Six Innovations in Allied Health Education
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## Abbreviations

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<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>ACCC</td>
<td>Association of Canadian Community Colleges</td>
</tr>
<tr>
<td>ACHDHR</td>
<td>Advisory Committee on Health Delivery and Human Resources</td>
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<tr>
<td>ACMDDTT</td>
<td>Alberta College of Medical Diagnostic and Therapeutic Technologists</td>
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<tr>
<td>AHHRI</td>
<td>Aboriginal Health Human Resources Initiative</td>
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<td>ASAP</td>
<td>Aboriginal Student Achievement Plan</td>
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<tr>
<td>BScN</td>
<td>Bachelor of Science in Nursing</td>
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<td>CAAHP</td>
<td>Canadian Association of Allied Health Programs</td>
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<tr>
<td>CAAT</td>
<td>Canadian Adult Achievement Test</td>
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<td>CAMRT</td>
<td>Canadian Association of Medical Radiation Technologists</td>
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<tr>
<td>CAOT</td>
<td>Canadian Association of Occupational Therapists</td>
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<tr>
<td>CASLPA</td>
<td>Canadian Association of Speech Language Pathologists and Audiologists</td>
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<td>CHA</td>
<td>Canadian Healthcare Association</td>
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<tr>
<td>CICIC</td>
<td>Canadian Information Centre for International Credentials</td>
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<td>CIHI</td>
<td>Canadian Institute of Health Information</td>
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<tr>
<td>CMA</td>
<td>Canadian Medical Association</td>
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<tr>
<td>CNFS</td>
<td>Consortium national de formation en santé</td>
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<tr>
<td>COTO</td>
<td>College of Occupational Therapists of Ontario</td>
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<tr>
<td>CSDMS</td>
<td>Canadian Society of Diagnostic Medical Sonographers</td>
</tr>
<tr>
<td>CSML</td>
<td>Canadian Society for Medical Laboratory Science</td>
</tr>
<tr>
<td>CSRT</td>
<td>Canadian Society of Respiratory Therapists</td>
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<tr>
<td>CUPE</td>
<td>Canadian Union of Public Employees</td>
</tr>
<tr>
<td>DMS</td>
<td>Diagnostic Medical Sonography</td>
</tr>
<tr>
<td>DRP</td>
<td>Degrees of Reading Power</td>
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<tr>
<td>ESC</td>
<td>Essential Skills Competency</td>
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<td>ESSP</td>
<td>Enhanced Student Support Project</td>
</tr>
<tr>
<td>FIT</td>
<td>Freshman Integrated Tracking</td>
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<tr>
<td>GPA</td>
<td>Grade Point Average</td>
</tr>
<tr>
<td>GTA</td>
<td>Greater Toronto Area</td>
</tr>
<tr>
<td>HHR</td>
<td>Health Human Resources</td>
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<tr>
<td>HHRS</td>
<td>Health Human Resource Strategy</td>
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<tr>
<td>ICEF</td>
<td>Interprofessional Care Education Fund</td>
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<tr>
<td>IEHP</td>
<td>Internationally Educated Health Professional</td>
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<tr>
<td>IEHPI</td>
<td>Internationally Educated Health Professionals Initiative</td>
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<tr>
<td>IEO</td>
<td>Internationally Educated Occupational Therapist</td>
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<tr>
<td>IPC</td>
<td>Interprofessional Collaboration</td>
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<tr>
<td>IPE</td>
<td>Interprofessional Education</td>
</tr>
<tr>
<td>IT</td>
<td>Information Technology</td>
</tr>
<tr>
<td>LAC</td>
<td>Learning Assistance Centre</td>
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<tr>
<td>LF-CUES</td>
<td>Learner-Focused Clinical Ultrasound Education Sites</td>
</tr>
<tr>
<td>LMI</td>
<td>Labour Market Information</td>
</tr>
<tr>
<td>MCI</td>
<td>Ministry of Citizenship and Immigration</td>
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<td>MIC</td>
<td>Medical Imaging Consultants</td>
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<tr>
<td>MLS</td>
<td>Medical Laboratory Sciences</td>
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<tr>
<td>MLT</td>
<td>Medical Laboratory Technology</td>
</tr>
<tr>
<td>MRT</td>
<td>Medical Radiation Technology</td>
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<tr>
<td>NAHO</td>
<td>National Aboriginal Health Organization</td>
</tr>
<tr>
<td>NAIT</td>
<td>Northern Alberta Institute of Technology</td>
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<tr>
<td>NAPN</td>
<td>Native Access Program to Nursing</td>
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<tr>
<td>NSCRT</td>
<td>Nova Scotia College of Respiratory Therapists</td>
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<tr>
<td>NUI</td>
<td>National Unique Identifier</td>
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<tr>
<td>Acronym</td>
<td>Description</td>
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<tr>
<td>OBPAP</td>
<td>Ontario Bridging Participant Assistance Program</td>
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<tr>
<td>OECD</td>
<td>Organisation for Economic Co-operation and Development</td>
</tr>
<tr>
<td>OSOT</td>
<td>Ontario Society of Occupational Therapists</td>
</tr>
<tr>
<td>OT</td>
<td>Occupational Therapy</td>
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<tr>
<td>OTA-PTA</td>
<td>Occupational Therapist Assistant and Physiotherapist Assistant</td>
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<tr>
<td>OTepp</td>
<td>Occupational Therapy Examination and Practice Preparation</td>
</tr>
<tr>
<td>PBL</td>
<td>Problem-Based Learning</td>
</tr>
<tr>
<td>PEP</td>
<td>Preceptor Education Program</td>
</tr>
<tr>
<td>PI</td>
<td>Principal Investigator</td>
</tr>
<tr>
<td>PSE</td>
<td>Post-secondary Education</td>
</tr>
<tr>
<td>PSW</td>
<td>Personal Support Worker</td>
</tr>
<tr>
<td>PT</td>
<td>Physiotherapy</td>
</tr>
<tr>
<td>REB</td>
<td>Research Ethics Board</td>
</tr>
<tr>
<td>RT</td>
<td>Respiratory Therapy</td>
</tr>
<tr>
<td>SAHO</td>
<td>Saskatchewan Association of Health Organizations</td>
</tr>
<tr>
<td>SAIT</td>
<td>Southern Alberta Institute of Technology</td>
</tr>
<tr>
<td>SEPP</td>
<td>Supporting Entry to Professional Practice</td>
</tr>
<tr>
<td>SHASS</td>
<td>Science and Health Aboriginal Success Strategy</td>
</tr>
<tr>
<td>SIAST</td>
<td>Saskatchewan Institute of Applied Science and Technology</td>
</tr>
<tr>
<td>SLP</td>
<td>Speech-Language Pathology</td>
</tr>
<tr>
<td>SSWG</td>
<td>Social Services Worker – Gerontology</td>
</tr>
<tr>
<td>TOTE</td>
<td>Trial Occupational Therapy Examination</td>
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</tbody>
</table>
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This study would not have been possible without the support, insights, and dedication of the members of the multi-stakeholder Working Group, who provided leadership from the study’s initial inception to the formulation of a blueprint for change. Working Group members participated in numerous teleconferences and meetings, and in ongoing reviews of materials and early versions of study reports.

We extend our sincere appreciation to the following Working Group members and their organizations:

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**EMPLOYER GROUPS**
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Introduction

This innovations guide profiles six case studies of post-secondary institutions identified as innovation leaders in allied health student recruitment, retention, graduation and workforce integration in Canada. The guide offers important insights into “what works” in allied health education. It demonstrates to policy makers, funders, and institutional leaders the value of initiatives to increase participation in allied health programs, and offers practical assistance to those interested in replicating innovations in other settings and contexts.

The project began with the following definition: Innovation is the application of problem-solving or creativity to produce a new, more effective strategy, process or service that meets an identified need, resulting in a genuine, positive change in thinking and practice.

Innovation in post-secondary health education involves the development of new approaches to attracting students and supporting students to be successful. It also includes culturally competent responses to the unique needs of Aboriginal learners, and strategies to facilitate the labour market integration of internationally educated health professionals (IEHPS). Ultimately, the purpose of innovation is to increase the supply of allied health professionals in Canada’s workforce, and ensure sufficient health human resources to meet the needs of Canadians.

The case studies are presented in some detail to shed light on the problems they were designed to solve, the changes they produced, and the critical factors that contributed to their effectiveness. Each stage of the process is explored – from initiation and development, to implementation and monitoring, to evaluation and lessons learned. While the case studies benefited from in-depth interviews with decision makers, partners, and those involved in implementation, particular attention was paid to the experience of allied health students, and the impact of each innovation on the quality of their post-secondary experience and ability to achieve their career goals.

The cases were identified through a competitive Request for Proposal process. Post-secondary institutions across Canada were invited to submit proposals describing innovative practices that had demonstrated effectiveness in one or more of the following areas:

- Partnerships with employers
- Interprofessional education and transferable credits
- Recruitment, admissions and student selection
- Student support programs/retention
- Faculty development

The six cases were selected based on the nature of the challenge and creativity of the approach, documented evidence of success, sustainability and potential to have an ongoing impact on the allied health workforce, and transferability to other institutions, programs, learners or disciplines. Because the innovative practices had already proven their effectiveness, the case studies focused on how and why they achieved success, not whether they were successful. The table below summarizes the innovations profiled in the research.
Background

This report is part of a larger study titled Sustaining the Allied Health Professions. The study, funded by Health Canada, was initiated in December 2009 by the Association of Canadian Community Colleges (ACCC) to develop and promote a pan-Canadian approach to ensuring a sustainable supply of allied health professionals.

Canada’s population is aging. Canadians are living longer, and facing more complex and chronic health conditions. Large numbers of health professionals are also nearing retirement and there is concern whether there will be enough future health care providers to meet the dual demands of providing high quality patient care and educating future generations of allied health professionals. Since post-secondary graduates of allied health science programs and internationally educated health professionals (IEHPs) constitute the two main sources of the future supply of qualified health professionals, the study focused on effective practices to improve student retention and success in allied health programs, as well as strategies to integrate IEHPs into the Canadian health care system. The study placed special emphasis on understanding health human resource issues from an Aboriginal perspective in light of faster population growth and younger demographics in Aboriginal communities than in the Canadian population as a whole, and the significantly higher health needs of First Nations, Métis and Inuit peoples.

As Canada’s primary provider of advanced skills and a leader in immigrant labour market integration, the college system plays a key role in optimizing the supply of allied health care professionals. ACCC, the national organization

<table>
<thead>
<tr>
<th>INSTITUTION</th>
<th>INNOVATION</th>
<th>THEME</th>
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<tbody>
<tr>
<td>La Cité collégiale</td>
<td>Interprofessional Health Promotion Fair</td>
<td>Interprofessional education, student support</td>
</tr>
<tr>
<td>McMaster University</td>
<td>Occupational Therapy Examination Practice and Preparation (OTepp) Project</td>
<td>IEHPs, employer partnerships, student recruitment, student support</td>
</tr>
<tr>
<td>Northern Alberta Institute of Technology (NAIT)</td>
<td>Learner-Focused Clinical Ultrasound Education Sites (LF-CUES)</td>
<td>Employer partnerships, student support</td>
</tr>
<tr>
<td>Red River College</td>
<td>Paths to Success-Enhanced Student Support Project (Paths-ESSP)</td>
<td>Student support, faculty development</td>
</tr>
<tr>
<td>Saskatchewan Institute of Applied Science and Technology (SIAST)</td>
<td>Science and Health Aboriginal Success Strategy (SHASS)</td>
<td>Aboriginal learners, employer partnerships, student recruitment, student support, faculty development</td>
</tr>
<tr>
<td>The University of Western Ontario</td>
<td>Preceptor Education Program (PEP)</td>
<td>Employer partnerships, interprofessional education, student support, faculty development</td>
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</table>
representing Canada’s network of public colleges and institutes, carried out the study in collaboration with a Working Group made up of representatives of educational institutions, national professional associations, accreditation services, provincial regulatory bodies, and employer organizations. Two Working Group subcommittees, described in Appendix B, were formed to oversee the study deliverables. In May 2010, Academica Group was contracted to develop the research instruments and study protocols, manage and execute the fieldwork, analyze the data, and report on the key findings and implications. The results of the research are presented in the following study reports:

- **Meeting Expectations: A Blueprint for Maintaining the Allied Health Professions**, which outlines policy recommendations for governments, provincial regulators, professional associations, and educational institutions to improve the recruitment, retention, graduation, and employability of allied health students and IEHPs.

- **Six Innovations in Allied Health Education**, which highlights innovative and effective practices, resources and tools to support post-secondary allied health student retention and success.

- **Sustaining the Allied Health Professions: Research Report**, which provides a detailed analysis of the primary research conducted to inform the development of the policy recommendations.

These publications can all be accessed from the ACCC website (www.accc.ca).

### Methodology

A case study is a qualitative research and evaluation methodology that enables in-depth analysis of multiple perspectives and experiences in real-world settings (Yin, 2009). Case study designs are appropriate for research and evaluation projects when “how” or “why” questions are being asked about contexts over which the investigator has no control. Case study research always includes interviews with people directly involved in the intervention’s implementation and effects, and often includes the examination of documents, statistical data, or program implementation data. These multiple data sources are converged and triangulated (or cross-checked) in the analysis and interpretation of findings.

Academica Group worked with ACCC to design and execute the case study research. In July 2010, ACCC issued a Request for Proposals (RFP) in both official languages for innovative practices in allied health student recruitment, retention, graduation and workforce integration in Canada. Following the October 2010 RFP close date, the proposals were evaluated by a seven-member review team and five innovations were selected for case study. A sixth case, profiling an innovation specific to Aboriginal students, was added in December 2010.

Academica Group developed a Case Study Protocol in both English and French to ensure methodological consistency in the implementation of field procedures and data collection at each site, and assisted in the preparation of Research Ethics Board (REB) submissions for each case study institution. Two Academica Group project teams, each involving two researchers, conducted the study, with the support of a designated site contact at each institution. The English language research team conducted the McMaster University, NAIT, Red River College, SIAST, and University of Western Ontario case studies. The La Cité collégiale case study was conducted by the French language research team.

