Efficacy and Impact of Key Performance Indicators as Perceived by Key Informants in

Ontario Universities

by

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Abstract

The issue of performance indicators for colleges and universities in Ontario was first raised in the early 1990s by the Ministry of Education and Training's Task Force on University Accountability. The decision to develop and use Key Performance Indicators (KPIs) was made in the 1990s (Ministry of Education and Training, 1998). The three KPIs for Ontario universities are Graduation Rates, Employments Rates, and OSAP Loan Default Rates.

The declared purposes of the publication of the KPIs evolved over time. Initially, they were to enable parents and students with data to inform post-secondary education choice. The purposes then became benchmarks without any clear indication of what constituted satisfactory or unsatisfactory performance. Performance funding based on KPIs introduced a third phase. Finally, they were to influence the universities' programming behaviour without government's direct intervention. The overall intent was to help universities improve their performance (MTCU, 2012). My study focused on the impact of KPIs on Ontario universities 10 years after they were instituted.

This exploratory and descriptive study examined the history of why and how KPIs were introduced in Ontario and the perception of 12 key informants of 11 participating

universities regarding the efficacy and effectiveness of the existing KPIs. The study sought to identify areas of concern of the participants and their suggestions on how the KPIs can be altered to improve their effectiveness. The findings provide an understanding of the impact of the KPIs and suggested alternatives, and provide valuable information and a potential source for evidence-based MTCU policy decisions that impact Ontario's universities and their stakeholders.

The findings suggest that a review and redefinition of the theory of accountability as applied in Ontario universities are required as the initial interpretation of accountability defined by the three KPIs is too narrow to be pragmatically useful. Most university participants perceived that the current KPIs are not having the intended impact. I recommend that both parties work together and be clear on each other's goals and expectations to develop effective measures on institutional performance and accountability, and to satisfy the needs of the government, the universities and the public.

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I would like to thank my committee members, Dr. Dan Lang and Dr. Tim McTiernan. Dr. Lang is a walking encyclopedia of the postsecondary education systems – not only of Ontario and Canada, but also of international jurisdictions. Dr. McTiernan's advice and unsurpassed knowledge of the government systems have been invaluable. Both of my committee members have directed me through various challenging situations and truly enabled me to achieve this accomplishment, for which I am extremely grateful.

I will always be grateful to Dr. Paul Stenton and Janice Winton for their generous advice, support, and mentorship. Their insight and thorough knowledge of the post-secondary education system in Ontario have enabled me to learn, understand, and navigate this system effectively.

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CHAPTER ONE: INTRODUCTION

Ontario universities have traditionally guarded zealously their charter autonomy and freedom from government control, and the imposition of government regulated performance indicators (especially when tied to funding) may be perceived as a threat to that privileged status. However, with the ever-increasing demand for public funding to support higher education has come an increased demand also for these institutions to be accountable for the use of those funds, by requiring them to publicly report on their performance based on specified indicators as mandated by the government (Ministry of Training Colleges and Universities, 1999b and MTCU, 1999c). Shafritz and Russell (2000) define accountability as the extent to which one must answer to a higher authority for one's actions in a democratic society – in the context of public education this means the taxpayer! Since 1998, the Ministry of Training, Colleges and Universities (MTCU) has required that data on specific Key Performance Indicators (KPIs) be made public by each publicly funded college and university in Ontario. The information is intended to be used by colleges and universities to demonstrate their achievements, and to improve their programs and services. Furthermore, the initial intent of the government in requiring that this information be made public is to provide a basis for informed decision-making by potential students and their parents in the selection of institutions and programs (MTCU, 1999a).

While the Ontario colleges are required to report on five Key Performance Indicators, the universities are required to report on only three, namely: Graduation Rates, Employment Rates and Ontario Student Assistance Program (OSAP) Default Rates. The universities are not required to report on student, graduate and employer satisfaction rates as do the colleges. The Ministry conducts an annual Ontario Graduate Survey (with the names

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and contact information for their alumni provided by each institution) to collect the required data (specifically related to graduation and employment rates), calculate the relevant KPIs, and report on the findings to each university. Each university is then responsible for making the results of their own institution publicly available by whatever means they choose. The Ministry also publishes the KPIs by program and institution on the MTCU website (http://www.tcu.gov.on.ca/pepg/programs/osaprates).

As stated in the Council of Ontario Universities' Proposed University Accountability Framework in 2004, universities were required to report extensively on the funding provided by the province and there were 20 reporting requirements for provincial grants to the Ministry (Council of Ontario Universities, 2004). The Council of Ontario Universities (COU) stated these reporting requirements were considered onerous, time-consuming, resource-intensive, and expensive to prepare (COU, 2004). KPI reporting is one of these requirements since 1998. Although the provision of existing data to the Ministry for the purpose of KPI reporting is in and of itself not an onerous or costly task for the universities (unlike the case of the Ontario colleges) since they routinely collect these data anyhow, it does raise the question of the effectiveness and efficacy of this requirement, and to what extent the intended impact of the public reporting of KPIs has been realized. The intended impact was to inform universities about outcomes so that the data could be used for improvement, and to provide students and families with data to make informed choice of universities and programs . The KPIs have been implemented for more than a decade now, and the purpose of this study is to examine whether the existing three KPIs have had the intended impact, as perceived by 12 key informants in the 11 Ontario universities who participated in this study.

Background

The issue of performance indicators in Ontario was first raised in the early 1990s by the Ministry of Education and Training's Task Force on University Accountability (also known as the Broadhurst Task Force) chaired by Dr. William Broadhurst. These terms Task Force on University Accountability, Broadhurst Task Force and Task Force are used interchangeably in this report (Ministry of Education and Training, 1993). In September 1992, the Committee on Accountability, Performance Indicators and Outcomes Assessment of the Council on University Planning and Analysis (CUPA), a subcommittee of COU, was asked by the Task Force to provide advice and recommendations on benchmarks and indicators which might enhance the capability of boards of governors to hold their universities accountable (MET, 1993). A report was completed and sent to the Task Force and also to COU in March 1993 (Council on University Planning and Analysis, 1993). In the report, the CUPA emphasized two important aspects of the Task Force's interest:

> The first was that the Task Force expressly called for management indicators,
> as opposed to indices that might be used to rank institutions or set norms that
> would be applied uniformly to all universities. The second was the Task
> Force's emphasis on the boards of governors as the principal instrument of
> accountability. The combination of management indicators designed for local
> use and the empowerment of boards of governors to take charge of
> accountability is an excellent match of means and ends. (p. 1)

The Broadhurst Task Force proposed 25 indicators based on the recommendations by the CUPA Committee and employed relevance, reliability, accessibility, and clarity as the core criteria. The report also emphasized that universities should connect these indicators to

institutional mission statements and their academic and financial plans (MET, 1993). The boards of governors of universities were expected to select from the 25 indicators relevant to their respective mission and plans (MET, 1993).

The decision to develop and use KPIs was made in the 1990s (MET, 1998a). Two working groups were formed: one for colleges and the other for universities (MTCU, 1999a). At that time, the KPIs were unrelated to funding. The connection to funding for the Ontario colleges was made in 2000-01 after the KPIs were introduced in 1998 (Sheridan, 2012). The universities were exempt from any funding impact when KPIs were first instituted (in 1998 and 1999), but this raises the question of whether the KPIs would have been different or would have had a different impact if, from the start, they had been connected to funding – not only in the colleges, but also in the universities.

Queen's University was the first Canadian university to include an article on performance indicators in its collective agreement (Queen's University Faculty Association, 1997). Queen's University (1997) emphasized the role of performance indicators in decision-making.

> A performance indicator includes any parameter, measure or quantitative instrument intended or used for
>
> (a) evaluating, measuring, ranking or comparing the performance, productivity or standards of an academic Unit, Program, Faculty, School, Institute, in whole or in part; and
>
> (b) making decisions which affect the terms or conditions of a Member's employment. (QUFA, 1997, Article 26).

Ontario universities are seen to play a key role in the economic growth and well-being of the province, and, in the academic year 1998-1999 (MTCU, 1999b), under the Conservative government of Premier Harris, the KPIs were instituted to measure the success rates of preparing graduates with skills that the economy needed and to make universities more accountable to both students and taxpayers (MTCU, 1999b). While appropriate to the mandate of the colleges, this motivation was inconsistent with the traditional mission of the universities as perceived by academics. Clark, Moran, Skolnik and Trick (2009) state that the most important concern of academics has been that "none of these indicators reflect the most important institutional, and government objectives for post-secondary education (p. 126)."

In my discussions with MTCU Staff (October 29, 2012), they confirmed that the three KPIs that the Ontario universities are required to report on are:

   1) **Graduation Rates.**

   The MTCU calculates Graduation Rates using a single entering cohort of
   students and determining whether or not they graduated within seven
   years. The methodology employed involves the selection of all new full-
   time, Year One undergraduate students on the official fall enrolment file
   annually, who have a valid (and unique) student ID number, and are
   seeking either a bachelor's or first professional degree. The subset is then
   matched against the records for students who received a degree (in any
   program) from the same institution during the most current seven year
   period.

2) **Employment Rates.**

> The employment rate is defined as the number of employed persons expressed as a percentage of the labour force where the labour force is those persons who are employed, or unemployed but looking for work. To determine Employment Rates of recent graduates, Ontario universities conduct surveys of all graduates of undergraduate degree programs annually. Graduates are asked questions regarding their employment situation six months and two years after graduation.

3) **OSAP Loan Default Rates.**

> The annual Default Rates calculated by MTCU reflect the repayment status of students who were issued Ontario Student Loans in the two academic years before and did not receive an Ontario Student Loan in the past academic year, and who defaulted on their repayment obligations. An Ontario Student Loan is in default when the Ontario government has paid the bank's claim for an inactive loan. A loan is inactive when no payments were made by the students for at least 90 days. Student loan recipients/defaulters are, for purposes of calculating Default Rates, assigned to the last institution/program they attended in the previous two academic years. (Ryerson University,
>
> http://www.ryerson.ca/upo/statistics/KPI.html)

In my review of the literature, I found two studies that addressed KPIs in Ontario. They are two PhD theses: *A Study of Performance Funding of the Ontario Colleges of Applied Arts and Technology* by McColm in 2002; and *Achieving Government, Community and*

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Institutional Goals through the Measurement of Performance: Accountability and Performance Indicators in Ontario Colleges and Universities by Callahan in 2006.

McColm's study addressed KPIs only as they impact the Ontario colleges and did not explore their impact on Ontario universities. McColm's research investigated how the Ontario Colleges of Applied Arts and Technology reacted to KPIs and the nature and significance of the implementation of performance indicators and performance funding at the jurisdictional and institutional levels.

Callahan's research is more closely aligned with my study. Her study focused on the government's motivation for requiring performance measures from both universities and colleges for the period of the mid-1960's (when colleges were established and the university system was expanded) to the end of the 1990's (when accountability frameworks for post-secondary education were established). My study focused on the impact of KPI's on Ontario universities only – the efficacy and effectiveness of the existing KPIs 10 years after they were instituted. Since the socio-economic context and challenges faced by universities have changed considerably since the 1990's, my study revisited some of Callahan's research questions about the system of performance indicators used in Ontario for measuring performance of universities. My research also explored to what extent the KPIs impact the performance of universities, which was an area Callahan's study did not address, but which she did recommend for further research in her study.

Statement of the Problem Situation

While the declared purpose of the publication of the KPIs as stated by the Ontario government is to enable parents and students to make an informed choice of program and institution for the student's post-secondary education and to help universities improve their

performance (MTCU, 2012), I have found little research that explored whether the existing three KPIs have achieved these goals, or whether they should continue to be implemented or replaced by another more useful mechanism. Although the Callahan study was completed in 2006, she explored some of the impacts of KPIs in Ontario universities only during the period of 1960s to 1990s. One of the issues that Callahan identified as needing further research was that of the potential impact on university behaviour if performance measures were tied to funding. In the seven intervening years since the Callahan study, the socio-economic context for Ontario post-secondary education has changed substantively. For this reason, this is a good time to revisit the issues that were identified and addressed in that study.

Purpose of the Research

This exploratory and descriptive study examined the history of why and how KPIs were introduced for Ontario universities and the perception of key informants of participating universities regarding the efficacy and effectiveness of the existing KPIs – are they appropriate and do they have the intended effect with respect to improving university performance? It also sought to identify areas of concern, if any, where changes should be made to improve their effectiveness as accountability measures. Through a comprehensive analysis of quantitative and qualitative data collected through document analysis, questionnaire survey and interviews of key informants, the findings of the study provided a better understanding of the effect of the KPIs and suggested alternatives. The findings have the potential to provide valuable information for evidence-based MTCU policy decisions that impact Ontario's universities and their stakeholders.

Rationale and the Researcher's Perspective

For more than 10 years now, the Ontario government and universities have been allocating resources for the implementation of KPIs. The Ontario government committed $23.2 million annually to universities based on their performance on two of the three KPIs – Graduation and Employment Rates (MTCU, 2009). The findings of this study may help us to understand the extent of the usefulness of the KPIs and see if changes could or should be made to be more beneficial to all stakeholders.

I have over 20 years of experience in university administration. My current position as the Director, Research Planning, Finance and Evaluation at Ryerson University requires me to contribute to the university's decisions about the development of increasingly effective, efficient and accountable administration of the university's scarce resources and opportunities. As a senior member of the central administration team of a large university in Ontario, a deeper understanding of issues related to KPIs enabled me to contribute more knowledgeably to policy and decision-making at the university. Although I am not directly involved with KPI reporting at Ryerson University, I participate in the decisions made related to overall institutional priorities.

This study explored the implications of the three KPIs which formed a basis of accountability and also their relevance to institutional performance.

The exercise of KPIs was instituted during the early era of government's involvement on university accountability in the 1990s (Clark et al., 2009). The extent of reporting requirements to the universities were relatively simple during that time compared with the various reporting requirements nowadays. The challenges that universities are now facing could be very different from the 1990s.

MTCU's 1998-1999 Business Plan indicated that the goal of Graduation Rates was to measure students' success in completing their programs, the Employment Rates to measure graduate outcomes, and the OSAP Loan Default Rates was to measure students' ability to repay loans, and for the Ministry to maintain the post-secondary participation rate at a certain level (MTCU, 1999c). This study examined how different groups of stakeholders perceived the relevance of KPIs to various aspects (institutional planning, student recruitment, setting tuition fees for specific programs, or other purposes), and explored if other mechanisms are being used by the universities. This study would be useful for university administrators to learn how other universities perceived on or enhanced their program delivery, management structure, services and reallocated of resources to restructure programs from the current KPIs in order to better serve students, taxpayers, and the government.

The 25 indicators developed and included in the Report of the Task Force on University Accountability (Broadhurst Report) were intended to be management indicators which were designed for internal use and for the boards who were responsible for accountability. These indicators were not for ranking or norm setting purposes. The Task Force also emphasized that the boards of governors were the principal instrument of accountability, and did not mention the funding be linked to the indicators. The Broadhurst Report was issued in May 1993. The government announced the implementation of KPIs in February 1998. Between these two time periods, the political parties in power in Ontario had changed. This study examined the evolution of from the performance indicators developed by the Broadhurst Task Force to the implementation of KPIs in Ontario and explored the impact of the work of the Broadhurst Task Force more than ten years since the KPIs came into effect.

Research Questions

The specific research questions that drove this study were:

1) What was the impact of the work of the Broadhurst Task Force on the initiation of KPIs and what were the KPIs intended to achieve?

2) To what extent does each of the following key performance indicators impact institutional planning of participating Ontario universities, as perceived by key informants?

   a. Graduation Rates

   b. Employment Rates

   c. OSAP Loan Default Rates

3) For their own internal purposes, do universities use any other indicators? If they do, what are they, why and how are they different?

4) To what extent are KPI results used by universities in student recruitment, setting tuition fees for specific programs, or other purposes?

5) To what extent are the key performance indicators perceived by participating key informants to be effective in improving the performance of universities at the institutional and program levels? That is, what is the impact of each of the KPIs, if any, on academic planning and delivery?

6) To what extent has the introduction of the Multi-Year Accountability Agreement process changed the role and impact of the KPIs?

7) How appropriate are the three KPIs currently in place as measures of institutional performance and account ability? What other indicators might better serve all stakeholders?

Theoretical Framework

This study is grounded on the theories of university governance and accountability.

University governance.

The Oxford White Paper on University Governance (2006, p. 5) referred to governance as:

> the processes of decision-making within an institution. It thus holds
>
> implications for the administrative organization which enables an institution
>
> to set its policies and objectives, to achieve them, and to monitor its progress
>
> towards their achievement. It also refers to the mechanisms whereby those
>
> who have been given the responsibility and authority to pursue those
>
> policies and objectives are held to account. The adoption of sound
>
> principles of governance helps those charged with taking important
>
> decisions to identify, assess and manage institutional risk, and to set up
>
> sound systems of financial control. Finally, a well-designed structure of
>
> governance will serve all members of the institution; but it will also serve
>
> the public by virtue of what it does to render an institution accountable to
>
> the outside world. (Oxford, 2006, p. 5)

The Oxford White Paper on University Governance further stated that the first and most fundamental principle of governance is accountability (Oxford, 2006). The primary responsibility of the governing bodies of Ontario universities is to ensure that necessary accountability processes are in place in order for the universities to operate effectively. The governing body has a critical role in recognizing the interests of different groups such as the provincial government, public and private granting agencies, and corporate and individual

donors by holding the university accountable for the use of public funds and donations, and

ensuring that these funds are used for the purpose of assisting the university is fulfilling its

mission (MET, 1993). Besides the capacity for getting things done and having services

delivered, Peters (2011) adds that good governance is also democratic and the normative

dimension must be considered.

One of Stoker's (1998) propositions of theory of governance relates to autonomous

self-governing networks of actors. Elite actors from public and private sectors together form

the "regimes in urban politics", says Stoker, when "actors and institutions gain a capacity to

act by blending of the resources, skills and purposes into a long-term coalition" (p. 23).

Stoker (1998) suggests that government can indirectly and imperfectly steer networks when

the networks have a high degree of autonomy. This is the case in the Ontario context where

the government is attempting to influence the autonomous universities by requiring KPI

reporting and offering performance funding by attaching two percent funding to performance

measures, even though it may not have a huge impact on the behaviour of the universities.

Fisher and Rubenson (1998) claimed that, on the other hand, when universities have less

autonomy and provincial governments are more directly responsible, "obvious attempts at

tighter control over university policy and more emphasis on the strategic needs of the

province" can be seen (p. 94).

Ansell and Gash (2007) state that collaborative governance brings public and private

stakeholders together in common fora to engage in consensus-oriented decision-making.

There are five criteria of collaborative governance that Ansell and Gash (2007) emphasize

that are related to university governance: "(1) the forum is initiated by public agencies or

institutions, (2) participants in the forum include non-state actors, (3) participants engage

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directly in decision-making and are not merely 'consulted' by public agencies, (4) the forum

is formally organized and meets collectively, (5) the forum aims to make decisions by

consensus (even if consensus is not achieved in practice" (Ansell and Gash, 2007, pp. 544-

545). Ansell and Gash (2007) also observe that through collaborative governance,

stakeholders become aware of their interdependence (Ansell and Gash, 2007). Even though

the university perspective was represented to some extent in the membership of the

Broadhurst Task Force, the final decision about which KPIs would be imposed on the

universities was made unilaterally by the government, seemingly without any real

consultation or collaboration with the universities.

Accountability.

Shafritz and Russell's (2000) definition of accountability is that it is the extent to

which one must answer to a higher authority for one's actions in a democratic society; this

generally means the taxpayer on the subject of public education! This study was framed on

accountability theory, which was a mandate of the Task Force on University Accountability

in recommending performance indicators for publicly funded post-secondary institutions.

Prior to that, the Ontario universities had been required to file externally audited financial

reports to the government since the 1960s. Monahan (2004) contends that the rules around

eligibility for receipt of operating grants and capital funding fulfilled the need for

accountability. Ontario universities recognize the need to be accountable for the use of the

public funds granted to them by the Ontario government. Monahan (2004, p. 151) says "It

had always been understood that Ontario universities were to be accountable for the

expenditure of the public funds they received – accountable to their governing boards, faculty

and students and to the government, and through it to the taxpayers. When government grants

became their principal source of revenue, the universities accepted and clearly acknowledged this accountability." This accountability had been acknowledged by the Ontario universities ever since a large portion of their funding has come from the Ontario government and indirectly from the taxpayers (Monahan, 2004).

According to Trow (1996, p. 310), accountability is defined as "the obligation to report to others, to explain, to justify, to answer questions about how resources have been used, and to what effect." Trow also stated that one of the functions of accountability is to sustain or raise the quality of performance of institutions "by forcing them to examine their own operations critically, and by subjecting them to critical review from outside" (Trow, 1996, p. 311). While the quality of performance may be seen to contribute to the KPIs, based on the input of members of the Broadhurst Task Force the initial discussion of performance indicators was not grounded in the notion of quality assurance per se. The term KPIs is not specifically mentioned in the *Quality Assurance Framework* published by the Ontario Universities Council on Quality Assurance (Ontario Universities Council on Quality Assurance, 2012), although graduation and employment rates are included (Section 4.3.6, pp. 23-24) in the quality criteria, they are not the most important variables listed.

The research of Vlaicu and Whalley (2012) describes differences in the drivers for hierarchical accountability and explains that the policymaker is under hierarchical accountability "if the monitor's own continuation in office depends primarily on policymaker performance" (p. 2). They focus on "the incentive effects of hierarchical accountability, a prevalent and increasingly common accountability form in many governments such as counties, cities and school districts" (p. 27). They state that their model "implies that hierarchical accountability reduces pandering incentives relative to direct accountability. It

also uncovers factors that determine this difference in incentives" (p. 16). Based on Vlaicu and Whalley's theory, the differences in accountability of MTCU to the public, and the accountability of university senior management to their boards may lead to differences in the perceived effect on behaviour of incentives such as performance funding.

Knouse (1979) sees accountability as "a responsibility, an obligation, a commodity in an exchange relationship, and a set of procedures leading to better performance" (p. 59). He concludes that if accountability is established by "the acceptance of role expectations sent by the superiors and coworkers" (p. 62), that is, performance expectations, and the motivation of accountable behaviour should be strengthened by the "social influence processes leading to compliance, identification, and internalization of role expectations" (p. 62). One of the guidelines that Knouse proposes for increasing accountability is that when setting levels of the performance accountability, all stakeholders should be involved (Knouse, 1979).

Frink and Klimoski (1998) claimed that "a role systems theory perspective adds value to any treatment of accountability in work settings" (p. 21). And, informal sources of accountability include group norms (Frink and Klimoski, 2004). Shared expectations are important for an organizational response to accountability of its members according to Frink and Klimoski, (2004). The nature and clarity of the expectations of members of the role set and the degree of alignment with these expectations are vital to anticipating or modeling agent behaviour (Frink and Klimoski, 1998). These concepts have implications for the setting of performance indicators not only in the work place but also at a macro level, such as between MTCU and the universities. Understanding each other's expectations in setting performance indicators would add value to MTCU and the universities in responding to accountability.

Hernandez and Hodges's theory-based accountability consists of a framework that includes "well-articulated ideas about the population to be served, critical strategies, and intended outcomes" for linking information to action (Hernandez & Hodges, 2001, p. 38). Clear linkages between identified goals and strategies, and the implementation plans inform strategic planning in Hernandez and Hodges's theory-based framework. A new sense of clarity and consensus should also be built in the process. In addition, a theory-based framework can facilitate the establishment of well-integrated systems "that include the input from multiple stakeholders, and accountable to those stakeholders for the results of their efforts (Hernandez & Hodges, 2001, p. 39). Obtaining clarity and consensus of the MTCU and universities in the process of setting performance measures, this well-integrate system would enable universities to establish their strategic planning in order to work towards the intended outcomes.

Conceptual Framework

The worldview of pragmatism is appropriate for this study as this is a real-world practice-oriented study in which the development of the KPIs of Graduation Rates, Employment Rates, and OSAP Default Rates was explored, and relevant behaviours of the participating universities examined through an explorative, descriptive analysis. The pragmatic worldview "arises out of actions, situations, and consequences rather than antecedent conditions," says Creswell (2009, p. 10).

Consistent with the pragmatic framework, the findings of the research provide evidence-based information that may potentially influence recommendations made to MTCU policy makers. The identification of areas of concern and recommendations and, if any, changes that should be made to improve their effectiveness, contribute to the Ministry's

decision makers' understanding of whether or not the current KPIs are adding value to the universities and their stakeholders, and what other alternatives they might consider in related policy decisions.

Scope and Limitations of the Research

This study explored the perceptions of key informants in 11 (55%) of the 20 Ontario universities who participated in this study with respect to the implementation and subsequent impact of KPIs in the universities. The extent to which current KPIs were aligned with individual university's mission statement and other tools or mechanisms was also explored. Participation in the study was not by random sampling and because of the considerable diversity among Ontario universities in terms of size, geographic location, program mix and intensity of teaching and research, the findings are not generalizable to all Ontario universities.

This study *did not* address existing research related to performance indicators for post-secondary institutions in other Canadian provinces (since education is a provincial matter under the Canadian constitution), nor international jurisdictions, which may be similar to or very different from the Ontario experience. The study also *did not* examine the impact of KPIs on Ontario colleges even though the five KPIs mandated for the colleges are similar to those required of the universities, though they are very different in implementation. This study explored the perceptions of the value and effectiveness in relation to the KPIs on the performance of universities in Ontario but it *did not* focus strongly on financial costs to the universities for KPI reporting since, from the onset the Ministry accepted responsibility for the collection of the required data and the universities are only required to report data they already gather for other purposes. In her recommendations, Callahan includes the need to

explore the funding implications of KPIs. While the issue of performance funding is explored to some extent, the actual financial costs of KPI reporting were not addressed in this study as that was not the primary focus of this study. While I initially wanted to stress the issue of financial costs of the implementation of the required KPI reporting, it became clear that this requirement did not appear to create a heavy financial burden on the universities since the data that are required to be reported are already collected by the universities – unlike Ontario colleges which do incur some costs in collecting additional data.   For this reason, the focus of this study became the value and effectiveness of this policy requirement.

The invited participants/respondents of this study were the personnel who were directly involved in the areas of institutional planning, budgeting and institutional performance and who provided the perspective from an institutional level. On the other hand, the Deans of faculties, who are probably the ones most directly involved in directing program changes, were not included and may well have a very different viewpoint.

This study also *did not* explicitly address the ranking of universities or benchmarking, although the relationship of KPIs to these two performance measures is explored.

Outline of the Rest of the Chapters

This thesis consists of five chapters. In this chapter, I introduced this study, the background and nature of the problem to be studied, its purpose and the research questions that drive the study. Chapter Two reviews the relevant literature in relation to performance indicators in higher education. Chapter Three includes a detailed description of the research methodology, the universities included in this study, and details on the research design, data collection and analysis. Chapter Four presents the findings, analysis, and interpretation of the findings in relation to the literature reviewed, and Chapter Five concludes with

recommendations and suggestions for further research and practice based on the findings of

this study.

Terms and Definitions

Performance Funding

Performance funding ties specified state funding directly and tightly to the performance of public campuses on individual indicators. Performance funding focuses on the distribution phase of the budget process (Burke & Minassians, 2003, p. 3).

Performance Budgeting

Performance budgeting allows governors, legislators, and coordinating or system boards to consider campus achievement on performance indicators as one factor in determining allocations for public campuses. Performance budgeting concentrates on budget preparation and presentation, and often neglects, or even ignores, the distribution phase of budgeting (Burke & Minassians, 2003, p. 3).

Performance Reporting

Performance reporting represents a third approach to accountability for higher education *(in addition to performance funding and performance budgeting).* These periodic reports recount statewide and often the institutional results mostly of public higher education on priority indicators, similar to those found in performance funding and budgeting (Burke & Minassians, 2003, p. 3).

Pragmatic Worldview

Pragmatism provides a philosophical basis for research (Creswell, 2009, p. 10). Pragmatism is the philosophy or worldview which originates from

actions, situations, and consequences (Creswell, 2009, p. 231). Pragmatic

research seeks to address existing real world problems or challenges.

Pragmatism is not committed to any one system of philosophy or reality.

This applies to mixed-methods research in that inquirers draw liberally from

both quantitative and qualitative assumptions when they engage in their

research (Creswell, 2009, p. 10).

Effectiveness

In operations management, "effectiveness refers to achieving the intended goals"

(Stevenson & Hojati, 2007, p. 4).

Efficacy

Efficacy is defined as "the ability of something to produce the desired result"

(Barber, 2005). Efficacy is a measure of how valuable/valued a phenomenon is.

Task Force on University Accountability (also known as the Broadhurst Task Force)

Minister Richard Allen of the Ministry of Colleges and Universities established the

Task Force in 1991 and named Dr. William Broadhurst as the Chair. The mandate of

the Task Force was to develop recommendations for a comprehensive framework on

the accountability relationship between universities and the public in Ontario (MET,

1993).

Acronyms

AUCC – Association of Universities and Colleges of Canada

CCAF – Canadian Comprehensive Auditing Foundation

COU – Council of Ontario Universities

CSAO – Council of Senior Administrative Officers

CSRDE – Consortium for Student Retention Data Exchange

CUDO – Common University Data Ontario

CUPA – Council on University Planning and Analysis

KPIs – key performance indicators

MET – Ministry of Education and Training

MTCU – Ministry of Training, Colleges and Universities

MYAA – Multi-Year Accountability Agreement

OUSA – Ontario Undergraduate Student Alliance

PPIs – private proprietary institutions

QUFA – Queen's University Faculty Association

CHAPTER TWO: REVIEW OF THE LITERATURE

Scope of the Literature Reviewed

In this chapter, I review the literature relevant to the topic of interest, that is, the reporting of KPIs required of Ontario universities, starting with the historical background that led to the establishment of the Task Force on University Accountability, also known as the Broadhurst Task Force, by the Ontario government. Research studies and scholarly debate on the original intent of the KPIs, and the importance of relevant performance measures that address accountability issues are explored. What are the characteristics of these measures? What are the impacts? What alternatives have been tried and evaluated? How are the Ontario KPI measures related to quality assurance goals? And, finally, what has been the impact of these performance measures on the planning and performance of post-secondary institutions, especially universities?

Events prior to the Establishment of the Broadhurst Task Force Before 1991

Government grants have been a major source of revenue for Ontario universities since the 1960s, and the universities are accountable for the expenditures of these funds; accountable to their governing boards, faculty and students, government and the taxpayers. Since the 1960s, Ontario universities had been required to file externally audited financial reports to the government. Monahan (2004) observes that, based on the rules around eligibility for receipt of operating grants and capital funding, this accountability was fulfilled with these requirements. However, in the early 1980s the adequacy of those simple requirements was questioned by the provincial auditor. In spite of the new Audit Act (1978) which granted the provincial auditor wider authority to include the university sector under his

jurisdiction, the proposed "inspection audit" of Ontario universities in 1986 was not well-received. The Council of Universities of Ontario (COU) sought legal opinion on the scope of "inspection audit" under the Act. Some of the COU members even made an argument that the scope of the auditor's authority under the Act should be tested by the court (Monahan, 2004).

The legal opinion was received after the provincial auditor was slated to make a site visit to Trent University to conduct the "inspection audit" in May 1988. The legal opinion was that the audit could be conducted on financial records of universities, but not on records purely related to academic matters such as faculty appointments, promotions, tenure, sabbatical leave, and teaching loads. Not surprisingly, the auditor and the universities had different views in terms of the "academic matters" (Monahan, 2004).

In 1988, nationally, sustaining member partners of the Canadian Comprehensive Auditing Foundation (CCAF) held conferences to discuss the issues around the pressures to have managers be more broadly accountable for their organizations'/institutions' performance. In the context of the public sector, more and better information was increasingly demanded by the legislators, the media and the public (Canadian Comprehensive Auditing Foundation, 1988). A paper was then prepared for the members of the CCAF - *Accountability, Accounting and Audit – Responding to a Decade of Experience.* In this paper CCAF stated that:

> …in the early 1970s those who were doing the demanding (the federal
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> Parliament and the legislatures of several provinces) realized that they were
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> not getting the performance information they needed. They sensed an
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> accountability vacuum. They had choices to make: either they could ask

management to report on performance (the financial accountability model), or

they could have a third party (the auditor being a prime candidate) attempt to

fill the gap. (CCAF, 1988, p. 2)

While financial statements were a useful mechanism to explain how the money was

spent, other kinds of performance information were also required to fulfill a full range of

accountability information. In the context of educational institutions, universities were in a

privileged position in that provincial legislatures granted charters to each university for its

operation but they were accountable to their legislatures (CCAF, 1988). The CCAF paper

observed further that:

Usually there is little ministerial accountability or responsibility for their

operations – certainly far less than for other publicly funded institutions.

Perhaps for this reason, but no doubt for others as well, the history of

accountability reporting by universities (even in the area of financial

reporting) has been checkered. Over the last decade, and before, universities

have resisted the idea of reporting on their performance. The debate has often

been emotional. Universities have guarded their position vigorously and

tenaciously. As a result, there has been a general supposition that any attempt

to have universities report on effectiveness would come to naught. (CCAF,

1988, p. 7)

The CCAF paper also quoted a statement made by one of Canada's leading

educational experts - who was the head of one of the major institutions - that they (the

universities) had to, and wanted to, be more accountable; they needed defined indicators to

measure performance; and if they as managers did not do this, others would simply impose

these upon them (CCAF, 1988). The CCAF paper did not identify the expert who was quoted other than he/she was the head of a major higher education institution.

