

eCampusOntario Educational Technology Shared Services Survey: Final Report

Submitted on behalf of the University of Ottawa

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Executive Summary

The Educational Technology Shared Services Survey was distributed to each of 45 Ontario Colleges & Universities (English & French) between July 4 and Aug 2, 2018, to consider a provincial educational technology shared services strategy.

Overall the survey identifies interest in further exploring educational technology shared services as a way forward for colleges and universities in Ontario. All respondents supported shared services, though 64% had reservations that might influence their engagement.

Potential benefits of shared services include *innovative technology support & development, student success, and administration*. Primary amongst the identified benefits are *maximizing combined purchasing power and enriching learning experiences*.

The survey data also suggests several potential challenges for shared services, however the overall weighted averages of *challenges* are lower than the weighted averages of *benefits*. This suggests that respondents see *more benefit than risk in shared services*.

Collaborative governance, overlaps with existing processes and inclusion of diverse educational and institutional contexts (i.e. francophone) were identified as priority challenges.

The educational technologies deemed the highest priority as potential shared services include *captioning & transcription services, virtual labs, learning analytics, academic integrity software and virtual simulations (VR/AR)*.

There was no clear connection between *current educational technology deployment rates and priority ranking as a shared service*. This suggests a range of rationales for the perceived value of shared services, which should be explored for each technology that is to be considered.

Background

In Spring 2018, eCampusOntario engaged with stakeholder groups, including CIOs and AVPs (Teaching & Learning), to consider an educational technology shared services approach. Focused stakeholder groups agreed that a provincial shared services strategy for educational technology could result in the following benefits for members:

- reduced costs for educational technology software licenses;
- efficiencies in procurement and management of educational technology software licenses;
- software maintenance and integration support, and
- access to a sandbox environment for testing and piloting new software.

These consultations led to a plan for a survey project, to deepen connections with institutional leadership and to gather information on interest, readiness, and priorities for shared services. The Educational Technology Shared Services Survey project was communicated via a call for Expressions of Interest on the eCampusOntario website in May 2018. The scope of the project was to advise eCampusOntario on the development of a survey; disseminate the survey to all 45 colleges and universities, ensuring equitable representation of interests across the province; and provide an analysis of the findings to eCampusOntario.

The Educational Technology Shared Services Survey project was awarded to a University of Ottawa team led by Aline Germain-Rutherford (AVP Teaching and Learning Support Services), and Richard Pinet (Director, Centre for Innovative Pedagogies and Digital Learning). UOttawa outlined a workplan which included project quality oversight, translation services, and access to UOttawa's licensed survey tool (SurveyMonkey), with all communications planning, survey design, and data analysis to be undertaken by independent consultants Peter Wolf and Vivian Forssman.

Project Timelines

- The Educational Technology Shared Services Survey project initiated on June 8, 2018.
- Draft survey questions were refined based on feedback provided by several Ontario post-secondary leaders (CIOs, AVPs and Directors of Teaching & Learning Centres) identified by eCampusOntario.
- Communications regarding the survey was sent to VPAs/Provosts at all Ontario post-secondary institutions and included a pre-survey alert message in late June; access to the survey on July 3, and reminder messages. Email messaging was facilitated by eCampusOntario through OCAV and CCVPA distribution lists.
- French translations of the survey and all communications were provided through the University of Ottawa.
- Access to the survey opened on July 3, through a weblink sent to respondents; this weblink meant anyone at each post-secondary institution (either the VPA or a designate) could be the lead of the institutional response effort. However, since this link was not tied to any email address, correlating data by type of institution was not possible.
- Based on respondent feedback, the original deadline (July 20) was extended to Aug 2. This change was communicated, along with a form-fillable PDF to assist respondents in better organizing the collaborative involvement of multiple required stakeholders.
- The survey closed on Aug 2; analysis, final report and sponsor consultation was completed by Aug 20, 2018.

