

Educational Accountability: A Case Study of the Creation, Implementation and Cancellation of the Math Proficiency Test in Ontario, Canada

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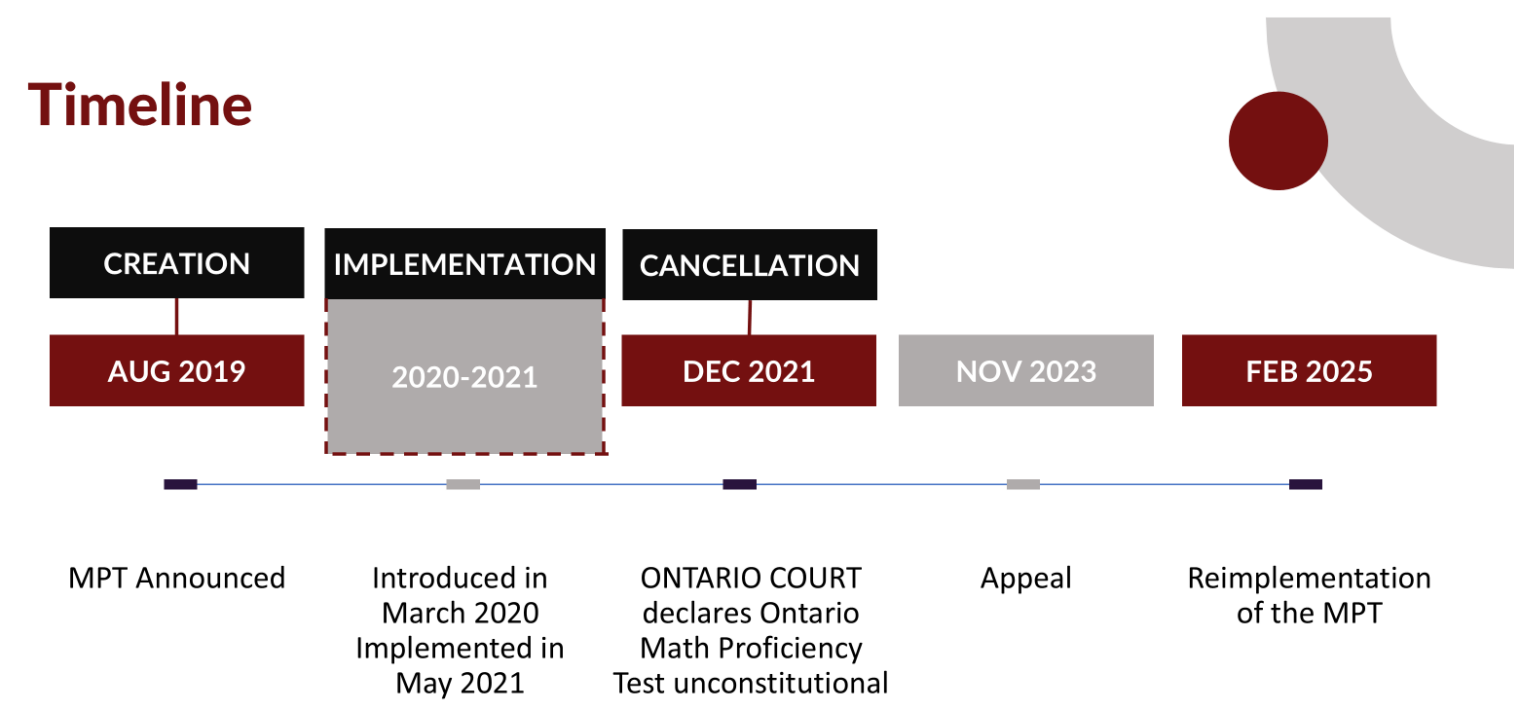
Land Acknowledgement and Positionality

This research was conducted when I was a graduate student at the University of Ontario (2019-2024) which is on the traditional land of the Algonquin people.

What is the Math Proficiency Test?

- A large-scale standardized computer-based assessment for prospective teachers created by Education Quality Assessment Office (EQAO).
- Focused on two key components: math content and pedagogy (Mathematics Proficiency Test, 2021a).
- To pass, teacher candidates (TC) had to obtain a score of 70% on both the mathematics and the pedagogy sections of the MPT.