In spite of the assistance of a COU working party, the audit of Trent University did not go well. A number of critical remarks on Trent's practices were included in the 1988 auditor's report. These were in essence the following (Monahan, 2004):

- the financial settlement with the former president was only approved by the executive committee of the university's board but not the full board; and

- the Ministry overpaid the operating grants to Trent due to incorrect recording of "honours" as opposed to "pass" students - although the Ministry had permitted that these students be recorded as "honours"; proper records of the permission given by the Ministry were missing.

Two inspection audits were subsequently conducted at the University of Guelph and the University of Toronto in 1989 and 1990. Some minor errors were found in these two audits. The auditor requested permission to conduct "value-for-money" audits of the universities in the fall of 1990. The request was not supported by the Deputy Minister and his arguments were around the tradition of university autonomy; assurance of proper accountability; and non-compliance with the legislation. On the other hand, with a new government under the New Democratic Party in power at that time, there was pressure for increased accountability of the university from the ministry (Monahan, 2004).

In November 1988, the Report of the Task Force on University Accountability was prepared for the Council of Senior Administrative Officers (CSAO) of the Universities of Ontario, at the request of the Council of Chairmen of Ontario Universities. This report offered: guidance to governing boards on the development of practices to advance the

administrative and financial accountability of universities (Council of Senior Administrative

Officers, 1988, Prefatory Note).

The CSAO stated that Ontario universities were complex organizations which were

highly autonomous and played a critical role in the economic and social development of

Ontario. Because of this, university accountability was seen as highly important to the

community and also to the universities (CSAO, 1988). Because of the rapid expansion of the

mandate of Ontario universities, there was a growing interest in the issues surrounding

university accountability. The diminishing effectiveness of the volunteer governing board

members because of increasing managerial complexity, and the appropriateness of the

structure of governing boards' representation as the tool for public accountability to the

communities and to the universities created significant concerns (CSAO, 1988). Major

findings were included in the CSAO Report. The following observations are particularly

relevant to the involvement of the boards:

- Agenda of meetings: the administration prepares the agendas which are reviewed by
  the chairs, and the members of the boards do not usually take part in agenda planning.

- Academic planning: most boards do not take part in academic planning.

- Budget development: board members generally are not directly involved in
  budget development and most members are not informed of budget changes or
  variances through the year.

- Instruments: boards in general have less influence on the instruments used for
  strategic planning as they represent different constituencies and common
  purpose and commitment may be difficult to achieve effectively (CSAO,
  1988).

Furthermore, according to the Council of Senior Administrative Officers (1988), not all board members had a clear understanding of their roles and responsibilities. The Task Force recommended that a statement of essential board responsibilities be developed for each governing board. With a wider ranges of issues included in the statement, the recommended shift from operating practices to overseeing management practices and policies would be the critical change necessary to empower governing boards to better fulfill their public accountability mission (CSAO, 1988).

As stated in the Oxford White Paper on University Governance, accountability is the first and most fundamental principle of governance (Oxford, 2006). The boards are to ensure universities have appropriate accountability process to operate effectively. Knouse (1979) concludes that performance expectations and motivation of accountable behaviour should be enhanced by the acceptance of role expectations by both the superiors and coworkers, in this case the MTCU and the universities, and the boards and the universities' administrators.

Establishment of the Broadhurst Task Force - September 1991

Subsequent to the three inspection audits at Trent University, the University of Guelph and the University of Toronto in 1988-1990, the Ontario auditor concluded there was inadequate accountability for university funding (Guelph, 1992). The lack of a well-defined accountability relationship contributed to this conclusion (MET, 1992). In order to respond to growing concerns on how universities spent taxpayers' money, the Task Force on University Accountability was established by the Ministry of Colleges and Universities in September 1991. The Task Force was assigned to design a system that universities would use to explicitly demonstrate their accountability to the public in financial, academic, property and community matters (Guelph, 1992).

Relevant Themes Identified in the Literature Reviewed

The relevant themes and characteristics I identified in scholarly and research-based literature on the topics of world-class institutions, ranking systems, benchmarking, performance-based funding and how these relate to performance indicators such as the KPIs, are reviewed with respect to their influence on accountability of publicly funded institutions and more specifically, on the planning and performance of universities. And lastly, the relationship between accountability, quality, accreditation, and the Ontario KPI measures are discussed.

"World Class" Universities

Historically, KPIs have been associated with university ranking systems such as that the Maclean's rankings of Canadian universities. The KPI initiative *does not* claim explicitly to identify "world class" universities. Altbach (2004) observed that "Everyone wants a world-class university. The problem is that no one knows what a world-class university is, and no one has figured out how to get one" (p. 20). Most of the key characteristics of world-class universities stated in *The Challenge of Establishing World-Class Universities* are related closely to research, including an international reputation for its research; number of research stars and world leaders in their fields; identifying and building on its research strengths with a distinctive reputation and focus; generating innovative ideas and producing basic and applied research in abundance; producing groundbreaking research output recognized by peers and prizes; attracting a high proportion of postgraduate students, both taught and in research; operating within a global market, and being international in research-linked activities (Salmi, 2009). According to Salmi, with respect to indirectly research-related characteristics, a world-class university also has a sound financial base, a diversified source of income,

including research income, provides a high-quality and supportive research environment (e.g., high-quality buildings and facilities); and has a first-class management team with strategic vision and implementation plans. Other key characteristics include having an international reputation for its teaching; being recognized not only by other world-class universities, but also outside the world of higher education; attracting the most able students and producing the best graduates; being able to attract and retain the best staff; being able to recruit staff and students from an international market; attracting a high proportion of students from overseas; producing graduates who end up in positions of influence and/or power; making a big contribution to society and our times; and having the confidence to set its own agenda (Salmi, 2009).

Ranking

The KPIs are also not intended explicitly to imply the ranking of universities, although their reporting may encourage ranking. There are currently a few well-known national and international ranking publications (e.g., Maclean's University Rankings, U.S. News and World Report College Ranking, and the Times Higher Education Supplement) that purport to report performance measures. The methodology used with respect to research-intensiveness in these publications varies, and thus, the ranking of universities differs. A major controversy occurred concerning the ranking of world universities by the Times Higher Education Supplement (THES) in 2005 when Malaysia's top two universities slipped by almost 100 places compared to the previous year (Salmi, 2009). Equating these rankings with performance measures in relation to some global scale is problematic. Although these publications compare performance of institutions globally, the rankings do not purport to

define or measure "world-class," which reinforces Altbach's suggestion that the term "world-class" is a meaningless term.

Maclean's magazine instituted a ranking survey and publication on Canadian universities in 1991. The methodology has changed from originally using a single set of indicators for all universities, to the current use of three separated ranking groups – namely "medical doctoral," "comprehensive," and "primarily undergraduate." Issues of the integrity of the data, differentiation of mission and characteristics of universities, and differences among students in their preferences in the Maclean's ranking system jeopardize the accuracy and relevance of the rankings (Smith, 2000). For example, KPIs are not considered in the Maclean's University Rankings and the measures Maclean's uses are distinctively different from KPIs. While KPIs are not intended to have direct relationships with any ranking systems, parents and students in general take these rankings into account with respect to their choices of universities.

Benchmarking

> Benchmarking was developed in the early 1980s at the Xerox Corporation in response to increased competition and a rapidly declining market share. The strategy of benchmarking is important both conceptually and practically. It is being used for improving administrative processes as well as instructional models at colleges and universities, by examining processes and models at other schools and adapting their techniques and approaches. Benchmarking is an ongoing, systematic process for measuring and comparing the work processes of one organization to those of another by bringing an external focus to internal activities, functions, or operations. (Alstete, 1995, p. iii)

Benchmarking allows universities to learn, and continue to learn, best practices for improving their operations in the teaching in undergraduate or graduate programs, research, and university administration by examining processes and models at other schools and adapting their techniques and approaches (Alstete, 1995). Although benchmarking is not an explicit goal of the KPI process, the fact that the results are published by program and university on the MTCU website, may act as informal benchmarking in that one of the goals of the public reporting of KPIs by the universities is to enable informed decisions in the selection of programs and universities. The two KPIs of Graduation and Employment Rates are particularly susceptible to comparisons in that process.

A benchmark for each of the three indicators of graduate employment rate six months after graduation; graduate employment rate two years after graduation; and Graduation Rates was created by MTCU for calculating the distribution of funds to universities. The benchmark was set for the particular indicator at a certain percentage below the system average. Funding will not be awarded for institutions that are below the benchmark (MTCU, 2009). In 2000, performance-based funding was introduced for colleges and universities. The MTCU allocated $16.5 million to universities based on Graduation Rates, Employment Rates six months after graduation, and Employment Rates two years after graduation (MTCU, 2001).

Performance Indicators

The 1997-1999 *Collective Agreement between Queen's University Faculty Association (QUFA) and Queen's University at Kingston* included the following definition of performance indicators:

A performance indicator includes any parameter, measure or quantitative instrument intended or used for

- evaluating, measuring, ranking or comparing the performance, productivity or standards of an academic Unit, Program, Faculty, School, Institute, in whole or in part; and

- making decisions which affect the terms or conditions of employment for a faculty member of Queen's University. (QUFA, 1997, Article 26)

Gaither, Nedwek, and Neal (1994) observed that policy makers and the academic community were encouraged to explore the use of a system of indicators to raise warning signs about the efficiency and effectiveness of higher education. Funding is determined by outcomes, results and performance, which are seen as motivators in the United States. Performance indicators and quality assessment have become international issues, particularly in Europe and Australia, since the late 1970s. They serve as signals or guides for making national and international comparisons in educational quality, effectiveness and efficiency; they are important in improving management and as serving as points of reference against peers over time, or for measuring achievement against a desired goal. However, the ability to "measure the immeasurable" is in doubt, especially the validity of such measures being used to reward quality, leading to retrenchment in the Netherlands and the United Kingdom. Depending on the results desired, the role of performance indicators varies from a minor role as a supporting tool, to an expanded and crystallized role to measure results to satisfy the public appetite (Gaither et al., 1994).

Burke (1997) compared indicators of performance-funding programs in eight states in the United States. What made the comparison challenging was that their indicators differed

in number, content, and wording. Missouri had nine indicators while Colorado had 38.

Another source of confusion was variation in terminology. Burke (1997) constructed a

common core of indicators and raised a question as to whether the selected indicators

expressed the internal concerns of the academic community or the external concerns of state

policy makers. Six out of the eight states claimed that performance-funding programs sought

both external accountability and institutional improvement (i.e., a change institutional

behaviour). Burke concluded in the study that the performance funding indicators used in

> … most of the eight states obviously respond to external complaints about the
>
> quality and quantity of faculty teaching and student learning, the preoccupation
>
> with graduate studies and research and neglect of undergraduate education, the
>
> lack of priorities and productivity, the allowance of mission creep and program
>
> sprawl, and the swelling of administrative positions and support staff. (Burke,
>
> 1997, p. 19)

Lack of commonality in the choices of performance indicators among states was

discovered despite their response to common concerns. One of the recommendations that

Burke made was that state and university leaders should work together to develop a set of

indicators that reconciles quality and efficiency and responds to internal concerns of the

academic community and the external concerns of state policy makers (Burke, 1997).

McMillan and Datta (1998) claim that data envelopment analysis (DEA) is more

reliable than performance indicators in terms of comparisons. DEA includes output variables

such as number of graduate enrolments in different degree level programs, and total

sponsored research expenditures, and input variables such as total number of full-time faculty

members eligible for Tri-council or Canada Council grants (McMillan and Datta, 1998).

However, these were not included in the KPIs selected by the Ontario government.

Performance and Accountability

The literature suggests three reasons for the lack of effect on performance and the perception of a lack of accountability, despite so much reporting at the institutional, system, and state levels. The issues stated by Burke (2004) are:

1) lack of a list of common indicators for policy makers to measure down and up the performance chain and the performance reports at each level represent separate and segregated policies;

2) the concern that accountability programs seldom reach down to the academic departments that are highly responsible for the higher education results and tend to be invisible below the vice-presidential level; KPI reporting not just by institution, but also by program seeks to address this issue, and

3) lack of a public agenda collectively formed by the government, business and education leaders stating what their (state) needs most from the universities (Burke, 2004).

The Ontario KPIs seek to address the same issues in that the three KPI measures are applied consistently to all Ontario universities.

Performance Reporting

Burke and Minassians (2003) concluded that performance reporting was the preferred approach to accountability. Performance reporting "relies on information rather than funding or budgeting as a lever to encourage desired performance in public higher education and its

colleges and universities. But information is powerful only if it is used" (Burke & Minassians, 2003, p. 21). The findings showed that the state and campus policy makers did not use the performance reports extensively. It was yet to conclude whether performance reporting represents "real" accountability, that is goal and result-oriented (Burke & Minassians, 2003). The purpose of my study was to determine the extent to which key informants in participating Ontario universities think KPIs are useful for enhancing the performance of universities at the academic/program level.

In my literature review, I found only two studies that had addressed the topic of KPI's in Ontario; one (the McColm study), focused only on the colleges, and the second, by Callahan, focused on the government's motivation for imposing KPIs on the university sector, rather than the impact/effectiveness of the KPIs which is the focus of this study. The findings of these two studies are reviewed briefly.

McColm's Study on KPIs in the Ontario Colleges

McColm (2002) investigated the response of Ontario Colleges of Applied Arts and Technology to the implementation of performance indicators and performance funding in particular. The study stated that problems for performance funding in Ontario may be caused by the following weaknesses:

- the stakeholders' input in the development of the indicators and process was limited,

- the performance funding system does not adequately address the goals of improving higher education or increasing funding,

- the policy values articulated by performance funding do not support quality over efficiency,

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- the data costs are significant and

- there has been no additional funding to assist the colleges or the

  ministry with these additional costs (McColm, 2002, p. 211).

Callahan's Study on the Ontario Government's Motivation for Imposing KPIs

Callahan's study focused on the government's motivation for imposing performance

measures on universities and colleges for the period of the mid-1960's (when colleges were

established and the university system was expanded) to the end of the 1990's (when

accountability frameworks for post-secondary education were established). Callahan (2006)

found consistency in the perceptions of stakeholders and in public documents on government

goals for post-secondary education. On the other hand, the lack of clarity of government

goals and "those the current performance indicators appear to be measuring, caused

confusion and could result in inappropriate steering effects on the behaviour of colleges and

universities" (Callahan, 2006, p. iii).

Performance Indicators and Performance Funding in Canada

For the purposes of monitoring performance of post-secondary institutions,

performance indicators have been established in some provinces in Canada. Some provincial

governments also use these measures to tie funding with institutional performance (i.e.,

performance funding (OCUFA, 2006). Although implied, I found no direct discussion that

that KPI's to quality assurance goals in the Alberta, British Columbia or Saskatchewan. For

example, in Alberta "performance indicator-base system is designed to measure and reward

institutional progress towards system-wide goals of accessibility, responsiveness,

affordability and, for universities' research excellence" (Barnetson, 1999, p. 37).

Alberta.

Alberta was the first province in Canada to adopt performance funding in post-secondary education, starting in 1997. The purposes of the implementation of performance funding in Alberta were to increase institutional productivity and increase government influence. There were five common learning component indicators and four research component indicators in the Alberta plan (Boberg & Barnetson, 2000). A performance indicator-based system was created as a performance-based funding tool within its post-secondary education system. This tool was used as a measure to reward institutional progress towards system-wide goals of accessibility, responsiveness, affordability and research excellence (Barnetson, 1999).

The five common learning indicators are derived from the goals of responsiveness, accessibility, and affordability, and they are: Employment Rates of graduates; graduates' satisfaction with their educational experience; full-load equivalent (FLE) enrollment based on a three-year rolling average with adjustments between urban and rural institutions; administrative expenditures; and outside generated revenues (Boberg & Barnetson, 2000). Barnetson (1999) states that there are two factors which affect the employment-rate indicator that institutions have little or no control – the significantly fluctuation of general level of employment resulting from Alberta's resource-base economy, and graduates' attributes or activities (Barnetson, 1999). Although institutions can close programs in order to control these factors, this is not a politically sound alternative as there is a strong tradition and expectation that many programs are available in every region of Alberta (Barnetson, 1999).

The additional four research component indicators for research universities are: national granting council awards per full-time faculty member; ratio of citation in published

papers; community and industry-sponsored research per full-time faculty member; and total

sponsored research revenues generated as a proportion of government grants (Boberg &

Barnetson, 2000). They explain that "Citation Impact is the expressed ratio of citations to

published papers" (p. 7).

Performance funding is allocated based on the numeric score on an indicator (e.g.,

percentage of graduates employed) of each institution. Benchmarks are set as ranges which

divide performance corridors (e.g., 60-69%, 70-79%, 80-89%, > 89%). Institutions' scores

are based on the number of points set within the performance corridors. The total number of

points is tallied by the five learning-component indicators and performance funding is

rewarded according to the total number of points (Boberg & Barnetson, 2000).

Below are the tensions that transpire between productivity and accountability when

only one method is employed to increase productivity and government influence as identified

by Boberg and Barnetson (2000):

1) **Contradictory aims**: It is argued that an increase in productivity will result from

   the encouragement of self-evaluation because of resource scarcity within

   institutions and those performance indicators beyond institutional control

2) **Contradictory methods**: As opposed to increasing efficiency, institutional

   competition "creates long-term redundancy and waste expected of bureaucracies"

   (Boberg & Barnetson, 2000, p. 17).

The province of Alberta allocates about two percent of the operating grants to

universities and colleges as performance funding. Significant negative impact on institution's

operation can happen if the institution's priorities are not different from the government's

and/or its performance is not up to government's expectations on a targeted area (Ontario

Confederation of University Faculty Association, 2006). An example provided by the

Ontario Confederation of University Faculty Association (OCUFA) (2006) is that University

of Alberta underperformed in the enrolment area i.e. did not meet the province's enrolment

target in 1997. University of Alberta had to use 0.5 percent of its own budget to subsidize the

shortfall of performance funding envelope (OCUFA, 2006). The measures that Alberta uses

for performance funding (e.g., in tracking university graduate employment), are market-

oriented and outcome focused. Although useful in some aspects, the Alberta's use of KPI's

has limitations similar to those identified by participants in this study: inputs are not taken

into account such as institution's performance in other important areas, its local needs and

concerns, and its distinct mission and mandate (OCUFA, 2006).

British Columbia.

Unlike Alberta and Ontario, British Columbia's performance indicators in higher

education are not linked to funding. The Accountability Framework in British Columbia

(B.C.) was implemented in fiscal year 2003-04 (OCUFA, 2006). This Framework was

established as a set of planning and reporting processes for public higher education system

and the purposes are stated to be:

- to ensure individual public post-secondary institutions are accountable to the Ministry

  and the public for their performance related to ensuring students received quality

  educational opportunities relevant to their needs and the needs of the labour market;

  and

- to ensure the Ministry is accountable to the public for the performance of the public

  post-secondary education system in B.C., with the aim that it should benefit all

  residents of the province by ensuring the system's ongoing contribution to social and

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economic development. (British Columbia Ministry of Advanced Education,

Innovation and Technology, 2012, p. 4)

B.C. started with 19 performance indicators in 2003-04 (OCUFA, 2006). B.C. currently has 15 indicators which are derived from five strategic objectives – capacity, access, quality, relevance, and efficiency, and they are: student spaces, credentials awarded, number and percent of students who are Aboriginal, Aboriginal student spaces, student satisfaction with education, student assessment of the quality of instruction, student assessment of skill development, student assessment of the usefulness of knowledge and skills in performing job, unemployment rate, sponsored research funding, transition rate of high school students to public post-secondary education, student satisfaction with transfer, loan repayment as a percent of income, year to year retention rate, and participation rate. Institutions are required to collect and report the data of these 15 indicators to the Ministry (B.C. Ministry of Advanced Education, Innovation and Technology, 2012).

B.C. realized that performance measurement cannot be carried out by a cookie-cutter approach. B.C. government "asserts the interpretation of performance will require careful analysis and judgment of the different roles, mandates, strengths and challenges of each institution" (OCUFA, 2006, p. 10).

Saskatchewan.

The Saskatchewan government established an accountability framework document in 1996. Two universities (University of Saskatchewan and University of Regina) in Saskatchewan were involved in the development of this document. The document states that while re-affirming "the importance of university autonomy and academic freedom, ….the obligation of the universities to be accountable to the public for the nature, quality and

relevance of their programs and services and for the ways in which they use public funds"

was the key message (Saskatchewan Post-Secondary Education and Skills Training, 2001, p.

1). The government has the obligation to ensure the universities are aware of its 10 priorities,

they are: quality, accessibility of university programs and services, equity, meeting the

learning needs of society, research, service to the community, social and cultural

development, economic development, integration of technology in teaching and learning, and

international activities. In order to address these priorities, a joint effort between the

government and both universities was conducted (Saskatchewan Post-Secondary Education

and Skills Training, 2001). The two universities were allowed "to establish their own

strategic planning processes and their own institution-specific performance indicators"

(OCUFA, 2006, p. 10). Funding is not attached to the priorities or universities' performance

indicators (OCUFA, 2006).

Performance Indicators and Performance Funding in the United States

Performance funding in the U.S. was first implemented in 1979 (OCUFA, 2006).

Between 1979 and 2007, performance funding was enacted in 26 states. In 2007,

performance funding was still present in 14 states (Dougherty & Natow, 2009).

Tennessee.

As the first state to implement performance funding program in 1979, Tennessee's

Master Plan has been linked with the funding model (Dougherty, Natow, Hare, Jones, &

Vega, 2011; McKeown-Moak, 2013). Tennessee Commission on Higher Education and

representatives of the public colleges and universities developed the details of the program.

Although the state and the business community were not involved in the creation of the

program, their demands for greater accountability, for education reform, and for a system that

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build a highly qualified workforce were taken into account in the development of the program (Dougherty et al., 2011). Performance funding applied to Tennessee's two- and four-year public higher education institutions (Dougherty and Reddy, 2011).

Public institutions could be rewarded an additional funding of two per cent of their annual allocation from the state based on five performance indicators in 1980-81 based on a point system. These indicators were program accreditation, student major field performance, student general education performance, evaluation of instructional programs, and evaluation of academic programs by external (outside the state) peer review teams of scholars. Each of these indicators was worth 20 points (Dougherty and Reddy, 2011). In 2009-10, Tennessee had replaced four indicators by nine indicators which focused on student achievement such as degree attainment, time to degree, etc. and institutional improvement, and changed the weight of each indicator. Performance-based funding has been increased to 5.45% of the base state appropriation (Dougherty and Reddy, 2011; McKeown-Moak, 2013). Tennessee's performance funding level and performance indicators have changed considerably since the inception. Internally, these changes came from the pressure of the state higher education coordinating boards, and externally from the state governor (Dougherty et al., 2011). Tennessee is still retaining performance funding (McKeown-Moak, 2013).

Missouri.

Missouri's performance funding system (Funding for Results program) – was created in 1993 and began in fiscal year 1994 with a funding appropriation of $3 million to the performance of public four-year institutions. The funding appropriation increased to $4.3 million in fiscal year 1995 and further increased to $11 million in fiscal year 1999. The Funding for Results program is considered a carefully designed and likely to be a long lasting

system, and has attracted nationwide policymakers and analysts' attention (Dougherty et al., 2011). The Missouri performance funding system conforms to the best practice principles. These principles include clearly understood expectations for institutional performance at the outset; and different starting place for institutional performance measurement and benchmarks for success for different institutions, for instance (McKeown-Moak, 2013).

There were originally three indicators in the program and currently eight indicators which are freshman success rates, success of underrepresented groups, performance of graduates, successful transfer, quality of new undergraduate students, quality of new graduate students, quality of prospective teachers, and attainment of graduation goals (Dougherty et al., 2011).

Coordinating Board for Higher Education, state governors (from 1993 to 2000 – Democrat and Republican), and Democratic legislative leaders supported the Funding for Results program. Different perspectives from the higher education institutions on performance funding were seen – mildly supportive and decidedly negative. These three groups formed a coalition to advocate performance funding for the purposes of increasing state funds for higher education, and increasing higher education efficiency by reducing redundancy in the provision of higher education programs (Dougherty et al., 2011). The Coordinating Board also had a goal of improving the quality of higher education through the performance funding program. In addition, business had a high level of indirect influence and felt that additional funds should associate with greater accountability demand (Dougherty et al., 2011). Missouri is still retaining performance funding (McKeown-Moak, 2013).

South Carolina.

Performance funding was enacted in 1996 in South Carolina that 100 percent of the allocation of state funding to public higher education institutions be based on performance beginning in fiscal year 2000. Each public higher education institution is required to "create mission statements with clear goals, improve faculty quality by establishing post-tenure review for professors and expanded training, and foster better cooperation among the business community, public education, and higher education" (Dougherty et al., 2011, p. 45). The performance funding was allocated according to 37 indicators and they are "grouped into nine Critical Success Factors (in priority order): mission focus, quality of faculty, instructional quality, institutional cooperation and cooperation and collaboration, administrative efficiency, entrance requirements, graduates' achievements, user-friendliness of institution, and research funding" (Dougherty et al., 2011, p. 45). Commission on Higher Education decides the mechanism to measure performance after receiving institutions' submissions of their performance data (Dougherty et al., 2011).

There were coalitions of supporters and opponents to the performance funding in South Carolina. The coalition of supporters included the legislators and a segment of the business community. Although the governor was not part of the coalition, he was supportive to performance funding. The coalition's belief is that greater accountability was required to improve the ineffective and inefficient higher education during that time – capable graduates were not produced in higher education to meet the needs of the economy during that time. On the opponents' side, the primary coalition was the higher education community. They only opposed it privately. In the public they appeared to be supportive to performance funding which they felt that this was the only possible way to respond to "political pressure

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and the national attitude in favouring accountability" (Dougherty et al., 2011, p. 49). South Carolina abandoned its performance funding system seven years after inception (Dougherty et al., 2011).

Securing greater support from public higher education institutions was one of the factors that Dougherty et al. (2011) indentified to increase the likelihood of the enactment of performance funding. They concluded that a lack of support for the continuation of performance funding from the institutions contributed to the demise of performance funding system (Dougherty et al., 2011). Changes in funding levels and performance indicators should not be implemented suddenly and erratically. Periodic reviews should be conducted to allow institutions to anticipate changes. Extensive participation should be involved in the review process (Dougherty et al., 2011).

Quality Assurance in the European Higher Education Area (EHEA)

The Budapest-Vienna Declaration on the European Higher Education Area (March 12, 2010) re-affirmed the primary goal of the Bologna Declaration (1999) which was to enable students to benefit "from mobility with smooth and fair recognition of their qualifications, (so they) can find the best suited educational pathways" (European Higher Education Area, 2010, para.3). While quality assurance is mentioned in the Bologna documents, comparison of program Learning Outcomes at the undergraduate and graduate levels is the main focus, not KPIs as they exist in Ontario.

The European Association for Quality Assurance in Higher Education (ENQA) was created in 2000 to develop and implement standards, guidelines and processes, for quality assurance in higher education across the Bologna signatory countries (European Association of Quality Assurance in Higher Education, ENQA History,

http://www.enqa.eu/history.lasso). The purposes of the Standards and Guidelines are stated

by the ENQA to be:

> • to improve the education available to students in higher education institutions in the

EHEA;

> • to assist higher education institutions in managing and enhancing their quality and,
>
> thereby, to help to justify their institutional autonomy;
>
> • to form a background for quality assurance agencies in their work;
>
> • to make external quality assurance more transparent and simpler to understand for
>
> everybody involved. (p. 14)
>
> The Guidelines for Standard 1.6 (*Information systems*) include the expectation

that the quality assurance process of individual institutions will "at least cover":

> • student progression and success rates;
>
> • employability of graduates;
>
> • students' satisfaction with their programmes;
>
> • effectiveness of teachers;
>
> • profile of the student population;
>
> • learning resources available and their costs;
>
> • the institution's own key performance indicators. (ENQA, 2009, p. 19)

The first two indicators, student progression and success rates, and employability of

graduates are similar to the Ontario KPIs. There is no mention of student loan default rates.

 Furthermore, the criteria for quality assurance in the EHEA institutions encompass far more

than do those limited indicators.

Lang's Discussion of Performance Funding: past, present, and future

Lang (2013) commented that performance funding should be tied to quality, significance and influence – that is, "the difference that performance makes" (Lang, 2013, p. 15). He also added that the "one size fits all" homogenizing effect of performance indicators impaired the essence of performance funding. The incapability of the current performance indicators in measuring quality has led the commercial surveys and rankings of universities to substitute reputation for quality (Lang, 2013). In Ontario, the performance funding program tied with performance indicators has changed four times. Each university's total performance is not captured by the indicators, and other sources of funding for universities are significantly more than the current performance funding program, resulting in diminishing the reliability of performance measurement and influence of performance funding (Lang, 2013).

The Relationship between Quality, Accountability and Accreditation

When I began this literature review I wondered about the relationship between the Ontario's KPIs and program quality assurance goals and processes. The growing interest in the performance of higher education systems started with the expansion of higher education and the increase of funding to universities and colleges in the 1960s.

In the 1960s and 1970s, university accountability was established by requiring Ontario universities to file externally audited financial reports with the government in compliance with the rules around eligibility for receipt of operating grants and capital funding. In the early 1980's the provincial auditor questioned the adequacy of these simple requirements. Clark et al. (2009) point out that the practice of "quality" and "accountability" became part of the discussions among the stakeholders within the higher education systems.

These authors define accountability as "the broader of the two terms and could be viewed as including quality" (Clark et al., 2009, p. 113). Accreditation which is related to the practice of accountability and quality according to Clark et al., (2009) is well engrained in professional and para-professional programs, such as the health professions and accounting.

The discourse on quality in Canadian higher education began primarily by the university administrators who controlled the quality agenda in the late 1960s and 1970s. Clark et al. (2009, p. 114) state that "Quality first emerged as an important concern in Canadian higher education in the late 1960s and 1970s. The discourse on quality in those years was initiated by the university …administrators." They go on to explain there were three reasons and the first one was:

> university administrators anticipated that increased attempts by government to monitor and perhaps even control universities in the name of public accountability would inevitably follow the increased funding that government was providing. University administrators wanted to pre-empt government and thereby shape both the accountability discourse and the instruments of accountability in ways that protected the academic values that they held dear. By making quality the focus of attention, they were able to head off, for a few decades at least, moves to make universities more broadly accountable to agencies and groups outside the university and to control how quality was defined. (p. 114)

The second benefit was that the universities were able to make universities more broadly accountable to stakeholders external to the university and to control the definition of quality for a few decades by having quality as the main focus. They defined quality mainly

in relation to available resources and the associated indicators were faculty-student ratio, operating expenditures per student, library acquisitions, and capital expenditures.

The third reason for the universities to take the initiative on quality was protection from competition. This was to prevent other universities to lowering the cost of educating students (e.g., by offering more distance learning or hiring academic staff who did not do research in order to maintain an acceptable level of quality in accordance with their definition). It was argued historically that competition could possibly result in decrease of quality (Clark et al., 2009).

Government's involvement with respect to accountability and the interpretations of quality and the processes of quality assurance began in the 1990s (Clark et al., 2009). "Pressures arose for both a broader conceptualization of accountability and for the provision of information on university performance to the government and external stakeholders" (Clark et al., 2009, p. 115). During that time, the scope of the provincial auditor's authority over the publicly funded universities was questioned. The Broadhurst Task Force was established and took side of the provincial auditor. Performance measures were developed and these measures not only associated with quality but also related to outcomes (Clark et al., 2009).

Accreditation being the third concept related to the performance of post-secondary education institutions is highly interrelated with quality and accountability. Accreditation is a formal process and recognition of a post-secondary institution or program by a constituted agency which was developed more than a hundred years ago in the U.S. (Clark et al., 2009). Clark et al. (2009) claimed that "Quality is one of the major focuses of interest in most

accountability regimes, and is the main, and often the exclusive focus, of accreditation processes" (Clark et al., 2009, p. 117).

Verifying enrolment was Ontario government's main focus on accountability requirements for the universities until the mid-1990s. In addition to publishing audited financial reports, and universities were also required to publish institutional performance indicators which was beyond a university-controlled performance review process (only for graduate programs and none for undergraduate programs). Concerns were raised about these performance indicators. The variation among institutions was small in some indicators i.e. a small difference between two institutions can be relevant to a disproportionately large difference in funding linked with performance. The validity of some indicators due to problems of definition and measurement was another concern. The most important concern was that these indicators did not reflect institutional and government objectives for post-secondary education (Clark et al., 2009).

The Relationship between KPIs and Quality Assurance for Ontario Universities

It may well be that in some jurisdictions, performance indicators do measure quality, but that is not the case with the government's intention for Ontario KPI's. The Broadhurst Report proposed some performance indicators to measure overall quality of performance, such as distribution of entering grade average, acceptance or yield rate, research grants per professor, research yield, library resources in volumes acquired and total spending, per cent of faculty holding scholarly awards, per cent of students holding scholarly awards, and academic support. But, according to the MTCU, the KPIs are based on the following principles:

- overall government commitment to improve accountability for

  public investment in education;

- the Ministry of Education and Training Business Plan supports

  postsecondary institutions with the goal of providing excellent,

  relevant, accountable, and accessible postsecondary education;

- the availability of information about graduate rates, graduate

  employment rates and loan default rates for postsecondary

  programs will assist students in making their educational choices.