The purpose of the Case Study Protocol was to:

- Outline the overall research questions for the study to guide the data collection and analysis.
- Clarify the roles and responsibilities of Academica Group researchers and the site contacts.
- Describe the detailed procedures for data gathering.
- Assist case sites to identify potential key stakeholders for interviews (decision makers, implementers, partners, and participants).
- Describe the relevant documentation and information to be included in the document analysis.
- Provide standardized data collection instruments (logic model template, focus group discussion guide, interview questionnaire, SWOT template) and supporting materials (email content, Letters of Information, focus group screener and sign-in sheet).
Each case study involved two site visits and a variety of data collection tools, including facilitated meetings, focus groups, key stakeholder interviews, document analysis and field observations. The first visit to each site was held over two days between February and April 2011, and consisted of the following research activities:

- Facilitated meeting with the core team members directly responsible for the initiation, development and implementation of the innovation to develop a theory of change and program logic model.
- In-person semi-structured interviews with 10 to 15 key stakeholders, representing a mix of decision makers, implementers, partners, and non-student participants.
- Two student focus groups.
  
  Participants in the logic model meeting, key stakeholder interviews and student focus groups were identified and invited to participate by the site contacts, using the guidelines and supporting materials set out in the Case Study Protocol. (In some of the case studies, the same individuals participated in both the team meetings and key stakeholder interviews.)
  
  Interview and focus group participants were assured of confidentiality and asked for voluntary consent to participate in the research. Interviews and focus groups were audio-recorded and transcribed for purposes of analysis and reporting. The site contacts gathered documentation about the innovation for review by the Academica Group research team. Where appropriate, they also arranged for field observation of the innovation.

  Given the relatively small number of Aboriginal students involved in the Science and Health Aboriginal Success Strategy, only one student focus group was held for the SIAST case study. The two McMaster University focus groups were held online rather than in person, using the OTepp innovation platform. In recognition of their time, $50 honorariums were provided to all student focus group participants.

  Following the first site visit, Academica Group researchers developed a draft theory of change and program logic model for each case and made revisions to the logic model based on input and feedback from the site contacts.

  A half-day follow-up visit to each site was scheduled between April and May 2011. A second facilitated meeting was held with the core team members to conduct a SWOT analysis, present preliminary findings from the interviews and focus groups, and gather feedback on the findings. Following the second site visit, Academica Group researchers developed a draft case study narrative, for input and feedback from the site contacts and core team members.

The table below indicates numbers of participants involved in data collection activities at each site.

<table>
<thead>
<tr>
<th>TABLE 2 – CASE STUDY PARTICIPANTS</th>
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<tbody>
<tr>
<td>Logic Model/ SWOT Core Team Members</td>
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<tr>
<td>-----------------</td>
</tr>
<tr>
<td>La Cité</td>
</tr>
<tr>
<td>McMaster</td>
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<td>NAIT</td>
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<tr>
<td>SIAST</td>
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<tr>
<td>Red River</td>
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<tr>
<td>Western</td>
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<tr>
<td>TOTAL</td>
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</table>
Case Study Logic Models

The cornerstone of effective evaluation is a thorough understanding of the program or practice being evaluated, the resources available, the activities involved, the materials produced, and the intended outcomes – in other words, the “what” of the innovation. However, it is equally important to understand the “why,” to locate the innovation within its specific context and policy framework, and the reasons why those involved in its initiation and development expected the innovation to work.

To facilitate this understanding, Academica Group developed a logic model template combining a theory of change approach with a standard program logic format. Theory of change logic models are often used before a program has started up, to justify the reasons for the program and make a case for funding (Kellogg Foundation, 2004). They describe the unique characteristics of the program or practice, and the underlying assumptions, values, and principles on which it is based. The theory of change logic model template developed for the innovations guide includes the following elements:

- **Problem statement** – Problem to be solved, or issue to be addressed.
- **Innovation goals** – Overall purpose of the innovation, and the results intended to be achieved.
- **Needs** – Evidence of the need for the innovation.
- **Local assets** – Local assets within the institution, community or discipline that contributed to the initiation and development of the innovation.
- **Rationale and assumptions** – Rationale for the innovation, based on research, experience, or best practices, reflecting a core set of beliefs about how changes occur in allied health education. The assumptions reflect the existing conditions or resources available within the institution, community, or discipline to support implementation.
- **External factors** – Aspects of the policy environment that played a role in the development or implementation of the innovation, as well as the external social, political, cultural, and economic conditions that had an impact on the changes sought.
- **Strategies** – Strategies selected to achieve the innovation goals.

Program logic models describe the basic elements of the innovation, and are often used for monitoring and evaluation. The program logic model template developed for the Innovations Guide provides a generic guide for introducing similar innovations in other contexts, and includes the following elements:

- **Inputs** – Resources needed to implement the innovation, including human resources, financial resources, physical space, technology, equipment, and materials.
- **Activities** – Workplan or major actions involved in implementation, detailing how the resources were used to achieve the innovation goals.
- **Outputs** – Measurable, tangible, and direct products or services of the innovation activities.
- **Outcomes** – Short- and medium-term outcomes expected as a result of the activities and outputs.
- **Impacts** – Long-term changes anticipated from the innovation, which may not be under the post-secondary institution’s direct control but are within its sphere of influence.

Conceptual Model of Innovation

A conceptual model of innovation in education, developed by the Organisation for Economic Co-operation and Development (OECD) in its study of tertiary vocational education and training, was used to develop the overarching research questions for the study.

This model views educational innovation as a cyclical and iterative process, rather than a linear progression (OECD, 2009). It is centred on the role of the knowledge base, and the production, use and dissemination of “tacit” and “explicit” knowledge in educational innovation. Based on this model, the research questions guiding the case study evaluation are:

1. What are the factors that contribute to successful innovation at each stage of the process (initiation, development, implementation, monitoring, and evaluation)?
2. What is the contribution of the knowledge base to the innovation and what sources of knowledge are used?
3. How do the lessons learned enhance the knowledge base of what works in educational innovation?

The primary outcome of this case study methodology is the identification of the factors that contributed to the success of the innovation at each stage of the process (initiation, development, implementation, monitoring, and evaluation), measured through thematic analysis of the data gathered in the facilitated meetings, interviews and focus groups. The secondary outcome is the identification of the factors common to successful innovation at each of the six case study sites.

**Role of the Knowledge Base**

In a knowledge-based economy, the most successful organizations are able to produce, manage, retain, access and share knowledge. While technology has improved organizational capacity to capture and store explicit or codified knowledge, a wealth of tacit knowledge resides in the skills and experiences of staff. In the field of innovation studies, this distinction between explicit and tacit knowledge has emerged as critical to understanding how innovation occurs (Gertler, 2003).

The Conference Board of Canada (2011) defines explicit knowledge as including both data (facts and statistics) and information (data that has been processed, analyzed and interpreted). Explicit knowledge is easily transferred and commonly captured in documents, procedures, files and databases, and journals and books. By comparison, tacit knowledge is gained through individual experiences, skills, and intuition, and includes wisdom developed through the application of knowledge in specific contexts. Tacit knowledge resides in culture, relationships, values, and norms, and is much more difficult to capture and transfer.

The six innovations profiled in these case studies were grounded in the explicit knowledge available in the scholarly literature and analysis of institutional data. However, they also relied heavily upon on the tacit know-how and wisdom of the team members around the table, gained through personal experiences, peer interactions, interprofessional dialogue, and participation in communities of practice. The case study narratives provide insights into the sources of explicit and tacit knowledge accessed to initiate, develop, implement, and evaluate the innovations.
SIX INNOVATIONS IN ALLIED HEALTH EDUCATION

Although intended for public services, this typology is also relevant to post-secondary education, and provides a useful conceptual tool to help think about the six case studies presented in this guide. The six innovations generally fall into three of these categories (Service, Delivery and System Interaction), but many were accompanied by Policy and Process innovations to facilitate the change process.

Key Findings

The six cases profiled in this guide reveal important findings about the nature of innovation in allied health student recruitment, retention, graduation and workforce integration.

Each innovation was developed to address a particular need within a specific policy context. However, several common characteristics were observed, suggesting the enabling conditions that contribute to innovation success.

INITIATION

1. **Focus on student needs.** In all cases, the initiatives were driven by a commitment to students and a determination to provide students with a quality learning experience.

2. **Enlist strong champions, at the highest levels of the institution.** Many of the innovations were initiated by individual staff or faculty members, who mobilized support and motivated others to join the cause. In all cases, however, the innovations were taken up by high-level champions and received strong institutional endorsement. Leadership at the top levels of the organization is critical to successful innovation.
3. Identify and secure resources. Financial resources were essential to move all six innovations forward. Many of the innovations were initiated in response to a government call for proposals, and received significant financial support. Innovations that were not funded externally were able to secure institutional resources or in-kind contributions. Even if the amounts are small, funds earmarked to support innovative projects are important to initiate and sustain post-secondary innovation.

DEVELOPMENT

4. Leverage internal talents and wisdom across the institution. Tacit knowledge was identified as a vital resource for all six innovations, often more important than the academic literature and other scholarly sources. Accessing the skills and expertise within an institution – across different programs and service areas – is a key component of innovation effectiveness. In some cases, individual team members were unaware of their own strengths and contributions until brought into the study by others who recognized the value of their personal abilities and experiences.

5. Adopt a bottom-up process. Even if they began as a top-down directive, all six innovations were developed through a bottom-up process that engaged and empowered staff and faculty – and often external partners – in brainstorming creative solutions.

6. Foster collaboration. For several innovations, the supportive, flexible and dynamic team was identified as the single greatest asset. Successful innovations bring people together who share a commitment to respecting, supporting, and learning from each other. Often food and social activities were mentioned as strengthening the spirit of cooperation and collaboration.

7. Work to ensure faculty buy-in. No innovation focused on student learning can succeed if faculty are not on side. Even if faculty are not directly involved, efforts should be made at the outset to engage them as part of the team, and to maintain regular, clear and transparent communications.

8. Involve employers and community partners. When employers and community partners understand the benefits and see the results, they can become an innovation’s strongest advocates.

9. Assign a dedicated project coordinator. Assigning overall responsibility to one person for managing study details and administrative tasks was seen as important in keeping the innovations on track.

IMPLEMENTATION

10. Allow time to innovate. Innovations are often in flux, and the six innovations look very different today than when they were first initiated. Innovators need to feel confident that they can test ideas, take risks, and learn from their experiences. They need time to adapt continually to new learning and adjust to changes in participants, partners and contexts.

11. Customize to meet individual user needs. Innovations are rarely one-size-fits-all. All six innovations included built-in flexibility to enable individualized solutions targeted to specific student needs.

MONITORING

12. Commit to continuous improvement. All six cases demonstrated a visible responsiveness to student concerns, and willingness to “course correct” as issues arose. The innovations moved back and forth between problem and solution, re-examining and adjusting initial strategies in light of what was learned during implementation.

EVALUATION

13. Embed evaluation and dedicate resources to evaluate. The ability to evaluate results is critical to the innovation process, even if outcomes are slow to materialize or initially disappointing. Informed and evidence-based decisions about sustainability or transferability cannot be made without mechanisms to assess innovation effects, and without resources allocated to support evaluation. The fluid nature of post-secondary innovation means that developmental evaluation should also be considered in addition to (or instead of) summative or formative evaluation (Dozoir, Langlois & Blanchet-Cohen, 2010; Gamble, 2008).
How to Use This Guide

This innovations guide is designed to serve three purposes. First, it provides a practical resource and how-to guide for post-secondary institutions interested in implementing similar innovations in their own college or university. Second, it demonstrates to policy makers, funders, and sector stakeholders the benefits of identifying and sharing best practices in allied health student recruitment, retention, graduation and workforce integration in Canada. Third, it offers in-depth insights into the innovation process, from the initial recognition of a problem, through to practical implementation and evaluation. The lessons learned can be applied to innovation in general, in a variety of program areas and institutional settings.

Each case study includes:

• A summary of the innovation with useful contact information for questions or follow-up.

• Case study narrative describing the process of innovation from identification of need, to initiation, development, implementation, monitoring, and evaluation. The narrative identifies the key champions and highlights findings related to the impact of the innovation on student participants. It details how the innovation has been sustained and plans for moving forward, and concludes with lessons learned from those involved.

• Theory of change and program logic models (Appendix C). The theory of change outlines the unique contextual circumstances that contributed to the initiation and development of each innovation. The program logic model offers a “recipe” with the essential ingredients needed to replicate the innovation in other institutions.

• Ranked strengths, weaknesses, opportunities and challenges/threats, as identified by the team members involved (Appendix D). Strengths and weaknesses provide insights into the factors associated with the transferability of the innovation to other institutions. Opportunities and challenges/threats shed light on factors affecting the innovation’s long-term sustainability.

Clearly, these case studies do not represent the only examples of post-secondary allied health innovation, nor are they appropriate or feasible for all allied health programs and institutions. Assessing their potential application – in whole or in part – requires careful consideration of the context in which they were developed, and the environment into which they will be transferred.

At the same time, it is also clear that these six innovations provided real benefits to allied health students. By disseminating these leading practices, and sharing the lessons learned, it is hoped that this guide will provide inspiration and encouragement for other post-secondary innovators. Facilitating the spread of innovation across the sector will not only improve the educational experience for allied health students, but will contribute to a more stable, sustainable supply of allied health professionals and ultimately, to enhanced health care services for Canadians.
1 Interprofessional Health Promotion Fair
Interprofessional Health Promotion Fair

Type of Innovation: Service

Description: Fifteen-week semester of interprofessional learning culminating in a one-day Health Promotion Fair for local seniors, involving booths developed by allied health student teams, workshops delivered by nursing students, and student-led event promotions.

Programs: Occupational Therapist Assistant and Physiotherapist Assistant (OTA-PTA), Personal Support Worker (PSW), Social Services Worker – Gerontology (SSWG), Practical Nursing, and Public Relations

Sustainability: Structure and content are in place with resource binder providing program details, budget, and student and program evaluation protocols.

Applicability to Other Allied Health Programs: Applicable to many allied health programs.

Transferability to Other PSE Institutions: Can be implemented by other post-secondary education institutions.

Limitations: Financial and organizational support is required. Aligning program schedules becomes more challenging with the involvement of more programs.

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Health care professionals are increasingly required to work in collaborative interprofessional health teams to develop and implement effective patient care plans. However, students in allied health programs typically receive little training in how to work collaboratively with other health professionals. To address this need, La Cité collégiale developed an interprofessional Health Promotion Fair titled “Vieillir heureux et en santé” (Aging in a Healthy and Fulfilling Way). Students from different health science programs, with support from public relations students, work together on this interactive health fair targeted to senior citizens in the local Franco-Ontarian community.