Survey Methodology

The Educational Technology Shared Service Survey questions were designed to:

- gather information to evaluate the benefits and challenges of educational technology shared services in support of the eCampusOntario Strategic Plan 2018 – 2021 (one of the key three strategies is to build capacity through shared and collaborative services);
- extend the conversation into a wider Ontario community around the evaluation of priorities for educational technology adoption and support.

The topics and language of questions within the survey addressed typical educational technology leadership responsibilities that fall into the portfolios of CIOs and AVPs and Directors of Teaching & Learning Centres. The survey was disseminated as two surveys - one in English and one in French. To effectively aggregate and analyze the data, after the survey closed, both English and French-language responses were incorporated into a single set of responses.

The survey questions focused on the perceived and potential benefits and challenges of shared services. The definition of shared services as provided in the survey included *shared province-wide licenses; software application hosting; and sandbox services for reviewing, testing and piloting educational technologies, providing early stage exploration prior to the formalities of RFPs, procurement, and ongoing technical support.*

- Benefit and Challenge questions, using a 5-point Likert-scale (Benefits were framed as *not important to very important*; Challenges were framed as *not concerned to very concerned*). These questions focused on the following categories of institutional opportunities and issues:
 - Administration (e.g. Budgeting, Procurement, and Product Lifecycling)
 - Institutional Planning
 - Student Success
 - Educational Technology Innovation, Support & Development
 - Technology Service Management (e.g. Help Desk, Servers and Network)
- Ranking of perceived and potential benefits and challenges
- Current deployment status (*no deployment/early stages/established/deployed institution-wide*) drawn from a list of 26 educational technologies with existing usage patterns in post-secondary education in North America.
- Rating of the priorities for potential educational technology shared services (low/medium/high priority)
- Open text comments and observations
- A straightforward question (*yes/yes-with-reservations/no*) on each institution's support for eCampusOntario moving forward with a plan to develop educational technologies shared services
- Respondents' role plus institutional identity information

The survey was open and completed by respondents in the period between July 4 and Aug 2, 2018.

Data Analysis

Likert-scale questions constitute most of the survey. This produced *weighted average data* which provides an average value based on the frequency of response occurrence and reflects its aggregate

importance. The data analysis has focused on using the weighted average of each response to determine the highest ranked benefits and challenges for educational technology shared services. Qualitative data gathered from the open text comments and observations is embedded throughout this report to draw further attention to benefits and challenges of shared services.

Respondents

Survey distribution	Ontario post-secondary institutions	45
Survey Response	32 identified, 2 anonymous; 32 English-or-bilingual; 2 French language post-secondary institutions	34
		Response Rate: 76%

Notes:

- Four incomplete responses were removed from the analysis; in addition, one institution submitted 2 responses - one from a School within the university and one as an institutional response; the School response was removed from this analysis.
- The survey response required consultation with multiple stakeholders at each institution, but with one response from each member institution. Most institutions had a response team including:
 - a. Director for Teaching and Learning or equivalent (30)
 - b. CIO or equivalent (26)
 - c. Director of Educational Technology or equivalent (25)

Results & Discussion

Overall, there is strong interest in further exploring educational technology shared services as a way forward for colleges and universities in Ontario. **100% of respondents agreed** with an Ontario-based shared services model, though **64% had reservations** that might influence their engagement.

Subsequent sections explore more in-depth identified potential benefits, challenges, and priority-setting for shared services in Ontario. As an overview however, certain trends emerge from the summary data above. For example, in comparing the top-ranked benefits with the top-ranked challenges, it seems clear that the respondents perceive there may well be student learning and cost-savings benefits to a shared services approach, while potential challenges seem to focus on inter-institutional collaboration and related governance issues.