  (MTCU, 1999a)

It must be remembered that the motivation for the introduction of the

KPIs by the Harris government was primarily to enhance the economic goals of the province

by holding the universities (and the colleges) accountable for graduation and employment

rates. And, loan default rates might suggest failure of the publicly supported institutions to

enable their graduates to obtain gainfully employment. While it made sense for the colleges

whose mandate is vocational relevance, it was inconsistent from the onset with what the

universities traditionally perceive their mission/mandate to be.

The Ontario Universities Quality Assurance Framework (QAF) (Ontario Universities

Council on Quality Assurance, 2012) does not specifically mention KPIs. However, section

4.3.6 of the QAF (pp. 23-24, after criteria related to faculty and to students) identifies the

following as some of the criteria to be considered in the program review process.

c) **Graduates:** rates of graduation, employment six months and two years after

graduation, postgraduate study, "skills match" and alumni reports on program quality

when available and when permitted by the Freedom of Information and Protection of

Privacy Act (FIPPA). Auditors will be instructed that these items may not be available and applicable to all programs.

Similar to the focus of the Bologna initiative, the QAF focuses primarily on expected Learning Outcomes for programs at the undergraduate (UDLEs) and graduate level (GDLEs) as quality measures.

The Ontario Confederation of University Faculty Association (2006) observed that with the large number of performance indicators being used globally, most of these indicators do not reflect the breadth and depth of quality education. It is problematic to ensure the reliability of performance indicators (OCUFA, 2006). Higher Education Quality Council of Ontario (HEQCO) (2013) claimed that "Measuring performance in postsecondary education is a confounding endeavour. While opinions and anecdotes abound, strong and relevant measures elude, especially in the domain of quality" (Higher Education Quality Council of Ontario, 2013, p. 3).

Limitations of Literature Reviewed

Much of the relevant literature reviewed in this chapter is based mainly on publications from the United States and on the US system. With the exception of the two PhD studies identified above (McColm and Callahan), and an unpublished paper on performance funding (Lang), I found little research conducted in Ontario, or in Canada, other than Boberg and Barnetson (2000). This study addresses that gap in the literature.

Outline of the Rest of the Chapters

In this chapter, I provided a literature review of studies and articles in relation to performance indicators in higher education and a discussion of the distinction by the Ontario

government of KPIs as accountability measures rather than integral to quality assurance in

Ontario universities. Chapter Three includes a detailed description of the research

methodology, the universities included in this study, and details on the research design and

data collection and analysis. Chapter Four presents the findings of the study based on the

research questions. Chapter Five concludes the study with recommendations and suggestions

for further research and for program and institutional decision-making and policy

development.

CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY

The socio-economic context of the universities a decade after the introduction of the KPIs is very different from that at the time they were introduced. This exploratory descriptive study focused on the original intent of KPI requirement for Ontario universities, and the perceptions of key informants from the Task Force on University Accountability, from participating universities, and from the Ministry of Training Colleges and Universities regarding their current efficacy and effectiveness. This chapter describes the research design, and the methodology employed, including data collection, data analysis, methodological assumptions and limitations.

Research Design

The overall research question that drove this study was "What impact have the existing three key performance indicators (i.e., Graduation Rates, Employment Rates and OSAP Default Rates) had on Ontario universities over the past 10 years"? The specific research questions are identified in Chapter one. The perceptions of key informants at participating universities and an analysis of existing data in the reporting of KPIs over the years, provided a deeper understanding of the impact of the KPIs on the performance of these universities. A sequential mixed methods, exploratory descriptive design was the basis of this study.

Sequential mixed-methods exploratory design.

Consistent with the methodology described by Creswell (2009), the intent of this four-phase, sequential mixed method study was to collect data for analysis in order to answer the

respective research questions. Creswell describes the sequential mixed methods process as follows:

> Sequential mixed methods procedures are those in which the researcher seeks to elaborate on or expand on the findings of one method with another method. This may involve beginning with a qualitative interview for exploratory purposes and following up with a quantitative, survey method with a large sample so that the researcher can generalize results to a population. Alternatively, the study may begin with a qualitative method in which a theory or concept is tested, followed by a qualitative method involving detailed exploration with a few cases or individuals. (Creswell, 2009, p. 14)

This study began with document analysis and qualitative interviews, followed by a quantitative questionnaire survey and a final qualitative interview phase. The sequential mixed method is appropriate for this exploratory descriptive study as it permits an in-depth review of the history and current state of KPI's impact on Ontario universities. Because of the complexity of this topic of interest, exploration from a variety of perspectives provided a meaningful understanding of the topic under study. The advantage of the approach is that the design is straightforward, is easy to implement with clear steps and separate stages, and is easy to describe and to report. The main shortfall of this design is that the data collection with four distinct phases is very time-consuming.

In the **first phase,** the focus was document analysis and interviews with participants in the initial development of KPIs. In **phase two**, documents (generated by the Broadhurst Task Force, MTCU, COU and participating universities) reporting KPI performance were

analyzed and trends identified. In **phase three,** all of the English Language universities in

Ontario were invited to participate in a quantitative online questionnaire survey that was

based on the themes identified in the data collected from the first two phases. Themes

generated by this Questionnaire Survey were explored further in the **fourth phase**, which

consisted of interviews with consenting key informants from the universities in order to gain

a deeper understanding of the issues explored (Creswell, 2009). In addition, key informants

from the Ministry of Training, Colleges and Universities (MTCU) were interviewed to obtain

a comprehensive perspective on how KPI data were used in the Ministry.

Site Selection

Table 1 depicts the characteristics of the 20 English language universities in Ontario

from which the participants in this study came.

I sent an Information Letter (Appendix D) to the president of each of the 20 English

Language universities in Ontario (Table 1) asking them to refer my request for participation

in the study to the individual(s) who would be the most knowledgeable about the KPIs and

university performance measures in their institution. After several reminders (Appendix L),

11 presidents agreed to have their universities participate. Four universities declined the

formal invitations (in one case, the Research Ethics Office reported that their Provost's Office

disallowed its university's participation before the Research Ethics Office had even processed

the ethics application). Five universities did not respond at all, even after I had sent them two

or three reminders by email (Appendix L).

Table 1: The 20 Universities Who Were Invited to Participate

	Name of University	City/Location	Population of City in 2011 Census	Total Number of Enrolments in 2011	University Size	Maclean's Category
1	Algoma University	Sault Ste. Marie Northern Ontario	67,646	1,250	Small	Primarily Undergraduate
2	Brock University	St. Catharines Southern Ontario	309,319	18,200	Medium	Comprehensive
3	Carleton University	Ottawa Southern Ontario	933,596	26,700	Medium	Comprehensive
4	University of Guelph	Guelph Southern Ontario	122,362	26,950	Medium	Comprehensive
5	Lakehead University	Thunder Bay Northern Ontario	102,222	8,810	Small	Primarily Undergraduate
6	Laurentian University	Sudbury Northern Ontario	106,840	9,390	Small	Primarily Undergraduate
7	McMaster University	Hamilton Southern Ontario	670,580	29,030	Medium	Medical Doctoral
8	Nipissing University	North Bay Northern Ontario	53,515	6,440	Small	Primarily Undergraduate
9	Ontario College of Art and Design (OCAD) University	Toronto Southern Ontario	5,132,794	4,290	Small	Primarily Undergraduate
10	University of Ontario Institute of Technology	Oshawa Southern Ontario	290,937	8,390	Small	Primarily Undergraduate
11	University of Ottawa	Ottawa Southern Ontario	933,596	41,400	Large	Medical Doctoral
12	Queen's University	Kingston Southern Ontario	117,787	24,800	Medium	Medical Doctoral
13	Ryerson University	Toronto Southern Ontario	5,132,794	35,900	Large	Comprehensive
14	University of Toronto	Toronto Southern Ontario	5,132,794	90,490	Large	Medical Doctoral
15	Trent University	Peterborough Southern Ontario	80,660	7,940	Small	Primarily Undergraduate

16	University of Waterloo	Waterloo Southern Ontario	98,780	28,700	Medium	Comprehensive
17	University of Western Ontario	London Southern Ontario	366,191	34,680	Large	Medical Doctoral
18	Wilfrid Laurier University	Waterloo Southern Ontario	98,780	18,350	Medium	Comprehensive
19	University of Windsor	Windsor Southern Ontario	276,165	15,920	Medium	Comprehensive
20	York University	North York Southern Ontario	5,132,794	55,050	Large	Comprehensive

Source: 2011 Census, Population Centre (except Waterloo from Census Subdivisions), Statistics Canada
Source: Enrolment by University, 2011 preliminary full-time and part-time enrolment at AUCC member institutions (rounded to the nearest 10)
University size: Small < 10,000; Medium 10,001 to 30,000; Large > 30,000 based on Queen's university (http://www.queensu.ca/admission/uep/why/univfacts.html)
Location of universities (http://www.ontarioimmigration.ca/en/living/OI_HOW_LIVE_CITIES.html)
Source: Maclean's 2011 University Rankings – categories are as follows:
- Medical Doctoral (universities offer a broad range of PhD programs and have medical schools)
- Comprehensive (universities have a significant degree of research activity and a wide range of programs at the undergraduate and graduate levels, including professional degrees)
- Primarily Undergraduate (universities are largely focused on undergraduate education with relatively fewer graduate programs and graduate students)

Participant Selection

The Broadhurst Task Force informants were identified from the membership list of the published Broadhurst Report (MET, 1993, p. 90). The 19 members of the Task Force were affiliated with the Ministry of Education and Training, the Council of Ontario Universities, then Ontario Council of University Affairs, and 10 Ontario universities in addition to one external observer/consultant. Information letters (Appendix A) were sent to five of the original Task Force members (who were representatives of the various stakeholders and for whom I was able to locate current contact information), to invite them to participate in interviews. Three of the five responded and agreed to be interviewed. Invitation letters were originally sent by email to the two members who did not respond and the letters were sent again by mail four weeks later but no responses were received. The

three interviewees included a member appointed by the Ministry, a COU representative, and an observer/consultant of the Task Force.

An information letter (Appendix D) was also sent to the presidents of the universities to invite their institutions to participate in this study. They were requested to sign the consent form (Appendix E) if they were willing to have their universities participate in this study, and they were requested to identify key informant(s) - personnel who were involved in the areas of planning, budgeting, performance and mission in their institution and who would be able to complete the questionnaire. After receiving the confirmation of participation from the university presidents, an invitation letter (Appendix F) was sent to the key informant identified by each president. I had to send one reminder to one person, and two reminders to two others to request the signed consent forms after they were identified by their presidents. Since only 11 of the 20 universities agreed to participate in this study, rather than selecting a sample of university respondents for a follow-up interview to clarify/explore further the questionnaire responses as initially intended, each of the representatives from the participating universities was asked to participate in these follow-up interviews. Ten of the university informants who were invited to participate in the follow-up interviews were the same individuals who completed the online survey for their institution. One other person, who had not participated in the online survey, was selected by the President of his/her university for the interview. This meant that a total of 12 university informants participated in this study.

Description of Study Sites

Only eleven of the 20 English language universities participated in this study for a response rate of 55%. Based on the nature of the findings, I now speculate that a reason for

the disinterest in this study on KPIs by the nine other universities may be that KPI reporting is not an important issue for them – it is just another report they are required to do - and that the KPIs do not impact their institutional planning to any great extent.

Among the 11 participating universities, four are small universities, four are of medium sized, and three are large universities, compared with the sizes of all 20 universities - seven of which are small with enrolments of less than 10,000; eight are medium sized with enrolments between 10,001 and 30,000; and five are large universities with enrolments over 30,000 (Table 1, pp. 59-60). This means that at least half (50 to 60%) of each type of university by size was represented in the participating sample.

Of the 20 English language universities in Ontario, seven are primarily undergraduate, eight are comprehensive, and five are medical/doctoral based on Maclean's categorization (Table 1). Of the 11 participating universities, four (57%) were primarily undergraduate, five were comprehensive (63%), and two (40%) were medical/doctoral universities.

Table 2 depicts the profile of the universities and their representatives who participated in this study with respect to the universities' classifications by size, institutional category, and geographic location compared with that of all 20 universities. Based on these data, the universities and participants are well represented - especially for the on-line survey.

Table 2: Characteristics of Participating Universities Compared to Those of Ontario Universities

	11 Participating Universities in			7	Out of 11 Participating	Out of 20 Ontario
	All	On-line Survey	%	Interviewees	Universities	Universities
Universities by Size						
Small	7	4	57%	3	75%	43%
Medium	8	4	50%	3	75%	38%
Large	5	3	60%	1	33%	20%
	20	11		7		
Maclean's Category						
Primarily Undergraduate	7	4	57%	3	75%	43%
Comprehensive	8	5	63%	2	40%	25%
Medical Doctoral	5	2	40%	2	100%	40%
	20	11		7		
Location						
Northern Ontario	4	2	50%	2	100%	50%
Southern Ontario	16	9	56%	5	56%	31%
	20	11		7		

The MTCU informants were selected by the Minister of MTCU. An information letter was sent to the Minister (Appendix I) to invite him or his designates to participate. I made follow up phone calls to the Minister's Office about one and half months and three and half months after the information letter was sent with no response. About five and a half months after the information letter was sent, two officials from the Postsecondary Accountability Branch of the MTCU agreed to participate in an interview.

Data Collection

The quantitative and qualitative data collected from these multiple sources provided a triangulated perspective on the topic of interest. Creswell (2009) describes the importance of triangulation in the verification of data; that is, data are collected through multiple sources to provide a fuller understanding of the phenomenon explored. For example, in this study,

document analysis, questionnaire survey and interviews with several different sources and informants were used to gain a comprehensive perspective in response to the research questions.

As this was a sequential mixed-methods research study, the data were collected in four phases. The survey questions (Appendix G) were derived from the analysis of the data collected in the first two phases.

Phase I – **Historical Perspective**

Historical research was included since performance indicators in Ontario had been discussed before the inception of KPIs. For example, performance indicators in Ontario were a major part of the Broadhurst Report (*University Accountability: A Strengthened Framework, Report of the Task Force on University Accountability*, May 1993). The performance indicators included in the 1993 *Report of the Committee on Accountability, Performance Indicators, and Outcomes Assessment to the Minister's Task Force on University Accountability* were examined and analyzed. Documents reporting on the history of the development of the KPIs (such as the Broadhurst Report itself) were analyzed as well.

I also interviewed three members of the Broadhurst Task Force of the five that I was able to locate and who agreed to participate. The goal of these interviews and the historical document analysis was to gain a comprehensive understanding of the history of how the KPI initiative came into being in Ontario, including the goals/intent of the KPIs, alternatives explored, and challenges identified.

Phase II – Document Analysis

I conducted ongoing document analysis. I reviewed and analyzed mission statements and strategic plans of all Ontario universities, and MTCU policies related to KPIs to see how they were related to the KPI findings. Most of these documents were posted on publicly accessible web sites, and the rest were provided by MTCU staff. In addition, I also reviewed eight documents provided by MTCU, such as the Publication of Postsecondary Program Indicators (1999), and the Postsecondary Key Performance Indicators (2012) provided by MTCU.

I approached the official responsible for the database of the Graduation and Employment Rates, as well as OSAP Default Rates in the Ministry of Training, Colleges and Universities to seek permission to access these data for the period from 1998 to 2010. The purpose of my request was to facilitate trend analyses in plotting the scores by year in graph format using the System Level data. After considerable effort and over time, I was provided with these data by the person I interviewed at the MTCU.

Phase III – Questionnaire Survey

Eleven consenting key informant university participants responded to a primarily quantitative, online questionnaire survey that addressed the research questions. Themes and questions that I identified in the literature review and in the historical and document analysis were the basis of the specific questions that formed the survey. The Survey Wizard software located on a secure U of T server at OISE was used for the online survey. Survey participants were asked to respond to a series of statements on a four-point, forced choice response scale (ranging from strongly disagree to strongly agree).

Phase IV – Interviews

After completing the analysis of the data collected in the first three phases, I conducted interviews with key informants of participating universities to follow up on the themes and questions that emerged. The 11 questionnaire survey participants or his/her replacement were also invited to participate in a follow-up interview. Seven key informants from these eleven universities agreed and were interviewed. Six of these seven key informants had also participated in the questionnaire survey; the seventh person was an additional informant selected by the president of the university and had not participated in the survey. Appendix H presents the semi-structured interview guide.

An interview (Appendix K) was also conducted with two key informants in the MTCU to obtain a comprehensive perspective on how the data are used in the Ministry.

With the consent of the participants, all of the interviews were audio-recorded for transcription and analysis. After I transcribed the recorded interviews, the transcripts were sent to the participants for validation. Several participants made minor editorial changes in the transcripts, but no substantive content was revised or eliminated. With the participants' written consent, all interviews were audio-recorded and transcribed for analysis.

Table 3 identifies the data sources in relation to the Research Questions.

Table 3: Data Sources That Answer the Research Questions

RQ #	Research Question	Data Sources
1	What was the impact of the work of the Broadhurst Task Force on the initiation of KPIs and what were the KPIs intended to achieve?	Interview Guide for Broadhurst Task Force: Questions #1, 2, 3, 4, 5, 6a, 6b, 7, 9a, and 9b. Document: Broadhurst Report, 1993; Lang, 2013; Monahan, 2004; CCAF, 1988; CSAO, 1988; Guelph, 1992; MET, 1992; CUPA, 1993; MET, 1998a; MET, 1998b; MTCU, 1999a; MTCU, 1999b; MTCU, 1999c; MTCU, 2001; MTCU, 2009.
2	To what extent do each of the following key performance indicators impact institutional planning of participating Ontario universities, as perceived by key informants? a. Graduation Rates b. Employment Rates c. OSAP Loan Default Rates	Interview Guide for Broadhurst Task Force: Question #11d. Document: Mission statements and academic/strategic plans of all English universities in Ontario Interview Guide for MTCU: Question #2, 3, 4, and 9. Online Survey Questions # 1, 2, 3, 25-31, 34, 37d, 39 and 40. Post survey Interview of Key Informants: Questions #1, 5, 8, 11, 12, 14, 15, and 17.
3	For their own internal purposes, do universities use any other indicators? If they do, what are they, why and how are they different?	Online Survey Question #41.

| 4 | To what extent are KPI results used by universities in student recruitment, setting tuition fees for specific programs, or other purposes? | Student recruitment websites of all English language universities in Ontario

Interview Guide for Broadhurst Task Force: Questions #8, 11c and 11e.

Interview Guide for MTCU: Questions #7 and 8.

Online Survey Questions #4, 5, 6, 7, 8, 9, 10, 11, 12, 37 c, 37e, 42, 45, and 46.

Post survey Interview of Key Informants: Questions #1, 3, and 7. |
| 5 | To what extent are the key performance indicators perceived by participating key informants to be effective in improving the performance of universities at the institutional and program levels? That is, what is the impact of each of the KPIs, if any, on academic planning and delivery? | Interview Guide for Broadhurst Task Force: Question #11a and 11b.

COFO Financial Report of Ontario Universities 2011-12

Document: 1998-2010 data of the KPIs from MTCU.

Interview Guide for MTCU: Questions #1, 5, 12 and 13.

Online Survey Questions #13, 14, 15, 16, 17, 18, 35, 36, 37a, 37b and 38. Post survey Interview of Key Informants: Questions #1, 2, 6, 10, and 13. |
| 6 | To what extent has the introduction of the Multi-Year Accountability Agreement process changed the role and impact of the KPIs? | Document: MTCU, 2009

Interview Guide for MTCU: Questions #6, 10, and 11.

Online Survey Questions #19, 20, 33, and 47.

Post survey Interview of Key |

		Informants: Questions #9 and 16.
7	How appropriate are the three KPIs currently in place as measures of institutional performance and accountability? What other indicators might better serve all stakeholders?	Interview Guide for Broadhurst Task Force: Question #10 Document: MTCU, 2009. Online Survey Questions #21, 22, 23, 24, 32, 43, and 44. Post survey Interview of Key Informants: Questions #4a, 4b, and 17.

Establishing Credibility

Survey Questionnaire.

A pilot test for the content and face validity of the questionnaire was conducted with two informed persons who work in an Ontario university and have expertise in the impact of performance indicators on universities, but who were not participants in this survey questionnaire. No changes were recommended in either the content or in the wording and sequence of questions.

Interviews.

Since the interview data from members of the Broadhurst Task Force (Appendix C) were to be the initial basis of further exploration in subsequent interviews (Appendix H), the interview questions were open-ended and basically asked the members to discuss their lived experience on that committee. Pilot testing of the Broadhurst member interview guide was not appropriate since the questions were specifically open-ended to allow the respondents latitude in discussing their recollections without influence.

Data Analysis

The qualitative data were derived from the participants' responses to the open-ended questions (Creswell, 2009). These were subjected to deep and constant comparison content analysis to identify and compare themes that I identified related to the topic of interest. Constant comparison is a process in which data of emerging items are compared with established items (Creswell, 2009). Creswell states content analysis is a detailed examination of the contents in which patterns, categories, and themes can be identified. The data collected were analyzed by identifying similarities and differences to establish specific themes. The data sources to answer each of the research questions that drove this study are identified in Table 3.

In planning this exploratory, descriptive study I made the decision to use a four point response scale, rather than the 5-point Likert Scale with its neutral middle option. Ray (1990) suggests a balanced Likert scale that words 50 per cent of the statements in a scale pro-left (i.e., strongly disagree, and disagree) and 50 per cent pro-right (i.e., agree and strongly agree) will eliminate any systematic effect of acquiescence or conservatism. I did not want to encourage ambiguity in responses. The consent form clearly gave permission for respondents to decline to respond to any statements they did not wish to. It was reasonable then to assume that any respondent who did not have an opinion on the statement posed would have chosen to not respond. For these reasons, I chose to use a four point forced choice response scale.

Creswell (2009) points out that quantitative data are measurable/numerical response data that are analyzed through statistical procedures. Percentages were calculated for quantitative data collected (using SPSS) and distributions of responses depicted in tables.

Because of the small number of participants, the responses on the four-point scale have been collapsed into two categories: strongly disagree and disagree is the first, and agree and strongly agree is the second category.

Methodological Assumptions and Limitations

A major challenge encountered was that of locating the members of the Broadhurst Task Force for the historical perspective to identify the original intent of KPIs as proposed by the Task Force. A methodological limitation is the fact that much of the historical data collected was based on recall of past activities and these may not exactly reflect things as they actually occurred. This is especially true for the interviews with members of the Broadhurst Task Force given that it met some two decades ago. However, things that they did recall must have been important issues if they are remembered so clearly so many years later. Furthermore, since the participants in the survey and interviews had nothing to gain or lose, it is reasonable to assume that their responses were as they actually perceived or remembered them to be.

Furthermore, this study involved a voluntary sample (n=11; 55%) of English language universities in Ontario and the findings cannot be generalized to the other English language universities, nor to the francophone university in Ontario, or to other universities in the rest of Canada or elsewhere.

Ethical Issues/Considerations

Ethics review approval was obtained from the University of Toronto Research Ethics Board, and that of the Research Ethics Boards in each of the universities who agreed to participate before any data collection involving human participants was begun. I encountered

minor challenges and delays from the Research Ethics Board of only one participating

university and these were resolved in time after I sent numerous reminders.

Potential participants were assured that participation in this study was completely

voluntary and that neither they nor their universities would be identifiable in any reporting of

the findings. However, there was a slight chance that, because of their key roles within the

universities, participants might be identifiable by some who know the universities well,

therefore potential participants were informed of this eventuality in the consent form. The

interviewees were informed that no value judgments would be placed on their responses.

All participants were informed they were free to decline to answer any questions they

did not wish to answer or withdraw from the study at anytime without explanation or

consequence of any kind. If they chose to withdraw, all data collected at that point would be

destroyed and not included in the study findings. Participants in the online survey were

informed that they were free to withdraw only until they submitted their completed survey;

because the surveys were anonymous, it was not possible to delete data once the

questionnaires were submitted. None of the participants who consented to participate in the

study withdrew from the study.

No compensation was offered to any participants because the study was directly

related to their professional responsibilities and the time and effort requested of them were

not onerous.

At the beginning of each interview, I asked each of the 12 interviewees (three

Broadhurst Task Force members, seven universities' key informants, and two officials at

MTCU in the same interview) to confirm that they agreed to the audio-recording of the

interview. All the interviews with the Broadhurst Task Force members and universities' key

informants were conducted on a one-on-one basis. At their request, one interview was conducted with two officials at MTCU. Audio-recorded interviewees were assigned non-identifiable codes; the list linking the names of participants with the assigned codes was kept separate, secure, and accessible only to me.

All data collected were kept secure and confidential, accessible only to my thesis supervisor and me. Digital data were encrypted in accordance with the University of Toronto encryption policy. The risk level of participating in this study was considered to be no more than that encountered in everyday life. There were no known or anticipated risks to the participants.

Outline of the Rest of the Chapters

In this chapter, I provided a detailed description of the research design and methodology, the universities included for this study, and details on the collection and analysis of both the quantitative and qualitative data. Chapter Four presents the findings of the study with respect to the research questions that drove this study, and their interpretation based on the literature reviewed. Chapter Five concludes the study with implications, recommendations and suggestions for further research and for program and institutional decision-making and policy development.

CHAPTER FOUR: RESEARCH FINDINGS

This chapter reports the study findings from the four phases of data collection – (1) Historical Perspective, (2) Document Analysis, (3) Questionnaire Survey and (4) Follow-up Interviews with respect to the research questions that drove this study (see Chapter 1, p. 11).

Description of Participants

Of the total 17 individuals who participated in this study, three were from the Broadhurst Task Force, 12 were from the universities, and two were from the MTCU.

Broadhurst Task Force participants.

The three members of the Broadhurst Task Force who were interviewed included a member appointed by the Ministry, a COU representative and an observer/consultant of the Task Force. They are named Members A, B, and C in the reporting of the findings.

University participants in the questionnaire survey.

The university participants were designated by the presidents of their respective universities and identified as individuals who had an active role in their university's institutional planning. They are senior officials such as Manager, Associate Director, Director, or Assistant Provost, of their Institutional Planning Offices or equivalent. Four (36%) of the 11 are female and seven (64%) are male. After sending two or three reminders to several potential participants, all of the 11 participants identified by their presidents completed the online questionnaire.

Of the 11 online survey participants four (57%) were from small universities, four (50%) from medium universities, and three (60%) from large universities. Two out of four

(50%) of the universities represented by those who completed the on-line survey were located in northern Ontario, and nine out of 16 (56%) were located in southern Ontario. Medical-doctoral universities were the least represented at 40% and comprehensive and large institution the most represented at 60% and 63% in the on-line survey respectively.

All of the university respondents agreed or strongly agreed that they fully understood how the KPIs are *calculated*, and agreed (but not as strongly) that they fully understood the *intended impact* of the three KPIs. The university participants in the on-line survey are named U-A to U-K in the reporting of the findings.

University participants in the follow-up interviews.

Of the 11 university participants invited, only seven consented to be interviewed (i.e., 64 percent of the 11 and 35 percent of the total number of universities). Representativeness by interviewees' universities is much lower than in the on-line survey, with large institutions least represented at 20% and northern universities most represented at 50% (Table 3).

Six of the seven interviewees had also completed the online survey; one of the interviewees had not. At the request of their university that one individual participated in the interview instead of the person who had completed the on-line questionnaire. These participants are named KI-A to KI-G in the reporting of the findings.

MTCU participants interviewed.

Two officials from the Post-secondary Accountability Branch of the MTCU who had first-hand knowledge of the KPIs participated in one interview. The two officials were interviewed together at the request of the initial interviewee who brought his/her staff into the discussion. They are identified as TCU-A and TCU-B.

Reporting of the Findings

       The findings are presented in response to the research questions that drove this study, as they related to the themes identified in the literature, and according to the four phases used. The sources of data that answered each of the research questions are identified in Table 3 in Chapter 3 (pp. 67-69).

Research Question #1: What was the impact of the work of the Broadhurst Task Force on the initiation of KPIs and what were the KPIs intended to achieve?

       The findings that were identified in the document analysis are described first, followed by the findings from the interviews with members of the original Broadhurst Task Force.

a) Document Analysis

       Analysis of the source documents listed in Table 3 provided the historical perspective reported as described below:

       June 1992: Broadhurst Task Force Progress Report and Issues Paper.

       A progress report was submitted by the Broadhurst Task Force in June 1992. The intent of this report was to reflect the issues considered by the members and to stimulate discussion and elicit responses from those who were interested in the university sector accountability issues (MET, 1992). The following quotes from the Provincial Auditor are included in this report:

       The enabling Acts for universities place responsibility for the government,

       conduct, management and control of universities with their governing bodies.

To whom these governing bodies are accountable is an issue that remains in limbo.

Although the Ministry of Education and Training provides the majority of funds to the universities, which might suggest the universities should report to the Ministry, the Ministry maintains that it lacks the legislative authority to establish such a relationship. Instead, the Ministry believes that the governing bodies are accountable directly to the public. (MET, 1992)

While acknowledging that the Ministry had encouraged the universities to report publicly on their performance and stewardship of public funds, the Auditor stated that "No meaningful reporting has yet been forthcoming" (MET, 1992, p. 6).

The main issues that the Task Force had identified were well beyond finance and management concerns. The main issues identified were in the areas of: finances; academic affairs – admission and graduation standards, curriculum, teaching, learning and research, terms and conditions of appointment, institutional governance; human resources; management of physical assets, and community relations.

Despite recognizing the key role of governing boards in improving university accountability, the Task Force did not think having only the governing body accountable was sufficient. The June 1992 Progress Report included the Task Force's recommendation that an independent monitoring agency be established to report on measuring the performance of the universities against their mission statements, operational plans, and processes; and also against government policies and regulations, and other relevant measures of accountability (MET, 1992).

September 1992: Establishment of the Committee on Accountability,

Performance Indicators, and Outcomes Assessment.

Although the establishment of an independent monitoring agency never materialized,

in September 1992, the Chair of the Broadhurst Task Force requested the CUPA Committee

on Accountability, Performance Indicators, and Outcomes Assessment to advise the Task

Force on management indicators that could be used to strengthen the capability of boards to

hold their universities accountable (CUPA, 1993). The Broadhurst Task Force requested the

CUPA to come up with "an array of objective measures and expressions of institutional

performance and outcomes" (MET, 1993, Appendix A).   It was viewed that:

> The combination of management indicators designed for local use and the
>
> empowerment of boards of governors to take charge of accountability is an
>
> excellent match of means and ends. (CUPA, 1993, p. 1)

The CUPA Committee asked questions related to relevance, reliability, accessibility,

and clarity in the process of developing each indicator. The Committee also took into

consideration that the indicators should reliably inform the boards about "the state of the

university." The indicators were identified and constructed according to: responsiveness,

quality, performance, management and allocation of resources, mission statement, and

transparency (CUPA, 1993, p. 2).

Table 4 lists the 25 indicators recommended by the CUPA Committee on

Accountability, Performance Indicators and Outcomes Assessment to the Minister's Task

Force on University Accountability (Broadhurst Task Force). Depending on the mission and

goals of individual universities, the boards were to select the indicators that would be suitable

Table 4: Indicators Recommended by the Committee on Accountability, Performance Indicators and Outcomes Assessment to the Minister's Task Force on University Accountability

	Indicator	Responsive-ness	Quality	Perform-ance	Resour-ces	Mission
1	Distribution of entering grade average	X	X			X
2	Acceptance or yield rate		X		X	
3	Research grants per professor		X	X		
4	Research yield		X	X		
5	Research grants as a % of revenue*			X		X
6	Research contracts as a % of revenue*			X		X
7	Tenured faculty a. faculty holding tenure b. eligible faculty receiving tenure				X X	
8	Library resources a. volumes acquired b. volumes held c. total spending		X X		X X	
9	Per cent of international students	X			X	X
10	Per cent of faculty holding scholarly awards		X			
11	Per cent of students holding scholarly awards		X			
12	Per cent of living alumni making gifts				X	
13	Student retention a. quality b. institutional or program performance* c. management and allocation of resources*	X X		X		X
14	Space allocation				X	
15	Space utilization a. classrooms b. teaching laboratories				X	
16	Courses scheduled/courses offered*				X	
17	Time to graduation*	X		X		
18	Per cent of faculty with doctorate	X				
19	Educational technology	X				
20	Academic support		X		X	
21	F-T/P-T instruction				X	
22	Academic staff on research leave				X	
23	Instructional load a. teacher: student ratio* b. student contact hours* c. graduate thesis supervision*				X X X	

	d. class size				X	
24	Allocation of resources				X	X
25	Curricular articulation with CAAT's	X			X	

*output measures
X: marked as relevance to each indicator

for measuring performance of their universities. Furthermore, these indicators were not to be used for comparison or ranking purposes (CUPA, 1993).

February 1998: Announcement of the implementation of KPIs.

In February 1998, a memorandum was sent from the Assistant Deputy Minister of the Ministry of Education and Training (MET) to the Executive Heads of Provincially-assisted universities, the Presidents of Colleges of Applied Arts and Technology, and the Presidents of Private Vocational Schools regarding changes to the OSAP for 1998-99 and announcing that post-secondary institutions would be required to provide students with information on Graduation Rates, Employment Rates, and OSAP Default Rates (MET, 1998). The two goals and proposed measures that MTCU included in its 1998-1999 Business Plan were:

> 1) a post-secondary education system that offers high-quality programs of
> instruction, which for universities (would) be measured by graduate outcomes
> (Employment Rates) and by student graduation rates (success in completing
> their programs). The Ministry committed to maintaining the highest ranking
> in Canada for full-time employment of university graduates and to improving
> its third place ranking for the proportion of university graduates employed
> either full or part-time, and

2) a post-secondary education system that (was) accessible to students in need

of financial support yet ensures that students fulfill their obligations to repay

loans, to be measured by the proportion of the population aged 18-24 years

who were receiving post-secondary education (the participation rate) and by

student loan default rates. The Ministry wishe(d) to maintain the post-

secondary participation rate at 34% subject to changes in the labour market,

and to reduce the loan default rate from over 20% to 10% within five years.