Over a 15-week semester, health science students are guided through micro-activities, team meetings and logistical preparation for the event. Occupational Therapist Assistant and Physiotherapist Assistant (OTA-PTA), Personal Support Worker (PSW), and Social Service Worker – Gerontology (SSWG) program faculties each select one course with learning outcomes that can be linked to the overall project. The curriculum for the selected course is then condensed to create a common interprofessional hour, allowing students to meet in interprofessional teams to pool their knowledge and prepare a common booth on a topic related to health and welfare. Students are required to contact an organization with expertise relevant to the topic of their booth, and collaboratively develop a poster presentation, a brochure, and an interactive component where applicable. To complement the fair, practical nursing students develop a health clinic and workshops throughout the semester, giving them an opportunity to experience an interprofessional day. In 2011, the fair involved public relations students in providing support for the poster presentation and brochure.

The Health Promotion Fair is held at a local community centre. Senior citizens from the Franco-Ontarian community are invited to attend, and are provided with lunch and transportation. High school students are also invited to experience the fair, encouraging them to consider a health care career. The goal is to provide students with hands-on opportunities to develop the interpersonal and interprofessional competencies needed to work in collaborative health teams in clinical settings. The interprofessional teaching approach also conveys to students the values and competencies of collaboration through faculty preparation, facilitation and project evaluation.

The Need

Significant shortages in the health human resources workforce in Ontario underscore the need to develop new ways of practising health care in order to maintain high standards of patient care. An interprofessional approach enables greater efficiency in the management of complex health situations by rapidly leveraging the expertise and input of all health professionals involved in patient care. It also reduces redundancies and repetition in the interventions and services provided by health professionals.
have both adopted policy positions supporting interprofessional approaches to health care and strongly encourage relevant training to prepare current and future health care providers to work in interprofessional, collaborative teams. Often students in one allied health program are well-trained in their own discipline, but rarely have the opportunity to interact with students in other programs. As a result, they often arrive at clinical work placements with little understanding of how to work with other health professions to develop and implement plans of patient care, how to deal with different practices and opinions regarding treatment, and how to resolve conflicts that can arise. At the same time, employers seek professional staff who are more versatile, creative, collaborative, and skilled at resolving problems and conflicts.

Recognizing the challenges of teaching students interprofessional skills in a traditional lecture-based classroom setting, La Cité faculty members were interested in providing dynamic and interactive learning opportunities for students to learn how to work in collaborative, interprofessional teams.

**Initiation**

In 2007, La Cité’s Health Sciences faculty began to develop strategies for teaching interprofessionalism with funding support from Health Force Ontario’s Interprofessional Care Education Fund (ICEF), and Health Canada’s Consortium national de formation en santé (CNFS), a pan-Canadian group of 11 post-secondary institutions that offer health sciences programs in French. The following year, key faculty members participated in a series of conferences and meetings held in Toronto and Ottawa related to research in interprofessional health education. In discussions with Ottawa hospital administrators, post-secondary institutions in the region were encouraged to train students in interprofessionalism so they could become “agents of change” in the adoption of interprofessional collaboration in clinical settings once they entered the workforce. Building on this momentum, the Academic Health Council of the Champlain region (a group consisting of the University of Ottawa, Algonquin College and La Cité collégiale with a mandate to promote interprofessionalism in these three post-secondary institutions) was asked to develop interprofessional education activities in French and English that would be relevant and feasible for both college and university health services programs. Shortly after, La Cité faculty participated in a pilot project of the University of Ottawa and a local continuing care facility to develop a tool for teaching students to work in interprofessional health teams.

Because of their participation in the 2008 research and knowledge of interprofessionalism, La Cité faculty members were asked by the Director of Health Sciences in 2009 to develop an interprofessional educational activity to be integrated into existing program curricula and implemented the next academic year. A health fair in place since 2006 as the final project for students in the Social Services Worker – Gerontology (SSWG) program was identified as offering the potential to be expanded to an interprofessional focus.

“We needed a process for learning collaboration and interprofessional skills. And since the skills in question were communication, role clarification, team functioning, conflict resolution, and client-centred care, the real need was to find something that would give us an opportunity to address the lack of collaborative learning for all those skills. We thought that the fair provided an ideal opportunity to do so.”
Development

The successful SSWG health fair was expanded to three additional programs, OTA-PTA, Personal Support Worker, and Practical Nursing. Linda Cloutier, Director of Health Sciences, was the initial champion of the initiative, providing support for the coordination of working hours and schedules across the four participating programs, and securing budgetary approval from the Vice-President Academic for dedicated staff time. With a budget of $9,000 for hiring an event coordinator and related event expenses, and dedicated staff time to develop the health fair into a multi-disciplinary interprofessional educational activity for four health science programs, the program was developed between September and December 2009 for implementation in January 2010.

During the development phase, faculty placed an emphasis on distinguishing the activity (the content) from the experiential approach focused on the acquisition of interprofessional skills (the process). Faculty also wanted to ensure that the model included supervisory support for students as they engaged in the process of collaborative inter-program teamwork.

“I think that the faculty who are involved in the initiative have really taken a step forward. At the administrative level, it was difficult to try and coordinate schedules, make sure that the courses happened at the same time, have a classroom with a dividing wall so that the students would be able to work in teams, and so on. It might not seem like much, but those things caused a lot of problems, and we had to come up with a lot of solutions.”

• The commitment and willingness of team members to share their time and expertise, and the collegial, interprofessional nature of the collaboration were seen as critical to the fair’s success. If the time and availability of faculty had been reduced, it “wouldn’t have worked.”

• The success of the Health Promotion Fair has been a source of professional pride for faculty involved in its development and implementation. They have received professional recognition from within their faculty (support from the Director of Health Sciences), from the institution (funding and support from the Vice-President), from federal and provincial governments, from the community, and from their professional associations through the formal recognition of interprofessional skills.

• Funding was viewed as an extremely important component of the project’s success but now that the fair is up and running it can be adapted to a smaller budget if necessary.

INNOVATION CHAMPIONS

Linda Cloutier, Director of Health Sciences, La Cité collégiale
• Institutional champion of interprofessionalism through her role on the Academic Health Council
• Secured funding and coordinated staff schedules for the four participating Health Sciences programs

Olivette Girard, programme Préposé aux services de soutiens personnels
Jean-Maurice Lafond, programme Relations publiques
Marc Lebel, programme Préposé aux service de soutiens personnels
Suzanne Legault, programme Techniques de travail social – gérontologie
François Miville-Deschênes, programme Relations publiques
Chantal Morin, programme Soins infirmiers auxiliaires
Véronique Piché, programme Techniques de travail social – gérontologie
Marie-Josée Thellend, Programme Assistant de l’ergothérapeute et Assistant du physiothérapeute

La Cité collégiale faculty involved in 2010 and 2011 fairs

“Shared a passion for interprofessional education
• Contributed time and expertise to developing the fair
• Promoted the fair to colleagues within La Cité and in the community

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TACIT KNOWLEDGE

Much of the knowledge involved in developing the health fair was acquired throughout the development process itself. Key faculty had already worked in interprofessional health teams in the past, and had gained further understanding of the importance of interprofessionalism through their own professional development activities. They already understood the concept of interprofessionalism and its value to their students. Feedback from student participants has also been used to improve the process.

“At La Cité collégiale, we were relatively new to the area of interprofessionalism. For two years, we had been implementing a few activities, but after two years it was still new. And what was innovative for La Cité collégiale was that there was a level of complexity – in terms of an activity for learning interprofessionalism – that had never been achieved before. The complexity meant that the fair integrated many different elements, and that’s what was innovative about it.”

Implementation

The first Interprofessional Health Promotion Fair was held in April 2010. In partnership with her colleague in Community Services, the Director of Health Sciences played a key role in implementing the initiative by making it logistically possible to organize classrooms and allow students from the different programs to work together at the same time.

A partnership was established with a Franco-Ontarian community centre to host the fair. Faculty from the three allied health programs met on a bi-weekly basis (about 12 hours per month), and also participated in weekly follow-up with the practical nursing program. Blackboard software, accessible to both students and faculty, was used as a digital resource to consolidate all documentation and communication. Faculty agreed to organize course content around the desired learning outcomes, and scheduled a common hour for interaction between the three allied health programs. During the common hour, each group of interprofessional students developed a booth (panel, brochure, various interactive information) based on the theme of the fair. They were also responsible for contacting an organization related to the subject of their booth, such as the Alzheimer Society of Canada, in order to support their project with expert input. Students from the OTA-PTA program planned a set of physical exercises for an ongoing activity to be conducted on the day of the fair. Working in parallel, practical nursing students developed workshops and a health clinic. In 2011, students in the public relations program collaborated on the panel and brochure designs.

There were concerns about the difficulty of coordinating the participation of different programs, and consistency in program delivery.

• Students were inundated with a considerable amount of information, deadlines, and instructions which sometimes resulted in confusion.
Because student schedules are so busy and program timetables do not overlap, it was only possible to set aside one hour per week for collaborative teams to meet. This was not seen as enough time for students to plan their booths and for faculty to help resolve conflicts and address student concerns.

Several supervising faculty had not taught the course before and lacked experience in their new roles which resulted in some lack of consistency and miscommunication.

Students from the public relations program joining in the middle of the process of developing the 2011 fair led to confusion and deadline changes.

Even though all information was posted on Blackboard, students often did not make use of this resource.

**Monitoring**

The Health Promotion Fair is still evolving. At the first fair held in April 2010, students tended to work in parallel with each other without combining their professional skills. As a result, faculty improved the format for 2011 by introducing a component that explicitly encouraged interprofessional communication and engagement across the three core programs involved in the initiative, and the two programs that provide complementary support. In 2011, the event coordinator assumed responsibility for teaching the interprofessional hour to students from one of the participating programs, in addition to event coordination. While this was viewed as a critical improvement, it also highlighted the importance of clarifying between the responsibilities of event coordinator and the role of program faculty member.

Adjustments have been made in response to evaluation feedback from clients who attend the fair, and from student participants. Students complete an evaluation form before and after the fair to report what they have learned. They also share their experiences at a debriefing session held at the end of the fair. Faculty also conduct their own SWOT analysis each year, which is used to make improvements the following year.

“It’s a process, it’s not a static initiative. You always have to continually put it in the context of the group you have for a given year, and that means it’s never static. A tool might work for one group but not work in another year.”

“What helped us a lot was the feedback from last year’s students. It’s like there’s a transfer happening from student to student, and the profs feel more and more in control of the situation because they have experienced it once, they’ve seen what worked and what didn’t work so well, and they can make changes.”

**Evaluation**

It is still early in the process as the Health Promotion Fair has only been held twice and La Cité faculty are still learning about what works and what doesn’t. In addition, the fair is primarily a teaching activity so the focus is on evaluating the skills acquired by students such as time management, conflict management, and the quality of the presentation of individual booths. Timing presents another challenge in evaluating the impact of the Health Promotion Fair on students, since it is often not until much later, when students are in clinical placement, that they understand the value of what they learned.

All participating students are evaluated twice during the Interprofessionalism course, once at the mid-point and again after the fair has taken place. Each student conducts a self-evaluation which is validated by the other members of their team and their supervising faculty member. The evaluation is based on required skills, development protocols, and tasks to be completed each week, and students obtain a grade at the end of the fair.

- The innovation has contributed to greater student engagement, increased confidence and awareness of the importance of interprofessionalism. These findings, together with the contribution to the local Franco-Ontarian seniors community, were identified as the key strengths of the innovation.

- The Health Promotion Fair was described as having a strong positive impact on student understanding and perception of the importance of interprofessionalism and their ability to act as agents of change in their chosen profession, which is aligned with increasing expectations for professional collaboration in clinical settings.

- The on-going evaluation process, which includes a mid-point and final self-evaluation by students, is validated by faculty and was described as an important way to encourage
Franco-Ontarian community, and contributes to improved inter-generational understanding, with many seniors indicating renewed confidence in youth as a result of their interaction with La Cité students.

Students who participated in the fair reported improvements in their personal confidence, professional competence, team work and conflict management skills, and understanding of interprofessionalism, all of which better prepare them for clinical placements.

Students in their second year of the program, who had participated in the 2010 Health Promotion Fair, reported a greater awareness of interprofessionalism, teamwork and collaboration during their clinical internships, and some have indicated that they feel better equipped and more confident dealing with conflict resolution.

“I think it helps us to become better integrated into the work environment. If there’s a conflict, you have an idea of how to deal with it. You also have an idea of how other professions collaborate toward a common goal. So, you’re more receptive to the contributions of others in a work team.”

“For me personally, it allowed me to have an idea of what each profession does and how to collaborate toward the same purpose. It’s true that there are a lot of different professions, but what are they there for? They’re there for the patient, for the client. So that helped us be able to work together with other professions.”

“I realized its importance because, if a senior who is already not feeling good and is already weak has to repeat her patient history to the occupational therapist, the social worker, the orderly, the nurse, the doctor... at a certain point, she won’t discuss it any more, she’ll just try to get rid of the person in front of her. Whereas, if we’re able to work interprofessionally we can share the same patient information and we can get together in our different professional capacities and say ‘Okay, what do you think is the best approach to help this person?’ That’s why what we’ve done here is so important.”

“It was in French. We all had francophone clients. It was a good experience in the sense that, even though we’re in Ottawa, we really provided a service in French for seniors who may need it but who don’t really know where to go for service in French. I think that was a strength of the fair.”

Impact on Participants

The case study evaluation revealed strong endorsement of the Health Promotion Fair from students and faculty, as well as the seniors who attended.

Faculty have built up expertise in interprofessional education and enjoy the opportunity to move away from lecture-based teaching to more dynamic, experiential approaches focused on student participation and interactive learning. The fair also allows La Cité to build stronger linkages with the local Franco-Ontarian community, and contributes to improved inter-generational understanding, with many seniors indicating renewed confidence in youth as a result of their interaction with La Cité students.

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The seniors said they felt very welcome, that it was very friendly. We provided a spaghetti dinner, and everyone was excited to come and eat. There was the social aspect of really interacting with seniors. And they were able interact with other people, to socialize, to really get out and avoid being isolated. I really liked that.

Sustainability & Moving Forward

Because the fair has now been held twice, and all of the steps for planning, implementation and evaluation have already been developed, the Health Promotion Fair offers good long-term sustainability prospects. There is also a potential for expanding the number of health sciences programs involved, adding other non-health related programs, and adapting the fair to other clientele such as adolescents.

“What I envision is a project that brings together all fields within the sector. Right now it brings together four or five fields, but we offer 12 programs. Do we apply it to the rest, to the five or so that aren’t involved? Should we do something similar? Is it more or less relevant for them? For me, it’s about what can be transferred, what can be adapted, and by how much can we increase the number of programs?”

