with an email indicating that the LIP has been approved. Candidates are responsible for informing their OPC Facilitator and site mentor of the Approval.
- Candidates are responsible for submitting the proposal to the OPC Facilitator for his/her approval.

### Confirmation of LIP Proposal Approval

- Upon approval, the OPC Facilitator will complete the assessment form and notify OPC of the LIP Proposal approval.

### Execution of Plan

- The Academic Advisor is available for consultation during execution of the plan.
- Candidates may wish to provide the Academic Advisor with updates on progress.

### Preparation of LIP Reports

- Before commencing the writing process, candidates should review the requirements for the reports.
- Candidates may wish to review the requirements with the Academic Advisor.
- Candidates may wish to submit to the Academic Advisor draft sections of the report for comment.

### Submission of LIP Reports to Academic Advisor

- Candidates need to carefully edit their reports before submission. It is important that APA standards are used.
- The reports should be submitted as WORD files to allow the Academic Facilitator to use the 'Review' function.
- Only artifacts specifically referenced in the reports should be included, most often as appendices.
- Upon approval, the Academic Advisor will notify by email the candidate and OPC.

### Submission of Academic Advisor Approved LIP Reports to OPC Facilitator

- Candidates may determine to submit the reports to the Academic Advisor and the OPC Facilitator. Otherwise, the reports should be forwarded to the OPC Facilitator with the email from the Academic Advisor indicating approval.
- Candidate will complete the appropriate sections of the Confirmation Form and forward to the OPC Facilitator.

## Submission of LIP Confirmation Form

- Upon his/her approval of the reports, the OPC Facilitator will complete and submit the LIP Confirmation Form.

## Obtaining a Letter Confirming Completion of Master's Dimension

- Once candidates have registered for one of the associated degrees, a letter confirming completion of the Master's Dimension should be requested of OPC. This letter should be submitted to the university and at that point, the master's credits will be awarded.

## Appendix A: Quick Overview of Some APA Standards

### Item 1: Paragraph Structure, Indented Quotation, Reference

The National Council of Teachers of Mathematics (NCTM, 2005) states that problem solving is a skill that students need to master to become successful individuals in all areas of life.

> Problem solving is an integral part of all mathematics learning. In everyday life and in the workplace, an ability to solve problems is a tremendous advantage. Teachers can introduce most mathematical concepts through problems based on familiar experiences in students' lives or arising from intriguing mathematical contexts. (National Council of Teachers of Mathematics, October 2005, p.177)

Similarly, the Ontario Education Excellence for All (2004) Expert Panel states that problem solving involves both processing and communicating information which in turn are essential job requirements.

### Item 2: Unacceptable Paragraph Structure – Insufficient Original Thought and Text

"Problem solving is an integral part of all mathematics learning. In everyday life and in the workplace, an ability to solve problems is a tremendous advantage. Teachers can introduce most mathematical concepts through problems based on familiar experiences in students' lives or arising from intriguing mathematical contexts (National Council of Teachers of Mathematics" October 2005, p.177). Hilbert et al. (1997) state: "When students encounter mathematical ideas that interest and challenge them in an open e nded problem solving context, they are more likely to experience the kinds of internal rewards that keep them engaged" (p.6). Further, O'Donnell (2006) argues "that problem solving allows students to grasp Mathematical concepts rather than just procedures" (p.177).

## Item 3: Connecting Paragraphs in a Section

### Importance of Problem Solving

Why should problem solving be central to the teaching of the mathematics curriculum? The answer is multifaceted. First, problem solving skills will prepare youth for the future. The National Council of Teachers of Mathematics (NCTM, 2005) states that problem solving is a skill that students need to master to become successful individuals in all areas of life.

> Problem solving is an integral part of all mathematics learning. In everyday life and in the workplace, an ability to solve problems is a tremendous advantage. Teachers can introduce most mathematical concepts through problems based on familiar experiences in students' lives or arising from intriguing mathematical contexts. (National Council of Teachers of Mathematics, October 2005, p.177)

Similarly, the Ontario Education Excellence for All (2004) Expert Panel states that problem solving involves both processing and communicating information which in turn are essential job requirements.

Second, teaching problem solving skills will help students become more confident and gain a deeper understanding of Mathematical concepts. Hilbert et al. (1997) state: "When students encounter mathematical ideas that interest and challenge them in an open ended problem solving context, they are more likely to experience the kinds of internal rewards that keep them engaged" (p.6). Further, O'Donnell (2006) argues that problem solving allows students to grasp Mathematical concepts rather than just procedures. Similarly, teaching through problem solving allows for more than one strategy to be used, which complements the different thinking strategies of students (Ontario Education Excellence for All, 2005). All that said, how do we effectively teach problem solving.