(MTCU, 1999c, p. 221)

MTCU started to publish Loan Default Rates for all universities and colleges in

December 1998 (MTCU, 1999a). And, since 1999, the universities have been required to

publish their Graduation and Employment Rates. The goal of the government of this

requirement was to assist students and their parents in making informed choices based on the

assessment of the performance of individual universities.

1999: Issues and Recommendations by the Provincial Auditor.

In the 1999 Annual Report prepared by the Office of the Provincial Auditor (OPA),

the Auditor commented that while the Graduation and Employment Rates were important

statistics for outcome measurement, assessing performance of programs required more

information. The following arguments were made as the basis of this recommendation:

1) Graduation Rates – differences in the calibre of students that universities attract

   were not accounted for; and

2) Employment Rates – local and general labour market conditions could

   significantly influence the results. (MTCU, 1999c)

The Provincial Auditor also noted that there were no available data for monitoring performance of universities that would mitigate students' financial burden while achieving their educational objectives. Besides monitoring universities' efforts to meet changes in demand and to deliver programs that reduced students' financial burden, and obtaining required information for forecasting capacity and spending requirements, the Auditor recommended that indicators be developed to measure the extent to which the accessibility objectives of university programs were achieved (MTCU, 1999c).

The Provincial Auditor was concerned that the universities he had visited were unable to relate resources to outputs. In other words, whether the universities were operating economically or efficiently could not be determined. The Auditor recommended that measurable objectives and appropriate indicators of the economy be developed to evaluate operational efficiency and effectiveness (MTCU, 1999c).

2000: Establishment of Performance Funding.

The Provincial Auditor also raised the point that there was no financial reward for program performance, (i.e., there was no difference in the level of grant and tuition revenue based on world-class/excellence of programs). The Auditor recommended that MTCU establish funding approaches to reward institutions on their achievement of MTCU's objectives (MTCU, 1999c).

In 2000, performance-based funding was introduced for colleges and universities. The MTCU allocated $16.5 million to universities based on Graduation Rates, Employment Rates six months and two years after graduation (MTCU, 2001). Table 5 shows the funding allocation based on these three indicators from fiscal years 2000-01 to 2012-13 (MTCU, 2009 and Council of Ontario Finance Officers, 2013).

Table 5: Performance Fund Allocation to Ontario Universities and University-Related Institutions by the Ontario Government (2000-2013)

Year	Total ($)
2000-01	16,500,000
2001-02	23,160,000
2002-03	23,160,000
2003-04	23,160,000
2004-05	23,160,000
2005-06	23,160,000
2006-07	23,160,000
2007-08	23,276,704
2008-09	23,280,368
2009-10	23,280,368
2010-11	23,280,373
2011-12	23,280,363
2012-13	23,280,368

Source: The Ontario Operating Funds Distribution Manual – A Manual Governing the Distribution of Ontario Government Operating Grants to Ontario Universities and University-Related Institutions (Formula Manual), 2009-10 Fiscal Year by Post-secondary Finance & Information Management Branch, MTCU, 2009.
Council of Ontario Finance Officers (COFO). (2013) Financial Report of Ontario Universities 2009-10 to 2012-13. http://couprod.tgtsolutions.com:94/static-reports.aspx

In Lang's paper on *Performance Funding: Past, Present, and Future*, (2013) he summarized the intended purposes of KPIs in four stages that presented an "evolution of ends but not means" (p. 7) in that although the purposes for the KPIs changed, the indicators themselves did not. Lang pointed out that:

i)   (Initially) the primary purpose was to provide parents and students with public

information for making informed decisions in selecting programs and institutions.

ii) As the KPIs are public information, the results could be easily ranked and compared. However, the benchmarks were not clear (i.e., what would be an acceptable rate in certain programs when comparing the data of the universities? Did all the universities perform well or underperform? Without knowing the standard, the performance indicators would not be a useful public information tool for the parents and students.

iii) As the purposes of informing students and parents as consumers or setting standards were of minimal effectiveness, the KPIs were used for the purpose of allocating a portion (2%) of annual operating funding. The indicators did not change in spite of the change in their purpose. It was a type of "carrots and sticks" strategy (p. 6).

iv) Without interfering with institutional autonomy, KPIs could serve to "influence institutional behaviour without direct government intervention." Attaching the funding formula to the indicators might do "more to influence institutional behaviour than to measure institutional behaviour" (p. 7). At the same time, compliance with government policies in cost efficiencies, the cost of student loan defaults, and satisfying labour market demand might be promoted (Lang, 2013).

b) Interviews with Members of the Broadhurst Task Force

After the historical document review, the goals of the Task Force do not seem to be consistent with the intent of the government's establishment of the KPIs. The three KPIs were not included in the list of 25 indicators listed in the Broadhurst Report. Performance funding was not mentioned in the Broadhurst Report. The interview questions with the members of the Broadhurst Task Force were developed based on the findings from the historical document analysis (Appendix C).

With respect to the interviewees' membership and extent of their involvement in the Task Force: one was appointed by the Ministry, one was a representative of COU, and the third one was an observer/consultant of the Broadhurst Task Force. One of the interviewees only answered Questions 1 to 4 of the 11 interview questions (Appendix C) as he/she was not involved after the Broadhurst report was published.

All three of the interviewees agreed that the main challenges/issues/questions that dominated the discussions of the Task Force related to university governance; the specific topics identified in this discussion are summarized as follows:

(i) Governing body and its roles: The initial challenge faced by the Task Force was to verify that the universities were run by their Boards and not the Academic Councils. The Task Force members eventually agreed that the responsibility for the university in both bicameral and unicameral governance structures rested with the Board of Governors. Member B mentioned that "not all boards understood their main responsibility to accountability," and "several saw their roles as public relations and fund-raising." This member also mentioned that "one board chair, for example, claimed to have never seen the university's budget - and this explains a lot about the interest in performance indicators - many board (members) either received no or not enough information to perform their role in accountability."

(ii) Shared governance: The government at the time wanted to increase the "democratization" of governance (i.e., to increase faculty and student presence on the university Boards and to require minimum representation in each group). The Task Force was given the responsibility to "come up with something that made sense in terms of the roles of the boards and governors versus what the senate would have" (Member C). This informant

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also mentioned that "the real challenge was to be able to meet the agendas of various people (who) brought some strong views to the table."

(iii) **Monitoring function**: Most Ontario universities had appropriate policies in place, but the monitoring function by the governing body was often insufficient, according to Member A. The three members interviewed agreed that improving and ensuring institutional accountability was one of the most important goals of the Task Force. The Minister of Education and Training at the time wanted the Task Force to conduct the study at the institutional and not at the system level. The expectation was that each university should have a written mission statement and effective means for assessing progress in achieving its mission (Member A). When asked to what extent those initial goals were realized, Member B replied that since the Broadhurst Report was published, the profile of board accountability has been higher and clearer, and a number of boards have initiated reforms such as changing the mechanism of appointing their board members and making meetings more accessible.

With respect to the impact of the Broadhurst Task Force in the establishment of KPIs, Member B clarified that although the term KPI came from the Broadhurst Report, "what the government finally called a KPI is quite different from what the Task Force intended." Member B continued, "The (government's) goal was to improve and ensure institutional accountability; although the government may appear to have accepted and acted on the report of the Committee on Accountability, Performance Indicators, and Outcomes Assessment, I do not think it really did. It missed the basic arguments."

Members A and C both felt that the Task Force's goals of improving and ensuring institutional accountability with respect to the reform of governing bodies have been achieved by a number of bodies. The interviewees felt that the big and permanent difference

that the Broadhurst Report made was that university managers started to provide more information to their boards on a regular basis.

With respect to which goals, if any, the informants felt were not achieved, Member C responded that the creation of an external monitoring body has never been implemented. "The recommendations (of the Task Force) are quite intrusive into what the expectations are for governing bodies and so there's never been any follow-up," explained Member C. It is interesting to note that the current three KPIs required of Ontario universities (i.e., Graduation Rates, Employment Rates and OSAP loan Default Rates) were *not* included on the list of 25 indicators recommended in the 1994 CUPA Report of the Committee on Accountability, Performance Indicators, and Outcomes Assessment to the Minister's Task Force on University Accountability. However, Member B pointed out that Indicators #13 (Student Retention: quality; institutional or program performance; and management and allocation of resources) and #17 (Time to graduation) in the Broadhurst Report are related to graduation rate. Default Rates and Employment Rates were discussed by the Committee on Accountability, Performance Indicators and Outcomes Assessment. However, there were no sources of data to support these indicators at that time, explained Member B, which is why they were not included in recommendations of the Task Force. He/she explained, "I made a submission to Statistics Canada and travelled to Ottawa to see what relevant data StatsCan could make available. Nothing was practically possible." Member B added that the KPIs as now understood were not in place at the time of the Task Force's deliberations. They followed six years later, and were fully (implemented) seven years later. While the Task Force referred to performance indicators, it never used the word 'key.' The closest the report of Committee on Accountability, Performance Indicators, and Outcomes Assessment came to

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the notion of "key" was that it called for indicators in a minimum and specified list of areas of institutional activity. But none of the areas had to have a specific indicator. With respect to the criteria used in selecting the current three KPIs, Member C explained:

> …my recollection is that there would be something that was being measured and data were already being collected. Secondly, it had to be outcomes that the conservative government was really concerned about, and so certainly employment outcomes and graduation rates were there. I think the third part was some symmetry with the colleges and, there was a tendency in that time period and it continues, (to) "do the same thing on either side.' The fourth part was that we wanted to keep it narrow because we were concerned about where this would all end up. So there was concern about making it too broad at the beginning. As it turned out, it was a financial thing as well.

To summarize, Member C's recollection was that the criteria used for the KPIs: 1) they were to be measurable and include data that were already being collected; 2) they had to be outcomes that the Conservative Government was concerned about such as employment and graduation rates; 3) they had to be aligned with the KPIs required of the colleges; 4) they had to be narrow and not too broad; and 5) they had to address financial concerns as well.

According to Member B, these decisions were made by the Government based on the advice of two advisory committees to the government - one for colleges and one for universities. These two advisory committees started with a report on performance indicators by COU, and the COU report was based on the report of the Committee on Accountability, Performance Indicators and Outcomes Assessment. The advisory committees' work was intended to produce definitions and data collection as opposed to selection of indicators.

Calculation of Graduation Rates from Year One or Year Two was discussed extensively (Member B). The advisory committee on the universities' side was called the COU-MET Joint Steering Committee (MTCU, 1999a). Its roles were to oversee the development of the methodology, the collection, presentation and publication of data of the three KPIs, and also to determine future improvements (MET, 1998).

With respect to what the current KPIs accomplish compared with what the Task Force and the government intended at that time, Member B claimed that the Task Force's intention was to provide university governors with more access to information regarding performance of their respective universities while the government's intention was to have information available to students (and parents) to make informed decisions in marketing choices among institutions and programs. The advisory committees emphasized that "either different KPIs or the same KPIs with different definitions would be needed if the KPIs were used for purposes other than to inform students," said Member B.

There was no recommendation in the Broadhurst Report to tie funding to KPI performance or accountability, and the government insisted at that time that KPIs would not be used to allocate funding. Member B felt that "the idea (of KPIs) was mainly a political ideology and that the market would enforce accountability." Member B also raised a very interesting point:

> In having a KPI for student loan default, the government was deliberately
> putting accountability pressure on private proprietary institutions (PPIs). The
> PPIs are not eligible for public funding but their students are eligible for
> OSAP. In the period immediately prior to the introduction of the KPIs, the
> government had been embarrassed by the abrupt closure of some PPIs after

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they had collected tuition fees from students who had been given OSAP loans.

In meetings with the advisory committees, government staff explained that the

default rate KPI was really only for the PPIs; there was no concern about

universities but none of that could be said publicly, so the KPI applied to all.

As shown in Table 6, the OSAP Default Rates have decreased over time in all three

sectors; that is, the colleges, universities, and the PPIs. None of the participants were able to

explain why.

Member C stated that the intention of the Broadhurst Task Force was to have

measurable outcomes of the university education service. With respect to the employment

rate, Member C explained, "to the government at the time, employment was really important

and getting people through was important as well; also the universities were seen as lagging

behind the health sector and other sectors in terms of measurement." But, he/she explained it

was felt that the universities had no control over the outcome of the employment indicator.

Member C also commented that:

> given the nature of the (employment) indicator, I would say that it's a complete
>
> failure (in terms of) any usefulness at all … because nobody tries, I mean what can
>
> you do? There's really not much that you're going to be able to do with those
>
> indicators. So if the motivation was actually formative - to get people to improve -

Table 6: OSAP Default Rates of Three Post-secondary Sectors (1998-2010)

	Universities	CAAT	PPI	PST Total
1998	12.3	25.4	34.5	22.1
1999	8.4	20.1	31.0	18.2
2000	7.1	17.2	28.9	15.7
2001	7.4	17.5	26.7	15.4
2002	7.5	16.0	24.2	13.9
2003	7.1	16.4	23.5	13.5
2004	7.6	18.0	25.9	14.4
2005	10.6	21.5	22.2	16.6
2006	5.7	13.6	16.8	10.3
2007	4.3	11.0	17.5	8.6
2008	3.9	10.6	18.0	8.4
2009	4.0	11.0	15.1	8.0
2010	3.7	10.6	13.0	7.6
Legend: CAAT = Ontario Colleges of Applied Arts & Technology PPI = Private for Profit Institutions				

it's not useful because it's out of your hands. Particularly for university

education where the outcomes of university education aren't that you're

employed in six months, the outcome is when you start looking at your career

so it's more long-term.

With respect to Graduation Rates, Member C thought that the Task Force was

successful in drawing attention to retention and graduation. He/she also thought that there has

been no impact on the other two indicators (Employment Rates and OSAP Default Rates) as institutions would not spend time on improving them because they have no control over them.

Both Member B and Member C insisted that performance funding was never discussed by the Task Force. In fact, at that time, the government had stated that allocation of funding would never be based on KPIs. Both Members B and C thought that if the KPIs had been connected to funding based on performance from the start, the impact of KPIs would have been different. Member C elaborated:

> The conversation around your KPI's at that point becomes, once you start
> putting financing in, 'What do you really want to achieve', 'What is critical
> that you need to achieve', 'How are the funds going to make that happen', and
> 'whether or not you are truly reflecting the differences rather than artificially
> reflecting differences from what these indicators do.'

c) Legacy of Broadhurst Task Force

Although the Report of the Broadhurst Task Force was published more than two decades ago, its impact is still felt today. Below are a few examples of the impact of the Broadhurst Report on the KPI requirment:

(i)   The three KPIs *implemented* ostensibly came from by the Broadhurst Task

         Force. Graduation Rates were derived from Indicators #13 (Student Retention:

         quality; institutional or program performance; and management and allocation

         of resources) and #17 (Time to graduation) in the Report. Default Rates and

         Employment Rates were discussed but there were no sources of data to support

         these indicators during that time which is why this indicator is not included in

the Broadhurst Report (Member B). Two of the questions in the Ontario Graduate Survey (OGS) address KPIs.

(ii) **Maclean's University Ranking** was first published in 1991. There were 22 educational indicators under six broad categories: student body, classess, faculty, finance, library and reputation. Twenty out of these 22 indicators came direclty and indirectly from the Broadhurst Report (e.g., average entering grade, proportion who graduate, faculty with PhD, class size, total library holdings, library acquisitions, and library expenses, and alumni support). Maclean's came out with these ranking indicators well before the Ministry instituted their KPIs. Even today, the indicators used in the Mclean's ranking of 49 Canadian universities is still based mostly on those identified in the Broadhurst Task Force Report (e.g., average entering grade, student/faculty ratio, faculty awards, total research dollars, total library holdings, library acquisitions and library expenses, student retention, and proportion who graduate (Maclean's, 2014).

(iii) Some of the indicators suggested in the Broadhurst Report are also included in the current **Muti Year Accountability Agreements (MYAA),** such as international enrolment, student retention, space utilization, and class size.

(iv) The **Common University Data Ontario (CUDO) Indicators** post-date the introduction of KPIs and the OGS and were developed by the Ontario universities to allow the public to access information about each university in Ontario. The indicators such as "entering average ranges" by program, library collections, instructional faculty and class size, research awards, and retention rates are also reflected in the Broadhurst Report.

Based on my review of the documents and the literature, Table 7 illustrates the important events and documents that were described above and are relevant to the establishment of KPIs in chronological order.

Table 7: Chronology of Important Events/Documents Relevant to the Establishment of KPIs (Research Question #1)

Date	Description/Document/Report	Source	Political Party in Power
1960s	Ontario universities had been required to file externally audited financial reports to the government since the 1960s. With the rules around eligibility for receipt of operating grants and capital funding, accountability was fulfilled.	Book by Monahan, 2004	
Early 1970s	Federal Parliament and legislatures of several provinces realized that they did not receive the performance information they needed – accountability vacuum.	Written report, Canadian Comprehensive Auditing Foundation	
1988	*Accountability, Accounting and Audit: Responding to a Decade of Experience* – A Paper Prepared for Members of the Canadian Comprehensive Auditing Foundation	Written report, Canadian Comprehensive Auditing Foundation	Liberal – Peterson
May 1988	Auditor announced to conduct audit at Trent – did not go well	Book by Monahan, 2004	Liberal – Peterson
Nov 1988	Report of the *Task Force on University Accountability by Council* of Senior Administrative Officers, Universities of Ontario	Written report led by Edward Monahan, Executive Director, Council of Ontario Universities	Liberal – Peterson
1989-1990	Inspection audits at Guelph and Toronto – minor errors found	Book by Monahan, 2004	Liberal – Peterson
Fall 1990	Auditor requested to conduct value-for-money audit and was declined	Book by, Monahan, 2004	NDP – Rae
1990	Change of government - NDP in power - direct pressure of increased accountability from the Ministry to the universities	Book, Monahan, 2004	NDP – Rae
Jun 1992	*Task Force on University Accountability* - Progress Report and Issues Paper	Written report led by William Broadhurst, Chair	NDP – Rae
Mar 1993	Report of the *Committee on Accountability, Performance Indicators, and Outcomes Assessment* to the Minister's Task Force on University Accountability	Written report led by Dan Lang, Chair	NDP – Rae
May 1993	Broadhurst Report - *University Accountability: A Strengthened Framework,* Report of the Task Force on University Accountability	Written report led by William Broadhurst, Chair	NDP – Rae

Feb 1998	Memorandum from Assistant Deputy Minister to Executive Heads of Provincially-assisted universities, Presidents of Colleges of Applied Arts and Technology, and Presidents of Private Vocational Schools regarding Changes to OSAP for 1998-99 - Announced that post-secondary institutions will be required to provide students with information on Graduation Rates, Employment Rates, and OSAP Default Rates	Initiative implemented by David Trick, ADM, MET	PC – Harris
Oct 1998	COU-MET Joint Steering Committee was established - to oversee the development of the methodology for KPIs	Initiative implemented by MET	PC – Harris
Dec 1998	MTCU Office of Provincial Auditor 1999 Annual Report - OSAP Default Rates was started to be made available to the public	Initiative implemented by MTCU Office of Provincial Auditor	PC – Harris
1999	MTCU Office of the Provincial Auditor 1999 Annual Report – Graduation and Employment Rates were starting to be made available to the public	Written report, MTCU Office of Provincial Auditor	PC – Harris
2000	MTCU 1999-2000 Business Plan – Performance-based funding was established	Initiative implemented by MTCU	PC – Harris
May 2005	*Multi-Year Accountability Agreements* were established - Researching Higher: The McGuinty Government Plan for Post-secondary Education	Initiative implemented by Premier's Office	Liberal – McGuinty

Conclusion in Response to Research Question #1

The impact of the Task Force on University Accountability (Broadhurst Task Force) in the initiation of the Ontario government's required reporting of KPIs that began in 1999 has been considerable. For instance, its report increased awareness of the need for accountability of governing boards, and influenced the Maclean's Ranking of universities. However, the government chose not to implement the broad range of performance indicators or the Task Force's recommendation that individual universities be allowed to select those that were most appropriate to their own institution's mission and goals. Instead, they selected only Graduation, Employment and added OSAP Loan Default Rates as the KPIs that all universities were required to report on. Clark et al (2009, p. 126) point out that

Several concerns have been expressed about these indicators. One is that

some of them show quite little variation among institutions, so that a very

small difference in indicators or values between two institutions can be

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associated with a disproportionately larger difference in performance funding.

Furthermore, while the Task Force sought to provide more effective measures to strengthen the accountability of boards of governors, the main intent of the government was to provide information to parents and students in selecting universities and programs in the hopes that this would facilitate the achievement of the employment and economic goals of the government. For example, Clark et al state that the time the KPIs were initiated in the 1990's the "government accountability requirements of provincial universities focuses almost exclusively in verifying enrolment" (p. 125). The Broadhurst Task Force, on the other hand, was concerned about providing performance data to governing boards to assist them to fulfill their accountability responsibilities, and recommended broad performance measures that were aligned with the mission of individual universities as perceived by them. The KPIs instituted by the government did not accomplish either of these goals.

Research Question #2: To what extent do each of the following key performance indicators impact institutional planning of participating Ontario universities as perceived by their key informants?

    a) **Graduation Rates**

    b) **Employment Rates**

    c) **OSAP Loan Default Rates**

The MTCU calculates **Graduation Rates** using a single entering cohort of students and determining whether or not they graduated within seven years. The **Employment Rate** is defined as the number of employed persons expressed as a percentage of the labour force where the labour force is those persons who are

employed, or unemployed but looking for work six months and two years after graduation. The annual **Loan Default Rates** calculated by MTCU reflect the repayment status of students who were issued Ontario Student Loans in the two academic years before and did not receive an Ontario Student Loan in the past academic year, and who defaulted on their repayment obligations. The detailed definition and calculation have been provided in Chapter One, pp. 5-6.

To begin with, I was interested to know how well the participants understood how the KPIs were calculated and how well they understood their intended impact. All of the online survey respondents claimed that they fully understood *how* the KPIs are calculated. All (100%) the eleven respondents agreed or strongly agreed with the survey statement #25, "I fully understand how 'Graduation Rates' are calculated" and the survey statement #26, "I fully understand how 'Employment Rates' are calculated" (Table 8). The 10 respondents who answered this question, also agreed or strongly agreed with the survey statement #27, "I fully understand how 'OSAP Default Rates' are calculated" (Table 8), although one respondent did not indicate his/her position on this statement. These findings suggest that the survey respondents were very confident of their understanding of *how* the KPIs are calculated.

All 10 of the online survey participants who responded to the following statements also claimed that they fully understood the *intended impact* of three KPIs (Table 8). They all agreed or strongly agreed with the survey statement #28, "I fully understand the intended impact of the 'Graduation Rates'," the survey statement #29, "I fully understand the intended impact of the 'Employment Rates'," and the survey statement #30, "I fully understand the intended impact of the 'OSAP Default Rates'," (Table 8). Again, one person did not respond

Table 8: Responses to Online Survey Statements #25-30

#	Statement	n*	Scaled Responses	
			Strongly Disagree/ Disagree*	**Agree/ Strongly Agree***
25	I fully understand how "Graduation Rates" are calculated.	11	0	11
26	I fully understand how "Employment Rates" are calculated.	11	0	11
27	I fully understand how "OSAP Default Rates" are calculated.	10	0	10
28	I fully understand the intended impact of the "Graduation Rates."	10	0	10
29	I fully understand the intended impact of the "Employment Rates."	10	0	10
30	I fully understand the intended impact of the "OSAP Default Rates."	10	0	10
Scale used for Responses: 1 – Strongly Disagree; 2 – Disagree; 3 – Agree; 4 – Strongly Agree *= number of responses by collapsed categories (strongly disagree/disagree and agree/strongly agree)				

which suggests he/she may not have been as confident as the other 10. An acknowledged

limitation is that the questions asked only if the respondents *believed* they understood the

intended impacts, and there is no way of knowing what they thought those intended impacts

were.

The responses from the key informants varied in terms of whether the existing three

KPIs are having the intended impact on their respective universities and on universities in

Ontario, given KPIs have been implemented for more than a decade now. Some felt that there has been no, not much, or modest impact of the KPIs on program planning. KI-F stated that performance indicators are needed and brought up an interesting question about these measures: "Do they meet the demands for decision-making both at the institutional and the government level? If they don't, what is it that is missing or what is it that we can tweak so that they can do that?"

The overall assessment of most key informants was that the *impact* of the KPIs on Ontario universities is minimal. One key informant claimed that "the current KPI framework is a nuisance." Another key informant raised the idea that the current KPIs are insufficient and do not reflect the vision of the sector. Furthermore, another participant claimed that it is "a bit flawed" to attach funding to the current KPIs.

However, the MTCU participants felt strongly that Graduation Rates "were strong" and had improved because of the impact of KPIs on university behaviour, especially because of performance funding.

Based on the MTCU interviews, the Ministry's expectations of KPIs as perceived by TCU-A to be: "to monitor progress in key areas at system and institutional levels; to be a useful tool for students, the public and the sector; to evaluate programs and institutions; to compare institutions and allow institutions to do internal benchmarking; and to have enough integrity for the Ministry to attach funding."

Impact of KPIs on Institutional Planning

Participants' responses to survey statements that addressed the importance for institutional planning of these three KPIs were based on a forced choice four-point response

scale ranging from strongly disagree (1 point), disagree (2 points), agree (3 points) and strongly agree (4 points).

Most (91%) of the university respondents *agreed* that the impact of the "Graduation Rates" KPI was high on their universities' institutional planning. On the other hand, only 45% and 20% of respondents respectively *agreed* that the impact of the "Employment Rates" and "OSAP Loan Default Rates" KPIs was high on their universities' institutional planning. Because of the small number of participants, the responses on the four-point scale for the statements related to these three KPIs were collapsed into two categories: strongly disagree and disagree is the first category, and agree and strongly agree the second (Table 9).

Table 9: **Responses to Online Survey Statements #1, 2, 3, and 31**

#	Statement	n*	Scaled Responses	
			Strongly Disagree/ Disagree*	Agree/ Strongly Agree*
1	The impact of the "Graduation Rates" KPI is high on my university's institutional planning.	11	1	10
2	The impact of the "Employment Rates" KPI is high on my university's institutional planning.	11	6	5
3	The reported "OSAP Loan Default Rates" indicator is high on my university's institutional planning.	10	8	2
31	The existing three KPIs are having the intended impact in Ontario.	11	9	2
Scale used for Responses: 1 – Strongly Disagree; 2 – Disagree; 3 – Agree; 4 – Strongly Agree * = number of responses by collapsed categories (strongly disagree/disagree and agree/strongly agree)				

a) Impact of Graduation Rates.

Most respondents *agreed* that the Graduation Rates KPI highly impacted their institution's planning (see Table 18, p. 143). Ten of the 11 (91%) agreed or strongly agreed with survey statement #1, "The impact of the 'Graduation Rates' KPI is high on my university's institutional planning" (Table 9).

One university interviewee commented that the vertical aggregation of the **Employment and Graduation Rates** (from program to institution to system) become less useful at a more granular level of planning for specific programs. The problem of horizontal aggregation of the Graduation Rates (across programs within the institution and in other universities) was raised by another university participant. The Graduation Rates of different programs are not comparable, for example the content and process within similar programs and between programs across institutions may vary considerably, and second entry programs are very different from direct-entry science programs. Better results are always seen for second entry programs such as medical programs and dentistry. Furthermore, because the current methodology does not segregate the students who transferred between universities, the Graduation Rates in the original university are understated.

Another important finding related to the horizontal aggregation of the KPI data is that the data do not permit differentiation of performance between programs. Several university participants explained the KPI data from all the programs/institutions are so close to the mean that significant under/over performance cannot be identified. With respect to the current KPIs, most university respondents did not have high expectations of impact due to the unreliability of data including the method of calculation and the response rates. Broadhurst

Task Force Member C also mentioned that there have been no statistically different results among the universities.

b) **Impact of Employment Rates.**

On the other hand, just slightly more than half (55%) of the university respondents *disagreed* that Employment rates of graduates had a high impact on institutional planning. Six of the 10 respondents strongly disagreed or disagreed with the survey statement #2, "The impact of the 'Employment Rates' KPI is high on my university's institutional planning" (Tables 9 and 18).

The university participants raised a number of issues of performance funding based on Employment Rates. The response rates are low - the lowest was 19.8% in 2007-08, and 28.6% in 2010-11. The margin of error becomes high with the low response rate. This is not helpful for institutions in making decisions about resource allocation.

Furthermore, there is little differentiation given the system-wide Employment Rates are statistically high over the years (the lowest was 90.8% and 93.8% of the 6 months and two years after graduation Employment Rates respectively).

In contrast to the less than positive perceptions of the university participants regarding the impact of the KPIs on institutional performance, both of the MTCU participants stated that from their perspective, the current KPIs are having the intended impact. One of them said

> I think they're one of the reasons why we have seen progress on graduation rates, for example. And on the OSAP Defaults Rates. I think whenever you have an objective measurable to attach to something, and then you also make that public, that's a powerful tool. So we do credit it with being, along with other initiatives, a reason why we've seen progress since their introduction. (TCU-A)

However, TCU-A did recognize the disconnect in what the universities control when he/she said "Graduation Rates have been going up. Employment Rates have been strong, but they would have an economic tie-in in that the institutions wouldn't have any control over (them)."

Impact of OSAP Loan Default Rates.

All of the university participants agreed that **OSAP Default Rates** are *not* effective in improving performance at either the program or institutional levels. The university participants were not quite as confident in their knowledge of how OSAP Default Rates were calculated since they do not participate in that process. But they were adamant that Default Rates are driven by factors which are beyond the institutions' control and disconnected from institutional and program decisions. With respect to the calculation of **OSAP Default Rates**, the student loan recipients/defaulters are included in the last institution/program they enrolled in the preceding two academic years.

Broadhurst Task Force interviewee, Member B mentioned that "The default rate KPI, in terms of service to students, is problematic because for students who attend more than one institution or earn more than one degree, attributing the debt is highly problematic." Furthermore, one of the university participants stated that the variation of the OSAP Default Rates is meaningless because the universities' default rates are so low (e.g., 3.7% in 2010-11).

An overwhelming 80%, eight of the 10 respondents, strongly disagreed or disagreed with survey statement #3, "The impact of the 'OSAP Loan Default Rates' is high on my university's institutional planning" (Table 9). Only 20% of survey respondents reported that OSAP Loan Default Rates highly impacted institutional planning (see Table 18, p. 143).

Since most of the survey participants disagreed or strongly disagreed that the OSAP Default Rates inform institutional planning, a follow-up interview question was asked to explore reasons *why* OSAP Default Rates were not helpful to universities. Of the seven university participants interviewed, a majority (five of the seven) stated that there are factors which impact these KPIs that are beyond the institution's control, such as employment opportunities, labour market needs, and the state of the economy.

Furthermore, Broadhurst Member B pointed out that the loan default rate KPI is the only indicator that a university would not have known about with or without KPIs.

Eighty-two per cent of the survey respondents *disagreed* that the current KPIs are having the intended impact. Nine out of the 11 strongly disagreed or disagreed with survey statement #31, "The existing three KPIs are having the intended impact" (Table 9).

Performance Funding based on the Three KPIs

In 2000-01 (one year after the KPIs were initiated) the Ontario government committed $16.5 million and just over $23 million in subsequent years to award to the universities based on their performance on two of the three KPIs – Graduation and Employment Rates (six months and two years after graduation) (MTCU, 2009). The methodology used for funding allocation is as stated to be follows:

> A benchmark is established for each of the three indicators, set at 10 percent below the *system average* for the particular indicator. For example, if the system average is 95 percent, the 10 percent benchmark is 9.5 percent. The benchmark level which institutions must achieve to qualify for performance funding would be 85.5 percent. Institutions at or above the benchmark were allocated funding in proportion to their

performance from the benchmark and their size (eligible total BIUs). Institutions

below the benchmark level did not receive funding. (MTCU, 2009, p. 9)

These rates are derived from the vertical aggregation of each university's program

data. The Ministry uses these institutional data to come up with a system average for each

indicator which then becomes the basis against which the universities are assessed for

allocating the 23 million dollars annually. As will be discussed in Research Question #5,

while KPIs are reported at the program level, however, allocation of performance funding for

KPIs is at the institutional level. This means there are no incentives for action by Deans of

Faculties who are the key players for driving program changes and improvements. In

summary, the aggregated institutional level KPIs as an incentive for performance funding is

also disconnected with the locus of decision-making at the program level.