As professional associations move to integrate interprofessionalism standards into accreditation programs, La Cité faculty also envision the possibility for interprofessional learning to become a required component of training in the allied health professions, so that students obtain formal recognition on their diplomas for completing interprofessional training.

“The contribution that we wanted to make was not just to have a course called Interprofessionalism. What we were talking about was having a passport – students could complete online modules, they could acquire certain skills as part of their internships, and acquire others as part of their coursework. Ultimately, we wanted to be able to provide students with a mixture of options. There could be a note on their diploma indicating that this individual has high-level interprofessional skills. Nothing has been decided yet, but it’s in the works and it’s progressing well.”

Lessons Learned

Faculty and students offered a range of suggestions for ongoing improvements:

- Revise and clarify the activity planning and preparation process.
- Include an introductory collaborative activity at the beginning of the process to build rapport and help establish team relationships and identify the strengths of individual team members more quickly.
- Limit the amount of time spent providing information at the beginning of each class to leave students more time to work on their booth.
- Revise submission deadlines to get students to manage their time better earlier in the process.
- Develop a conflict resolution process that is task-oriented rather than interpersonal for faculty to encourage positive participation from less motivated or less involved students.
- Clarify the roles of the event coordinator and the student logistics team.
- Work more closely with public relations students to promote the fair more widely in the community.
2 Occupational Therapy Examination and Practice Preparation (OTepp) Project
Occupational Therapy Examination and Practice Preparation (OTepp) Project

Type of Innovation: Delivery

Description: Free curriculum, delivered face-to-face and/or online, to assist internationally educated Occupational Therapists (IEOTs) with transition to practice in Canada.

Program: Occupational Therapy

Sustainability: OTepp is currently funded until September 2012. Curriculum content (in both French and English) and the Elluminate online learning platform are in place, with IT and accounting support provided by McMaster University. McMaster provides oversight for Ontario clinical placements. Partner institutions are available to deliver the OTepp Core Curriculum in French and to assist IEOTs with clinical placements in BC, Alberta and Manitoba. Options are currently being explored to ensure long-term sustainability, such as shifting to a tuition fee model and providing re-entry and remediation for domestic OTs.

Applicability to Other Allied Health Programs: Some general OTepp curriculum content could be used for a similar program for other internationally educated health professionals (IEHPs), using the infrastructure and governance model developed for OTepp.

Transferability to Other PSE Institutions: Other PSE institutions can become partners in the delivery of OTepp for IEOTs.

Limitations: To participate in OTepp, IEOTs must be eligible to write the Canadian Association of Occupational Therapists (CAOT) national certification exam and meet language fluency requirements. Introduction of a tuition fee model for OTepp could reduce accessibility for IEOTs.

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Ontario
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McMaster University

Partners

Ontario receives support for some skills training programs from the Government of Canada

Funded by the Government of Canada’s Foreign Credential Recognition Program

Canadian Association of Occupational Therapists
Association canadienne des ergothérapeutes
Innovation Overview

In the face of current and future skills shortages, the need to identify and eliminate barriers for internationally educated health professionals (IEHPs) seeking to practice in Canada has been identified as both an economic and social justice imperative.

To assist internationally educated occupational therapists (IEOTs) with their transition to Canadian OT practice, McMaster University’s School of Rehabilitation Science developed the Occupational Therapy Examination Practice and Preparation (OTepp) Project. Initially launched in 2008, OTepp offers a free face-to-face and/or online curriculum for IEOTs who are eligible to write the Canadian Association of Occupational Therapists (CAOT) national certification exam and who meet language fluency requirements. The OTepp curriculum includes five modules: CAOT Examination Preparation, Work Readiness, Transition Counselling, Mentorship, and a 23-week Core Curriculum consisting of seven courses with two supervised clinical experiences (30 hours and 225 hours). The Elluminate learning platform provides an online classroom for both in-person and online participants, with classes recorded and archived for those who are unable to attend. During the registration process and intake interview, participants are supported in selecting the module(s) that best meet their individual needs. For IEOTs interested in registering in Ontario, OTepp is available online and onsite at McMaster, and in French language at the University of Ottawa. Completion of the OTepp Core Curriculum earns a McMaster University certificate, with curriculum hours recognized for professional currency-of-practice by the College of Occupational Therapists of Ontario (COTO). For IEOTs seeking to practice in other provinces, a national version of OTepp is available online, delivered in partnership with community liaisons at UBC, UAlberta, and UManitoba who connect with provincial regulators and professional associations, and assist with clinical placements. OTepp is governed with input from three advisory committees (Ontario, National, and BC) which meet twice a year, and include representatives from regulatory bodies, professional associations, employers, and IEOTs.

The overall goal of OTepp is to assist IEOTs to integrate successfully into OT practice in Canada by increasing IEOT knowledge and skills specific to the Canadian OT context, thereby building a more integrated culturally diverse workforce. The specific goals are to increase the number of IEOTs who pass the national certification exam, register to practice with their provincial regulatory bodies, and obtain employment.
The Need

In 2002, a landmark report by the Caledon Institute of Social Policy and the Maytree Foundation called for a “systems approach” to facilitate the labour market entry of internationally educated professionals into their fields of expertise. This call to action was taken up by the Canadian Association of Occupational Therapists (CAOT), which had for several years tracked low pass rates for IEOTs on the national certification exams. In a period of high demand for occupational therapy services and an under-supply of occupational therapists, CAOT secured federal funding in 2005 for the Workforce Integration Project to shed light on the factors that facilitate or inhibit the integration of IEOTs into Canadian OT practice. The report found that most IEOTs were on their own in integrating into the Canadian system, with only a patchwork of supports available. These findings were reinforced in anecdotal evidence about the lived experiences of IEHPs, which highlighted the difficulties they faced acculturating to their new environment and integrating into the Canadian workforce. Although the foreign credentials of most IEOTs made them eligible to write the national certification exam, many lacked experience and understanding of Canadian approaches to OT practice, and had limited opportunities to gain exposure and familiarization. IEOTs who could afford to attend university-based OT courses often found the content duplicated the knowledge they already had, and was not customized to their unique needs as newcomers. Without a network to facilitate access to supervised clinical placements, IEOTs faced significant challenges finding employers willing to supervise the clinical currency hours often required to register in their profession.

Initiation

Motivated by an academic interest in acculturation and deeply committed to reducing barriers faced by internationally educated professionals, McMaster University Occupational Therapy professor Sue Baptiste began to offer informal examination practice assistance for IEOTs in early 2000. In collaboration with a colleague in Physiotherapy (PT), she also began to explore the possibility of developing an online program to help OTs and PTs become acculturated to Canada. After several unsuccessful efforts to secure funding, the Supporting Entry to Professional Practice (SEPP) micro-project was approved by Ontario’s Ministry of Health and Long-Term Care in 2007. This six-month project involved the development of a mentoring network model to support OTs and PTs acculturating to or re-entering professional practice in Ontario, by providing online resources and access to supervised placement opportunities.

In 2008, Professor Baptiste drew upon lessons from both SEPP and the informal examination practice program to spearhead the development of the Occupational Therapy Examination Preparation Project (OTepp). With strong support from McMaster’s Faculty of Health Sciences, OTepp received 18-month pilot funding from the Ontario Ministry of
Citizenship and Immigration (MCI) to provide support for IEOTs seeking to practice in Ontario, through assistance with exam preparation, mentoring, clinical placement, and education about the Canadian health care system and OT profession. As a research project, the only costs associated with OT epp participation were textbook purchases, which helped reduce barriers created by the limited financial resources of many IEOTs. A lending library was also available to participants.

**INNOVATION CHAMPIONS**

Sue Baptiste, OT Professor, McMaster University
- Ontario OT epp Principal Investigator (PI) and National OT epp Co-PI
- Visionary leader, committed to seeking out funders and champions to advance vision
- Motivational and supportive mentor for OT epp team members

Claudia von Zweck, Executive Director, CAOT
- National OT epp Co-PI and Ontario OT epp Advisory Committee member
- Recognized need for action and coordinated CAOT environmental scan
- Ensured continued alignment between OT epp and CAOT

Elinor Larney, Deputy Registrar, College of Occupational Therapists of Ontario (COTO)
- Ontario OT epp Advisory Committee member
- Facilitated recognition of OT epp currency hours by the COTO Registration Committee

Elizabeth Steggles, National OT epp Project Manager
- Negotiated partnerships with provincial regulators and PSE institutions for delivery of National OT epp

Lori Whelan, Professional Practice Leader, St. Michael’s Hospital, Toronto
- Ontario OT epp Advisory Committee member
- Strong employer advocate for diversity

Dr. John Kelton, Dean of Health Sciences, McMaster University
- Provided in-kind support and publicly championed OT epp

The report found that most IEOTs were on their own in integrating into the Canadian system, with only a patchwork of supports available.
Ontario Ministry of Health and Long-term Care
• Funder, 2007 SEPP project

Ontario Ministry of Citizenship and Immigration
• Funder, 2008-2009 OTepp pilot and 2009-2012 Ontario OTepp

Foreign Credential Recognition Program
• Funder, 2010-2012 National OTepp

Marie-Christine Beshay, Research Assistant, National OTepp
Shaminder Dhillon, Curriculum Lead, Ontario and National OTepp
Leah Dix, Project Manager, Ontario OTepp
Nancy Lidstone, Clerical Lead, Ontario and National OTepp
Colleen McGrath, Research Assistant and Technical Coordinator, Ontario OTepp
Pat McMahon, Research Assistant and Practicum Coordinator, Ontario OTepp

OTepp team members
• Enthusiastic, passionate advocates for the project

Development
The OTepp pilot, consisting of a Core Curriculum with two supervised clinical placements, was developed in close collaboration with COTO, CAOT, and the Ontario Society of Occupational Therapists (OSOT). The McMaster University philosophy of Problem-Based Learning (PBL) provided the theoretical underpinnings for the curriculum, and a dedicated curriculum lead was responsible for ensuring that “everything was seen through the lens of the curriculum.” In recognition of participants’ OT education and experience, the curriculum was solidly grounded in professional OT practice, and incorporated many resources used in McMaster’s Occupational Therapy program. Therapists involved in the SEPP project had demonstrated their willingness to volunteer as mentors and preceptors, and OTepp relied upon “site champions” within the relatively small, close-knit OT profession to help secure clinical placements. During the pilot period, COTO agreed to recognize OTepp Core Curriculum hours as contributing to required currency-of-practice for IEOTs.

The experience of SEPP had revealed that insurance issues presented a major barrier to securing clinical placements for IEHPs, because of preceptor and employer concerns about potential liability risks. To address these concerns, from the beginning OTepp was planned to be delivered as an official McMaster University program of study in order to provide insurance coverage for IEOT clinical supervision under the university’s group insurance plan. While waiting for McMaster University Senate approval, part-time OTs – whose risks were covered by their professional liability insurance – were approached as potential IEOT preceptors, and in return were provided with letters of acknowledgement for inclusion in professional portfolios. Formal recognition of OTepp as a McMaster University certificate program in July 2009 addressed employer insurance concerns. It also authorized OTepp to tap into McMaster’s existing employer relationships and enter into affiliation agreements with new clinical partners, which was helpful in facilitating placements for students located outside the Greater Toronto Area (GTA). Finally, McMaster University student identification enabled IEOTs to access the full range of university library resources.

• Team members identified OTepp’s enthusiastic, collaborative, and dedicated staff as its greatest strength. Many team members were personally recruited for the project by Professor Baptiste. They developed strongly supportive relationships with each other, and a deep passion and commitment to the project.

• OTepp’s high-quality, rigorous curriculum, responsiveness to the specific needs of IEOTs, and innovative online learning platform, were viewed as critical to the program’s success.

• Despite the inevitable challenges involved in managing diverse partnerships, another important asset was the involvement of a broad range of stakeholders in OTepp’s development,
Role of the Knowledge Base

“OTepp really emerged from a very well-researched basis as to what the issues were, and what needed to be addressed in terms of providing support.”

EXPLICIT KNOWLEDGE

Findings from the 2002 report of the Caledon Institute and Maytree Foundation and the 2006 CAOT Workforce Integration Project were key sources of knowledge for OTepp. In addition, the evaluation of the SEPP project – which highlighted the critical importance of networking in facilitating entry or re-entry to therapy practice – contributed directly to OTepp’s development. Another legacy of SEPP was its rich resource library and organized academic literature on acculturation and mentorship. These resources were enhanced by the addition of literature about PBL, the principles of adult learning, and readiness for change.

TACIT KNOWLEDGE

Personal interactions with IEHPs and anecdotal evidence about their lived experiences confirmed the need for supports to assist IEOTs in integrating successfully into Canadian OT practice. Some team members were McMaster OT faculty and graduates themselves, and brought not only a familiarity with PBL, but also experience with the informal McMaster IEOT exam preparation program and SEPP. Conference presentations and participation in federal roundtables provided a forum for sharing

OTepp was viewed by key stakeholders as offering a range of benefits to IEOTs, including learner-centred curriculum and a choice of modules addressing a broad scope of entry-to-practice issues.
ideas and information. A critical source of tacit knowledge for OTepp was intellectual exchange with academics and researchers involved in issues around support for IEHPs – such as Zubin Austin at the University of Toronto, Phil Schalm at Ryerson University, and consultant Lionel Laroche. Zubin Austin led the development of the International Pharmacy Graduate Program at the University of Toronto – one of the first bridging-education programs for IEHPs seeking licensing in Canada – and emphasized the importance of embedding programs within existing institutions. Phil Schalm initiated the Bridging Program for Internationally Educated Physiotherapists at Ryerson University’s School of Continuing Education, which also drew upon the experience of SEPP, and underscored the value of securing formal credit recognition for IEHP programs. Lionel Laroche provided insights into the experience of internationally educated professionals, many of whom do not anticipate roadblocks to practicing their professions in Canada, and who may lack the soft skills needed to succeed in the Canadian labour market.

Implementation

Following completion of the pilot, OTepp funding was renewed by MCI for an additional three years (2009-2012) as the Occupational Therapy Examination and Practice Preparation Project. To reduce attrition and better individualize OTepp supports to specific IEOT needs, an intake interview process was introduced to assess IEOT previous training/experience, job readiness skills and profession-specific language skills.