Third, the teaching of mathematical problem solving skills assists students who have difficulty reading symbols and decoding the problems. Hence, Montague (2005) believes that students who are taught problematic skills develop strategies and skills which in turn help them not only with mathematical text book problems but also assists them in their daily lives. As well, in terms of reinforcing the importance of teaching these skills, Rubenstein and Thompson (2001) state that "many students have difficulty verbalizing, reading, understanding, and writing mathematics to express their mathematical thoughts, reflect on concepts or extend ideas" (p.265).

Lastly, student's perceptions of problem solving are forwarded as an important consideration. Tretter (2003) researched the application of a curriculum for Mathematics problem-solving in teaching gifted high school students. Tretter (2003) summarized the…

## Item 4: Quotations in Text

Second, teaching problem solving skills will help students become more confident and gain a deeper understanding of Mathematical concepts. Hilbert et al. (1997) state: "When students encounter mathematical ideas that interest and challenge them in an open ended problem solving context, they are more likely to experience the kinds of internal rewards that keep them engaged" (p.6).

… Rubenstein and Thompson (2001) state that "many students have difficulty verbalizing, reading, understanding, and writing mathematics to express their mathematical thoughts, reflect on concepts or extend ideas" (p.265).

## Item 5: Paragraph Structure, Reference Notations

Lastly, student's perceptions of problem solving are forwarded as an important consideration. Tretter (2003) researched the application of a curriculum for Mathematics problem-solving in teaching gifted high school students. Tretter (2003) summarized the most common themes that emerged from the students in two key points. First, students discussed "the importance of understanding why, instead of merely how" (p.27). One particular student stated: "I learned that the thought process is very important, and that now more than ever I must become responsible for my learning" (p.27). Second, students

believe they need to think creatively when developing strategies. Perceptions are important considerations.

## Item 6: Section Headings

### CHAPTER TWO: REVIEW OF LITERATURE

This chapter presents selected literature from current research in the field of Mathematics education. Essential issues central to the topic of problem solving are examined in an effort to guide the preparation of a curriculum unit. The issues are discussed under the following subheadings: defining the term problem solving, the importance of problem solving and teaching problem solving.

### Defining the Term Problem Solving

In 1962, Polya established the following definition as the meaning of the term problem solving: "Searching for an appropriate course ….

#### *Teacher's Role*

The teacher's role is central to the process of teaching problem solving. To begin, an important aspect of the role includes questioning techniques. Specifically, the Ontario Education Excellence for All (2004) Expert Panel states that teachers should ask…

## Item 7: Figures (Check the Manual for Tables and Appendices.)

| **Name:** | **Problem Solving Checklist** | |
|---|---|---|
| | **YES** | **NO** |
| **Shows problem solving strategy** | | |
| **Uses picture in solution** | | |
| **Uses correct process** | | |
| **Has correct solution** | | |
| **Checks work** | | |

*Figure 3.* Problem solving checklist (Adapted from Mgombelo (2002))

## Item 8: Reference List


Bottge, B. (2001). Reconceptualizing mathematics problem solving for low-achieving students. *Remedial and Special Education, 22*(2), 102-112.

Education Quality and Accountability Office (EQAO). (2006). *Key words*. Retrieved February 15, 2007 from http://www.eqao.com.

Education Quality and Accountability Office (EQAO). (2006). *Strategies for educators*. Retrieved February 15, 2007 from http://www.eqao.com.

Flowers, J., Krebs, A.,& Rubenstein, R. (May, 2006). Problems to deepen teachers' mathematical understanding: Examples in multiplication. *Teaching Children Mathematics. National Council of Teachers of Mathematics*, *12*, 478-484.

Forsyth, R., & Ansley, T. (1982). The importance of computational skill for answering items in a mathematics problem-solving test: Implications for construct validity. *Educational and Psychological Measurement*, 42, 257-263.

Fuson, K.C. (2003, February). Toward computational fluency in multidigit multiplication and division. *Teaching Children Mathematics*, *9*(6), 300-305.

Goldman, S.. (1989). Strategy instruction in mathematics. *Learning Disability Quarterly*, *12*, 43-55.

Hiebert, J., Carpenter, T, P., Fennema, E., Fuson, K., Human, P., Murray, H., Olivier, A., & Wearne, D. (1996). Problem solving as a basis for reform in curriculum and instruction: The case of mathematics. *Educational Researcher, 25* (4), 12-21.



Hiebert, J., Carpenter, T, P., Fennema, E., Fuson, K., Human, P., Murray, H., Olivier, A., & Wearne, D. (1996). Problem solving as a basis for reform in curriculum and instruction: The case of mathematics. *Educational Researcher, 25* (4), 12-21.