University participant K1-A said in the interview "based on the relatively small

amount, nobody likes them (the KPIs), nobody pays attention to them or uses them directly or

very much in their programming [evaluation] processes." This participant also explained that

When (performance funding) was first introduced, there were definite winners and

losers. If you were in the top third you got a share of two thirds your proportionate

share of the grant. If you were in the middle third you got one third, if you were in the

bottom third you got a zero. Now we (have) evolved to the point where …as long as

you meet the benchmark you get your proportion of the share …so there (are fewer)

true winners and losers at the end of the day. (KI-A)

On the other hand, one of the MTCU participants said "I think whenever we talk

about money with institutions, they really listen, so I think it's been a good tool … that's why

it's continued (TCU-A)." In response to my question as to whether the performance funding

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would have had a different impact on the universities if it had been started immediately when the KPIs were introduced, TCU A said "I don't think so" .…

> not introducing the funding impact right away, was a really critical process piece, in terms of demonstrating to institutions this new thing that's being done is fair. That we all have confidence in the data, that we've all seen the data collected, we've all had a chance to look at it, we think that it's an accurate reflection of what's actually going on, that the methodology is appropriate, that the response rates are appropriate, and that the way the funding formula was created as the evaluative tool or to reflect the evaluation of the data is fair. So, that is such a critical piece - to get the sector buy in.

(TCU-A) went on to explain "I think we've seen improvement as a result of the indicators so that says that behaviour is changing. I think the amount of (the performance funding) money that is allocated to them is appropriate."

Broadhurst Member B agreed that the timing of the initiation of performance funding was appropriate, but he disagreed with TCU-A about the amount – he/she felt a larger amount of funding might have made a difference. Furthermore, he/she disagreed with the university participants regarding the impact of current performance funding on university behaviour in that "So little funding is attached to the KPIs that their use for that purpose should be discontinued."

University Interviewee Feedback on Impact of the KPIs

Overall, most university interviewees felt that the three KPIs do not have a strong impact in the institution's planning process and two of the interviewees even felt that the

KPIs do not impact their planning process at all. KI-A also stated that because of the change

in the funding allocation formula, there are "less true winners and losers" as the funding

awarded to the universities which meet the benchmark threshold point is relatively minor.

KI-F pointed out that the university environment is so complex that the three

indicators are not formative enough to direct an institution. Five of the seven university

interviewees responded that the costs incurred by their respective institutions in the collection

and reporting of KPIs was only a minor concern, and one interviewee (KI-G) did not have an

answer. However, KI-E felt differently, he/she commented that the cost of the collection and

reporting of KPIs is too high and "there is too much reporting, and all we're doing is taking

money out of the classroom that really should be used for planning and enhancing the quality

of instruction."

KPIs and Mission Statements

With respect to the alignment between KPIs and the university's mission statement,

mixed answers were received. Responses included "directly, indirectly, in some general way,

in principle and somewhat." Most key informants talked about the quality of the student

experience as an important dimension in their mission statements.

Neither Member B nor Member C of the Broadhurst Task Force felt that prompting

universities to focus more on their core missions in setting performance objectives is an

achievable goal in Ontario's use of KPIs. In general, strategic/academic planning is derived

from the missions of the institutions. Member B added that the current KPIs are not

expressions of the "core mission" of the university. It is interesting to note that 'Mission'

was one of the categories of indicators recommended in the CUPA Committee's report to the

Broadhurst Task Force (MET, 1993).

Moreover, 64% of the university survey respondents agreed with the Broadhurst Task

Force member's conclusion in that they also *agreed* that prompting institutions to focus more

on their core missions in setting performance goals is an achievable goal. Seven of the 11

survey participants agreed or strongly agreed with the statement (37d) "I recognize the

following as achievable goals in Ontario's use of KPIs: prompt to institutions to focus more

on their core missions linking toward setting performance goals" (Table 10). However, more

than half (55%) of the university respondents *disagreed* that the existing KPI are consistent

with their respective universities' mission statements.   Six out of 11 respondents strongly

disagreed or disagreed with the survey statement #34, "The existing KPIs are consistent with

my university's mission statement" (Table 10). This finding is consistent with the most

important concern expressed by Clark et al which is that "none of these indicators reflect the

Table 10: **Responses to Online Survey Statements #34 and 37d**

#	Statement	n*	Scaled Responses	
			Strongly Disagree/ Disagree*	**Agree/ Strongly Agree***
34	The existing KPIs are consistent with my university's mission statement.	11	6	5
37d	I recognize the following as achievable goals in Ontario's use of KPIs: prompt to institutions to focus more on their core missions linking toward setting performance goals.	11	4	7
Scale used for Responses: 1 – Strongly Disagree; 2 – Disagree; 3 – Agree; 4 – Strongly Agree * = number of responses by collapsed categories (strongly disagree/disagree and agree/strongly agree)				

most important institutional, and government objectives for post-secondary education (p. 126)."

My analysis of the publicly-posted university mission statements and academic or strategic plans found that KPIs were not directly mentioned in any of the 20 Ontario universities' mission statements and only the following two universities mentioned them in their academic/strategic plans:

1. Algoma University – its seven-year KPIs are included in the Student Retention and Success section as the measurement of post-graduation student success (Algoma, 2010); and

2. Carleton University – its KPIs are used to measure progress and success of the goals of the academic plan. The KPIs as one of the sources are stated "to provide a quantitative assessment of the ability of the university to deliver on the goals of the plan" (Carleton, 2010, p. 16).

Alignment of KPIs with Academic or Strategic Plans

With respect to the alignment of KPIs with academic or strategic plans, most interviewees (five out of the seven interviewed) had the same or similar answers in response to the impact of KPIs on the mission statement, that is, that the KPIs are directly and indirectly aligned with their academic or strategic plans. Only KI-D explained that his/her institution does not expect the KPIs to be relevant in their short-term plans because of the KPIs "slip long and many years old." KI-D mentioned that his/her institution wants to continue to offer relevant programs, so in that sense, the KPIs have some alignment with their plans. They care about Graduation Rates but the slipped reporting nature of the 7-year Graduation Rates means that the KPIs short-term relevance is limited. The "slipped

reporting" refers to the practice where the Graduation Rates are calculated by using a single entering cohort of students and determining whether or not they graduated within seven years. All new full-time, Year One undergraduate students on the official fall enrolment register are selected annually, who have a valid (and unique) student ID number, and are seeking either a bachelor's or first professional degree. The subset is then matched against the records for students who received a degree (in any program) from the same institution during the most current seven year period.

In stark contrast, MTCU participants' perception of the level of impact of KPIs on universities' institutional planning was that the publicly published numbers "create a weight and a presence that institutions can't ignore and don't want to ignore." TCU-B mentioned that universities certainly pay attention to and use them at the institutional level and also related this to a commitment to transparency and accountability. What was not clear to them was exactly how and when the institutions actually based decisions on their KPI results.

From the perspective of the universities, the following are some of the responses quoted directly from the online survey comments on what they thought the government's expectations of KPIs which were: "to focus on simplistic measures to point to as a surrogate accountability scale as the development of more comprehensive measures is too difficult given the way institutions have differentiated themselves; to demonstrate sector performance on key issues, highlight any institution-specific problems, encourage actions to improve performance and funding; to demonstrate due diligence in a few aspects of university operations; and to demonstrate institutional accountability."

The university respondents' expectations of KPIs are that they should "reflect and provide benchmarks of performance of institutions and the system as a whole; aid in

institutional planning; enhance institutional accountability; and be appropriate to each university's mission and plans." However,…."trying to make resource allocation based on derived lines of data with the margin error of the data that are being collected, doesn't make sense" said KI-A.

Unlike the MTCU participants, the university respondents generally did not have high expectations of the current KPIs. U-B explained that "there are key flaws in each KPI that severely undermine their usefulness: 1) (OSAP Loan) Default Rates are low in universities, so variation is meaningless; 2) the statistical sampling error rate for employment (negates) differences; and 3) the Graduation Rates compares apples and oranges (e.g., B.Ed. vs. a direct-entry science program)." Furthermore, KI-A said in the interview,

> The other thing that impacts the smaller institutions, is the methodology …. the employment data are still done on a survey basis and the response rates are pretty low, the margin for error is relatively high in specific instances. The published survey of say a 96.2% [survey result] implies a level of preciseness that is not justified given the data provided.

U-C stated also that the narrow scope of the current KPIs limits the "applicability to the general work of the university and its desire to offer quality programs." U-D expected that significant under/over performance could be identified. However, not much attention has been paid since the results are close to the mean. Smith (2000) points out that similar issues such as integrity of the data and differentiation of mission and characteristics of universities are found in the Maclean's ranking methodology, and can jeopardize the accuracy and relevance of the results of KPIs. The Ontario Undergraduate Student Alliance's Policy Paper – *Measuring Up: Quality Metrics and Accountability in Ontario's Post-Secondary System*

states that quality indicators are needed to help students choose appropriate institution for their education goals (Ontario Undergraduate Student Alliance, 2008). That paper did not indicate whether the KPI data serve that purpose.

With respect to what they thought the Ministry wanted to achieve by requiring universities to report KPIs, the university key informants felt that the government wanted to have "some kind of performance measurement or framework," to promote awareness, to steer universities towards a more market-focused approach, just to have more information and more data, and required for accountability and performance.

Disconnect of KPIs

An important finding based on the reports of the university participants is that they perceived there to be a considerable disconnect, both between the required KPIs and the mission/goals of universities, and what was under their control. Perhaps most importantly, some of the participants commented that Employment Rates do not reflect the mission of the universities which is much broader than to prepare graduates for specific jobs, which was the goal of the government at the time the KPIs were introduced. Recall that more than half (55%) of the university respondents *disagreed* that the existing KPI are consistent with their respective universities' mission statements. This finding is consistent with the views of Clark et al (2009, p. 126) who suggest that "none of these indicators reflect the most important institutional, and government objectives for post-secondary education."

The hope of the government was that reporting of Employment Rates and OSAP Loan Default Rates would influence the universities' program planning and efforts to control the costs of education. However, with respect to Employment Rates, participants explained that factors related to that students' ability to find employment that is directly related to their

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specific programs are beyond the institutions' control. Employment opportunities differ

greatly among communities, and in changing economic contexts from time to time.

Furthermore, the timing of the KPIs was another issue for them since the universities are not

able to predict the labour market demands five years after the students begin their programs

of study, and students often do not work in the same discipline as they majored in, which is

not properly reflected in the Employment Rates.

University informant K1-A summarized these concerns of the university participants

with "I think what the biggest issue most places have with the KPIs, is there's a lack of

causality between what they're measuring and what is intended to be measured. There's

certainly some correlation, but it's certainly not that strong."

As to tuition fees, most of the university interviewees mentioned that KPIs are

disconnected from setting tuition fee for specific programs as tuition fees are largely

regulated by the province. This is also consistent with the observation of Clark et al (2009, p.

126) that the KPIs have "limited usefulness since (they are) not tied to any specific factors

over which institutions have some control (e.g., institutional practices, academic policies, or

resources)."

Summary of Findings that Answer Research Question 2

The Broadhurst member participants did not feel that the current KPIs were helpful in

terms of institutional planning while MTCU participants had a slightly more positive view.

Most participating universities are not using Employment Rates and OSAP Default Rates for

institutional planning, but the Graduation Rates KPI is seen to be useful in this regard, despite

its limitations. Most importantly, the university and Broadhurst participants pointed out the

disconnect between the three KPIs and the universities' missions/mandates, lack of control

over Employment and Loan Default Rates, and questionable reliability of the data and method of aggregation which all serve to undermine the usefulness of the KPIs for university program planning.

Research Question #3: For their own internal purposes, do universities use any other indicators? If they do, what are they, why and how are they different?

In response to this question, in the comment section of the questionnaire survey, the participants all commented that their universities do use other indicators for internal purposes. Furthermore, one respondent's argument for using other indicators was that they did so because of the "flawed nature" and "lack of usefulness" of KPIs (U-B).

Other indicators used by the universities as identified by the survey respondents were: institution-specific and focused plans that permit drill-down analysis, tied to each of the institution's key strategic priorities. These were said to be helpful in managing performance and included data gathered by data collection tools such as the National Survey of Student Engagement (NSSE), the Consortium for Student Retention Data Exchange data (CSRDE), and the Delaware Study metrics, relevant to outcomes, outputs and impact, and useful for planning, evaluation and communication.

U-C answered that his/her institution uses "a number of different measures in different contexts. Student satisfaction with their educational experience is one. We look at the number of experiential courses we offer. Retention (not just Graduation Rates) is an area we look at and accessibility for a variety of students is also important, especially for first generation and aboriginal students." It was interesting to learn from respondent U-H that his/her institution has over 100 indicators which are used for different purposes such as planning, evaluation, and communications. Examples of indicators reported in the survey are

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student satisfaction with their educational experience, retention, accessibility such as first generation and aboriginal students, research, time to completion, faculty, awards, and student financial support. Interestingly, most of these examples are found also in the indicators originally recommended by the CUPA Committee on Accountability, Performance Indicators and Outcomes Assessment to the Minister's Task Force on University Accountability (see Table 3). U-J mentioned that amalgamating all the data in a coherent fashion is a major challenge and "the development of a business intelligence and reporting tool is currently a key university policy."

Furthermore, U-E commented that "the Graduation Rates can be a useful tool for program planning - when used along with retention rates. However, the Employment Rates and OSAP Default Rates are too far removed from institutional control to be useful in planning."

Research Question #4: To what extent are KPI results used by universities in student recruitment, setting tuition fees for specific programs, or other purposes?

Responses from the Broadhurst members, university participants and key informants from MTCU are presented under the three themes included in the research question as follows.

a) **Use of KPIs for student recruitment.**

As discussed in Chapter Two, although the KPI initiative does not purport explicitly to identify "world-class" universities, they are intended to reflect the excellence of performance of universities. Altbach (2004, p. 20) claims "Students and parents may use KPIs for comparison purposes to make informed decision when choosing universities and

programs as 'everyone wants a world-class university'." This notion of informed decision making for parents and students was also one of the ministry's initial purposes of the KPIs.

In terms of the influence of KPIs on the decisions of students and parents in choosing universities as perceived by the study participants, Broadhurst Member B recalled reading a report, commissioned by the COU, which concluded that students and parents, at the time, were not widely aware of the KPIs. Member C thought that students and parents look at the overall perception of an institution's reputation rather than specific KPIs. In fact, Member C said he/she hoped that the KPIs did not influence the decisions of students and parents because he/she thought the indicators (other than the Graduation Rates) are flawed for the same reasons as identified by U-B above.

 The majority (73%) of the questionnaire respondents *agreed* that their KPIs on Graduations Rates were useful for student recruitment (see Table 18, p. 143). However, the survey respondents did not all fully agree that Graduation Rates are being used by their universities in student recruitment. Eight of the 11 respondents (73%) agreed or strongly agreed with the survey statement #4, "'Graduation Rates' are used by my university in student recruitment" (Table 12, p. 123).

Fewer than half of the respondents (45%) *agreed* that Employment Rates are useful to the universities in student recruitment (Table 18). Slightly more than half of the respondents (55%; n=6) did not agree that Employment Rates are being used by their universities in student recruitment. Five (45%) of the 11 respondents agreed or strongly agreed with the survey statement #5, "'Employment Rates' are used by my university in student recruitment" (Table 12).

The majority (91%; n=10) of the university respondents *disagreed* that OSAP Loan

Default Rates had a high impact on student recruitment (Table 18). Ten (91%) of the 11

respondents strongly disagreed or disagreed with the survey statement #6, "'OSAP Loan

Default Rates' are used by my university in student recruitment" (Table 12).

Most interviewees commented that the KPIs are of limited use in student recruitment.

The KPIs were stated to be used as a public relations tool in two interviewees' institutions,

but only when the results of KPIs are favourable (KI-A and KI-E).

Moreover, most participants felt that the KPIs have no or little impact on student

preference for universities and U-H stated that "program availability, quality, reputation and

location (among others) all trump the impact of KPIs in influencing student preferences."

One issue that respondent U-F brought up was that "some (students and parents) may

misinterpret these (KPIs) as an actual measure of quality that can be compared across

institutions." With respect to student preference for programs, the responses were similar to

preference for universities, that is, KPIs have no or little impact.

Given that the initial purpose of the KPIs was to inform the public, particularly to

assist with program/institution selection by parents and prospective students, I reviewed the

student recruitment-related websites of the 20 English Language universities to identify how

these sites might or might not include information on KPI performance. I did not find reports

of KPIs or web-links related to KPIs on any of these websites.

The perspectives of the two MTCU interviewees were consistent with the university

respondents' perspectives. They did not think that the universities were using KPIs in their

active student recruitment, and they did not know whether the KPIs actually impacted student

preferences.

b) Impact of KPIs in setting tuition fees for specific programs.

Table 11 below presents the system level KPIs and the response rates for the

Employment Surveys from 1998-99 to 2010-11. The results of the Employment Rates of six

months and two years after graduation were all above 90%. The response rates of the

Employment Survey have dropped significantly from 54.3% in 1998-99 to 28.6% in 2010-11

and the lowest response rate is 19.8% in 2007-08. As KI-A mentioned above, the response

rates for the Employment Survey were low.

The Graduation Rates have risen slightly and were between 70.8% in 1999-00 and

79% in 2010-11. OSAP Loan Default Rates have generally declined as well – the highest

was 12.3% in 1998-99 and the lowest was 3.7% in 2010-11 with a spike of 10.6 in 2005-06

(Table 11).

Figure 1 shows a significant decline of the response rates between the initial

Employment Survey in 1998-1999 and 2010-2011. The response rate of the KPI

Employment Survey was more than 50% in 1998-99, but in 2010-11 it was below 30% and

the lowest was in 2007-08 which was below 20%.

Table 11: KPIs of Ontario Universities (1998-99 to 2010-11)

	Employment Rates (%)	Employment Rates (%)	Employment Survey Response Rate (%)*	Graduation Rates (%)	OSAP Default Rates (%)
	6 months after graduation	2 years after graduation			
1998-99	90.8	96.7	54.3	N/A	12.3
1999-00	93.1	96.4	45.0	70.8	8.4
2000-01	94.6	97.2	31.7	73.2	7.1
2001-02	94.4	95.6	33.5	73.7	7.4
2002-03	95.9	96.1	29.5	73.0	7.5
2003-04	93.6	95.8	28.7	73.1	7.1
2004-05	92.3	96.0	23.8	74.0	7.6
2005-06	92.1	96.8	23.2	74.9	10.6
2006-07	92.8	96.2	21.9	75.4	5.7
2007-08	92.8	96.2	19.8	75.7	4.3
2008-09	93.9	96.9	21.7	77.0	3.9
2009-10	94.1	95.8	28.9	78.3	4.0
2010-11	91.7	93.8	28.6	79.0	3.7

Source: Ministry of Training, Colleges and Universities

*Response rate calculated as: completed surveys / (total surveys – returned surveys)

Figure 1: Trend of Employment Survey Response Rate (%) – Ontario Universities
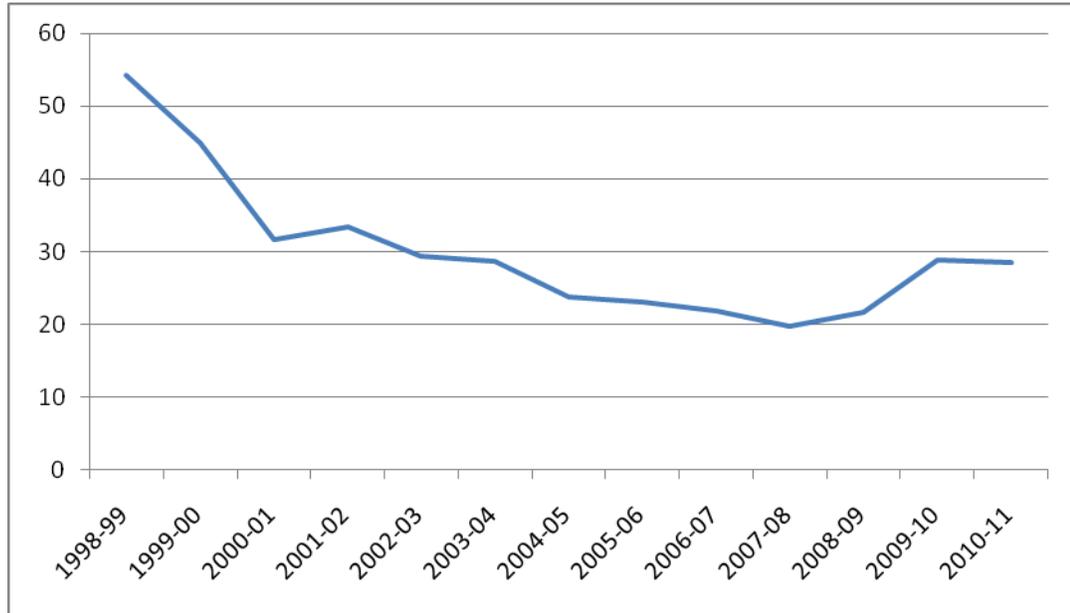
Source: Ministry of Training, Colleges and Universities
*Response rate calculated as: completed surveys / (total surveys – returned surveys).

Based on the responses to the relevant statements (survey statements

7 and 9), Graduation Rates and OSAP Loan Default Rates "are used by (their) university in

setting tuition fees for specific programs," only two of the 11 respondents agreed or strongly

agreed with the survey statement #8 "'Employment Rates' are considered by my university in

setting tuition fees for specific programs" (Table 12, p. 123). None of the respondents agreed

that Graduation Rates and OSAP Default Rates are used in setting tuition fees and only 18% ;

n= 2) agreed that the Employment Rates are considered by their respective universities in

setting tuition fees for specific programs (Table 18, p. 143).

The interview responses were consistent with the survey results. One of the main

reasons for this that all the interviewees raised in the follow-up interviews was that the tuition

fees are regulated by the province. Most key informants (4 of the 7) felt that these indicators

are disconnected from setting tuition fees for specific programs. High-level indicators such as

Employment Rates cannot translate to or properly reflect the students' ability to find employment in relation to specific programs because employment opportunities vary a great deal by community and the state of the economy at the time the students graduate five years after entering a specific program – all of which are beyond the control of the university or of the graduates.

Perhaps more important is the philosophy of the meaning and purpose of university education. The creation, conservation and interpretation of knowledge and ideas, the search for truth, transmission of new knowledge, and the training of students who will practice and "carry on" are the major missions of universities according to Flexner, (1968). Newman (1976) stated that the university's primary goal must be the development of good members of society, the raising of the intellectual tone of society, cultivating the public mind, supplying true principles, and creating new thinkers (Newman, 1976). Consistent with this classical definition of the mission of the university, KI-C explained that "you offer a (university) program not to equip individuals for the workplace, but to equip them for life, so it's not as if you are going to tie (the program) directly into some sort of employability or retention data."

KI-B also raised the timing issue, that is, the reality that the labour market five years hence is unknown. And, KI-F commented that "the more granular level of planning for specific programs is, the less it is useful to look at the global Employment and Graduation Rates."

c) **Other purposes.**

In addition to the usefulness of KPIs in student recruitment and setting tuition fees for specific programs, survey and interview questions explored whether KPIs were helpful for other purposes.

All of the 11 respondents agreed of strongly agreed with Statement #10 that the Graduation Rates are used by their universities for other purposes (see Tables 12 and 18, p. 143).

The survey respondents did not fully agree that the Employment Rates are useful for other purposes. Only nine of the 11 (82%) respondents agreed or strongly agreed with the survey statement #11, "'Employment Rates' are used by my university for other purposes" (Tables 12 and 18).

Only four of the 10 (40%) respondents agreed or strongly agreed with survey statement #12 "'OSAP Loan Default Rates' are used by my university for other purposes" (Tables 12 and 18).

In the narrative part of the survey, only three respondents clarified that the KPIs are used in "promotional material for potential students," "communication messages," and "included in background data scans to support the review of existing and new programs."

d) Use of KPIs to prompt institutions to become more efficient and responsive.

Broadhurst Member C did not see prompting universities to pay more attention to the Province's needs especially in workforce development as an achievable goal for the use of KPIs, but he/she did not provide the reasons for his/her view. On the other hand, Member B felt that this goal might be achieved if other KPIs were used. Currently, the high Employment Rates and low Default Rates make it difficult for the universities to improve in workforce development, said Member B.

Member C felt that the Graduation Rates might prompt universities to become more efficient and pay more attention to how students are best served as an achievable goal. With respect to "efficiency," Member B did not agree with Member C regarding whether or not

current KPIs are related to efficiency. Member B felt that the current KPIs do reflect how well students are served, but added that if students attend more than one institution or earn more than one degree, the Default Rates would not be reflective on service to students due to the attribution to the debt. Five (45%) of the 11 university respondents agreed or strongly agreed with the survey statement #37e, "I recognize 'prompting institutions to become more efficient and pay more attention to how students are best served' as an achievable goal in Ontario's use of KPIs" (Table 12). From the perspective of survey respondents, 55% of university respondents acknowledged that prompting universities to pay more attention to the Province's needs, especially in workforce development was an achievable goal in the use of KPIs. Six out of 11 respondents agreed or strongly agreed with the survey statement #37c, "I recognize 'prompting institutions to pay more attention to the province's needs especially in workforce development' as an achievable goal in Ontario's use of KPIs" (Table 12).

Table 12: **Responses to Online Survey Statements #4-12, 37c, and 37e**

#	Statement	n*	Scaled Responses	
			Strongly Disagree / Disagree *	Agree/ Strongly Agree*
4	"Graduation Rates" are used by my university in student recruitment.	11	3	8
5	"Employment Rates" are used by my university in student recruitment	11	6	5
6	"OSAP Loan Default Rates" are used by my university in student recruitment.	11	10	1
7	"Graduation Rates" are used by my university in setting tuition fees for specific programs.	11	11	0

8	"Employment Rates" are considered by my university in setting tuition fees for specific programs.	11	9	2
9	OSAP Loan Default Rates" are considered by my university in setting tuition fees for specific programs.	11	11	0
10	"Graduation Rates" are used by my university for other purposes.	11	0	11
11	"Employment Rates" are used by my university for other purposes.	11	2	9
12	"OSAP Loan Default Rates" are used by my university for other purposes.	10	6	4
37c	I recognize the following as achievable goals in Ontario's use of KPIs: prompt to institutions to pay more attention to province's needs especially in workforce development.	11	5	6
37e	I recognize the following as achievable goals in Ontario's use of KPIs: prompt to institutions to become more efficient and pay more attention to how students are best served.	11	6	5

Scale used for Responses:

1 – Strongly Disagree; 2 – Disagree; 3 – Agree; 4 – Strongly Agree

* = number of responses by collapsed categories (strongly disagree/disagree and agree/strongly agree)

Summary of Findings that Answer Research Question 4

Most of the responses pointed out that KPIs (particularly Employment and Loan Default rates) are not useful to the universities for recruitment or in setting tuition fees, because many of the factors that impact these rates are beyond the control of the universities such as employment opportunities in specific areas, the state of the economy and the status of labour market at any given time. For instance, most survey respondents disagreed and

strongly *disagreed* that the OSAP Default Rates are used for **student recruitment** (n =10 of

11 respondents or 91%), *setting tuition fees for specific programs* (all 11of the respondents),

and 60% for *other purposes* (six of 10 respondents) (see Table 18, p. 143)**,** a follow-up

interview question was asked with respect to the reason why the OSAP Default Rates were

not too helpful to universities, the university key informants confirmed again that the OSAP

Default Rates are beyond the control of any university.

Research Question #5: To what extent are the key performance indicators perceived by

participating key informants and related performance funding to be effective in

improving the performance of universities at the institutional and program levels? That

is, what is the impact of each of the KPIs, if any, on academic planning and delivery?

Effectiveness in improving *institutional* performance

         With respect to survey statement #13, "'Graduation Rates' are an effective factor in

improving my university's institutional performance," most of the respondents – eight of the

11 respondents (73%)   agreed or strongly agreed (Table 13, Table 18, p. 143). Similarly, six

of the 11 respondents (55%) agreed or strongly agreed with the survey statement #14,

"'Employment Rates' are an effective factor in improving my university's institutional

performance" (Table 13). However, all the 10 respondents strongly disagreed or disagreed

with the survey statement #15, "'OSAP Loan Default Rates' are an effective factor in

improving my university's institutional performance" (Table 13).

Effectiveness in improving *program* performance

         With respect to improving performance at the *program* level, eight (80%) of 10 who

responded to this statement agreed or strongly agreed that Graduation Rates are effective in

improving performance (Tables 13 and 18, p. 143). However, only two of the 10 agreed or

strongly agreed that Employment Rates impacted performance at the program level. All 10

of the respondents strongly disagreed or disagreed that OSAP Default Rates improved

program performance (Table 13).

Table 13: Responses to Online Survey Statements #13-18, 35, 36, 37a, and 38

#	Statement	n*	Scaled of Responses	
			Strongly Disagree/ Disagree*	Agree/ Strongly Agree*
13	"Graduation Rates" are an effective factor in improving my university's institutional performance.	11	3	8
14	"Employment Rates" are an effective factor in improving my university's institutional performance.	11	5	6
15	"OSAP Loan Default Rates" are an effective factor in improving my university's institutional performance.	10	10	0
16	"Graduation Rates" are an effective factor in improving performance at the program level in my university.	10	2	8
17	"Employment Rates" are an effective factor in improving performance at the program level in my university.	10	8	2
18	"OSAP Loan Default Rates" are an effective factor in improving performance at the program level in my university.	10	10	0
35	The exercise of conducting the annual graduate survey is beneficial to my institution	11	2	9
36	The costs incurred by my institution on the calculation of key performance indicators are	10	2	8

	minor.			
37a	I recognize the following as achievable goal in Ontario's use of KPIs: clear improvement in education.	10	5	5
37b	I recognize the following as achievable goals in Ontario's use of KPIs: increase provincial funding support for institutions with improvement.	11	5	6
38	Overall, the implementation of KPIs is a worthwhile exercise.	11	3	8

Scale used for Responses:

1 – Strongly Disagree; 2 – Disagree; 3 – Agree; 4 – Strongly Agree

* = number of responses by collapsed categories (strongly disagree/disagree and agree/strongly agree)

Not one of the university respondents agreed that the OSAP Default Rates are effective in improving performance at either the institutional or at the program level. As suggested in their responses to Research Questions #2 and #4, the key reasons why OSAP Default Rates are not useful are that Default Rates are driven by factors that are beyond the institution's control; they are disconnected from institutional and program decisions and do not measure program performance. In the follow-up interview, when the respondents were asked for an explanation for the two drops in OSAP Default Rates in 1999-2000 and 2006-07, the majority felt that it might be due to the economy. Two respondents indicated that the structural changes and policy changes at the government level might have contributed to these two drops of the OSAP Default Rates.

Benefits of KPI Activities

Although 82% of respondents to the online survey agreed or strongly agreed that the exercise of conducting the annual graduate surveys is beneficial to their universities, 18% did not. Only nine of the 11 respondents agreed or strongly agreed with the survey statement #35, "The exercise of conducting the annual graduate survey is beneficial to my institution" (Table 13). Unfortunately, none of them explained why or how.

The majority of survey respondents (eight of the 11 or 73%) also agreed or strongly agreed with the survey statement #38, "Overall, the implementation of KPIs is a worthwhile exercise" (Table 13). Similarly, eight of the 10 who responded (80%) agreed or strongly agreed with statement #36, "The costs incurred by my institution on the calculation of key performance indicators are minor" (Table 13).

Interviewee Feedback

Based on the data provided in the follow-up interviews, most university key informants commented that overall, KPIs are not effective in improving institution's performance. KI-D elaborated that Employment Rates are not embedded in its planning, and Graduation Rates "are very late in the process because they are 7-year Graduation Rates." A couple of respondents mentioned that their institutions use the Year 1 and Year 2 Retention Rates of the CSRDE in their planning process and in improving performance. These can be measured annually which alerts institutions quickly if problems occur. Gaither et al. (1994) point out that indicators which can raise warning signs about the efficiency and effectiveness of higher education should be explored. However, the study participants did not indicate that this was an important use of KPIs in Ontario universities.

Related Performance Funding

When key informants were asked about the impact that performance funding has had on the overall performance of their universities, all except one (who did not have an answer) responded that the impact was none, minimal, or peripheral. KI-E explained that "the amount is (too) small," which is consistent with Lang's comments on performance funding in 2013. Figure 2 shows the percentages of each university's performance funding allocations of their total operating expenses in 2011-12. The highest portion is 0.47% and the portions go as low as 0.06%.

In addition, most key informants declared that the benefits of collecting KPIs are none or marginal at best. One respondent had a different view in that he/she felt that the exercise could be helpful in providing a benchmark and in comparing with other universities.