It is also interesting to note that overall, there is little clear connection between the specific technologies prioritized as a shared service and current institutional deployment rates. For example, *Captioning & Transcription*, the top priority for a shared service, is already deployed at 47% of institutions that responded. This is quite different from *Learning Analytics*, also a priority, which is currently deployed at only 21% of Ontario institutions. This suggests that there will likely be differing motivations for exploring any technology as a shared service and a clear understanding of the value proposition will need to be articulated and evaluated.

Summary of Top-Ranked Responses

3 Top-Ranked Benefits	3 Top-Ranked Challenges	5 Top-Priorities for Shared Services	5 Least-Deployed Institutional Technologies
<p><i>Shared services may...</i></p> <ul style="list-style-type: none"> ...provide a wider choice of technologies at a lower overall cost, maximizing combined purchasing power and buffering individual institutions against pricing swings ... enrich learning experiences and access to technologies to enhance student success ...provide faculty and educational technology professionals with a broad set of supported technologies 	<p><i>Shared services may...</i></p> <ul style="list-style-type: none"> ...require agreed-upon priorities among many stakeholders, which are difficult to achieve ...require overhead of multi-institutional coordination resulting in longer time-to-deploy ...complicate technology adoption and retirement cycles, and not meet universal needs (e.g. bilingual products) precluding some institutions from participating in this initiative 	<ul style="list-style-type: none"> Captioning & Transcription Services Learning Analytics Virtual Labs Academic Integrity Software Virtual Simulations (VR/AR) 	<ul style="list-style-type: none"> Learning Analytics Digital Badging Credentials Platforms Peer-to-Peer Assessment Web Publishing (e.g. Domain-of-One's-Own) Web-shareable Annotation Tools

Benefits and Challenges of Shared Services

Challenges of Shared Services

The 5 identified categories of potential benefits of shared services were ranked overall, with each category being further explored separately.

Benefit	Weighted Average (5-pt. scale)
Educational Technology Innovation, Support & Development	3.56
Student Success	3.41
Administration (e.g. Budgeting, Procurement, & Product Life-cycling)	3.26
Technology Service Management (e.g. Help Desk, Servers, & Network)	2.35
Institutional Planning	2.41

Top Ranked Benefits

The ranking below articulates the *benefits* with a weighted average above 4.0. There is enthusiasm for shared services identified in the Likert-scale questions, and the comments articulate some of the enthusiasm and reservations by respondents.

Category	Benefit	Weighted Average (5-pt. scale)
Administration	Shared services may provide a wider choice of technologies at a lower overall cost, maximizing combined purchasing power and buffering individual institutions against pricing swings	4.24
Student Success	Shared services may enrich learning experiences and access to technologies to enhance student success	4.21

Educational Technology Innovation, Support & Development	Shared services may provide faculty and educational technology professionals with a broad set of supported technologies	4.13
Educational Technology Innovation, Support & Development	Shared services may build organizational capacity, shifting focus from technology management to supporting faculty in the use of technology	4.12
Technology Service Management	Shared services may reduce duplication of effort throughout the Ontario system (e.g. streamlined processes, joint negotiations with vendors, shared database of Privacy Impact Assessments, etc.)	4.09
Educational Technology Innovation, Support & Development	Shared services may offer a low-risk test and production environment for emerging technologies (e.g. tools for micro-credentials)	4.03
Technology Service Management	Shared services may deliver technology cost savings	4.03
Institutional Planning	Shared services may enable positive organizational change by providing low risk access to new technologies	4.00
Institutional Planning	Shared services may provide efficiencies to allow for focus on other key initiatives	4.00
Administration	Shared services may enhance efficiency of procurement processes by pre-qualifying vendors	4.00

The survey data suggest **shared services offer opportunities for educational technology innovation, student success, and administration**, especially procurement.

“Shared services may reduce costs of some major educational technologies, allowing more and better technology to be deployed across the institution. It may also help to buffer against significant changes in the dollar if the focus is on open source and Canadian vendors, and/or with predictable and lower prices for all vendors. It may also encourage exploration of technologies that had not been previously considered by the institution or its stakeholders.”