The informal examination practice program was formally integrated into OT epp as a stand-alone Exam Preparation module, to provide concentrated support for IEOTs preparing to write the CAOT exam. An orientation period was added to the Core Curriculum, to familiarize participants with Elluminate technology and to introduce concepts specific to the McMaster University setting and the Canadian OT context, such as Problem-Based Learning, “occupation,” “client-centred” and “evidence-based practice.” New modules were developed to reflect specific aspects of transition to practice, including Work Readiness (resumé writing, email etiquette, formal verbal communication and interview skills) and Transition Counselling (for participants considering alternatives to OT). French translations of OT epp curriculum and resources were completed, and a partnership was established with the University of Ottawa to deliver OT epp to French-language IEOTs. Faculty coordinators were assigned to each curriculum module, and additional instructors were hired as needed to ensure a 10:1 student-to-instructor ratio.

In 2010, Foreign Credential Recognition Program funding was secured for online delivery of OT epp on a national scale for the period 2010-2012. The national project opened up eligibility to IEOTs living outside Ontario, interested in locating to any Canadian province. It also enabled IEOTs to participate in OT epp prior to their arrival in Canada.
OTepp was viewed by key stakeholders as offering a range of benefits to IEOTs, including learner-centred curriculum and a choice of modules addressing a broad scope of entry-to-practice issues. It also provided opportunities to build supportive networks with IEOT peers and OT mentors, and to gain clinical experience and currency hours.

Feedback from Advisory Committee employers during a tightening of the OT labour market led to the introduction of the Work Readiness module. The module engages employers directly in conducting practice interviews with IEOTs, and providing detailed input on resumé content.

National implementation of OTepp ensures consistent high quality curriculum across the country. However, challenges have been experienced ensuring alignment with regulatory requirements that vary by province. For example, some provincial regulators require pre-approval of placement sites in order to recognize OTepp clinical hours for currency-of-practice.

Although concerns have been raised about the effectiveness of online learning for IEHPS, particularly those for whom English is a second language, online delivery is viewed as important to make OTepp accessible across the country and internationally. Compared to other allied health professions, relatively few IEOTs immigrate to Canada each year. While they are concentrated in Ontario and BC, they are often geographically dispersed.

Despite the efforts to translate the curriculum into French and negotiate a partnership with UOttawa, there has been no uptake of the OTepp French language curriculum.

The intensive time commitment involved in the development and implementation of OTepp has reduced team opportunities to reflect upon and disseminate project findings.

Monitoring

Participants praised OTepp for its responsiveness to IEOT needs, respect for different cultural perspectives, and the efforts made to address participant concerns.

“They are very good in taking our feedback because they are very, very sensitive to our needs.”

“The faculty are very, very supportive and also very accommodating considering we came from different cultures. They were very willing to listen to what we have in our country, and they will not say anything against the practice that we have.”

“I really felt I was listened to. There were some issues with completing it offshore and that was difficult for me, so there were improvements made.”

Technology continues to present challenges. Although OTepp cannot address internet reliability and connection speeds, participants are now provided with OTepp headsets to facilitate their use of the Elluminate platform.

Ongoing adjustments have been made to the number of OTepp cohorts and the timing of the modules. In 2010, a second cohort of Core Curriculum participants was offered, however small numbers of participants led to a return to a single cohort in 2011. The other modules, which vary from three weeks (Transition Counselling) to seven weeks (Exam Preparation) may be offered twice with sufficient numbers, usually more than six IEOTs. During the pilot, two Core Curriculum courses were run at the same time on alternating evenings but are now scheduled sequentially to address participant concerns about workload. In 2012, the Core Curriculum will begin in January, aligning with the McMaster University calendar and allowing participants a break period between the final course of the Core Curriculum and the July CAOT exam.

Changes have been introduced to the Core Curriculum’s supervised clinical placements to address issues around participant placement eligibility and to offer enhanced supports for employers. Core Curriculum participants who do not complete pre-placement tasks (immunizations and police record checks) in advance of their supervised clinical experiences are advised that they cannot proceed to placement. The preceptor evaluation process has been simplified and
employers are provided with user-friendly resource materials, including a handbook and evaluation forms, on a USB key. Cultural sensitivity workshops for employers have also been organized to enlist employers in championing the benefits of a culturally diverse workforce for both staff and patients.

- A new Mentorship module, which received “overwhelming” support from OTs in response to a CAOT email request for mentors, has recently been added to offer additional support for IEOTs. The “phenomenal” response to the call for mentors was viewed as signaling increased awareness within the OT community about the value of workforce diversity.

- To support IEOTs with professional communication, a discipline-specific language tool is being tested in the program.

- The Exam Prep module has been revised to offer participants an opportunity to practice the national exam. The module now begins with a trial exam, and involves a review of questions over the next six weeks.

**Evaluation**

As a McMaster University research project, OTepp has been extensively evaluated through analysis of external data, and quantitative and qualitative participant research. OTepp registration data is reviewed to assess potential correlation between IEOT demographic characteristics and success in OTepp modules. OTepp participants are asked for permission to track their CAOT certification exam results, and numbers of IEOT provincial registrations are monitored (either publicly available from provincial regulators or self-reported). In addition to regular university evaluation tools such as online course and instructor evaluations and preceptor feedback, participants who consent to the research study participate in telephone exit interviews conducted by an external interviewer, and are contacted again at 12 months and 24 months following their completion of the module.

- The majority of 2008 participants could not be tracked following the national exam. Among those for whom data was available, 18.5% passed the exam and registered with their provincial OT regulatory body, and 14% obtained employment. Pass rates increased significantly in 2009, and the majority of participants who completed OTepp passed the national examination.

- In the first two cohorts in 2008 and 2009, a total of 76 participants registered for the Core Curriculum module and 32 completed.
A mismatch between the rigor of the curriculum and the academic needs of the participants was determined to be the primary reason for attrition. Some participants did not require the intensive training of the Core Curriculum, and left the module in order to focus on exam preparation. Other participants, despite their eligibility to write the national examination, struggled to meet the academic requirements of the Core Curriculum.

• Evaluation findings showed that completion of certain Core Curriculum courses was strongly correlated to an increased likelihood of passing the national exam. IEOTs from some countries experienced greater challenges acculturating to Canadian OT practice, and were much less likely to successfully complete OTepp and to pass the CAOT exam.

Impact on Participants

IEOTs who had participated in OTepp emphasized the value of the program in facilitating their knowledge and transition to Canadian practice, and in developing a network of contacts for employment and supportive peer relationships.

“IT’s been that precious window through which we could look into Canadian practice and feel that bit of familiarity that we were not in a position to gain by experience.”

“IT’s a way to make contacts and just to feel supported in the transition. Because that was one of the big things for me, I didn’t really know anyone in Canada let alone OTs in Canada. And just to learn how the system works …”

“Not being in that country and trying to prepare for an exam, we felt very much connected to them. It was a very good source of support, you know, psychological support for us. And they were very keen to promptly address any doubts and to provide us with every possible support they could give.”

“Having all the modules done in a group setting, not only were we getting ideas and education from the faculty and the moderators themselves, but from other therapists and from other countries and pulling together all of our strengths.”

“Even though as international candidates we are far away, they made the best use of technology to bring us all together as close as technically possible.”

“I felt really reassured and connected with other OTs in similar circumstances.”

“I’ve seen benefits when I put down that I’ve completed the OTepp program on my resumé. It sparked off a good conversation with the people who were interviewing me. I explained that I was prepared to practice and it was a good talking point for the interview, that I’d actually made the effort to integrate my own practice into Canada.”

Evaluation findings showed that completion of certain Core Curriculum courses was strongly correlated to an increased likelihood of passing the national exam.
Sustainability & Moving Forward

Plans are underway to manage the transition to a sustainable model with the end of national and Ontario funding in 2012. New revenue mechanisms are being considered, including tuition fees for the OTepp Core Curriculum, and new fee-for-service offerings such as the online Trial Occupational Therapy Examination (TOTE) with score analysis, and OT continuing education workshops. The option of providing remediation and re-entry support for domestic OTs is being explored, as well as developing partnerships with other allied health professions on areas of common interest, such as mentorship and understanding Canadian health care. There may be potential to expand OTepp, to address other gaps in the academic qualifications of IEOTs across the country. Targeted marketing and communication strategies, such as ads in Canadian Immigrant Magazine and Greater Toronto Area (GTA) ethnic media, have been implemented to raise awareness of OTepp among IEOTs.

OTepp participants indicate that free access to OTepp was a major factor in their decision to register in the program. To minimize cost barriers associated with a tuition fee structure, the OTepp team is working with the university financial aid office to ensure that financial assistance will be available to IEOTs through government student loans, part-time student bursaries, or designated funds such as the Ontario government's Ontario Bridging Participant Assistance Program (OBPAP).

Lessons Learned

Reflecting on their experience in the development and implementation of OTepp, team members described an emerging advocacy role around provincial regulatory coordination. They also offered suggestions for institutions considering similar initiatives:

- The development of relevant curriculum requires careful analysis and understanding of the actual issues, barriers and gaps experienced by IEHPs.

- Broad cross-sector partnerships are necessary to move forward with a program like OTepp. In particular, the forging of strong relationships with regulatory bodies is essential to ensure alignment between curriculum and provincial regulatory requirements. Gaining recognition of curriculum hours as currency provides a tangible demonstration of provincial regulator support.

- Embedding the program in a post-secondary institution can help to leverage institutional facilities and resources (classrooms, curriculum development, affiliation agreements with employers, access to financial aid programs) and also establishes credibility with employers.

- In light of competition for clinical placements between schools and across disciplines, it is helpful to have a dedicated placement coordinator focused exclusively on securing clinical placements for IEHPs and establishing personal connections with employers. In a small profession like OT, employer word-of-mouth about IEHP placement experiences can foster – or hinder – ongoing employer involvement in clinical supervision.
3 Learner-Focused Clinical Ultrasound Education Sites (LF-CUES)
Learner-Focused Clinical Ultrasound Education Sites (LF-CUES)

**Type of Innovation:** Delivery

**Description:** Learner-focused clinical education model utilizing a 2:1 student to preceptor ratio.

**Program:** Diagnostic Medical Sonography

**Sustainability:** Model has been integrated into the regular operation of the DMS program at NAIT.

**Applicability to Other Allied Health Programs:**
The model can be applied to many allied health programs, subject to regulatory requirements.

**Transferability to Other PSE Institutions:**
Can be implemented by other post-secondary institutions.

**Limitations:** Requires strong buy-in from clinical partners and can be taxing on the preceptor.

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Innovation Overview

Clinical training is an important component of health education programs, and is vital to the development of students’ practical skills. Traditionally, students are matched on a one-to-one basis with a clinical instructor or preceptor who provides direct role-modelling and supervision, structuring the student’s learning experience. Shortages of placement sites, however, are requiring the exploration of new models for providing clinical education.

In 2008, the Diagnostic Medical Sonography (DMS) Program at the Northern Alberta Institute of Technology (NAIT) partnered with Medical Imaging Consultants (MIC) to pilot an innovative clinical education model utilizing dedicated “learning rooms,” known as Learner-Focused Clinical Ultrasound Education Sites (LF-CUES). The LF-CUES are located within Diagnostic Ultrasound departments, and students and preceptors are matched on a 2:1 ratio for portions of their clinical education. Patient cases in the LF-CUES are scheduled purposely to expose students to a wide variety of ultrasound scans, and provide sufficient time for quality learning. Designated preceptors at the sites are offered specialized training in the model, and provided with a curriculum to structure the learning experiences of both the active and observing student. Students share responsibility for the entire case, from greeting the patient to presenting the findings to the radiologist, with enhanced debriefing designed to solidify learning immediately following each case.
The goal of LF-CUES is to increase clinical capacity on a sustainable basis, while providing students with an effective and engaging learner-focused clinical experience. The LF-CUES model aims to provide consistent scanning experience to students across placement sites, and transition students from the didactic to the clinical portion of the program. The 2:1 student to preceptor ratio enables more students to be accommodated at clinical sites, with less interference in daily workload. The focused attention students receive in these early practicum rotations is also designed to build capacity at rural and small urban sites – which often have fewer staff to provide direct supervision – by decreasing the time it takes students to become independent scanners.

**The Need**

In 2007, labour market demand for sonographers in Alberta led to a request from industry and government for a significant increase in the DMS student enrolment at NAIT, requiring an expansion in the number of clinical placement sites. Existing clinical pressures were a barrier to securing the additional placements needed to meet the enrolment targets. At the same time, there was also a concern that high workloads and clinical staffing shortages were compromising the quality of students’ clinical experiences. Some students were reporting dissatisfaction with the amount of physical scanning time they were receiving and there was considerable variation in the types of scans students were exposed to, particularly in early practicum rotations. At times, understaffed clinical sites were temporarily placing two students with one preceptor, with no pedagogical model for engaging both the active and observing student. From the perspective of clinical partners, preceptoring a student requires staff time and interrupts workload. While recognizing the importance of clinical experience for students and the need to produce more sonographers, many employers felt they simply could not provide additional placements for students using the traditional clinical education model.

**Initiation**

In response to these challenges, Denise MacIver, then Chair of NAIT’s Diagnostic Imaging Programs, envisioned a 2:1 clinical education model that could provide a quality experience for students while lessening the impact on the workload of clinical sites. She mobilized clinical partners and NAIT DMS faculty to develop a funding proposal in response to the 2008 call for proposals from the Building Educational and Clinical Capacity Fund of Alberta Health and Wellness Health Workforce Action Plan. Initially two private clinics signed on as partners, with each expected to host one pilot site. Following the withdrawal of one clinic, Medical Imaging Consultants (MIC) was the sole clinical partner hosting both pilot sites.

**INNOVATION CHAMPIONS**

Denise Maclver, Associate Dean, Health Sciences, NAIT

• As Chair of Diagnostic Imaging Programs, had the initial vision and developed the funding proposal

Suzanne Ebel, Mona Hoekstra, and Ron Van Vliet, Medical Imaging Consultants (MIC)

• Agreed to pilot the LF-CUES, offering the use of their clinics, staff and patients

• Acted as a full partner, providing on-going input and support

Lee Derksen, NAIT Faculty and LF-CUES Project Manager

• Passionate Project Manager

• Moved the project forward, continually incorporating feedback and suggestions for improvements

Karen Balon, Preceptor, MIC

• Volunteered to act as the first LF-CUES preceptor

• Brought many years of knowledge and experience, and was instrumental in shaping the program as it developed

Ellen Hughes, Dean of Health Sciences, NAIT

• Provided support and encouragement, championing the LF-CUES model at the institutional level
Development

In early 2009, LF-CUES received project funding for a period of almost two years. Once funding was received, a DMS faculty member was appointed as Project Manager and a steering committee was formed to provide oversight and guidance to the project. Consisting of the Dean of Health Sciences, Chair of Diagnostic Imaging, MIC Manager, and LF-CUES Project Manager, the steering committee felt that each LF-CUES room should have a dedicated, trained preceptor. MIC approached Karen Balon, an experienced sonographer, to act as the preceptor for the first site. Balon attended the NAIT “Becoming a Master Instructor” course and worked with the Project Manager to develop learner-focused booking schedules, course lessons, and a guiding manual, including tips and suggestions for engaging the observing student.