Figure 2: Performance Funding over Total Operating Expenses of Ontario Universities 2011-12
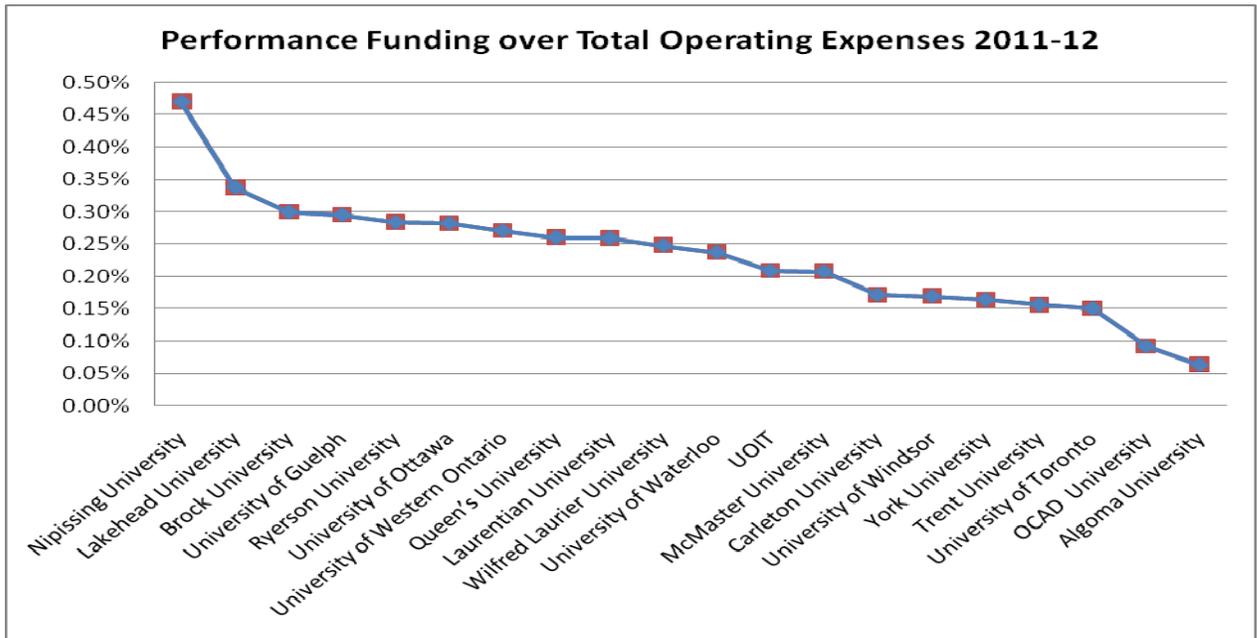
Source: Financial Reports of 20 universities in Ontario, and Council of Ontario Finance Officers (COFO) Financial Report of Ontario Universities 2011-12

Alstete (1995) contends that benchmarking can be a useful measure of program performance and allows universities to learn, and continue to learn best practices for improving operations in teaching research, and university administration through examining processes and models at other universities and adapting their techniques and approaches.

KPIs as a Goal of Improving Education

In terms of whether clear improvement in education was as an achievable goal in the use of Ontario's KPIs, Broadhurst Member C answered that he/she could not think of one improvement, and Member B replied that the current KPIs do not measure quality.

From the perspectives of the university participants, the result was mixed. Five of the 10 respondents agreed or strongly agreed with the survey statement #37a, "I recognize that 'clear improvement in education' as an achievable goal in Ontario's use of KPIs." Fifty percent (n=5) of survey respondents agreed or strongly agreed that clear improvement in education is an achievable goal in Ontario's use of KPIs, while the same number (5) strongly disagreed or disagreed.

In contrast, MTCU participants insisted that KPIs are "one of the reasons why we have seen progress on Graduation Rates and on the OSAP Default Rates." TCU-A elaborated that "whenever you have an objective measurement to attach to something, and then you also make that public, that's a powerful tool." TCU-A believed that the exercise of conducting the graduate survey would be beneficial to universities and mentioned that "they (the universities) are very co-operative partners."

As to whether increasing provincial funding support for universities for KPI improvement was an achievable goal, Broadhurst Member B answered that the deployment

of performance indicators has never led to an increase in funding for universities and the costs of the improvements are often more than that of the KPI performance funding. Member B added that depending on the government, tying KPIs to improved performance can work. However, he/she stressed also that arguments can arise as to why the institution needs more funding when it is doing so well.

On the universities' side, the survey respondents did not fully agree that increasing provincial funding support for institutions linked to improvements was an achievable goal in Ontario's use of KPIs. Six (55%) of the 11 respondents agreed or strongly agreed with the survey statement #37b, "I recognize that 'increasing provincial funding support for institutions with improvement' is an achievable goal in Ontario's use of KPIs," (Table 13, p. 126).

Costs Incurred

In a highly uncharacteristic move, the Ministry chose to conduct and incur the costs for the Ontario Graduate Survey to gather KPI data instead of assigning these roles to the universities. The first speculative reason that comes to mind for this move is that the Ministry tried to prevent any self-serving manipulation or non-compliance by the universities.

With respect to the costs incurred by the Ministry for the KPIs, TCU-A felt that the costs were reasonable. TCU-A's perspective on performance funding was that it can contribute to the improvement of universities. This is aligned with the observation of Gaither et al. (1994) who saw funding as a motivator for outcomes, results and performance in institutions in the US.

Use of Institutional Level Data for Funding Allocation

An important reason why the goal of performance funding was not successful as perceived by study participants was that, there is a disconnect between the KPIs as an incentive for performance funding and the locus of decision-making at the program level. In other words, for performance funding, KPI data are aggregated at the institutional level (arithmetic fact) and are insignificant at the program planning level because of the pooling of funding and aggregated data. As Deans of Faculties are the key players who drive program changes and improvements, the performance funding provides no incentives for them.

The government's intention in initiating performance funding in 2000 was to reward universities for excellence in performance as initially suggested by the Provincial Auditor. However, given the independent charter status of the universities, this may be interpreted as essentially an effort of the government to influence indirectly the behaviour of the universities to meet the government's socio-economic goals.

As shown in Tables 6, 11, and 14, and Figure 3, and as Member B mentioned, the overall OSAP Default Rates across the universities are fairly low. The goal that MTCU included in its 1998-99 business plan that the Loan Default Rates be reduced to 10% after 2005 has been achieved. But whether that is attributable to KPIs and performance funding is not certain.

As indicated in Figure 3, there was little variation in system level data on Graduation Rates, Employment Rates and OSAP Default Rates reported for the period from 1998 to 2011.

Figure 3: Trends of KPIs (1998-99 to 2010-11)
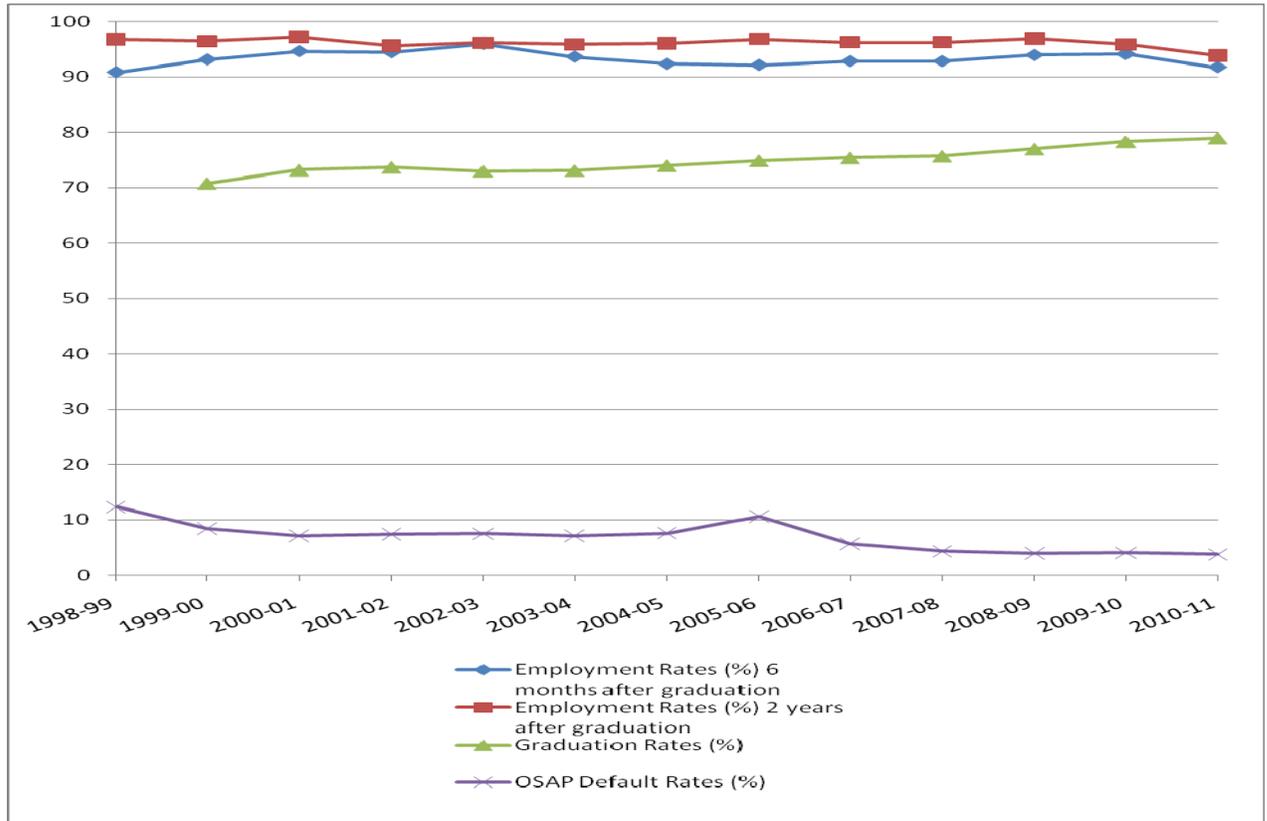
Source: Ministry of Training, Colleges and Universities

The OSAP Default Rates have consistently declined for most of the universities and across the system (Table 14), but whether this is due to KPIs is not known.

Appendix M also depicts the OSAP Default Rates by university and by year between 2005 and 2010.

Table 14: OSAP Default Rates for Ontario Universities (2005-2010)

	2005	2006	2007	2008	2009	2010
Algoma	21.1%	12.5%	6.7%	20.3%	9.1%	10.3%
Brock	11.8%	6.2%	3.8%	3.7%	4.6%	4.5%
Carleton	13.0%	7.4%	7.4%	5.1%	6.0%	5.1%
Lakehead	9.6%	8.3%	5.1%	5.6%	4.9%	3.9%
Laurentian	17.1%	12.3%	7.6%	7.2%	6.3%	6.4%
McMaster	8.4%	3.1%	2.7%	2.8%	3.6%	2.5%
Nipissing	11.0%	4.7%	3.8%	3.2%	3.9%	2.6%
OCADU	17.5%	9.1%	9.6%	9.7%	7.1%	5.0%
Queen's	7.2%	2.1%	1.5%	2.2%	2.4%	1.5%
Ryerson	9.3%	5.9%	3.4%	2.7%	3.1%	2.9%
Trent	16.1%	6.7%	5.5%	4.2%	6.1%	6.6%
Guelph	9.5%	3.1%	2.4%	2.6%	2.9%	3.0%
UOIT		4.5%	4.9%	6.6%	5.9%	4.0%
Ottawa	10.8%	7.3%	5.4%	4.3%	3.9%	3.7%
Toronto	9.2%	4.5%	3.4%	3.0%	3.2%	2.9%
Waterloo	7.3%	3.9%	3.0%	2.8%	2.7%	2.1%
Western	8.8%	4.6%	3.4%	3.2%	2.6%	2.4%
Windsor	13.5%	7.5%	6.7%	6.9%	6.1%	5.2%
Wilfrid Laurier	8.1%	5.8%	3.6%	2.4%	2.9%	4.3%
York	14.0%	7.7%	5.9%	5.1%	4.9%	5.0%
Ontario Total	**10.6%**	**5.7%**	**4.3%**	**3.9%**	**4.0%**	**3.7%**

Source: Ministry of Training, Colleges and Universities

Research Question #6: To what extent has the introduction of the Multi-Year

Accountability Agreement process changed the role and impact of the KPIs?

Multi-Year Accountability Agreements (MYAA) were established in May 2005. Substantial additional operating funding for universities based partly on MYAA achievements was announced in the *Reaching Higher Plan* in the 2005 Ontario Budget. The MYAA are required of all publicly-funded universities. The introduction of the requirement for these agreements was to ensure that the government's goals of access, quality and accountability for universities are achieved (MTCU, 2009).

A majority (91%) of survey respondents disagreed that the introduction of the MYAA process has changed the *role* of KPIs in their universities. Ten out of 11 respondents strongly disagreed or disagreed with the survey statement #19, "The introduction of the Multi-Year Accountability Agreement process has changed the role of KPIs in my university" (Table 15).

Similarly, 91% of survey respondents disagreed that the introduction of the MYAA process has changed the *impact* of KPIs in their universities. Ten out of 11 respondents strongly disagreed or disagreed with the survey statement #20, "The introduction of the Multi-Year Accountability Agreement process has changed the impact of KPIs in my university" (Table 15).

Seven (70%) of the 10 respondents also strongly disagreed or disagreed with the survey statement #33, "KPIs would have been different or would have had a different impact if, from the start, they had been connected to funding" (Table 15). In the follow-up interview, KI-C pointed out that the KPI funding does not significantly affect any university's revenue streams and he/she did not think that KPIs have a impact on institutional direction,

decision-making or planning. TCU-A also did not think that the impact of KPIs would have

been different had the funding had been connected to performance from the start.

Table 15: Responses to Online Survey Statements #19, 20, and 33

#	Statement	n*	Scaled Responses	
			Strongly Disagree/ Disagree*	**Agree/ Strongly Agree***
19	The introduction of the Multi-Year Accountability Agreement process has changed the role of KPIs in my university.	11	10	1
20	The introduction of the Multi-Year Accountability Agreement process has changed the impact of KPIs in my university.	11	10	1
33	KPIs would have been different or would have had a different impact if, from the start, they had been connected to funding.	10	7	3
Scale used for Responses: 1 – Strongly Disagree; 2 – Disagree; 3 – Agree; 4 – Strongly Agree * = number of responses by collapsed categories (strongly disagree/disagree and agree/strongly agree)				

With respect to the impact of the level of performance funding in motivating

universities to change their behaviour, some university informants claimed that the current

KPIs did not have any impact regardless of the funding level as the KPIs are "too flawed",

"the university is powerless to intervene," and stressed that "KPIs should be linked to things

that universities can control." U-H thought that the MYAA target reporting allows the

universities to maintain stability of base funding for operation and planning which is a better

way to influence behaviour.

In the follow-up interviews, university participants felt that the processes of MYAA and KPIs should be consolidated under one accountability framework, and that the MYAA is a more effective tool for accountability in which universities' priorities are taken into account.

From the perspective of the Ministry participants, the MYAA process "reinforced the importance of KPIs." TCU-A also claimed that the Ministry has seen improvements in performance because of KPIs, that is that the KPIs have changed university behaviour.

According to Clark et al. (2009), the introduction of the MYAA was to subsidize the limitations of the three KPIs with respect to institutional performance. Strategies, programs, and appropriate performance targets are set between the Ministry and individual universities. Each university is required to report its performance related to the goals set in the signed MYAA. MYAAs consist of considerable scope within the process and universities are accountable for addressing identified societal needs (Clark et al., 2009). Based on the input received from the study participants, the introduction of the MYAAs has not changed the role or impact of the KPIs; this study did not address whether their purpose as proposed by Clark et al. has been achieved.

Research Question #7: How appropriate are the three KPIs currently in place as measures of institutional performance and accountability? What other indicators might better serve all stakeholders?

The KPIs have now been in effect for more than 10 years, Broadhurst Member B recommended that the government continue the use of KPIs as a form of performance reporting but that KPIs be discontinued as a means of funding allocation. When they were first introduced (despite the government's initial assurance that they would not be used for

funding purposes), the advisory committees recommended to the government that KPIs

should be reviewed and modified if they were to be used for the purpose of funding

allocation, said Member B.

Member C felt that the method of calculating performance funding for individual

institutions did not make sense and did not reflect true differences. Member C also

commented that the Employment Rates should be dropped as there are no statistically

significant differences and more importantly, institutions are not able to do anything to alter

Employments Rates. As to the use of KPIs for benchmarking, Member C added that if a KPI

is relevant to funding, it should reflect true differences, fair comparisons, and institutions

should have the ability to change it. According to Alstete (1995) the current threshold setting

does not fulfill the essence of a benchmark, that is, to allow universities to improve by

examining and adapting best practices from other institutions, as it does not confirm best

practice or excellence.

Appropriateness of KPIs as measures of institutional performance and accountability

Not all survey participants *disagree* that the current KPIs are appropriate measures

of *institutional performance*, but the majority (73%) *disagreed* (Table 16). Eight of the 11

respondents strongly disagreed or disagreed with the survey statement #21, "The current

KPIs are appropriate measures of institutional performance" (Table 17, p. 140).

Similarly, even more of the survey respondents (91%) disagreed that the current KPIs

are appropriate measures of *institutional accountability* (Table 16). Ten of the 11

respondents strongly disagreed or disagreed with the survey statement #22, "The current

KPIs are appropriate measures of institutional accountability" (Table 17).

Only 9% - one out of 11 - respondents agreed that current KPIs are appropriate measures of *program performance,* but the other 91% disagreed (Table 17).

All of those who responded to this question disagreed that the current KPIs measure *program accountability* appropriately. Ten of the 10 respondents strongly disagreed or disagreed with the survey statement #24, "The current KPIs are appropriate measures of program accountability" (Table 17). This may reflect Burke's (2004) concern that academic departments which are responsible for the delivery of high standard of education are usually not involved in the discussion of program accountability.

Table 16 provides a summary of the percentages of positive responses (agree or strongly agree) to survey statements #21-24 with respect to KPIs as appropriate measures of institutional and program level performance and accountability.

Table 16: Percentages of the Number of Positive Responses from Online survey of KPIs on their Appropriateness (i.e., agreed or agreed strongly that the KPIs were appropriate)

Current KPIs are appropriate measures of:	Percentage of Positive Responses
- **institutional performance**	27% (3 out of 11)
- **institutional accountability**	9% (1 out of 11)
- **program performance**	9% (1 out of 11)
- **program accountability**	0% (0 out of 10)

In the follow-up interviews, the university participants also raised the point that the current KPIs are disconnected from the performance of the institution and program. In addition, the generic nature of the KPIs does not work well at the systems level in that it

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includes institutions of different sizes, mandates, program mixes, demographic groups of students, etc. This is consistent with Boberg and Barnetson's (2000) findings that when only one method is employed to increase productivity, contradictory aims and methods will transpire between productivity and accountability (Boberg & Barnetson, 2000).

As to the question of which KPIs should be eliminated, each of the three KPIs was mentioned by the participants. However, some university respondents suggested replacing "the Graduation Rates methodology with CSRDE methodology to ensure inter-institutional consistency," and that the KPIs "could certainly be re-assessed and/or recalculated," and disassociate them from performance funding. In terms of other key performance indicators

Table 17: Responses to Online Survey Statements #21-24, and 32

#	Statement	n*	Scaled Responses	
			Strongly Disagree/ Disagree*	Agree/ Strongly Agree*
21	The current KPIs are appropriate measures of institutional performance.	11	8	3
22	The current KPIs are appropriate measures of institutional accountability.	11	10	1
23	The current KPIs are appropriate measures of program performance.	11	10	1
24	The current KPIs are appropriate measures of program accountability.	10	10	0
32	I consider the current three KPIs are the best indicators to demonstrate accountability.	11	10	1
Scale used for Responses: 1 – Strongly Disagree; 2 – Disagree; 3 – Agree; 4 – Strongly Agree *= number of responses by collapsed categories (strongly disagree/disagree and agree/strongly agree)				

that would be more appropriate, the respondents recommended the Common University Data Ontario (CUDO) indicators, student satisfaction, research, indicators included in the Broadhurst Report and institution-specific reporting of data. In the follow-up interview, KI-E suggested using the strategic mandate agreement with the Ministry as the university autonomy is respected while differentiating institutions by absolute measures. The indicators in the MYAA were also recommended. KI-F suggested that the general expectations need to be defined at the system level. Key indicators would then be developed according to these expectations and consist of a standard piece and a variable, institution specific piece. The variable piece would capture the uniqueness of the institutions.

Below is the list of current Multi-Year Accountability Agreement Indicators:

- Enrolment – Headcount

- Under-Represented Students: Student with Disabilities, First Generation and Aboriginal

- Compliance with the Student Access Guarantee

- Participation in the Credit Transfer System

    o Expanding Transfer Pathways

    o Providing Support Services for Transfer Students

    o Improving Transparency and Access to Information

- Class Size

- eLearning

- International

    o Initiatives

- o Enrolment

- o English as a Second Language

- Supply Chain Compliance/Broader Public Sector Accountability Act

- Space Utilization

- Student Satisfaction

- Graduation Rate

- Graduate Employment Rate

- Student Retention

- Quality of the Learning Environment

    - o In-Class Experience

    - o Engagement

    - o Support

- Ten Percent Reduction in Executive Office Costs

The overall assessment of the impact of KPIs on Ontario universities was that the impact minimal as perceived by most key informants. KI-E used an interesting phrase to describe the KPI reporting requirement as "rewarding for A but hoping for B!"

Summary of Chapter Four

In this chapter, I presented the findings of the study and their interpretation in relation to the research questions and the literature reviewed. Table 18 summarizes the number and percent positive responses (agree and strongly agree) from online survey by KPIs on their impact, usefulness and effectiveness as perceived by the university participants.

Table 18: Percentages of Positive Responses (agree and strongly agree) from Online Survey by KPIs on their Impact, Usefulness and Effectiveness

	Graduation Rates*	Employment Rates*	OSAP Loan Default Rates*
High impact on institutional planning	91% (10 out of 11)	45% (5 out of 11)	20% (2 out of 10)
Used in student recruitment	73% (8 out of 11)	45% (5 out of 11)	9% (1 out of 11)
Used in setting tuition fees for specific programs	0% (0 out of 11)	18% (2 out of 11)	0% (0 out of 11)
Used for other purposes	100% (11 out of 11)	82% (9 out of 11)	40% (4 out of 10)
An effective factor in improving institutional performance	73% (8 out of 11)	55% (6 out of 11)	0% (0 out of 10)
An effective factor in improving performance at program level	80% (8 out of 10)	20% (2 out of 10)	0% (0 out of 10)
Source: Responses from the online survey provided by universities' key informants			

Chapter Five concludes the study with implications/recommendations to the Ministry and suggestions for further research and for program and institutional decision-making and policy development.

CHAPTER FIVE: CONCLUSIONS, IMPLICATIONS/RECOMMENDATIONS, AND SUGGESTIONS FOR FURTHER RESEARCH

This study focused on the exploration of the perceived efficacy and effectiveness of the existing KPIs for Ontario universities, more than 10 years after they were instituted. Trow (1996) stresses that institutions need to be examined internally and externally in order to sustain or raise their quality of performance, which is one of the elements of accountability. This study was one such examination.

In introducing the KPIs originally, the Ontario government attempted to influence indirectly the bahaviour of the universities to support the government's priorities. In doing so then, and over the years since then, the government is indirectly impacting on the universities' autonomy with the justification that, as publicly supported institutions they are accountable to the public. Fisher and Rubenson (1998) stated that provincial governments are more directly responsible when universities have less autonomy as tighter control over university policy and more emphasis on province's strategic needs can be seen. In this chapter, I present the conclusions based on the findings and identify implications for practice, policy, further research and underlying theory.

Conclusions Based on the Findings

The overall question that drove this study was whether or not the KPI reporting requirements and associated performance funding were valuable and effective in improving the behaviour of Ontario universities, specifically with respect to Graduation Rates, Employment Rates and student Loan Default Rates. The findings of this study indicate considerable agreement among the university participants and the Broadhurst Task Force

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members on most of the issues, though not all. In contrast though, the perspectives of the MTCU informants are markedly different.

Based on the input from the Broadhurst Task force members interviewed and the university participants surveyed and interviewed, the overall conclusion is that the impact on university behaviour of the KPIs and performance funding is minimal at best, and then only for very different purposes than the initial accountability goals. The participants recognized some usefulness of Graduation and Employment rates for communication and recruitment purposes, but not for strategic planning. However, the participants were very concerned about the disconnect of the KPI data from the universities' mission, their ability to impact these outcomes, as well as what they perceived to be "flawed" data collected. What was striking was the disconnect between their perceptions and that of the MTCU informants, who were confident that the KPIs and performance funding have had a positive impact. The MTCU informants felt that the government's goal of steering university behaviour to support the government's priorities was realized in the KPI requirement. The Broadhurst members felt that the KPI initiative had had a positive impact as well, but only in increasing the awareness of the accountability of governing boards and perhaps by providing them with needed information. As Frink and Klimoski (2004) claimed that shared expectations are important for an organizational response to accountability of its members. In order to effectively anticipate and model agent behaviour, the nature and clarity of the expectations of members of the role set and the degree of alignment with these expectation are necessary (Frink and Klimoski, 1998).

Another concern for the university participants was the basis for awarding the performance funding through aggregation at the institutional and system levels far removed

from the location of program improvement decision-making, which is generally at the program (Dean) level. Furthermore, the amount of the funding is too minimal to warrant the cost and effort of implementing program changes.

The findings also reveal a distinct disinterest in the use of the performance funding from the universities' perspective (a Broadhurst member also recommended discontinuing this) as there is little variation among the universities in the funding received, the amount of the funding is insufficient to entice behaviour change. Furthermore, the fact that the funding allocation has essentially remained unchanged since 2001 (Table 5) suggests that neither the universities nor the government have a strong interest in this. A more detailed discussion of the specific areas involved follows:

Impact on Institutional Planning

With respect to the impact of the KPIs on institutional planning, most university key informants perceived that none of the three KPIs have a significant impact in their institutional planning process. Most participating universities are using the Graduation Rates to a limited extent for institutional planning, but not Employment Rates or OSAP Default Rates. The nature of pooled funding for KPI performance raised the question of their usefulness in *institutional* planning since most of the decisions that would impact program excellence are made at the *program* level.

For internal purposes, all of the participating universities reported they are using other indicators. These indicators are institution-specific and plan-focused; they allow drill-down analysis related to each strategic priority; they are helpful for managing performance and planning; they are relevant to outcomes, outputs and impact, and for useful for evaluation and communication purposes. One of the university participants mentioned that his/her institution

uses more than 100 indicators for different purposes. Most of these internal indicators

reported by the survey participants are similar to those in the list of indicators initially

recommended by the CUPA Committee on Accountability, Performance Indicators and

Outcomes Assessment to the Broadhurst Task Force (Table 4, pp. 79-80). Hernandez and

Hodges (2001) stress that clear linkages between identified goals and strategies, and the

implementation plans are essential to inform strategic planning.

Graduation Rates.

Graduation Rates are used by most participants' universities for student recruitment

but Employment Rates and OSAP Default Rates are not widely used for that purpose. One of

the university participants stated that in his/her opinion program availability, quality,

reputation and location are the major factors influencing students' decisions.

OSAP Loan Default Rates.

With respect to setting of tuition fees for specific programs, the OSAP Default Rates

are not used at all by most of the participants' institutions. Only two participants' universities

are using Employment Rates (but not Loan Default Rates) for setting tuition fees, and then

only for very specific programs. Tuition fees are regulated by the province and most key

informants stated that the KPIs are "disconnected" from their control in this regard.

Overall Impact

According to the survey findings, all the participants' universities are using

Graduation Rates and most of them are using Employment Rates for other very different

purposes. Most university participants felt that the Graduation Rates have some but not much

impact in improving both the institution's performance and performance at the program level

(Table 18, p. 143). About half of the university respondents agreed that Employment Rates

are somewhat effective in improving *institutional* performance, but only two university

participants felt that the Employment Rates are effective in improving performance at the

program level (Table 18, p. 143). On the other hand, OSAP Loan Default Rates are not used

at all because factors such as employment opportunities, labour market, and the economy, are

beyond institution's control.

The current performance funding model has minimal impact on overall institutional

performance. This is consistent with Kerr's observation in *An Academy Classic - On the*

Folly of Rewarding A, While Hoping for B where he states that many examples of reward

systems can be found in the U.S. that show the desired behaviour is not being rewarded at all

(Kerr, 1995). The main reason provided by the participants in this study, is that the funding

level is too low (i.e., ranging from 0.06% to 0.47% of the operational expenses - Figure 2, p.

129) to affect institutional behaviour in any meaningful way. Perhaps that is why the

universities have not advocated for an increase in the amount of the funding over these many

years (since 2001) as that might then increase the government's power to direct university

behaviour.

Clark et al. (2009) stated that one of the roles of MYAAs was to subsidize the

limitations of KPIs in terms of institutional performance. However, the majority of university

participants *disagreed* that the introduction of the Multi-year Accountability Agreement

(MYAA) process has changed the role and impact of KPIs in their universities. They felt that

the MYAA and KPIs should be consolidated under one accountability framework.

The KPIs are not seen as appropriate measures of performance and accountability at

the institutional or program levels. Each of the three KPIs was mentioned in response to the

question on which of the KPIs should be eliminated. Furthermore, the university participants

recommended a number of indicators which might better serve all stakeholders, such as the indicators included in the Broadhurst Report, and MYAA for instance. While the ministry participants felt that the KPIs had achieved their intended goals and had in fact impacted positively on university behaviour, the university participants did not think, and neither did the Broadhurst members interviewed.

When the decision was made to require that KPI reporting be made public, the government's intent was to provide potential students and parents with the basis to make informed decisions in the selection of institutions and programs (MTCU, 1999b). On the sector side, colleges and universities could use the data to demonstrate their achievements, and to improve their programs and services. However, both MTCU and the sector participants agreed that the existing KPIs are not used fully for active student recruitment.

MTCU participants confirmed that currently the government also expects KPIs to monitor progress in key areas at the institutional and systems levels; to assist in evaluating programs and institutions, for internal benchmarking and to compare institutions, and to have enough integrity for the Ministry to attach funding. The findings in this study suggest that the three KPIs implemented currently are not achieving these goals. These ministry expectations are consistent with the desire of most of the university participants, but different from what they perceived to be the Ministry's expectations. They thought the government focused on simplistic measures as a surrogate accountability scale, expected to identify key issues of institutional performance, expected the KPIs to highlight institution-specific problems, and to reflect institutional accountability.

With respect to expectations of the value of the current KPIs, most university respondents did not have high expectations for their value because of the unreliability of data,

including the method of calculation and the response rates. And, under or over performance

cannot be identified as the results across the system are close to the mean. Burke and

Minassians (2003) point out that information can be powerful if it is used appropriately.

Employment Rates and OSAP Loan Default Rates are also not seen by these authors

to be very helpful in institutional planning, student recruitment, or in setting tuition fees for

specific programs. The factors affecting these two KPIs are seen to be beyond the control of

the universities. When these performance indicators are aligned with performance funding,

there is certainly an expectation of improvement or change in performance. However,

universities are not able to improve these indicators as the factors are not under their control.

And, with respect to the intersection of quality and accountability as intended by the KPI

requirement, Broadhurst member B commented "None of the current KPIs measure quality."

Implications for Practice

As to the implication of these findings for practice, Knouse (1979) suggests that

motivation of accountable behaviour will be strengthened if the expectations are accepted by

both parties. He also proposes that those being held accountable (i.e., universities in this

case) should be involved in the setting of levels of performance accountability. Ansell and

Gash (2007) agree that collaborative governance brings public and private stakeholders

together in common fora to engage in consensus-oriented decision-making. And, Frink and

Klimoski (2004) also state that shared expectations are important for an organizational

response to accountability. Similarly, Hernandez and Hodges (2001) stress that the input of

all stakeholders should be sought. The goals and expectations of both the Ministry and of the

universities need to be clarified and satisfied so that institutional accountability processes

related to the KPIs can be improved. Furthermore, Frink and Klimoski (1998) stress that the

nature and clarification of the expectations and the degree of alignment with these expectations are important to anticipating or modeling agent behaviour. Knouse (1979) also contends that accountability requires the clarification of role expectations on the part of the parties involved; both parties should be clear on each other's goals and expectations. As Burke and Minassians (2003) appropriately recommended for the American system, the Ontario government and universities should work together to develop a set of indicators that incorporate both quality and efficiency indicators in a way that responds to the concerns of both parties.

Performance Indicators should be based on valid and reliable tools, to measure actual performance that the universities do have some control over. Based on the findings in this study, the current KPIs should be revisited and the following characteristics should be considered in that review.

Because the universities are supported by public funding, the outcomes of university education service should be measureable and reported in an accountable way. If the reporting of performance is to be at all useful, there is a need to ensure the integrity of the data collected to measure performance. Mutually agreed upon performance measures should be helpful in decision-making for both the institutions and for the government. To this end, these performance measures should also allow institutions to build institution-specific indicators as recommended initially by the Broadhurst Task Force, to enable institutions to improve their performance. Participants in this study recommended the consolidation of the MYAA and KPIs under one accountability framework, and that relevant data from the Ontario Graduate Survey should be made public.

The question of whether performance funding should be continued or not needs to be

addressed explicitly. Furthermore, performance monitoring should allow institutions (i.e.,

their governing bodies) to evaluate operational efficiency, effectiveness and cost

effectiveness, and any reward funding should be sufficient to make it worthwhile for the

institutions to make appropriate changes.

Of the current KPIs, only the Graduation Rates were seen by the participants to be

most helpful for institutional planning, student recruitment, and other purposes, and are seen

by the study participants as effective factors in somewhat improving both institutional

program performance in that context. However, participants pointed out that, because the

current methodology does not isolate the students who transferred between universities, the

Graduation Rates are understated in the original university. Participants recommended that

the Consortium for Student Retention Data Exchange data (CSRDE) methodology be used

(i.e., students of the same cohort are followed through from the first year to the year they

graduate).

The published KPIs were initially intended to serve as a tool for universities to

provide marketing information to students and their parents. In order to be accountable to the

market, the norms (i.e., the standard KPIs and their narrative of each program) should be

made available to students and their parents. When they then review the KPIs of a university,

they can compare the norms to understand if the university is above or under the average

standard. However, this is possible only if that information is readily available and clear to

the public, and my review of the university student recruitment websites found that it was

not.