“Value of the product/service is more important than costs in terms of sustainability and standardization of business processes. Procurement efficiencies are very important due to the timeframe required to do RFP, RFI, etc.”

To realize the benefits, there is recognition of **the importance of a shared definition of shared services**, including governance and the further exploration existing practices.

“We have all seen shared services work well if the appropriate governance and decision-making framework is in place - and we have all seen them go completely off the rails in other cases. As a starting point to define shared services a complete, detailed survey of what exists in a shared model already needs to be conducted, followed by an analysis of what might the most meaningful shared service candidates. Although this has been started it is not yet complete.”

There is also the recognition that a **long-term perspective is needed to realize shared services benefits**.

“The expectation should be that success with a shared service is a multi-year undertaking and that adoption should scale over time based on a small pilot group adopting a shared service as a proof of concept. The big bang approach, with everyone adopting a shared services is, in most cases, unlikely.”

Challenges of Shared Services

The 5 identified categories of potential challenges of shared services were ranked overall, with each category being further explored separately.

Challenges	Weighted Average (5-pt. scale)
Institutional Planning	3.88
Administration (e.g. Budgeting, Procurement, & Product Life-cycling	3.06
Educational Technology Innovation, Support & Development	2.76
Technology Service Management (e.g. Help Desk, Servers, & Network)	2.65
Student Success	2.65

Top Ranked Challenges

The ranking below articulates the *potential challenges of shared services* with a weighted average above 3.0. There is enthusiasm for shared services identified in the Likert-scale questions, and the comments articulate some of the enthusiasm and reservations by respondents.

Category	Challenge	Weighted Average (5-pt. scale)
Institutional Planning	Shared services may require agreed-upon priorities among many stakeholders, which are difficult to achieve	4.15
Institutional Planning	Shared services may require overhead of multi-institutional coordination resulting in longer time-to-deploy	4.00
Administration	Shared services may complicate technology adoption and retirement cycles, and not meet universal needs (e.g. bilingual products) precluding some institutions from participating in this initiative	3.97
Institutional Planning	Shared services may contribute to a misalignment of digital transformation and institutional strategy	3.32
Administration	Shared services may lead to loss of institutional control in procurement processes	3.27
Technology Service Management	Shared services may compromise our ability to customize educational technology for localized use	3.27
Institutional Planning	Shared services may interfere with our local and unique focus on educational technology	3.18
Technology Service Management	Shared services may demand complex identity and access management (e.g. Single Sign On)	3.12
Administration	Shared services may change longstanding vendor relationships	3.12

The survey data suggest several potential challenges for shared services, however the overall weighted averages of *challenges* are lower than the weighted averages of *benefits*, suggesting respondents see **more benefit than risk in shared services**.

“As long as the principle of institutional independence remains, there is little concern.”

“It is likely that a shared service may not be immediately relevant to all potential participants. This should not be viewed as a barrier as long as there is a critical mass interested in participating in a pilot that is designed to scale.”

There is caution about the benefits in the broader context of institutional planning and administration, related to **prioritizing and decision-making**.

“It is critical that mechanisms developed to further this aim take into account the diversity of mission, size, locale, and autonomy of individual institutions. We need to remain cognizant of that value of using local suppliers and our commitment to our community, and we have found that some commodities can be purchased locally at better pricing than can be bargained collectively. There is also value in providing access to niche technologies that may not be applicable to all or the majority of institutions.”

“Priorities determined by the shared service group may not match those of our individual institution. Small institutions have stretched resources... shared services that are not an individual institution's priority will further stretch limited resources. “

Related, there is concern about whether **francophone/bilingual institutions can benefit from shared services**.

“Les services partagés dans un contexte francophone limite grandement les avantages.”

There are concerns about the **overlap between existing shared procurement processes already in place**.