Timeline



Research Questions

This study addressed the following three major questions:

- How have different educational accountabilities and connected stakeholders interacted with the **creation** of the MPT?
- How have different educational accountabilities and connected stakeholders interacted with the **implementation** of the MPT?
- How have different educational accountabilities and connected stakeholders interacted with the **cancellation** of the MPT?

*The MPT was reimplemented in February 2025

Literature Review

Educational Accountability (Hall & Ryan, 2011; Koch & DeLuca, 2012; Nagy, 2000; Sahlberg, 2010; Verger et al., 2019).

Tensions Created by Accountability in Large-scale Assessment (Jang & Sinclair, 2018; Kempf, 2016; Koretz, 2017).

Unintended consequences (Hargreaves, 2020; Jennings & Sohn, 2014; Pinto, 2016).

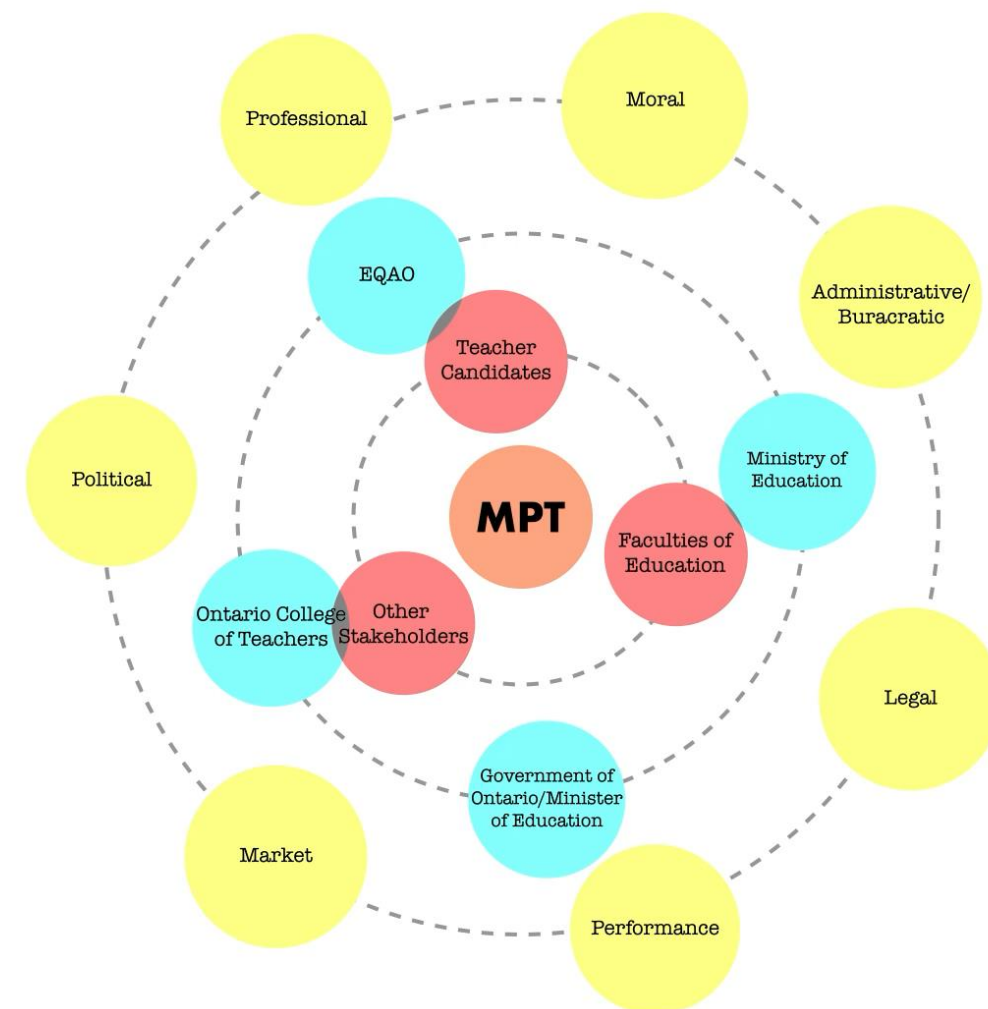
Ensuring Effective Teaching (Bell et al., 2012; Lee, 2018; Goldhaber, 2007).

Theoretical Framework

- My research is guided by the theoretical framework of institutional complexity (Friedland & Alford, 1991).
- Within institutional complexity there are competing values, needs, and groups of people and these all generate different accountabilities that are competing and contradictory (Diehl, 2019; Dulude & Milley, 2021).