The Ontario Graduate Survey (OGS) survey is administered by consultants on behalf

of the Ministry and asks the graduates about their employment experience at six months and

again at two years post graduation (Ontario Universities' Application Centre, 2009). The OGS asks the same 11 questions at each of those two times. For instance, the OGS for 2006 graduates of an Ontario university consists of three parts. The first part (questions #1 to #11) related to the graduate's employment situation six months after completing the program in 2006, the second part (questions #12 to #22) related to graduate's employment situation in October 2008 (two years after graduation), and comments were requested in part three. One participant (KI-A) recommended as another tool "the graduate satisfaction factor, that is, (do the students) gain good value of the money? ….. a few years out, because then they'd have (clearer) perspectives", but agreed that research on the validity and usefulness of student satisfaction data would be warranted.

Currently, only the KPI related-data in the Ontario Graduate Survey (i.e. Employment rates) are published. Some of the data that would be useful to students and parents are not published by the universities, COU, or MTCU but should be made available to the public. For example, the proportion of respondents who are working part-time and how many are attending further post-secondary education would be useful information for students and parents.

Public Policy

The findings of this study have the potential to enable more effective, evidence-based decision-making on public policy by the government and institutional policies by the universities. In instituting the KPIs originally the Ontario government attempted to indirectly influence the behaviour of the universities to support its socio-economic goals of increasing student participation in post-secondary education and their ability to attain employment after graduation. The government's end goal in instituting the KPIs and additional accountability

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measures, such as the MYAA, was to build a highly qualified workforce, and to monitor how effectively the public support of scarce resources are being used by the universities. On the other hand, the goal and mission of the universities is broader than that. Their concern is much more about the quality of the learning outcomes, as reflected in the *Quality Assurance Framework* (2012) and its focus on the many factors that impact the learning experience and outcomes.

Government policy for post-secondary education has become increasingly more market-oriented because of the unstable economic climate, not only in Ontario but world-wide. The current KPI model for accountability has been in place and unchanged since the 1990s despite significant changes in the economic context over these years. The findings in this study suggest that this model is not working; it is perceived by the universities to have only minimal impact on their behaviour and it is considered to be more of a "nuisance" than a driver for program change. What is needed is government policy that achieves the accountability goals and is more closely aligned with the mission of the universities and their ability to impact the goals of both the government and the universities. And, the new policy framework must take into account the diversity within the university sector. The current policy of "one size fits all" clearly does not work in the perception of the university participants in this study. And, participant K1-A declared:

> As far as improvements or changes, if the government really wants this as a policy tool then they have (to come up with) some serious funding, but they also have to come up with robust measures that the universities can influence. (The current KPIs) were selected because they were relatively easy. However they're subject to a whole lot of other factors that are well beyond the control of any post-secondary institution.

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An effective tool in measuring performance is crucial. Institutions should have the ability to improve the results and the governing body to evaluate operational efficiency and effectiveness.

Implications for Further Research

This study was limited to the evaluation of the KPI process more than 10 years after their implementation as perceived by key informants in only 11 of the 20 public universities in Ontario. Research is needed to address the important issues of valid and reliable measures of accountability in publicly funded educational institutions. Further research is recommended for the following purposes:

1) What are the common elements and differences of the indicators that all of the current 20 universities are using for different purposes? According to the findings, for internal purposes such as student satisfaction, retention, accessibility, research, and time to completion, all the participating universities are using other indicators. The participants mentioned that these institution specific indicators are helpful for different purposes, such as managing performance and planning; they are applicable to outcomes, outputs and impact, and for evaluation and communications. A thorough analysis of the commonality and differences of the indicators that the university sector is using would be helpful for the universities. It would be especially useful for the institutional planning offices to share best practices, to identify norms or standards of different programs, and to evaluate success and encourage improvement.

2) What indicators would address performance funding that will impact the institutions

at the appropriate locus of decision-making (i.e., whether at the institutional or program

level)? Performance indicators linked to funding vary from jurisdiction to jurisdiction. But,

the allocations of performance funding in jurisdictions examined in this study were all

calculated at the institutional level. As Burke (2004) indicates, academic departments are

usually not involved in the discussion of accountability programs and the discussions and

decision-making process usually stop at the vice-presidential level. Identifying indicators that

will impact the appropriate levels of decision-making would be helpful to connect the

responsible parties in the whole process.

3) Are there any underlying costs in terms of performance reporting? COU (2004) stated that

the 20 reportings to the Ministry required for provincial grants were considered onerous,

time-consuming, resource-intensive, and expensive to prepare (COU, 2004). KPI reporting

has been one of these 20 reporting requirements since 1998. In the online survey results,

eight of the 10 respondents agreed or strongly agreed that the costs incurred by their

institutions on the calculation of key performance indicators are minimal. Although most

universities felt that the costs to their institutions are minimal, two respondents did not agree.

In the follow-up interviews, one interviewee stated that the costs incurred by his/her

institution are too high. He/she added that "there's too much reporting, and all we're doing is

taking money out of the classroom that really should be used for planning and enhancing the

quality of instruction" (KI-E). It would be worthwhile to examine the actual underlying costs

in terms of performance reporting.

4) How and when do the institutions actually base their decisions on their KPI results? This

study has examined the impact, usefulness and effectiveness of certain areas such as for

institutional planning, student recruitment, setting tuition fees for specific programs, or other

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purposes, to improve institutional performance. The findings vary among the three KPIs and in different areas. As reported in Chapter Four, the MTCU participants' thought that the universities do pay attention to and use the KPI results at the institutional level and that the universities are committed to transparency and accountability as represented by the reporting of the KPIs. However, that view is not shared by the university respondents. For instance, one university interviewee specifically mentioned that his/her institution's short-term plans do not relate to the KPIs at all since it takes seven years to get the results in the Graduates Rates. Given the different perspectives of the MTCU and university participants as reflected in the analyses of the findings, it was not clear exactly how and when the institutions actually based decisions on their KPI results. Further research on this topic is recommended as this would be helpful for the Ministry to understand the usefulness of each of the three KPIs to the university sector.

5) Why did nine universities not respond to the requests for participating in the study? After enormous effort was made to connect with the 20 English Language universities, only 11 universities accepted the invitations. Out of the nine non-participating universities, four of them declined, but five did not even respond at all. I was informed that the Provost of one of these nine universities did not allow his/her university to participate before the ethics application was even processed. These nine universities represent 45% of the Ontario university system. It would be worthwhile to explore the reason why they chose not to participate, and why five of them did not even respond to the invitations. It is reasonable to assume that if the topic were of interest or concern to them, they might have been willing to participate in this study.

Implications for the Theory of Accountability as Used in the KPIs

As discussed in Chapter One, from the perspective of the Ontario government at the time, accountability was the driving force in the initiation of the requirement for the regular and public reporting by the Ontario universities of three selected Key Performance Indicators. That is why they established the Broadhurst Task Force which they explicitly named the Task Force on University *Accountability*. Furthermore, the Oxford University *White Paper on University Governance*, (2006) declares that accountability is the first and most fundamental principle of governance.

The governing bodies of Ontario's publicly funded universities have a fiduciary responsibility to ensure their universities operate effectively and efficiently. They have a responsibility to ensure that the interests of their stakeholders are well served, and to ensure that the funds provided by the public purse are used to fulfill their declared institutional missions.

As Trow (1996) stated, sustaining or improving performance of institutions is one of the functions of accountability. While the primary intent of the initiation of KPIs as tools for holding the universities accountable is laudable, the perception of the university participants was that the current KPIs are not fulfilling that goal. New indicators and processes that more accurately reflect performance are needed for *governance* and *accountability* purposes.

Perhaps more importantly, Clark et al (2009) point out that accountability and quality are closely interconnected. In fact these authors imply that demanding accountability without considering the quality of the performance is limiting. The findings in this study suggest that the initial interpretation of accountability as defined by the three KPIs required is too narrow to be pragmatically useful. The findings suggest that there needs to be a review and

redefinition of the theory of accountability as applied in the case of the governing boards of Ontario's university.

Conclusion

This pragmatic research study addressed important issues arising from the implementation of KPIs for Ontario universities. The exercise of KPIs involves the students, parents, universities, government, and taxpayers. The impact and effectiveness of KPIs are directly or indirectly relevant to all citizens of Ontario.

Through a comprehensive analysis of quantitative and qualitative data collected through document analysis, questionnaire survey and interviews of key informants, the findings of this study provide a deeper understanding of the questionable effectiveness of the KPIs as they currently exist, and suggest possible alternatives for measuring university performance. Although not generalizable, the findings have the potential to provide valuable insights that may assist in evidence-based decision-making in the revision or creation of MTCU policies that impact Ontario's universities and their stakeholders.

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On OISE Letterhead

Information Letter to Members of Task Force on University Accountability

[*Date*]

 [*Name of Member of Task Force on University Accountability*]

[*Address*]

Re: Title of Research Project: Efficacy and Impact of Key Performance Indicators (KPIs) as Perceived by Key Informants in Ontario Universities.

Dear [*Name*],

I am conducting the above research as a doctoral student in the Department of Theory and Policy Studies at the Ontario Institute for Studies in Educations of the University of Toronto (OISE/UT). I am conducting this study under the supervision of Dr. Katharine Janzen, from the Department of Theory and Policy Studies at OISE/UT.

The purpose of this study is to examine the history of why and how KPIs were introduced in Ontario and the perceptions of key informants of participating universities regarding the efficacy and effectiveness of the existing KPIs, which were introduced to Ontario universities just over 10 years ago. Are they having the intended effect? My research also seeks to identify areas of concern, if any, and where changes should be made to improve the effectiveness of the KPIs. Through a comprehensive analysis of quantitative and qualitative data collected through document analyses, questionnaire surveys and interviews of key informants, the findings of the study will provide a better understanding of the value and effect of the KPIs and suggested alternatives. The findings will provide valuable information for evidence-based university and Ministry of Colleges Training and Universities (MTCU) policy and planning decisions that impact Ontario's universities and their stakeholders.

I am inviting you and/or other members of the Task Force on University Accountability for an interview related to your work on the KPI initiative. I am also collecting data from key informants in Ontario's universities regarding their perceptions of the efficacy and effectiveness of KPIs. The goal of these interviews (and historical document analysis) is to gain a better understanding of the background of the development and implementation of performance indicators in universities in Ontario. The interview will take approximately 1 hour. With your permission, the interview will be audio-taped and transcribed by me; you will have an opportunity to review the transcript and make any changes you wish within four weeks of the interview. Participation in any part of the study is voluntary. No value judgment will be placed on your responses at any time. You are free to refrain from responding to any question(s) that they do not wish to answer, and you may withdraw from the study at any time without explanation – just tell me to stop the interview. In this case, your responses to that point will be destroyed and not included in the study findings.

There is not harm to participants anticipated that is greater than in daily living activities. Participants will be assigned a pseudonym and will be non-identifiable in any reporting of the findings, or if non-identifiability cannot be assured, I will request your written consent to be identified by position. In order to maintain confidentiality, each participant will be given a pseudonym or case number and all documents will be numbered accordingly in the participant's file along with any notes taken and the audio tape from the interview. The list linking the participants' identities with the pseudonyms or case numbers will be kept in a secure location separated from each other. Should any participant name specific institutions or persons in the interview, these will be deleted or given a factitious title or name in the final transcription of the data and not mentioned by name or title in the dissertation or in any publication.

All data collected will be kept in confidence and secure and accessible only to my thesis supervisor and me. All electronic information outside of a secure server environment will be encrypted consistent with UT data security and encryption standards. All data will be fully destroyed 5 years after completion of this study.

A summary of the findings of study will be made available to you upon a verbal or written e-mail request.

I would also appreciate access to any communication or publications regarding performance indicators. These might consist of memoranda to the University community, minutes of meetings, or action plans based on results on key performance indicators, etc. If you agree to provide these for my study, please let me know if I may work with your assistant and/or communications officer to access these documents.

If you are willing to participate in this study as requested please sign the attached consent form and return it to me in the envelope provided (or if you prefer in PDF form by email).

Should you have any questions about the study, please contact me at (416) 979-5000 ext. 2792 or at vivian.chan@utoronto.ca, or my thesis supervisor, Dr. Katharine Janzen at katharine.janzen@utoronto.ca or 416 978-1232.

If you have any questions about the rights of research participants please contact the **Office of Research Ethics** at the University of Toronto, at ethics.review@utoronto.ca or call 416 946-3273.

Thank you in advance for your support.
Yours sincerely,

Vivian Chan, CGA, MBA   Katharine Janzen, Ed.D.
Ryerson University   Room 8-264, OISE/UT
Director, Research Planning, Finance & Evaluation   252 Bloor St. W,
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Appendix B

On OISE Letterhead

Consent of Broadhurst Task Force Members agreeing to participate in the Research Project

Date:

_____

Title of Study: Efficacy and Impact of Key Performance Indicators as Perceived by Key Informants in Ontario Universities

Researchers: Vivian Chan, Principal Investigator; Dr. Katharine Janzen, Thesis Supervisor

I understand the nature and purpose of the research study identified above and as described in the Information Letter. Any questions I may have had have been answered fully.

I voluntarily agree to participate in this study and understand that I will be asked to answer questions in an interview regarding my expectations, experiences and perceptions on the topic of interest that is the focus of this study. The interview should take about 1 hour of my time. I understand that I will be interviewed in person, by telephone/Skype as negotiated and that the interview will be audio-taped.

☐ I agree to participate in the audio-taped interview as described in the Information Letter

☐ I agree to participate in the interview as described in the Information Letter but I do **NOT** wish to have the interview audio-taped

☐ In the event that it is not possible to guarantee my anonymity in the reporting of the findings, I agree to allow my responses to be associated with my relevant position

_____

Name (please print)

_____   _____

Signature   Date

Office Address_____

Phone No. _____   e-mail address: _____

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I would like a Summary of the report of research findings sent to me at:

_____

Please keep a copy of this consent form for your files.

Appendix C

Interview Questions of Members of the Task Force on University Accountability

Thank you very much for your positive response and agreeing to participate in this interview and the signed consent form. Just a gentle reminder that this interview is being audio-recorded and you are free to not answer any questions that you do not wish to answer, and you may stop the interview at any time without explanation. If you do so, any data collected to that point will be destroyed and not included in the study findings. Your responses will not be associated with your name and if non-identifiability cannot be assured because of your participation in this small Task Force, your responses may be associated with your role in that Task Force but only with your permission on the consent form.

1. I understand you were a participant in the Task Force on University Accountability. In what capacity and to what extent were you involved in that task force?

2. What were the main challenges/issues/questions that dominated the discussions of the task force?

3. What do you think were the most important goals of the Task Force in the final (Broadhurst) report?

4. In your view, to what extent have those goals been achieved? (Probe – please explain?)

5. Which goals, if any, do you feel were *not* achieved and why not?

6. The current three KPIs for Ontario universities (Graduation Rates, Employment Rates and OSAP Loan Default Rates) were *not* included in the list of 25 indicators recommended in Report of the Committee on Accountability, Performance Indicators, and Outcomes Assessment to the Minister's Task Force on University Accountability by the Council on University Planning and Analysis (CUPA) in 1993 from which universities were to select the most appropriate indicators for them. However, only 3 KPIs were selected and these were enforced for all universities in Ontario.

    (a) Were these 3 KPIs ever mentioned or discussed in any of the meetings of the Task Force?

    (Probe) what was the thinking of the task force members about these 3 KPIs

    (b) How and by whom was the decision made to focus only on these particular indicators?

    (Probe) What do you think was the rationale for these decisions?

7. To what extent are the current KPIs accomplishing what the task force and the government intended at the time?

8. In your view, to what extent do these KPIs influence the decisions of students and parents in choosing universities?

9. (a) Was performance funding based on the KPIs ever discussed by the task force?

   (Probe) What was the thinking of the task force about performance funding?

   (b) Would the impact of the KPIs have been different if, from the start, if they had been connected to funding based on performance?

10. Given the KPIs have now been in effect for more than 10 years, what would your recommendation be to the government, regarding their continuance, or what changes would you recommend and why ?

11. Which of the following would you see as achievable goals in Ontario's use of KPIs:

    a) clear improvements in education;
    b) increase provincial funding support for universities with improvement;
    c) prompt to universities to pay more attention to the Province's needs especially in workforce development;
    d) prompt to universities to focus more on their core missions linking toward setting performance goals;
    e) prompt to universities to become more efficient and pay more attention to how students are best served

On OISE Letterhead

Information Letter to University Presidents

[*Date*]

President [*Name*]

[*Name of University*]

[*Address*]

Re: Title of Research Project: Efficacy and Impact of Key Performance Indicators as Perceived by Key Informants in Ontario Universities.

Dear President [*Name*],

I am conducting the above research as a doctoral student in the Department of Theory and Policy Studies at the Ontario Institute for Studies in Educations of the University of Toronto (OISE/UT). I am conducting this study under the supervision of Dr. Katharine Janzen, from the Department of Theory and Policy Studies at OISE/UT.

 The purpose of this study is to examine the history of why and how KPIs were introduced in Ontario and the perceptions of key informants of participating universities regarding the efficacy and effectiveness of the existing KPIs, which were introduced to Ontario universities just over 10 years ago. Are they having the intended effect? My research also seeks to identify areas of concern, if any, and where changes should be made to improve the effectiveness of the KPIs. Through a comprehensive analysis of quantitative and qualitative data collected through document analyses, questionnaire surveys and interviews of key informants, the findings of the study will provide a better understanding of the value and effect of the KPIs and suggested alternatives. The findings will provide valuable information for evidence-based university and Ministry of Colleges Training and Universities (MTCU) policy and planning decisions that impact Ontario's universities and their stakeholders.

I am inviting you and/or others in your university whom you may identify as appropriate informants, (e.g., those who are involved in the areas of planning, quality assurance and the mission of your university) to complete an online questionnaire survey. The survey is anticipated to take 30-45 minutes to complete and will ask for the respondents' perceptions regarding the efficacy and effectiveness of the KPIs. Based on the findings of the survey and with their consent, I will also be contacting some participants for follow-up interviews to gain a deeper understanding of the meaning of their responses. I am writing to you to seek your assistance by asking your staff, who you feel could best inform this study, to contact me (as indicated below) if they are willing to participate.

Participation in this study will consist of completing an online, primarily quantitative questionnaire survey, and, **if selected**, a follow-up semi-structured interview with key informants on the implementation and impact of Key Performance Indicators (KPIs) in the Ontario universities. I would also like to review internal documents pertaining to key

performance indicators, planning, performance funding, and each university's mission statement.

The questionnaire will take about 30 minutes to complete; the interviews will last approximately 1 hour and will be audio-taped with the consent of the participants. The transcript will be sent to the interviewee within four weeks after the interview to read in order for the interviewee to add any further information or to correct any misinterpretations that could result. No value judgment will be placed on their responses at any time. There is no harm to participants anticipated that is greater than is present in daily living activities.

Participation in any part of the study is voluntary; participants are free to refrain from responding to any question(s) that they do not wish to answer and may withdraw from the study at any time without explanation just by letting me know. In this case, their responses to that point will be destroyed and not included in the study findings.

I will also need access to any University communication or publications regarding performance indicators, planning, performance funding and mission statements. These might consist of memoranda to the University community, minutes of meetings, action plans resulting from results on key performance indicators, etc. If you agree to provide these for my study, please let me know if I may with your assistant and/or communications officer to access these documents.

Participating universities will be assigned a code to protect their identity and the key informant participants will be non-identifiable in any reporting of the findings, or if non-identifiability cannot be assured for the participants, at the beginning of the interview, I will request their verbal consent to be identified by position.

All data collected will be kept in confidence and secure and accessible only to my thesis supervisor and me. All electronic information outside of a secure server environment will be encrypted consistent with UT data security and encryption standards. All data collected will be fully destroyed 5 years after completion of this study.

A summary of the findings of study will be made available to participants upon sending me an e-mail request.

If you are in agreement that I may use your University for the study and are willing send out the attached invitation to participate to key informants in your university, please sign the attached consent form and return it to me in the envelope provided (or in PDF form by email if you prefer).

Should you have any questions about the study, please contact me at (416) 979-5000 ext. 2792 or at vivian.chan@utoronto.ca, or my thesis supervisor, Dr. Katharine Janzen at katharine.janzen@utoronto.ca or 416 978-1232.

If you have any questions about the rights of research participants please contact the **Office of Research Ethics** at the University of Toronto, at ethics.review@utoronto.ca or call 416 946-3273, or the Research Ethics Board at your university at ………………..

Thank you in advance for your support.

Yours sincerely,

Vivian Chan, CGA, MBA   Katharine Janzen, Ed.
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vivian.chan@utoronto.ca   katharine.janzen@utoronto.ca

Appendix E

On OISE Letterhead

Consent of President for Access to University Documents for inclusion in Research Project

Date:

_____

Title of Study: Efficacy and Impact of Key Performance Indicators as Perceived by Key Informants in Ontario Universities

Researchers: Vivian Chan, Principal Investigator; Dr. Katharine Janzen, Thesis Supervisor

I understand the nature and purpose of the research study identified above and as described in the Information Letter. All my questions about this study have been explained.

Part A:

☐ I hereby agree to participate in the questionnaire survey as described above by completing the questionnaire online through a URL to be provided to me.
☐ I **AGREE** to participate in a semi-structured interview

☐ I **AGREE** to the audio-taping of this interview.

Part B:
☐ On behalf of my university, I give my permission for the investigator to be provided with and given access to any communication or publications regarding performance indicators, planning, performance funding and mission statements. These might consist of memoranda to the University community, minutes of meetings, action plans related to key performance indicators, etc.   Please contact ……………………………..for assistance with obtaining these documents.

_____

Name (please print)

_____   _____

Signature   Date

Office Address_____

_____

_____Phone No. _____

e-mail address: _____

I would like a Summary of the report of research findings sent to me at:

_____

On OISE Letterhead

Invitation for Key Informant Participants in Ontario Universities

[*Date*]

President [*Name*]

[*Name of University*]

[*Address*]

Re: Title of Research Project: Efficacy and Impact of Key Performance Indicators as Perceived by Key Informants in Ontario Universities.

Dear Colleague:

I am inviting you to participate in the above study as you are in a position to provide insightful information on the topic of interest by virtue of your past or present involvement in planning, mission development, quality assurance and/or collection of KPI data at your university. I am conducting this study as a doctoral student in the Department of Theory and Policy Studies at the Ontario Institute for Studies in Educations of the University of Toronto (OISE/UT), under the supervision of Dr. Katharine Janzen. The thesis that will report on the study findings is in partial fulfillment for my PhD degree.

 The purpose of this study is to examine the history of why and how KPIs were introduced in Ontario and the perceptions of key informants of participating universities, regarding the efficacy and effectiveness of the existing KPIs, which were introduced to Ontario universities just over 10 years ago. Are they having the intended effect? My research also seeks to identify areas of concern, if any, and where changes should be made to improve the effectiveness of the KPIs. Through a comprehensive analysis of quantitative and qualitative data collected through document analyses, questionnaire surveys and interview input of key informants, the findings of the study will provide a better understanding of the value and effect of the KPIs, and suggested alternatives. The findings will provide valuable information for evidence-based university and Ministry of Colleges Training and Universities (MTCU) policy and planning decisions that impact Ontario's universities and their stakeholders.

Participation in any part of the study is voluntary; you are free to refrain from responding to any question(s) that you do not wish to answer and may withdraw from the study at any time without explanation just by letting me know. In this case, your responses to that point will be destroyed and not included in the study findings.

Participation in this study will consist of you completing an anonymous online, primarily quantitative questionnaire survey that asks for your perceptions on the topic of interest, and, **if you agree and are selected**, a follow-up semi-structured interview with you in order to explore the survey responses in greater depth. It is anticipated that this may involve 8-10 persons.

The questionnaire will take about 30 minutes to complete   since the questionnaire is located on the University of Toronto server there is a slight chance that the web master may be able to identify my email address but I will not be privy to that information. If you agree to participate, you will be sent a URL address within 2 weeks to enable you to access the online survey questionnaire.

With your consent the interviews will be audio taped and will take about 1 hour of your time at a time and place that you select. You may be interviewed in person or by telephone/Skype at a time and located as negotiated with you. No value judgment will be placed on your responses at any time. You will have an opportunity to review the interview transcript and suggest any revisions you wish. In order to maintain confidentiality, each participant will be given a pseudonym or case number and all documents will be numbered accordingly in the participant's file along with any notes taken and the audio tape from the interview. The list linking the participants' identities with the pseudonyms or case numbers will be kept in a secure location separated from each other. Should any participant name specific institutions or persons in the interview, these will be deleted or given a factitious title or name in the final transcription of the data and not mentioned by name or title in the dissertation or in any publication.

There is no harm to participants anticipated that is any greater than participation in daily activities.

It is my intent to publish or report the study findings in appropriate professional venues, No participant will be identifiable in any reporting of the findings, or if non-identifiability cannot be assured, I will request your written consent to be identified by your position only.

All data collected will be kept in confidence and secure on a password protected computer and in a locked office at all times and accessible only to me. All electronic information outside of a secure server environment will be encrypted consistent with University of Toronto data security and encryption standards.

A summary of the findings of study will be made available to you upon sending me a separate e-mail request to: vivian.chan@utoronto.ca

If you have any questions about the study, please contact me at vivian.chan@utoronto.ca, or (416) 979-5000 ext. 2792, or my thesis supervisor, Dr. Katharine Janzen at katharine.janzen@utoronto.ca or 416 978-1232.

If you have any questions about the rights of research participants please contact the **Office of Research Ethics** at the University of Toronto, at ethics.review@utoronto.ca or call 416 946-3273, or the Research Ethics Board at your university at ……………...

If you understand the above and agree to participate in this study, please indicate your agreement below, and return it to me in the envelope provided or by e-mail.

Thank you in advance for your support.

Yours sincerely,

Vivian Chan, CGA, MBA
Director, Research Planning, Finance & Evaluation
Ryerson University
1V6 Tel: 416-979-5000 ext. 2792
979-5336
vivian.chan@utoronto.ca

Katharine Janzen, Ed.D.
Room 6-264, OISE/UT
252 Bloor St. W., Toronto, ON M5S
Tel 416 978-1232   Fax: 416-
Fax: 416 926-4741
katharine.janzen@utoronto.ca

INFORMED CONSENT

I understand the nature of this study as described above and:

☐ I hereby agree to participate in the questionnaire survey as described above by completing the questionnaire online through a URL to be provided to me

I understand that I *MAY* be asked to be part of a sample of respondents to be interviewed in person, or by telephone/Skype and that the interview will be audio-taped. I will have an opportunity to review and revise the interview transcript.

☐ If I am selected as described above, I **AGREE** to participate in a semi-structured interview

You may contact me at the following email address:

_____

☐ I **AGREE** to the audio-taping of this interview.

_____

Name (Please print of type)

_____

Signature   **Date:** _____

Please keep a copy of the Invitation and Consent form for your records.

Online Survey Statements to Participants in all English Language Universities

Thank-you for your willingness to participate in this questionnaire survey.

I have read and understand the terms of participating in this study as provided in the Invitation/Information Letter and voluntarily agree to participate in this online survey. I understand that I am free to not answer any question(f) I do not wish to answer and may withdraw from the study any time before completing the survey and none of the responses completed at that point will be included in the study findings. However, because this survey is anonymous, the data cannot be deleted once I press "submit" below.

(   ) I agree to complete this online questionnaire survey

(   ) I do not agree (at this point access to the questionnaire will be blocked)

_____

Section I

Please check your response on the following Scale (that will appear to the right of each question)

Strongly Disagree	Disagree	Agree	Strongly Agree
1	2	3	4

1. The impact of the "Graduation Rates" KPI is high on my university's institutional planning.
2. The impact of the "Employment Rates" KPI is high on my university's institutional planning.
3. The reported "OSAP Loan Default Rates" indicator is high on my university's institutional planning.

4. "Graduation Rates" are used by my university in student recruitment.
5. "Employment Rates" are used by my university in student recruitment.
6. "OSAP Loan Default Rates" are used by my university in student recruitment.

7. "Graduation Rates" are used by my university in setting tuition fees for specific programs.

8. "Employment Rates" are considered by my university in setting tuition fees for specific programs.
9. OSAP Loan Default Rates" are considered by my university in setting tuition fees for specific programs.

10. "Graduation Rates" are used by my university for other purposes.
11. "Employment Rates" are used by my university for other purposes.
12. "OSAP Loan Default Rates" are used by my university for other purposes.

13. Graduation Rates" are an effective factor in improving my university's institutional performance.
14. "Employment Rates" are an effective factor in improving my university's institutional performance.
15. "OSAP Loan Default Rates" are an effective factor in improving my university's institutional performance.

16. "Graduation Rates" are an effective factor in improving performance at the program level in my university.
17. "Employment Rates" are an effective factor in improving performance at the program level in my university.
18. "OSAP Loan Default Rates" are an effective factor in improving performance at the program level in my university.

19. The introduction of the Multi-Year Accountability Agreement process has changed the role of KPIs in my university.
20. The introduction of the Multi-Year Accountability Agreement process has changed the impact of KPIs in my university.

21. The current KPIs are appropriate measures of institutional performance.
22. The current KPIs are appropriate measures of institutional accountability.

23. The current KPIs are appropriate measures of program performance.
24. The current KPIs are appropriate measures of program accountability.

25. I fully understand how "Graduation Rates" are calculated.
26. I fully understand how "Employment Rates" are calculated.
27. I fully understand how "OSAP Default Rates" are calculated.

28. I fully understand the intended impact of the "Graduation Rates."
29. I fully understand the intended impact of the "Employment Rates."
30. I fully understand the intended impact of the "OSAP Default Rates."

The KPIs have been implemented for more than a decade now.

31. The existing three KPIs are having the intended impact in Ontario.

32. I consider the current three KPIs are the best indicators to demonstrate accountability.

33. KPIs would have been different or would have had a different impact if, from the start, they had been connected to funding.

34. The existing KPIs are consistent with my university's mission statement.

35. The exercise of conducting the annual graduate survey is beneficial to my institution.

36. The costs incurred by my institution on the calculation of key performance indicators are minor.

37. I recognize the following as achievable goals in Ontario's use of KPIs:

    a. clear improvement in education;
    b. increase provincial funding support for institutions with improvement;
    c. prompt to institutions to pay more attention to province's needs especially in workforce development;
    d. prompt to institutions to focus more on their core missions linking toward setting performance goals;
    e. prompt to institutions to become more efficient and pay more attention to how students are best served

38. Overall, the implementation of KPIs is a worthwhile exercise.

Section II – Comments:

1. What are your expectations of the KPIs?

2. What does your institution think about the government's expectations of the KPIs?

3. For internal purposes, does your university use any other indicators? If so, why?

4. If the KPI results are also used by your university for any other purposes, how are they used?

5. Which key performance indicators should be **eliminated** and why?

6. What **other** key performance indicators do you think should be **included** and why?

7. To what extent do the KPIs impact student preference for universities in your view?

8. To what extent do the KPIs impact student preference for programs in your view? Why or how?

9. How much funding tied to performance indicators would be needed to motivate universities to change their behaviour?

Interview Guide for Interviews with Selected University Informants

Thank you again for participating in the online survey. After reviewing the responses of all the participants to the survey questionnaire, I would like to explore the underlying reasons for these views in order to better understand the issues. I am interested in understanding your views on these issues.

You have agreed in the consent that this interview can be audio-taped. Are you still OK with this? Please be reminded that your responses will be anonymous and not identifiable; you are free to not answer any questions or withdraw at any time by just letting me know.

Theme 1: Regarding OSAP Loan Default Rates

1. Most of the respondents' answers to questions in terms of the usefulness of OSAP Loan Default Rates are "disagree" and "strongly disagree" (that is, they do not think that OSAP Loan Default Rates inform institutional planning, student recruitment, setting tuition fees for specific programs, other purposes, improving performance at the institutional and program levels). In your opinion, why might the respondents think that the OSAP Default Rates are not too helpful to universities?

2. I understand that there were two drops in OSAP Default Rates in 1999-2000 and in 2006-07. What do you think might have been the reason(s)?

Theme 2: Regarding Graduation Rates and Employment Rates be used in setting tuition fees for specific programs

3. Most respondents disagreed and strongly disagreed that Graduation Rates and Employment Rates are used by their universities in setting tuition fees for specific programs. In your opinion, why might the respondents generally have felt that Graduation Rates and Employment Rates are not helpful in setting tuition fees for specific programs?

Theme 3: Regarding Current KPIs are appropriate measures of institutional accountability, program performance, and program accountability

4. The respondents also disagreed or strongly disagreed that the current KPIs are appropriate measures of institutional and program accountability, and they are not the best indicators to demonstrate accountability.
   (a) In your opinion, why might the respondents generally have felt that KPIs were NOT the best indicators of accountability?

   (b) If not KPI's, what other indicators would you suggest?

5. In your view and experience, to what extent do the KPIs impact your institution's planning process?

6. How effective are the KPIs in improving your institution's performance? If so, in what ways? If not, why not?

7. To what extent does your institution use KPIs in student recruitment?

8. What do you think about the costs incurred by your institution in the collection and reporting of KPIs?

9. I understand the universities were exempt from any funding impact of KPI results. In your view, would the KPIs have had a different impact if, from the start, they had been connected to funding?