“*University X* is a member of the Ontario University Procurement Management Association (OUPMA) and also utilizes the resources of the Ontario Education Collaborative Marketplace (OECM), a not-for-profit group procurement organisation, offering a marketplace of competitively sources products and services available for use by Ontario's publicly funded education institutions and other publicly funded organisations.”

There is recognition of **potential technical issues** of shared services

“Shared services may (depending on the details) create additional complexities in identity management and in security management. It is likely to create more work for technology related staff and experts in most cases and shift to other roles in some cases. I don't think these are issues about shared services, they are about implementation of the services selection.”

Educational Technology Deployment and Prioritization as a Shared Service

In separate questions, the survey captures current deployment status of many educational technologies as well as prioritization of educational technologies as potential shared services. This table uses the ranked priority as the intended starting point

	Priority as a Shared Service Weighted average (3-pt. scale)	Currently deployed within or across institution
Captioning & Transcription Services	2.56	47%
Virtual Labs	2.44	38%
Learning Analytics	2.32	21%
Academic Integrity Software	2.26	76%
Virtual Simulations (VR/AR)	2.21	32%
Video/Audio streaming	2.12	85%
Web conferencing	2.09	88%
Video Creation & Repository	2.09	56%
Virtual Proctoring	2.06	38%
eLearning Authoring Tools	2.03	76%
Digital Badging Credentials Platforms	2.00	27%
Online Collaboration Tools (e.g. team support)	2.00	76%
Cloud hosting of applications	1.97	91%
Curriculum Mapping	1.97	62%
ePortfolios	1.91	59%
Learning Management Systems	1.85	97%
Lecture Capture	1.82	62%
Online Course Evaluation	1.82	88%

Peer-to-Peer Assessment	1.71	29%
Web Publishing (for students & faculty)	1.71	50%
Web Publishing (e.g. Domain-of-One's-Own)	1.71	35%
Online Live Communication	1.71	79%
Personal Response Systems	1.71	68%
Curriculum Records Storage	1.65	65%
Learning Records Storage	1.56	53%
Web-shareable Annotation Tools	1.53	35%

It is worth noting that there is no clear connection between current deployment and priority as a shared service, which suggests a potential for **diverse rationales for each technology as a shared service**.

Given the need for clear priorities to start within a shared service model, it would be advisable to **start with those technologies identified as high priority**, ensuring in-depth understanding of the value and rationale for adopting each chosen technology.

Within the grouping of high priority technologies, initiating priority shared services with **high-demand but low technical complexity** might provide an early opportunity to improve the perceived risk profile of shared services and demonstrate the reach and opportunities shared services. To this end, *captioning & transcription services* might be a good shared service to explore in early days.

It is also worth noting that the technologies that are in **early stages of deployment and lower in priority may also benefit from a shared services focus**. These educational technologies include web-shareable annotation tools, digital badges credentials platform, virtual simulations, virtual labs, and learning analytics. These may be the opportunities to help forward emergent technologies or ones that may benefit from a province-wide focus.

Conclusion

The Educational Technology Shared Services Survey identified overall interest in a shared service provincial approach, with a clear view of potential benefits to learning and for related cost efficiencies. Yet here are important challenges to overcome, mostly related to inter-institutional collaborations and governance-related issues.

Based on results from the survey, there are opportunities for shared services to help meet current educational technology priorities that are faced by a multitude of institutions, for example video captioning/transcription and learning analytics. Even in areas of greater demand, it can be expected that not all member institutions will choose to participate.

There are also opportunities to engage with emergent or niche technologies that may best move forward through collaborative inter-institutional efforts encouraged through a shared services approach.

Though this survey identifies specific technologies to explore, the rationales for those choices will likely be quite different between institutions and for each technology. Exploring the value propositions for each technology will need to be further explored and will likely guide future actions. It is also likely that that a shared services model will need to articulate governance and processes that allow for opt-in/out based on a diversity of institutional interest, while still demonstrating value to all institutions.

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