Project funding also enabled the purchase of sonography equipment for the LF-CUES. Each LF-CUES room was equipped with identical resources, including a Philips IU22 machine, an IBIOM stretcher, and a desktop computer.

• A key strength contributing to the success of the LF-CUES in the development phase was the team’s flexibility and openness to new ideas. Although the LF-CUES project started with the firm belief that a 2:1 student to preceptor model could be successful, the details of how to organize the experience and engage the observing student were only developed as the project moved forward.

• The most significant challenge was securing clinical partners. A number of partners expressed interest initially, but external restructuring factors at the time prevented public hospitals from becoming involved and one of the private partners withdrew after the proposal had been submitted.

• Another challenge was adjusting the project to funding timelines while also attempting to align with the students’ practicum cycle.

• While the purchase of equipment was welcomed by the clinical partner, it was not viewed as imperative to project success. In some ways, the equipment created additional challenges related to the type of equipment to purchase, timely delivery, and responsibility for repairs.

Role of the Knowledge Base

EXPLICIT KNOWLEDGE

The initial idea for the LF-CUES model was informed by research on mentorship primarily being conducted in the United States. The research evidence suggested that mentoring multiple students at once can enhance student learning and promote peer mentoring. This provided support for the idea that paired learning could be valuable for students in their clinical placements.

TACIT KNOWLEDGE

The initial idea for piloting a 2:1 student to preceptor clinical education model in sonography emerged through brainstorming with colleagues in the professional society about the potential for various educational models to help alleviate clinical placement pressures. There had also been a brief experience with Learning Clinics at SAIT that suggested a paired learning model could work. In 2005-2006, SAIT temporarily established one-week Learning Clinics with a 4:1 student to instructor ratio to utilize hospital scanning rooms in Calgary that were vacant because of labour shortages. Anecdotally, students reported that they enjoyed the learning experience and that it provided a good transition to participation in the traditional clinical model. The expertise and experience of the steering committee and preceptors further contributed to the knowledge base.

Implementation

The first LF-CUES room was opened in April 2009, with students attending an LF-CUES practicum rotation of two or three weeks from April to June. While the steering committee felt it was important to place students in an LF-CUES early in their clinical experience, the opportunity to have all students participate in LF-CUES in their first practicum was missed due to the time required to put the resources in place.

In June 2009, equipment for the second site was received, and interested MIC staff were invited to volunteer as dedicated preceptors. When a third site was added in the spring of 2010, a job posting was issued and qualified applicants were interviewed.
MIC provided LF-CUES preceptors considerable flexibility to implement the model, including the latitude to adjust their bookings. Bookings were done through MIC’s centralized booking desk, with staff trained to schedule the LF-CUES rooms based on the booking template and the students’ needs. As new sites were added, preceptors were given the opportunity to adjust the booking templates to suit their clinic. Patients were informed at the time of booking that their scan would be conducted by two students in a learning environment, and could take longer than usual. In addition, other clinic staff members were aware that the LF-CUES room was serving in a special capacity and should not be relied upon to pick up extra workload if the clinic was short-staffed.

In the LF-CUES model, students are responsible for the entire case, from greeting the patient to reporting the results to the radiologist. When feasible, each student scans half of each case, with clear activities to engage the observing student. Students are encouraged to discuss the case before they begin, while scanning (as appropriate), and immediately following during dedicated time for debriefing. Students are encouraged to ask questions of the preceptor, and there is an emphasis on professionalism, communication, and patient care and safety skills.

The strong focus on student learning was considered to be the primary strength of the LF-CUES model.

- The LF-CUES model promotes a shift in thinking, to seeing the preceptor as an educator rather than a technologist with a student.
- The specialized booking of patients ensures that students are consistently exposed to a variety of ultrasound cases, allows the preceptor to individualize the experience to student needs, and allocates sufficient time for students to complete each scan.
- Students are guaranteed consistent access to scanning practice because the LF-CUES are not subject to the demands of patient flow or clinic needs.
- Patients are informed at the time of booking that their scan will take place in a learning environment, therefore increasing student comfort.
- Students gain knowledge from each other, and learn to work collaboratively.
- Time for debriefing is built into the day after each case.
- Students see a consistent preceptor during their rotation, who is versed in LF-CUES teaching methodologies.
- The LF-CUES model helps students transition from the lab environment to the clinical setting.

**Monitoring**

Throughout the pilot process, the Project Manager consulted continuously with the preceptors, students, and the NAIT practicum liaisons. This allowed for concerns and challenges to be identified early, and for changes to be implemented on an on-going basis. The LF-CUES preceptors adopted this approach...
81% of students were somewhat or very satisfied with their LF-CUES rotation. Students who rotated through the LF-CUES in an early practicum rated their experience higher than those who participated during a later rotation.

Evaluation
An evaluation component was built into the pilot project funding and included student interviews and anonymous surveys, preceptor, radiologist and practicum liaison feedback, a scanning checklist, student log books, and student practicum evaluation surveys.

• 56 students experienced an LF-CUES rotation during the pilot.

• 81% of students were somewhat or very satisfied with their LF-CUES rotation. Students who rotated through the LF-CUES in an early practicum rated their experience higher than those who participated during a later rotation. This was supported in the student interviews, in which students reported that the LF-CUES rotation was most helpful in the early weeks of their clinical education when they were not yet independent scanners.

• Over half of students reported that they were very engaged or engaged while in the observer role, with an additional 40% indicating that they were somewhat engaged.

• Close to one-third of students stated that their favourite component of the LF-CUES was the preceptor.

• Almost all students reported that the variety of scans and the debrief component were helpful.

• Preceptors reported that while acting as the dedicated preceptor can be taxing, it is easier to follow student progress and ensure students are receiving consistent feedback during their rotation.

• Preceptors felt the LF-CUES promote teamwork among the students.

• Radiologists and NAIT faculty observed that the program helps to instill confidence in students in early practicum placements.

• Evaluation of logbooks and scanning checklists showed no loss of hands-on scanning time as compared to the traditional model.
Impact on Participants

During the case study evaluation, students described the LF-CUES as helping to build confidence, promoting peer learning, easing them into the clinical experience, and allowing more independent scanning time than in a traditional clinical placement – particularly when the LF-CUES are provided early in the clinical education experience.

“I went on practicum straight from school to LF-CUES for two weeks and it helped me boost my confidence. It built my self-esteem because I was able to make mistakes, ask a lot of questions and not feel stupid. When you go to an actual practicum you are basically on your own in some places, so it really helped me.”

“I started off in a big hospital and then went to the LF-CUES and I felt at the hospital we were kind of just trying to get through these exams. The LF-CUES gave both of us a lot of reassurance and gave us the experience we needed to go on and do other things. It kind of touched on every type of scan that we would do, which in some cases we wouldn’t get the chance to do, based on the hospital where we were placed. I think it really made us more comfortable and more apt to succeed past that point.”

“I was with a girl in my class who was really outgoing and dealt well with patients and she just taught me so many things and it helped me throughout the rest of my practicum and it changed me from that point on, pretty much.”

“My preceptors for the LF-CUES were awesome. They would make you and your partner work it out separately before they would step in, or if they knew you needed help right away they would step in. I think they were very open to us making errors because they knew we were just starting, and they knew that we would need that extra time and need that extra guidance.”

“If you are just working with a tech you might have five abdomens in a day and you don’t see any thyroids or legs or anything like that. Whereas in the LF-CUES they booked it specifically for us, so we knew what we were doing that day. We got early exposure to everything over the two weeks. That was nice.”

In addition, the clinical partner reported that the LF-CUES model allows them to accommodate more students with less interference in the workload of the clinic, and that it can provide an avenue for injured workers to remain in their career.

Sustainability & Moving Forward

Following the completion of the pilot, NAIT integrated the LF-CUES into the regular operation of the DMS program. LF-CUES were established at selected MIC clinics, enabling them to increase their student intake from 6 to 10 students, and a specialized LF-CUES training workshop was offered to all MIC employees. MIC is suggesting to their clinics that the LF-CUES model be used for the first three practicum
rotations, and that the fourth practicum utilize a two students/one preceptor/two rooms approach.

A number of additional uses of the LF-CUES model are envisioned for the future, including remediation in specific competencies, and focused training in rare types of scans (such as peripheral arterial vascular).

NAIT is interested in expanding the LF-CUES model to all clinical partners to allow every student an LF-CUES experience in their first three practicum placements. Attracting buy-in from new clinical partners, however, has been a challenge. While changing attitudes can take time, as the current students move to the workforce and become preceptors themselves their experience and comfort with the model may help to garner support.

Lessons Learned

While the model allows for considerable flexibility and variability from site to site, NAIT’s experience demonstrates that the LF-CUES model is most effective for students in their early placements. Students need to be clearly informed about the purpose of the LF-CUES and how they can learn the most from the experience. While personality clashes or differences in ability can cause friction between students, this can be minimized by pairing students with similar abilities and learning styles, and by having the preceptor provide clear guidelines for interaction between students. Students also appreciated when preceptors asked about their personal learning style and how they preferred to receive feedback, adjusting to student needs.

“I had an LF-CUES where the preceptor pulled the person aside and asked, ‘how do you like to be critiqued?’ I think sitting down with the students and getting them to discuss how they like their feedback and what works best for them is really important. Then you know that you are going to be given feedback the way you are okay with receiving it, and vice versa.” – Student

“I always oriented students well when they came. I told them about the project, my teaching philosophies. I ask a lot of questions when I teach. To me it isn’t to see what they know, it is to get them thinking. I made sure that they understood that I’m not trying to embarrass you in front of your partner, I’m not trying to see what you know or don’t know, so don’t be intimidated by my questions and don’t be embarrassed in front of your partner. It is okay if you don’t know it, you are here to learn.” – Preceptor

Preceptor continuity allows a relationship to develop between the students and preceptor, an important component of establishing a positive learning environment. However, consistently working with two students in a focused learning environment can be taxing for the preceptor. This can be alleviated by having at least two preceptors trained at each site.

Open, ongoing communication with clinical sites, staff, instructors, students and patients is vital to ensuring buy-in from all parties. The preceptors must believe in the model, and be dedicated to providing a student-centred learning experience. Informing patients at the time of booking that they will be part of the learning experience was also beneficial, and made patients more willing to participate.
Paths to Success-Enhanced Student Support Project (Paths-ESSP)
Paths to Success-Enhanced Student Support Project (Paths-ESSP)

Type of Innovation: System Interaction

Description: Student success and retention project involving assessment, advising, and program-level supports.

Program: Medical Laboratory Sciences (MLS)

Sustainability: Following the end of project funding in 2010, project activities have been fully integrated and embedded into regular MLS programming, with ongoing improvements implemented by MLS faculty.

Applicability to Other Allied Health Programs:
Applicable to many allied health programs.

Transferability to Other PSE Institutions:
Can be implemented by other post-secondary institutions.

Limitations: Requires strong faculty buy-in and commitment, as well as institutional leadership to enable coordination and collaboration across divisions.

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Innovation Overview

As Manitoba’s only source of Medical Laboratory Science (MLS) post-secondary graduates, Red River College has a critical role to play in ensuring a sufficient supply of Medical Laboratory Technologists to meet provincial labour market demands, and equipping every MLS student with the skills and competencies needed to enter the workforce upon graduation.

To support MLS students in completing their program successfully and becoming certified to enter practice, Red River College introduced a student success and retention project in 2007 with three main strategies:

• Pre-program assessment to identify individual student needs
• Faculty advisors to establish personal connections with students and direct them to appropriate college resources
• Academic and program-level supports, as well as program modifications and adjustments

Prior to enrolling in the MLS program, prospective students are expected to complete a program-specific assessment test during the spring orientation to gauge their fit with an MLS career and their need for content review or upgrading. During the first week of the program, MLS students are invited to participate in the Paths to Success electronic survey. This survey is administered in class to most incoming Red River College students in full-time diploma and certificate programs to assess individual learning needs and potential areas of risk. Survey responses are used to generate personalized “Student Success Plans” with a 24-hour turnaround. These pre-program assessments are followed by the second strategy, which connects every MLS student to a program faculty advisor who receives resources and training to support them in their advising role. In most cases, students consent to share their Paths survey data with their faculty advisors, providing a “starting point for the conversation” by offering insights into individual student strengths and weaknesses. The third strategy involves providing a range of academic supports for first-year MLS students, such as weekly “land-locked” tutorials to address learning skills and specific program issues. Tutorial requests and other program data are used to identify “tell-tale” courses, providing faculty with opportunities to review program curriculum, pinpoint issues that might be confusing for students, and consider changes to course content, design and sequencing.

The Need

Healthcare restructuring in Manitoba during the 1990s led to the downsizing of the medical laboratory technologist workforce and the closure of Red River College’s Medical Laboratory Sciences program. By 2001, a critical shortage of Medical Laboratory Technologists and looming MLS retirements led to the reinstatement of the program.

With high levels of employer demand and seat capacity limited by the availability of clinical placements, exceptionally high MLS graduation
rates were needed. Yet within the first four or five cohorts of students, students leaving the program meant the immediate loss of up to 10% of the potential MLS workforce. Even more troubling – and further intensifying workforce pressures – the pass rate for Red River College MLS graduates on the CSMLS National Certification Examination was below the national average. In addition, graduate surveys indicated student dissatisfaction with the program, and employer feedback from the MLS Advisory Committee highlighted gaps in graduate skills and competencies. Program-level efforts to improve program quality were having limited impact, and it was clear that systemic action was needed to address these concerns.

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The province’s open access mandate, with academic qualification the only criteria for college admission, more selective screening processes were not an option. As well as a major review of the MLS program, a strategy was needed that would support all qualified applicants to succeed.