Conceptual Framework

The conceptual model draws from the broader theoretical framing of institutional complexity, presented in the literature, while also focusing on educational accountabilities (Darling-Hammond, 1989; Dulude & Milley, 2021; Pollock and Winton, 2016), and incorporates the key stakeholders who are impacted by the MPT and are integral to this research project.



Methodology - 5 Phase Mixed Methods Case Study

Phases of Research Design 5 phases (Creswell and Plano Clark, 2018)		
Phase	Tasks	Analysis Tools
Phase I – Document Analysis Across Stages	<ul style="list-style-type: none">Document AnalysisResearch Ethics	<ul style="list-style-type: none">Document Extraction Tool
Phase II – Data Collection Across Stages	<ul style="list-style-type: none">Teacher Candidate SurveyFaculty of Education Administrator SurveyInterviews	<ul style="list-style-type: none">
Phase III – Data Analysis of individual stakeholder perspectives	<ul style="list-style-type: none">Analysis of Teacher Candidate SurveyAnalysis of Faculty of Education Administrator SurveyAnalysis of Interviews	<ul style="list-style-type: none">Teacher Candidate Survey MatrixFaculty of Education Administrator Survey MatrixInterview Matrix
Phase IV – Preliminary Findings by Accountability	<ul style="list-style-type: none">Organized the data analysis by stakeholder.Combined the data by accountability.	<ul style="list-style-type: none">Phase IV Chart - Alignment of Accountabilities and Stages.
Phase V – Interpreting Findings across Stages	<ul style="list-style-type: none">Reorganized data analysis by stage.	<ul style="list-style-type: none">Phase V Chart - Model of findings within and across Stages with Research Questions

Phase I – Document Analysis Across Stages

Documents	2016-2022		
	Creation	Implementation	Cancellation
Hansard Transcripts	33	10	
Ontario Teacher Candidates' Council v. The Queen, 2021 ONSC 7386			1
News Articles	11	17	5
Policy Documents	8	10	4
Total: 99	52	37	10

Methodology - 5 Phase Mixed Methods Case Study

Phase II – Data Collection Across Stages

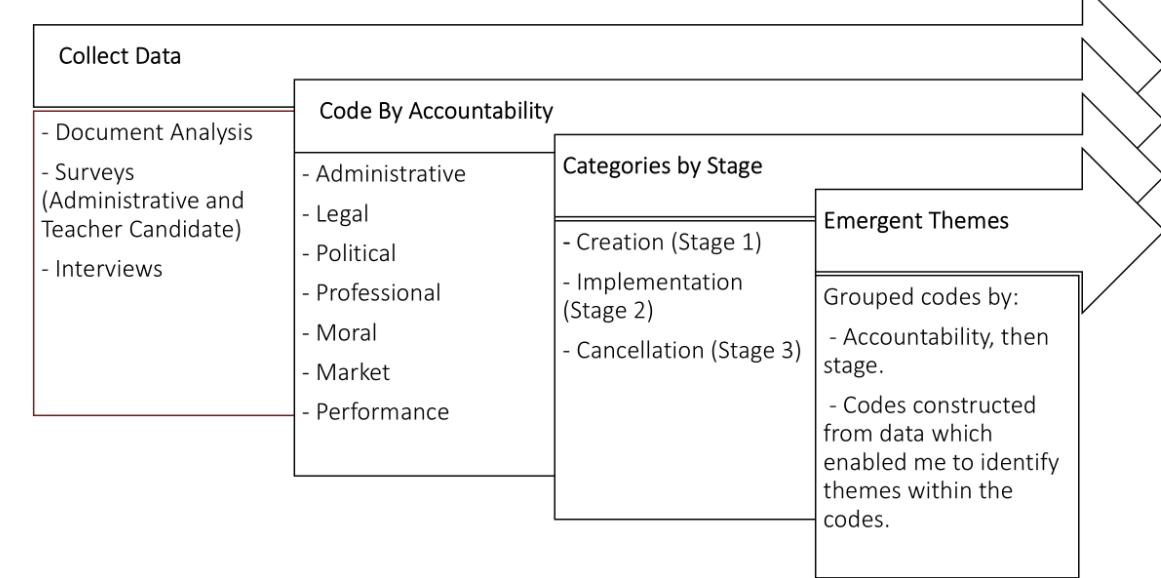
Data Sources	Number of Participants	Stage		
		Creation	Implementation	Cancellation
TC Survey	260	X	X	X
Faculty of Education Administrative Survey	10	X	X	X
Stakeholder Interviews	10	X	X	X