10. What impact, if any, do you think that performance funding has had on the overall performance of your university?

11. To what extent are the existing three KPIs aligned with your university's mission statement?

12. To what extent are the existing three KPIs aligned with your university's academic plan or strategic plan?

13. Is the exercise of collecting KPIs beneficial to your institution in any way? If so, in what way? If not, why not?

Theme 5: Regarding the intended impact of KPIs on universities

14. What do you think the government hopes to achieve by requiring universities to report KPIs?

15. The KPIs have been implemented for more than a decade now. What is your view on whether or not the existing three KPIs are having the intended impact on your institution and on universities in Ontario in general?

16. To what extent do you think the introduction of the Multi-Year Accountability Agreement process affects the role and impact of the KPIs? What reasons might be behind this?

17. In conclusion, what is your overall assessment of the KPI reporting requirement and its impact on Ontario universities? What other or alternative measures should be considered in your view?

On OISE Letterhead

Information Letter to Minister of Training, Colleges and Universities

[*Date*]

The Honourable Glen Murray
Ministry of Training, Colleges and Universities
14th Floor, Mowat Block
900 Bay Street
Toronto, Ontario M7A 1L2

Re: Title of Research Project: Efficacy and Impact of Key Performance Indicators as Perceived by Key Informants in Ontario Universities.

Dear Minister Murray,

I am conducting the above research study as a doctoral student in the Department of Theory and Policy Studies at the Ontario Institute for Studies in Educations of the University of Toronto (OISE/UT). I am conducting this study under the supervision of Dr. Katharine Janzen, from the Department of Theory and Policy Studies at OISE/UT.

The purpose of this study is to examine the history of why and how KPIs were introduced in Ontario and the perceptions of key informants of Ministry staff and participating universities regarding the efficacy and effectiveness of the existing KPIs, which were introduced to Ontario universities more than 10 years ago now. Are they having the intended effect? It also seeks to identify areas of concern, if any, where changes should be made to improve their effectiveness. Through a comprehensive analysis of quantitative and qualitative data collected through document analyses, questionnaire survey and interviews of key informants – approximately 30- 45 key informants in participating Ontario Universities, 2 or 3 members of the Task Force on University Accountability and 2 or 3 members of the MTCU the findings of the study will provide a better understanding of the value and effect of the KPIs and suggested alternatives. The findings will provide valuable information for evidence based MTCU policy decisions that impact Ontario's universities and their stakeholders.

I propose to interview you and/or your designates who are involved in the management of the key performance indicators reported by Ontario universities. Please extend my invitation by distributing the attached letter to others in your Ministry who are potential key informants for this study inviting them to contact me if they are interested and willing to participate in this study.

The interviews will take approximately an hour each and will be audio-taped with the consent of the participants. In my reporting of the findings the universities will be referred to solely by a non-identifiable code. Since I may not be able to assure non-identifiability for Ministry participants, I would identify them only by position and only with their individual consent to do so. The transcript will be sent to the interviewee within four weeks of the interview to

read in order for the interviewee to add any further information or to correct any misinterpretations that could result.

Participation in any part of the study is voluntary; participants are free to refrain from responding to any question(s) that they do not wish to answer and may withdraw from the study at any time without explanation just by letting me know. In this case, their responses to that point will be destroyed and not included in the study findings. There is no harm to participants anticipated that is greater than is encountered in their daily activities.

All data collected will be kept in confidence and secure and accessible only to my thesis supervisor and me. All electronic information outside of a secure server environment will be encrypted consistent with UT data security and encryption standards. All data collected will be fully destroyed 5 years after completion of this study.

A summary of the findings of study will be made available to participants by sending me an e-mail request.

I also request access to any Ministry communications or publications regarding performance indicators – past and present. These might consist of memoranda to the University community, minutes of meetings, action plans resulting from results on key performance indicators, etc. To obtain these, it may be more convenient if I work through your assistant and communications officer. .

If you are willing to participate in this study please sign the consent form below and return it to me in the envelope provided (or in PDF form by email if you prefer).

Should you have any questions about the study, please contact me at vivian.chan@utoronto.ca or by phone at (416) 979-5000 ext. 2792, or my thesis supervisor, Dr. Katharine Janzen at katharine.janzen@utoronto.ca or 416 978-1232.

If you have any questions about the rights of research participants please contact the **Office of Research Ethics** at the University of Toronto, at ethics.review@utoronto.ca or call 416 946-3273.

Thank you in advance for your support.

Yours sincerely,

Vivian Chan, CGA, MBA   Katharine Janzen, Ed.D.
Ryerson University   Room 6-264, OISE/UT
Director, Research Planning, Finance & Evaluation   252 Bloor St W., Toronto, On M5S 1V6
Tel: 416-979-5000 ext. 2792   Tel: 416 978-1232
Fax: 416-979-5336   Fax: 416 926-4741
vivian.chan@utoronto.ca   katharine.janzen@utoronto.ca

INFORMED CONSENT

I understand the nature and purpose of the research study identified above and as described in the Information Letter. All my questions about this study have been explained.

☐   On behalf of the Ministry of Training, Colleges and Universities, I give my permission for the investigator to be provided with and given access to any communication or publications regarding performance indicators, planning, performance funding and mission statements. These might consist of memoranda, minutes of meetings, action plans related to key performance indicators, etc.

☐ I hereby AGREE to be interviewed in person, or by telephone/Skype and that the interview will be audio-taped. I will have an opportunity to review and revise the interview transcript.

☐ I **AGREE** to the audio-taping of this interview.

_____
Name (please print)

_____   _____
Signature   Date

Office Address_____

_____

_____Phone No. _____

e-mail address: _____

I would like a Summary of the report of research findings sent to me at:

_____

On OISE Letterhead

Invitation for Key Informant Participants in Ontario Ministry of Training, Colleges and Universities

[*Date*]

[*Name*]

Ministry of Training, Colleges and Universities

 [*Address*]

Re: Title of Research Project: Efficacy and Impact of Key Performance Indicators as Perceived by Key Informants in Ontario Universities.

Dear Colleague:

I am inviting you to participate in the above study as you are in a position to provide insightful information on the topic of interest by virtue of your past or present involvement in planning, mission development, quality assurance and/or collection of KPI data at your university. I am conducting this study as a doctoral student in the Department of Theory and Policy Studies at the Ontario Institute for Studies in Educations of the University of Toronto (OISE/UT), under the supervision of Dr. Katharine Janzen. The thesis that will report on the study findings is in partial fulfillment for my PhD degree.

 The purpose of this study is to examine the history of why and how KPIs were introduced in Ontario and the perceptions of key informants of participating universities, regarding the efficacy and effectiveness of the existing KPIs, which were introduced to Ontario universities just over 10 years ago. Are they having the intended effect? My research also seeks to identify areas of concern, if any, and where changes should be made to improve the effectiveness of the KPIs. Through a comprehensive analysis of quantitative and qualitative data collected through document analyses, questionnaire surveys and interview input of key informants, the findings of the study will provide a better understanding of the value and effect of the KPIs, and suggested alternatives. The findings will provide valuable information for evidence-based university and Ministry of Colleges Training and Universities (MTCU) policy and planning decisions that impact Ontario's universities and their stakeholders.

Participation in any part of the study is voluntary; you are free to refrain from responding to any question(s) that you do not wish to answer and may withdraw from the study at any time without explanation just by letting me know. In this case, your responses to that point will be destroyed and not included in the study findings.

I would like to conduct a semi-structured interview with you in order to explore your perceptions regarding the topic of interest of this study. With your consent the interviews will be audio taped and will take about 1 hour of your time at a time and place that you select. You may be interviewed in person or by telephone/Skype at a time and located as negotiated

with you. No value judgment will be placed on your responses at any time. You will have an opportunity to review the interview transcript and suggest any revisions you wish.

There is no harm to participants anticipated that is any greater than participation in daily activities.

It is my intent to publish or report the study findings in appropriate professional venues, No participant will be identifiable in any reporting of the findings, or if non-identifiability cannot be assured, at the beginning of the interview, I will request your verbal consent to be identified by your position only. In order to maintain confidentiality, each participant will be given a pseudonym or case number and all documents will be numbered accordingly in the participant's file along with any notes taken and the audio tape from the interview. The list linking the participants' identities with the pseudonyms or case numbers will be kept in a secure location separated from each other. Should any participant name specific institutions or persons in the interview, these will be deleted or given a factitious title or name in the final transcription of the data and not mentioned by name or title in the dissertation or in any publication.

All data collected will be kept in confidence and secure on a password protected computer and in a locked office at all times and accessible only to me.

 All electronic information outside of a secure server environment will be encrypted consistent with University of Toronto data security and encryption standards.

A summary of the findings of study will be made available to you by sending me a separate e-mail request to: vivian.chan@utoronto.ca

If you have any questions about the study, please contact me at vivian.chan@utoronto.ca, or (416) 979-5000 ext. 2792, or my thesis supervisor, Dr. Katharine Janzen at katharine.janzen@utoronto.ca or 416 978-1232.

If you have any questions about the rights of research participants please contact the **Office of Research Ethics** at the University of Toronto, at ethics.review@utoronto.ca or call 416 946-3273.

If you understand the above and agree to participate in this study, please indicate your agreement below, and return it to me in the envelope provided or by e-mail.

Thank you in advance for your support.

Yours sincerely,

Vivian Chan, CGA, MBA

Director, Research Planning, Finance and Evaluation
Ryerson University

Tel: 416-979-5000 ext. 2792
Fax: 416-979-5336
viv.chan@utoronto.ca

INFORMED CONSENT

I understand the nature of this study as described above and:

☐ I hereby **AGREE** to participate in a semi-structured interview

☐ I **AGREE** to the audio-taping of this interview.

_____

Name (Please print of type)

_____

Signature   **Date:** _____

Please keep a copy of the Invitation and Consent form for your records.

Appendix K

Anticipated Interview Questions to Key Informants of Ministry of Training, Colleges and Universities

1. What do the Ministry of Training, Colleges and Universities (MTCU) think about the costs incurred in your Ministry on key performance indicators?

2. What are your expectations of the KPIs?

3. What are the government's expectations of the KPIs?

4. What do you think about the level of impact of KPIs on university's institutional planning?

5. What do you think about the effectiveness of KPIs in improving university's institutional performance?

6. To what extent do you think the introduction of the Multi-Year Accountability Agreement process change the role and impact of the KPIs?

7. To what extent do you think the universities would use KPIs in student recruitment?

8. How do you know KPIs' impact on students' preference?

9. The KPIs have been implemented for more than a decade now. Do you think the existing three KPIs are having the intended impact as perceived by the Ministry?

10. The universities were exempt from any funding impact, do you think if the KPIs would have been different or would have a different impact if, from the start, they had been connected to funding?

11. How much funding tied to performance indicators do you think would be needed to motivate universities to change their behaviour?

12. To what extent has performance funding improved the performance of universities?

13. Do you think the exercise of conducting the graduate survey beneficial to universities?

<p align="center">**Appendix L**</p>

First Reminder:

Dear President XX,

I am following up on the Information Letter I sent you on XX (below) to seek your assistance by asking your staff, who you feel could best inform my research study that is the basis of my PhD thesis, to contact me if they are willing to participate. I am looking for individuals who are involved in the areas of planning, quality assurance and the development of the mission of your university. Staff who agree to participate will be asked to complete an online questionnaire survey that will take about 30 minutes to complete. Based on the findings of the survey and with their consent, I will also be contacting some participants for follow-up interviews to gain a deeper understanding of the meaning of their responses.

I would very much appreciate if you would forward the attached Information and Invitation to your staff on my behalf. Those who are willing are asked to contact me directly. Participation of informed staff in my study is essential as it will provide an important understanding of the impact and challenges of the required reporting of Key Performance Indicators by Ontario universities. And, it is essential for my thesis research.

Yours sincerely,

Vivian Chan

Second Reminder:

Dear President XX,

You may recall that on XX I sent you a gentle reminder to follow up on the Information Letter that I sent you on **XX** (below) to seek your assistance by asking your staff, who you feel could best inform my research study that is the basis of my PhD thesis, to contact me if they are willing to participate. To date I have not heard from you or your staff. Participation in my study of informed staff at the Ontario universities invited to participate in my study is essential as it will provide important understandings of the impact and challenges of the required reporting of Key Performance Indicators. And, it is essential for my PhD thesis work. The findings may support policy decisions at the Ministry level that you would welcome! For these reasons, I would very much appreciate if you would forward the attached Information and Invitation to your staff on my behalf. Those who are willing are asked to contact me directly.

Please let my thesis supervisor, Dr. Janzen, or me know if you have any questions about the study. Our contact information is included in my initial message below and in the attached letter. I look forward to hearing from you as soon as possible, please and thanks.

Sincerely,

Vivian Chan

Third Reminder:

Dear President XX,

Since the last two email communications (as shown below) regarding your University's participation of the above-mentioned research study, we have **not** yet received any response from you or your office.

I would very much appreciate if you could let us know of your willingness in participating in this study by September 14, 2012. I would like to reiterate that participation of informed staff in my study is essential as it will provide an important understanding of the impact and challenges of the required reporting of Key Performance Indicators by Ontario universities. And, it is essential for my thesis research.

Yours sincerely,

Vivian Chan

Appendix M

The 2005 OSAP Default Rates show that Algoma University had the highest rate (21.1%) in
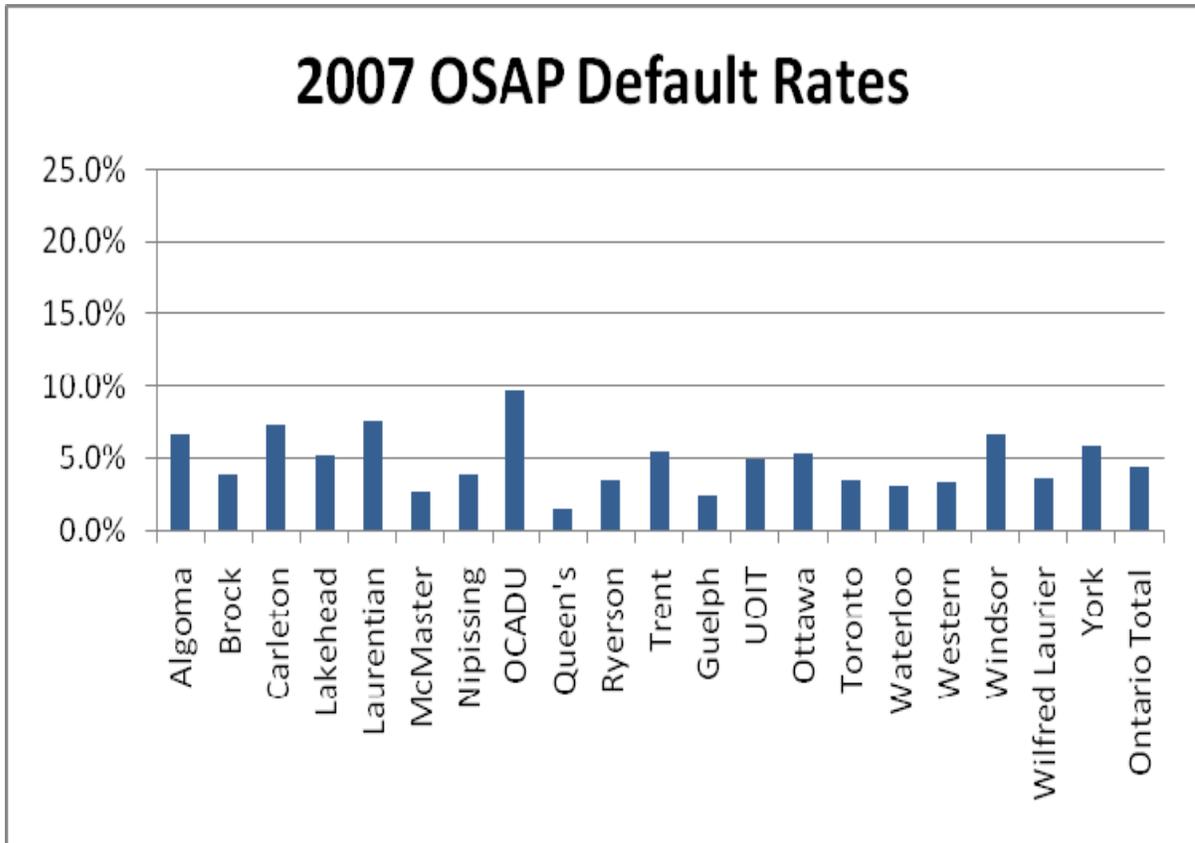
2005 and Queen's had the lowest rate (7.2%).
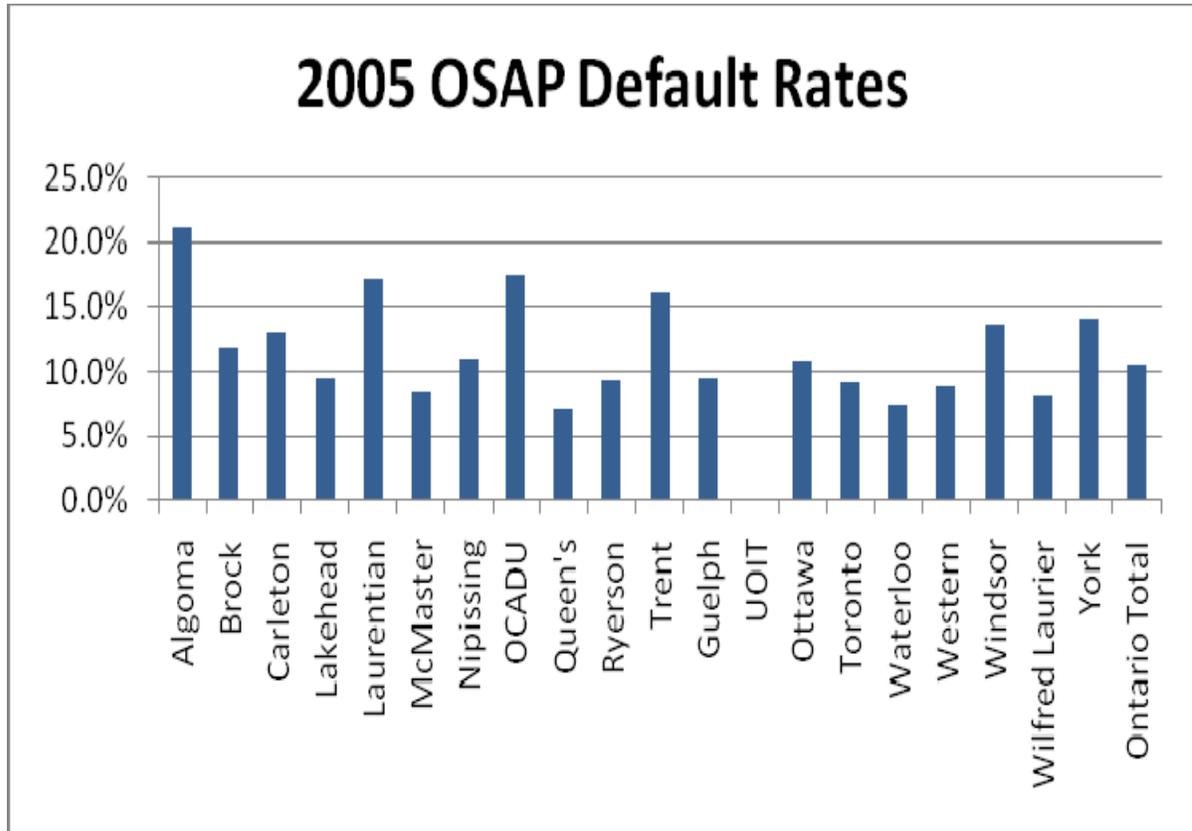
Source: Ministry of Training, Colleges and Universities

The 2006 OSAP Default Rates shows that Algoma University had the highest rate (12.5%) in

2006 and Queen's University had the lowest rate (2.1%). In comparison with the OSAP

Default Rates in 2005, there was a major drop in 2006.
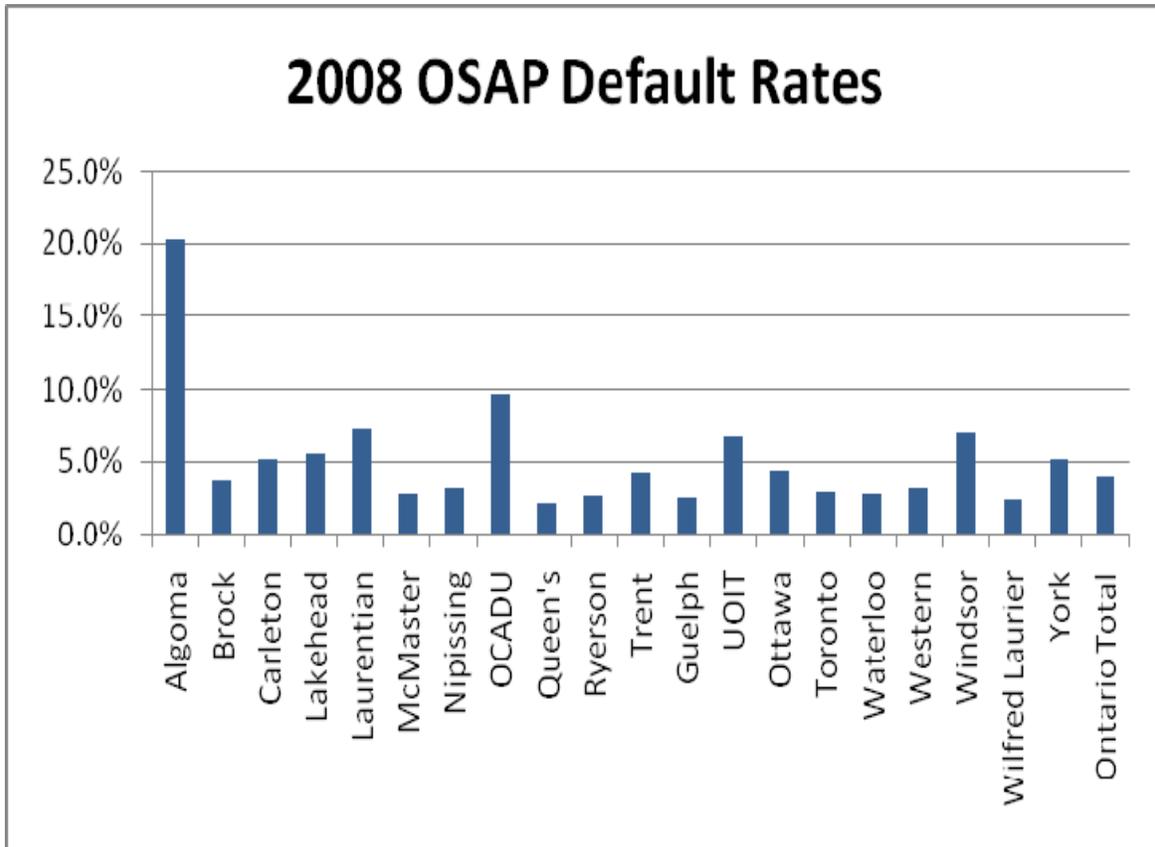

2006 OSAP Default Rates
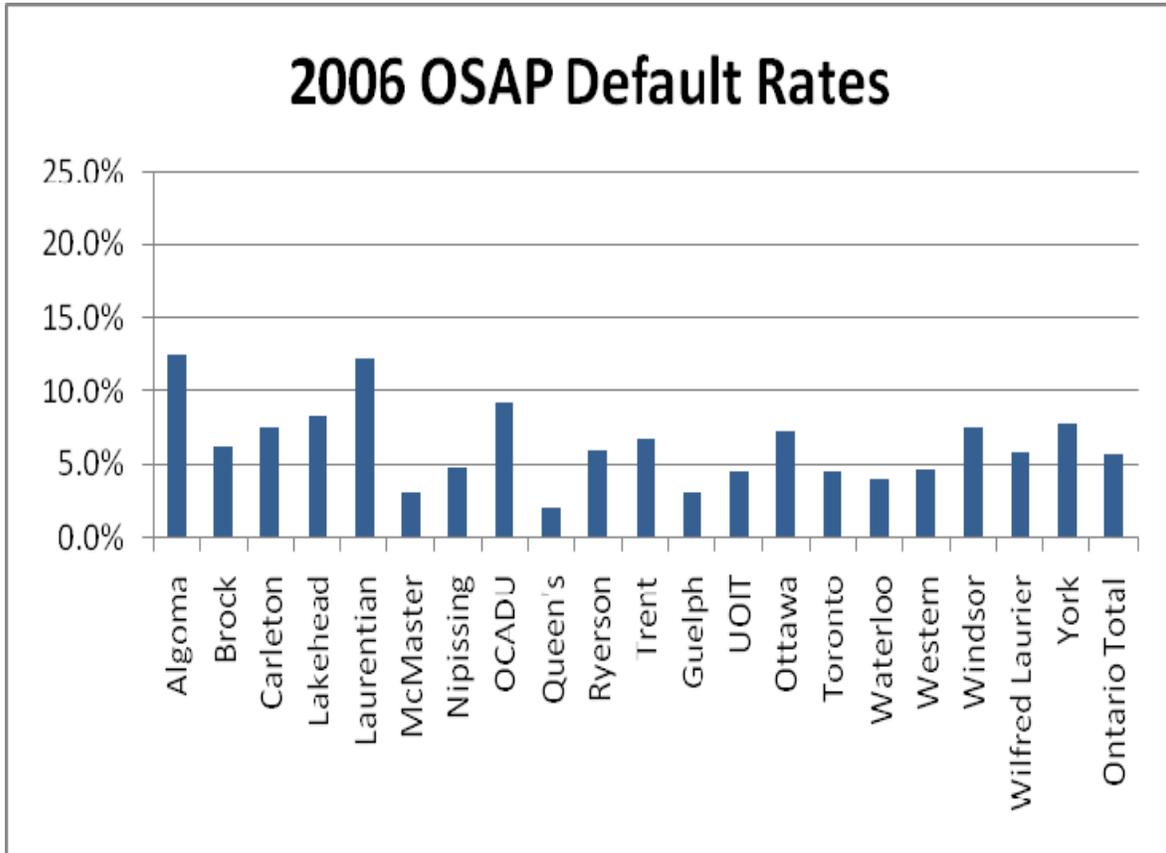
Source: Ministry of Training, Colleges and Universities

The 2007 OSAP Default Rates shows that OCADU University had the highest rate (9.6%) in

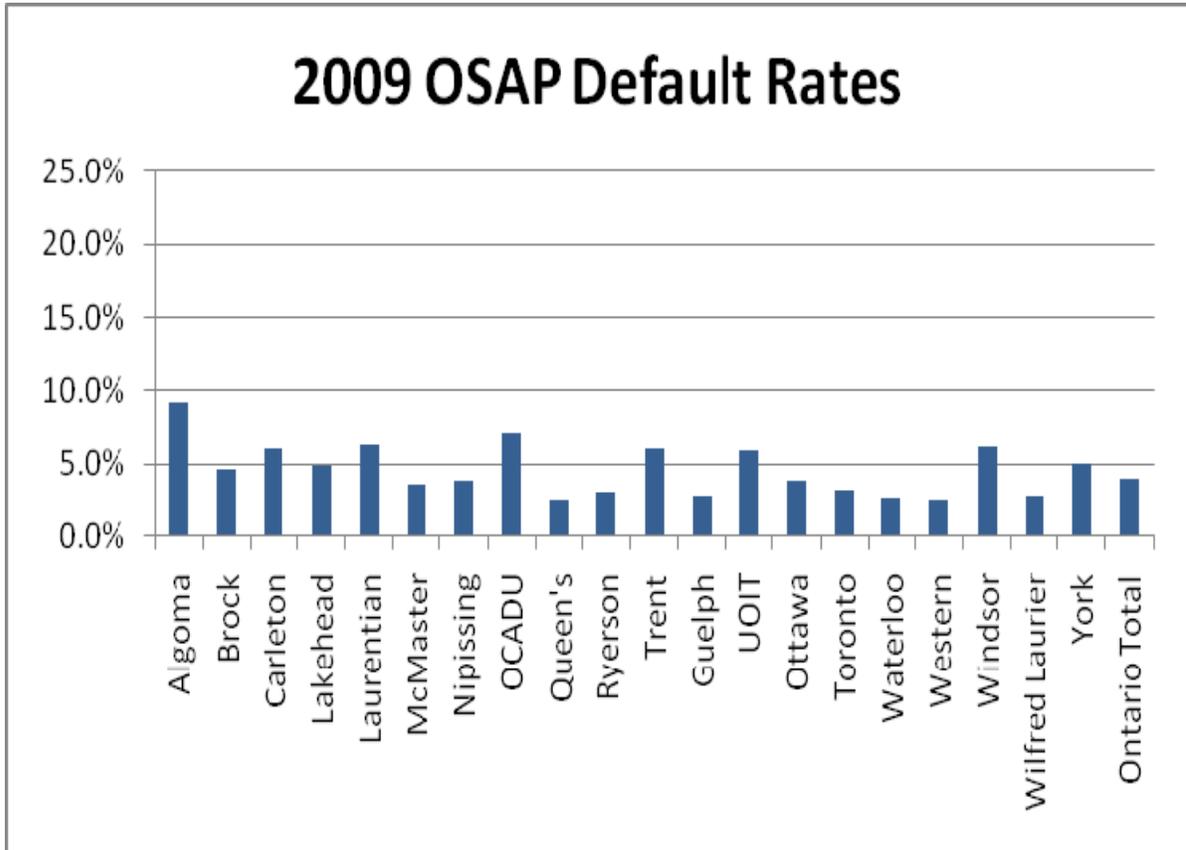2007 and Queen's continued to have the lowest rate (1.5%).

Source: Ministry of Training, Colleges and Universities

The 2008 OSAP Default Rates shows that Algoma University had the highest rate (20.3%) in

2008 and Queen's University again had the lowest rate (2.2%).
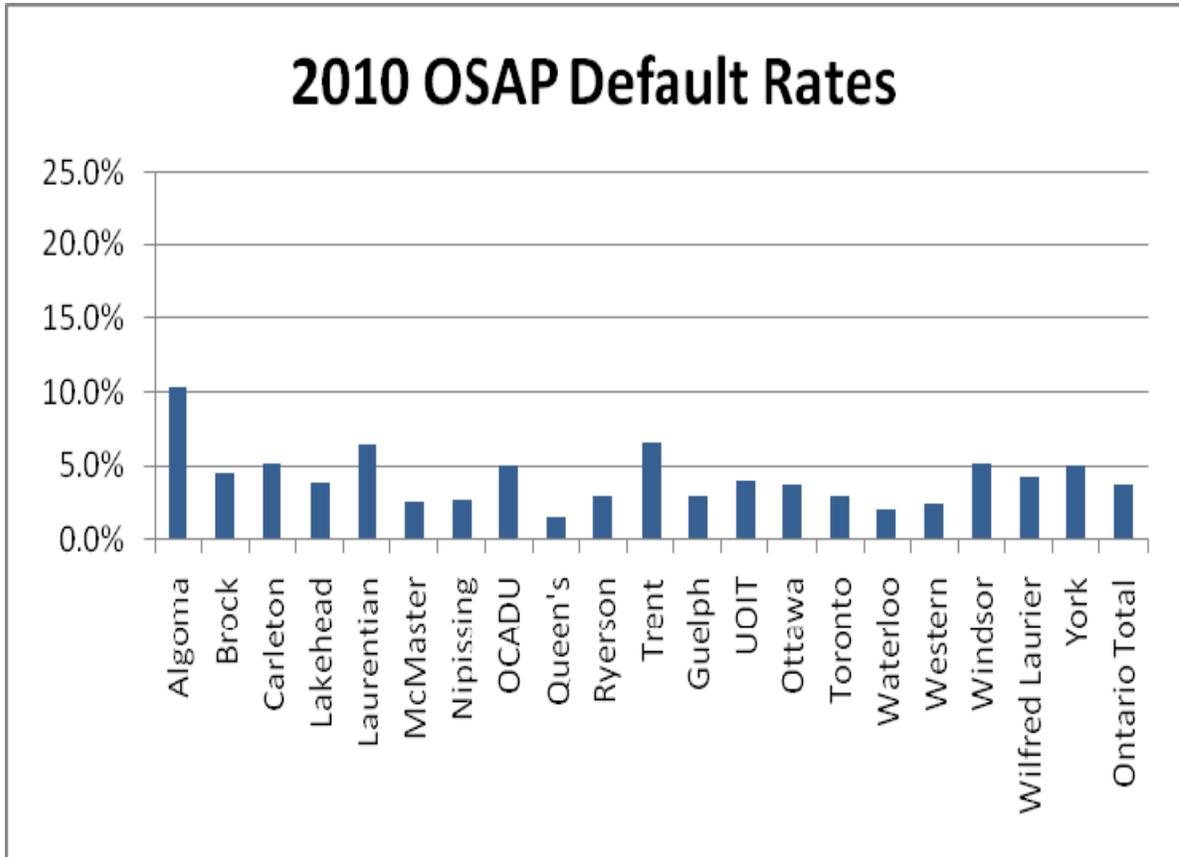

2008 OSAP Default Rates

Source: Ministry of Training, Colleges and Universities

As shown below, although there was a significant drop in the OSAP Default Rates of Algoma University from 2008 (20.3%) to 2009 (9.1%), Algoma University continued to have the highest rate (9.1%) in 2009 and Queen's University again had the lowest rate (2.4%).

2009 OSAP Default Rates

Source: Ministry of Training, Colleges and Universities

The 2010 OSAP Default Rates shows that Algoma University continued to have the highest rate (10.3%) in 2010 and Queen's University consistently had the lowest rate (1.5%).

2010 OSAP Default Rates

Source: Ministry of Training, Colleges and Universities