**Initiation**

In 2006, Louise Gordon was appointed Dean of Health Sciences and Community Services at Red River College. From her previous position in government post-secondary education policy, she was acutely aware of the high workforce expectations for graduates of the MLS program. As Dean, she was on the front-lines dealing with Program Advisory Committee concerns about program quality. The 2007 call from the Manitoba Council on Post-Secondary Education for a Red River College System Restructuring proposal gave her an opportunity to implement systems-level change in three programs that were experiencing significant – but very different – challenges in student retention and success: Medical Laboratory Sciences, Early Childhood Education, and Animal Health Technology. She rallied institutional recognition for these three programs as college priorities, and developed a proposal for the three-year Enhanced Student Support Project (ESSP) pilot. The proposal was based on the Beatty-Guenter retention model, which had been adopted by the college in 2005 and focused on “sorting” and “transforming” students through early identification and customized interventions. It was supported by the Vice-President Academic, who agreed to make institutional research services available to the project, and the Vice-President of Student Services, who provided access to Learning Assistance Centre (LAC) resources. Using incoming grade averages as indicators of risk, the project was designed to provide all at-risk students with diagnostic testing, individualized assessment, and academic and personal supports.

**INNOVATION CHAMPIONS**

**Louise Gordon, Dean of Health Sciences and Community Services, Red River College**

- Initiated project, enlisted institutional support (VPs, Deans, Faculty Chairs), brought committee together
- Trusted committee to implement

**Mike Krywy, Research & Planning Analyst, Red River College**
• Identified areas for research and analysis, responded to committee requests for data
Margaret Roger, Learning Assistance Centre (LAC) Manager, Red River College

• Shared expertise in assessment and program development, collaborated on the development of new program-specific assessment tools
Gillian Rimmer, MLS Program Coordinator, Red River College

• Ensured open communication and full engagement with MLS faculty, led process of program review and curriculum redesign
Ashley Blackman, Research & Planning Director, Red River College

Larry Kustra and Bill Younger, Allied Health Chairs, Red River College

Dave Rogalsky, Learning Assistance Centre Director, Red River College

• Scheduled workloads to enable full participation of Mike, Gillian, and Margaret

Development
Following project approval, an ESSP committee was established, composed of the three program coordinators, a designated research analyst, and an assessment expert. Provincial funding enabled the hiring of a project coordinator, who was responsible for organizing committee meetings, managing administrative details, and maintaining communications. The project coordinator also conducted a literature review of the student success and retention research. Other committee members included the Dean, Faculty Chairs, and the Directors of Research and Planning and the Learning Assistance Centre.

Given short timelines, the project committee started work immediately and held a series of meetings to review data, share concerns, and brainstorm ideas. In addition to research on grade averages as predictors of student success, the ESSP committee was interested in analyzing the correlation between the other assessment and diagnostic tools used by the college with student retention and CSMLS success. These tools included Degrees of Reading Power (DRP) and the Canadian Adult Achievement Test (CAAT), as well as the Freshman Integrated Tracking (FIT) system, which was initially piloted with 10 Red River College programs in 2005. Developed at Humber College in Ontario, FIT consisted of a paper-based survey administered to students when they entered college, with results used to generate a personalized “Success Plan” highlighting college support services tailored to individual student needs. Students were also assigned a faculty advisor to help connect them to both academic and non-academic supports. A preliminary evaluation of the FIT pilot showed higher retention rates among students who had participated in FIT than for other students, and plans were already in place to expand FIT to other Red River College programs.

• The project’s clear and unrelenting focus on student success was considered to be its greatest asset. It offered a dynamic, flexible model that was transferable across different programs, and an evidence-based approach to early and effective student assessment, customized personal and academic supports, and the identification and remediation of program concerns.

• In contrast to the directive process of project initiation, the Dean took a deliberate “hands-off” approach during ESSP development, demonstrating her confidence in the expertise of the team, and empowering and motivating the committee.

• The project’s emphasis on cross-college collaboration facilitated communication across divisions, and between programs and the service areas of the college, leveraging internal expertise and knowledge.

• Regular ESSP meetings and social activities encouraged a strong sense of camaraderie among team members, and provided the vital time needed to collect and analyze the data, carefully assess what was working, and determine where changes could be made. This action research design enabled the selection and development of assessment tools and intervention strategies targeted to the unique needs of students within each program.
Role of the Knowledge Base

EXPLICIT KNOWLEDGE

The literature review conducted to launch the project highlighted the importance of building strong connections between students and post-secondary faculty and staff to support students in achieving success. The Beatty-Guenter Retention Strategy model, and the work done at Humber College to develop the FIT survey, were fundamental to the initial development of the ESSP. The project was also informed by research on college readiness, student learning styles, Gardner’s theory of multiple intelligences, and the principles of adult education. The team embraced an evidence-based approach to measuring the effectiveness of diagnostic and assessment tools, and conducted detailed statistical analysis of CSMLS examination data, course GPAs, and student survey data.

TACIT KNOWLEDGE

Team members drew on the specialized expertise each brought to the project, in such areas as diagnostics and assessment, program development, adult learning, and research and evaluation. Content expertise was provided by the faculty chairs and program coordinators. Conference presentations provided opportunities to share ideas, enhance knowledge and exchange information with peer colleagues in other institutions.

Implementation

“It was people’s willingness to look at things, to examine them, and to change direction slightly to make things more effective. That’s what made it work. ... People were always looking at what can be done better.”

In the first year of the project, students were assessed during the first weeks of term through the standardized DRP, CAAT, and the FIT survey, and received a variety of academic supports – including group and individual tutoring, as well as customized supplemental instruction – throughout the school year. Referrals to available college services were reinforced by faculty advisors during discussion of the personalized FIT “Student Success Plan.”

In the second year, along with the DRP and the CAAT, a program-specific assessment tool was developed by the Learning Assistance Centre (LAC) in collaboration with MLS faculty. Improvements were made to the FIT survey, to generate a more focused learning plan and referrals to a broader range of college supports. The most significant change was the introduction of a weekly one-hour spare for skills workshops and content tutorials, “land-locked” between classes in the middle of the day in order to maximize student participation. During the first five weeks of the school year, mandatory study skills workshops were held, taught by LAC staff. For the remainder of the year, the spare was available for content tutorials delivered by faculty on request. To identify topics, students were provided with a sign-up sheet listing all of the first term courses and could sign up for course-
specific tutoring sessions, conducted by MLS faculty rather than external tutors. Course GPA data was analyzed to identify “killer” courses and consider changes to program content or design.

In Year 3, the program-specific assessment tool was administered to students during the orientation session, to allow time for remediation and “refreshers” prior to beginning the program, and the DRP and CAAT were continued. The FIT survey was replaced by Paths to Success, a college-wide online student assessment survey that built on FIT but allowed clearer issue identification and improved feedback to students. The five mandatory LAC workshops and content-based tutorial sessions were provided during the “landlocked” spare. A new Essential Skills Competency (ESC) was also introduced to raise awareness among MLS students of the employability criteria expected in order to graduate. Paths data was analyzed by cohort, to provide a profile of the incoming MLS class and help faculty better understand their students.

- Although an informal MLS faculty advising model had been in place since 2002, the FIT and Paths to Success surveys helped formalize the model. With the introduction of Paths, faculty training sessions were organized and an advising manual was developed, which helped to clarify the advising role (as distinct from professional counseling) and facilitated the establishment of advisor-student relationships.

- The Paths-ESSP project revealed the transformational role of faculty advising in strengthening students’ sense of connection to the MLS program and to the college.

- The involvement and commitment of MLS faculty, and their willingness to assume ownership of the project in advising students and offering tutorial support, was critical to the success of Paths-ESSP.

- The project highlighted the limitations of standardized assessment tools in predicting risk, and underscored the importance of program-specific assessments.

- Implementation challenges included initial “angst” among faculty that student requests for content tutorials would reflect negatively on their teaching, and confusion about how the tutorials would be implemented. There were also scheduling challenges to protecting the time allocated to the land-locked spare within packed student timetables.

### Monitoring

“*In a tight content-driven program that doesn’t allow for lots of flexibility, suddenly there was an opportunity for review built into every semester, and that was a big thing.*”

During case study focus groups, students noted the many improvements that have been introduced to the MLS program as a result of course evaluations and anecdotal feedback, and highlighted the “amazing communication between students and faculty, between faculty and faculty, and between students and students.”

- The project provided faculty with important opportunities to engage in a “meta-analysis” of the content-intensive, highly technical Medical Laboratory Sciences curriculum, and to consider changes to course design, content, and sequencing.

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“*After the mid-term evaluations they usually go over what’s been said and how they’ll fix it with us.*”

“*They’ve been updating the program every single year, and revising it every single year since they’ve re-started. And they listen to students.*”

“*The way they teach, the different assignments that they’ll have you do, the way that the assignments are arranged – they’ve all been from students. And if the faculty try something new, they’ll ask ‘Did you like that? Did you not like that? Tell me about it.’ … And they’ll get rid of the stuff that they think is a waste of time or didn’t help anyone learn, and they’ll keep stuff, or build on the stuff, that the students really enjoy.*”

“*The teaching isn’t static, it’s constantly evolving and changing.*”

“*They’re constantly refining the procedure to fit how students learn and what students like.*”

“*They really use student feedback. It’s not just ‘fill this out and maybe we’ll look at it.’ We’ll request something and the next term it’s there. You don’t have to wait the whole year.*”

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To better prepare students for the CSMLS national exam, a mock practice examination was introduced, to give students the experience of writing a six-hour multidisciplinary test. New multidisciplinary course testing strategies have also been implemented at the end of each term.

Other program changes include the replacement of the one-day “Clinical Readiness” process with a Minimal Competency Document to be completed over time, and the addition of a “Foundations for MLS” core course instead of series of more intensive short courses.

Impact on Participants

During the case study focus groups, MLS students offered a variety of perspectives on the resources and supports available to help them be successful in their program. While students recognized the potential benefits of the pre-enrolment assessment in previewing the program and an MLS career, many felt the current assessment test did not align closely enough to their actual coursework. Students also acknowledged the availability of pre-program refresher courses, but those who had participated in the math refresher questioned its usefulness. There was general agreement that the Paths to Success survey was important to let instructors and faculty advisors know about special circumstances in students’ lives, and to make sure that students were aware of academic and non-academic college resources.

Given relatively high MLS retention at the beginning of Paths-ESSP, the project has had much less impact on retention. In Medical Laboratory Sciences, retention rates remained high, at 97% in 2007, 93% in 2008, and 97% again in 2009.

Evaluation

A variety of tools have been used to evaluate Paths-ESSP, including analysis of MLS retention rates, CSMLS examination pass rates, graduate satisfaction surveys, student course evaluations, and student tutorial participation. Focus groups have been held with students and employers, and in 2010 the MLS program received six-year accreditation from the Canadian Medical Association, a strong validation of its effectiveness.

Prior to the introduction of Paths-ESSP, the CSMLS examination pass rate for Red River College MLS graduates was about six percentage points below the national average. In 2008, 2009 and 2010, pass rates have consistently been well above the national average. The 2010 pass rate of 97% was the highest in Canada.

“There was general agreement that the Paths to Success survey was important to let instructors and faculty advisors know about special circumstances in students’ lives, and to make sure that students were aware of academic and non-academic college resources.”

“By the time you walk in to see your instructor, your instructor already knows you, and kind of knows what your weaknesses are, and they’ll help.”
“They’d ask you: ‘are you having trouble with anything?’ or ‘where are you working – is that extra stress?’ They know what’s going on in your family to see if that would affect how you’re doing.”

“If you were working they wanted to know if that was interfering with your academics. They asked who you lived with, are your parents supporting you, just things like that. They told us that if we ever had an emergency, if something came up, that money is available – like if you couldn’t buy groceries, so you don’t have to stress about that.”

“I know people who were missing classes and it wasn’t ‘you ought to come here,’ it was ‘OK, is there something going on?’ They were more concerned.”

“You know that this person is watching you. If you start having habits that will be a problem in the workplace, or with your studying, they’re going to come and talk to you about it. Every teacher has so many students, and they kind of keep their eye on them. ... I like knowing that if I start doing something that’s going to be a huge problem, somebody will call me on it if I don’t realize it. Because then you know you’re okay.”

Although the mandatory LAC tutorials on reading and writing were largely regarded as a “waste of time,” students considered the program-specific tutorials to be exceptionally helpful. They viewed the guaranteed offer of tutorial support as a tangible demonstration of the faculty’s commitment to their success, and also appreciated the availability and supportiveness of faculty:

“We get tutorials every week. The teachers will go over anything if anyone needs more help on it. And usually since it’s not their original time slot for classes, they spend a bit more time to simplify it, because in class we just have to go- go- go. That’s helped me out.”

“So just because you were the only one who signed up for it, they wouldn’t be ‘Oh, not enough people, too bad.’ They still made time for you, even though you’re only one person.”

“This is a really time intensive program, we’re here 8 to 4 everyday with just a lunch. If I can talk to my teachers between classes and set up a tutorial, or email them about some stuff, that’s a huge help to me. I don’t have to run around to 10 different people and explain to them what my program is, and what I need help with, and why this isn’t making sense. There’s people who understand and have the time within the day already.”

“For me, the tutorials weren’t useful. I just thought we already have a busy enough schedule, why throw in an extra one when I don’t always 100% benefit from them every single time? But the teachers... you can just email them anytime, you can pop in their office. They’ve been really helpful to me when I need help, they’re always willing and will sit down and explain something to you.”

Sustainability & Moving Forward

“Some of these structural elements are ultimately things that you don’t need a project to do.”

Paths-ESSP is recognized as having achieved systems-level change within the MLS program. Data-informed decision making is now institutionalized as part of MLS culture, and the new practices developed during the project have been embedded and fully integrated into regular MLS programming. MLS faculty are committed to offering the land-locked tutorials, providing ongoing opportunities for program review, and expanding the range of strategies to help students be successful.

• The land-locked spare has been written into faculty job descriptions as an official student contact hour.

• The five mandatory LAC tutorials will be scheduled over the course of the academic year, instead of stacked at the beginning of year, and efforts are being made to increase their program applicability.

• Since the end of the Paths-ESSP project in 2010, MLS faculty members have collaborated on a new pre-enrolment assessment tool that better reflects program prerequisites, course expectations, and MLS workplace realities. The assessment will be implemented during spring orientation, with results analyzed to develop score bands for use as predictors of program success.
Lessons Learned

Team members gained important insights on the development and implementation of similar innovations through their involvement in the project:

- There must be a clear understanding of students’ specific needs, challenges, and concerns, in order to customize and individualize supports.
- While existing standardized tests can be limited in providing the kind of diagnostic information necessary to target interventions, program-specific assessment tools can generate deep insights into student needs.
- The most significant impacts for students result from program-level changes, including adjustments to course content and design, and strengthened faculty interactions with students.
- Transparency and open communication with faculty to clarify expectations around tutorials and faculty advising are important to fully engage faculty and allow them to see the value of the project in better preparing students.
- High-level institutional support and leadership is critical. The implementation of Paths-ESSP requires broad cross-divisional coordination – including admissions, IT, student services, institutional research, and program faculties. Senior management buy-in is needed to ensure that staff will have the time needed to develop, review, and modify strategies.