Phase III – Data Analysis of Individual Stakeholder Perspectives

Stakeholders	Data	Conceptual Framework	Stages		
			Creation (Stage 1)	Implementation (Stage 2)	Cancellation (Stage 3)
Teacher Candidates	Document Analysis TC Survey	Seven Educational Accountabilities	Administrative	Administrative	Administrative
			Legal	Legal	Legal
			Political	Political	Political
			Professional	Professional	Professional
			Moral	Moral	Moral
			Market	Market	Market
			Performance	Performance	Performance
Faculties of Education Administration	Document Analysis Administrative Survey Semi-Structured Interviews	Seven Educational Accountability	Administrative	Administrative	Administrative
			Legal	Legal	Legal
			Political	Political	Political
			Professional	Professional	Professional
			Moral	Moral	Moral
			Market	Market	Market
			Performance	Performance	Performance
Key Stakeholders	Document Analysis Semi-Structured Interviews	Seven Educational Accountability	Administrative	Administrative	Administrative
			Legal	Legal	Legal
			Political	Political	Political
			Professional	Professional	Professional
			Moral	Moral	Moral
			Market	Market	Market
			Performance	Performance	Performance

Phase IV – Alignment of Accountabilities and Stages				
Stakeholders	Conceptual Framework	Stages		
		Creation (Stage 1)	Implementation (Stage 2)	Cancellation (Stage 3)
Teacher Candidates	Seven Educational Accountabilities	Administrative	Administrative	Administrative
		Legal	Legal	Legal
		Political	Political	Political
		Professional	Professional	Professional
		Moral	Moral	Moral
		Market	Market	Market
		Performance	Performance	Performance
Faculties of Education Administration	Seven Educational Accountability	Administrative	Administrative	Administrative
		Legal	Legal	Legal
		Political	Political	Political
		Professional	Professional	Professional
		Moral	Moral	Moral
		Market	Market	Market
		Performance	Performance	Performance
Key Stakeholders	Seven Educational Accountability	Administrative	Administrative	Administrative
		Legal	Legal	Legal
		Political	Political	Political
		Professional	Professional	Professional
		Moral	Moral	Moral
		Market	Market	Market
		Performance	Performance	Performance

Diagram of Data Collection, Code by Accountability, Categories by Stage and Emergent Themes



Phase IV - Preliminary Findings by Accountability Example

Moral Accountability	
	Themes
Creation (Stage 1)	<ul style="list-style-type: none">Changing certification requirementsChallenging the idea of "are you really prepared"
Implementation (Stage 2)	<ul style="list-style-type: none">Lack of Diversity in Teacher Candidates passing the MPTAccessibility to the Test
Cancellation (Stage 3)	<ul style="list-style-type: none">The MPT was cancelled for being discriminatory for minority Teacher candidatesProving that the test was not fair in court

Phase V – Interpreting Findings across Stages

Creation (Stage 1)	Implementation (Stage 2)	Cancellation (Stage 3)
Administrative	Administrative	Administrative
Legal	Legal	Legal
Political	Political	Political
Professional	Professional	Professional
Moral	Moral	Moral
Market	Market	Market
Performance	Performance	Performance

- The Impact of Changing Certification Requirements
- Questioning the preparedness of Teacher Candidates and Teacher Education Programs
- Student Math Scores as a Reflection of Teacher Candidates' Mathematical Knowledge
- The MPT was a Barrier to Entering the Teaching Profession
- The Implementation of the MPT was Rushed and Disorganized, which led to Consequences such as:
 - Chaos, Confusion, and Stress among Stakeholders.
 - The Nature of the MPT became Apparent during the Implementation of the MPT.
- The Cancellation of The MPT Was Seen by Many as a Validation of Their Concerns:
 - Teacher Professionalism
 - Certification Requirements
 - Equity and Fairness

Conclusion

Five years have passed since the creation of the MPT, and new educational issues and situations have arisen in Ontario's education system:

- A severe teacher shortage (Jones, 2024).
- New EQAO and Programme for International Student Assessment (PISA) scores.
- The government call to go "back to basics" and governmental beliefs about using teacher tests to improve teacher proficiency in mathematics.

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