- In the past, pre-enrolment assessment results were reviewed only by the program coordinator, who directed students to LAC remedial workshops prior to the fall program start. With the development of the new assessment tool, results may also be shared with faculty advisors along with Paths data, providing faculty with additional insights about the needs of incoming students.
- Improvements are being planned to make the content of the pre-program remediation workshops and summer refreshers more relevant.
- During the focus groups, students expressed interest in expanded mentorship opportunities. First-year students emphasized the value of connecting with second-year students later in their academic year, once they’re familiar with the program and know what questions to ask. Second-year students were eager to share their experiences and pass along their wisdom and advice.

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Science and Health Aboriginal Success Strategy (SHASS)

**Type of Innovation:** System Interaction

**Description:** Multi-pronged strategy to increase the recruitment, retention and success of Aboriginal students in Science and Health programs.

**Program:** All science and health programs at SIAST

**Sustainability:** SHASS became core-funded in 2007.

**Applicability to Other Allied Health Programs:** Applicable to many allied health programs.

**Transferability to Other PSE Institutions:** Can be implemented by other post-secondary institutions.

**Limitations:** Requires on-going funding and buy-in from program heads and faculty.

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Innovation Overview

Aboriginal peoples, a young and rapidly growing population, are underrepresented in the health workforce. Many institutions have difficulty attracting and retaining Aboriginal students in health programs. Recognizing the need to better support Aboriginal students, SIAST created the Science and Health Aboriginal Success Strategy (SHASS), a multi-pronged approach to assisting students in science and health programs. Developed in partnership with a wide range of stakeholders, SHASS provides Aboriginal students in science and health programs with an advisor who is familiar with their specific needs and challenges, and who acts as a dedicated source of support.

The goal of SHASS is to build a strong Aboriginal community at SIAST, increasing the recruitment of Aboriginal students into science and health programs, creating a welcoming and culturally affirming environment, improving student retention, and aiding the transition of Aboriginal graduates into the health workforce. A variety of activities are undertaken to reach this goal. Recruitment is enhanced through the development of relationships with Aboriginal communities as well as participation in various information and career sessions. To promote student retention, the SHASS advisor provides a range of holistic support services, including assisting with funding and housing, helping to arrange child care, connecting students to tutoring services, and counselling students. Lunch and Learn workshops, mentorship opportunities, and access to representatives
from the Health Regions all help improve both student persistence and graduate employment outcomes. Recognizing the need to address institutional barriers, the SHASS advisors attend meetings of the Science and Health program heads, and work with programs to ensure their policies and practices are sensitive to the unique barriers and needs of Aboriginal students. Through partnerships with other SIAST initiatives, cultural awareness days and events are also held to promote a greater understanding of Aboriginal culture among SIAST’s faculty and student body.

The Need
A review of provincial data shows that Aboriginal peoples are the fastest growing demographic segment in Saskatchewan, and are expected to comprise one third of Saskatchewan’s population by 2030. Based on these figures, it was recognized that the labour force growth of Saskatchewan will be strongly dependent on the integration of Aboriginal peoples into post-secondary education programs and, subsequently, the workforce. Health professions were identified as a key area in which Aboriginal peoples are significantly underrepresented and, based on research showing that Aboriginal peoples face a number of unique barriers to accessing and completing post-secondary education, it was clear that increasing the number of Aboriginal peoples in the health workforce would require a coordinated effort involving government, the education sector, and health employers.

Initiation
Recognizing the need to increase the number of Aboriginal students completing health programs and entering the workforce, SIAST and the Saskatchewan Association of Health Organizations (SAHO) signed a partnership agreement with the Department of Intergovernmental and Aboriginal Affairs in 2003 to work towards building a representative workforce. Based on this partnership agreement, the Science and Health Division at SIAST decided to undertake a three-year pilot project, the Science and Health Aboriginal Success Strategy (SHASS), to support the recruitment and retention of Aboriginal students in programs in which they were underrepresented.

INNOVATION CHAMPIONS
Judy Layne, Former Dean, Science and Health, SIAST
- Passionate about the need to increase the recruitment and retention of Aboriginal peoples in Science and Health programs at SIAST, Layne spearheaded the initiative.
Regina Qu’Appelle Health Region and Saskatoon Health Region
- Both Health Regions signed a Memorandum of Understanding (MOU) with SIAST to jointly work towards facilitating Aboriginal student recruitment, retention and success and graduate employment
- Health Regions have been involved as ongoing partners in SHASS events and initiatives and active members of the working group.

Jacqueline Belhumeur, First SHASS Advisor, SIAST Wascana Campus
Lori Campbell, Judy Beck, Tracy Wilson, Current SHASS Advisors
- Jacqueline and Lori led the development of SHASS
- Current advisors have contributed considerable time and expertise to establishing SHASS initiatives and promoting the program both internally and externally.

Wendy Treble, Continuing Care Assistant Program Head, SIAST Wascana Campus
- Very engaged, works with SHASS advisors to support students and to make the program welcoming for Aboriginal students.

SHASS Working Group
- Composed of approximately 17 people, representing a cross-section of stakeholders, the working group provides input and direction and is strongly committed to the continued success of SHASS.

Development
To guide the development of the Science and Health Aboriginal Success Strategy, a working group was formed with representatives from SAHO, the Health Regions, government ministries, CUPE, the Dumont Technical Institute, and SIAST. In addition, Memorandums of Understanding were signed between SIAST and the Regina and Saskatoon Health Regions to support a collaborative working relationship. Central to the pilot project was the creation of
two SHASS advisor positions, to be located on SIAST’s Regina and Saskatoon campuses. Initially, a number of activities to increase the recruitment and retention of Aboriginal students were identified, including job shadowing and mentorship opportunities, recruitment strategies, and assisting students in accessing bursaries and scholarships. The project truly took shape, however, as it was implemented, with the SHASS advisors leading the development in consultation with the working group.

- Strong institutional support was central to the initiation and development of the SHASS program. SIAST had identified Aboriginal student recruitment and retention as a high profile priority for the institution, and was committed to supporting initiatives that would help realize this strategic objective.

- Involving a wide cross-section of stakeholder groups including employers and provincial ministries of health, education and Aboriginal Affairs also contributed to the successful development of SHASS. It was viewed as essential that institutions wishing to implement a similar program should also include community members in the project development.

- Prior to the development of SHASS, SIAST already had a number of supports in place for Aboriginal students, including an Aboriginal Activity Centre and Aboriginal-focused student counsellors. SHASS was unique in that it focused on forming relationships with Aboriginal students early, not solely when a student was in crisis, and providing holistic
supports to enhance not only recruitment and retention, but also successful transition to the health workforce.

• A key challenge in developing SHASS was the coordination of the project across multiple campuses, with the project initially experiencing greater success at the Wascana campus in Regina than Saskatoon’s Kelsey campus. Project stakeholders reported that tailoring the project to the particular environment of each campus is important for success.

• Attracting the full support and involvement of program heads was also identified as a challenge.

Role of the Knowledge Base

EXPLICIT KNOWLEDGE
The development of SHASS was informed by literature on student retention indicating that building a sense of community and providing cultural supports are often more important for Aboriginal student success than simply addressing academic issues. Mentorship literature was also consulted, as well as research on effective programs and initiatives in place in other Canadian jurisdictions and internationally.

TACIT KNOWLEDGE
The SHASS advisors and working group members brought considerable expertise to the project, acquired through lived experiences and many years of working with Aboriginal communities. SIAST’s success in recruiting and retaining Aboriginal students through the Native Access Program to Nursing (NAPN) contributed to the knowledge base, providing a strong rationale for the development of a similar program for Science and Health students and providing insight into successful strategies.

Implementation
SHASS was implemented in the fall of 2004 and initially focused on establishing a strong presence for the program on both campuses. The SHASS advisors attended program orientation sessions and dropped in on classes, building awareness of the resources available to students. A number of recruitment activities also took place, including attending campus open house events and career fairs, and working to establish connections with Aboriginal communities by visiting First Nations bands and submitting an article highlighting SHASS to Saskatchewan Indian Magazine.

The SHASS advisors partnered with existing SIAST programs and services to offer events and workshops, extending resources and building on each other’s strengths.

Early in the implementation process, a successful application was made to Health Canada to fund the development of a mentorship program as part of SHASS. Grants such as this have been continuously sought to supplement the program funding, allowing the SHASS advisors to provide additional events and activities for students.

Strong institutional support was central to the initiation and development of the SHASS program. SIAST had identified Aboriginal student recruitment and retention as a high profile priority for the institution, and was committed to supporting initiatives that would help realize this strategic objective.
Both students and program stakeholders viewed the holistic, culturally focused nature of SHASS as central to the program’s success.

• SHASS advisors work to develop relationships with students, celebrating successes as well as providing support in times of need.

• By addressing students’ entire life cycle with the institution, including recruitment, retention, graduation, and integration into the labour force, as well as all aspects of the students’ well-being based on the medicine wheel, SHASS provides holistic, individual, proactive support.

• The SHASS advisors’ offices are centrally located on each campus and close to the Aboriginal Centres, rather than being located in the Student Development Centre. This was viewed as important to promoting a relaxed, accessible environment. Students can drop in without an appointment and students see their culture reflected in the office through the images and art displayed.

• In partnership with other cultural services and groups on campus, SHASS organizes cultural events and awareness days.

• The SHASS advisors, identified as a key strength of the program, are knowledgeable about First Nations, Métis and Inuit cultures, and are respectful, approachable, understanding, and committed to student achievement.

Monitoring
Quarterly reports prepared by the SHASS advisors for the working group enable continuous review of the program’s progress in key focus areas. These reports document current activities, meetings, and events and identify on-going priorities, promoting continuous reflection on how the program can be improved. Monitoring also occurs through the close relationships established between the SHASS advisors and students, which allow for continual feedback on the supports being offered. The advisors work to understand the needs of students, and the flexibility of the SHASS model along with strong institutional support enable the advisors to tailor services to meet student needs. Regular discussions with program heads and faculty also help to identify potential services that could be offered and areas for improvement.

• Limited uptake in the original mentorship model led to a recognition that one-to-one mentorship is not a good cultural fit for many Aboriginal students. Greater success has been realized through mentorship networking workshops that provide opportunities for students to connect with mentors in informal and group gathering situations and that build mentorship capacity in students, encouraging students to see themselves as mentors.

• A quarterly newsletter was introduced to provide information on upcoming events, academic and life strategies, traditional teachings, and local resources, and is distributed to both students and faculty.
• SHASS advisors increased their visibility within classes, and in informal settings such as the hallways between classrooms, to be seen by students as accessible and approachable.

• Realizing that outcomes achieved by SHASS varied significantly by program, best practices for program heads were identified and developed. The SHASS advisors also worked to establish closer relationships with program heads, and began attending program head and program advisory committee meetings.

Evaluation

Data on Aboriginal student enrolment, progression through programs, attrition, and graduation are regularly examined at working group meetings. In-person and telephone interviews with students and program faculty, as well as paper surveys have also been utilized to evaluate the effectiveness of SHASS. In addition, the Health Regions track the number of Aboriginal applicants and are able to provide informal feedback on trends in employment.

• SHASS has focused more on retention, and improving the educational experience of current Aboriginal students, than recruitment, and there has not been a significant increase in the number of Aboriginal students in SIAST Science and Health programs.

• Since 2004, the graduation rate of Aboriginal students in Science and Health programs at SIAST has doubled from 5% to 10%.

• Student participants report that SHASS increased their self-confidence, and allowed them to build relationships in a supportive environment.

• Faculty report increased knowledge and awareness of Aboriginal culture and greater understanding of the issues Aboriginal students face. This knowledge has made them more willing to be accommodating and flexible to help Aboriginal students overcome challenges.

• The Health Region has seen an increase in the number of Aboriginal students from SIAST programs applying to work in the region.

Impact on Participants

The individualized attention and supports provided by the SHASS advisors were valued by student participants. Students felt that SHASS provides them with a source of encouragement, and appreciated the accessibility and openness of the advisors.

“I think they give you positive vibes and I like how encouraging they are. I work and then I go to school, so it’s hard for me to actually find time to study. It is nice because the advisor encourages me. If I want to talk, or if there are things that she could do to make things easier for me, she will.”

“To me it is an open door for students to help put everything in place, to help create environments that students can thrive in.”

“The SHASS advisor helped me a lot financially with funding. She helped me find bursaries and other ways for paying for school. I was kind of struggling with some issues and she was always confirming that she was there if I needed to talk or something. She was my support to find funding and a place for school.”

“They welcome us. You don’t feel intimidated to go and talk with them.”

“The SHASS advisor always has time for everybody. Sometimes I can just pop right in and she has time. It’s not like ‘well, come back in a couple of days’ or something.”

Program heads provided additional insight into the impact SHASS has had on their students.

“I can probably name five students who wouldn’t have graduated in the last two or three years without SHASS, simply because of the support they provided.”

“I have seen students walk out with more confidence, and an ability to say ‘I know I am going to be successful in the workplace.’ That is maybe due to helping them understand their culture, or maybe helping them understand the workplace and differences that could be there. I think the SHASS advisors are bringing that to the table. SHASS is helping them transition from their small rural community where they may have lived their whole lives into the larger urban centre.”
Sustainability & Moving Forward

After the completion of the three-year pilot, SHASS received core-funding and was expanded to include all Science and Health programs. This transition also involved a shift in the program’s reporting structure, with SHASS being transferred from the Science and Health Division to the Student Development portfolio.

In 2010 SIAST released a new strategic plan for promoting Aboriginal student success, titled the Aboriginal Student Achievement Plan (ASAP). The plan includes 21 priority areas, and advocates implementing elements of the SHASS model in programs across SIAST. In particular, one of the priorities involves hiring Aboriginal retention coordinators, similar to the SHASS advisors, who would be attached to specific programs with low Aboriginal student retention rates.

While it is unclear how the implementation of ASAP will impact SHASS, the SHASS Working Group held a session in October 2010 to develop strategic directions that align with SIAST’s ASAP. The session was attended by 26 stakeholders and focused on six action items to guide the program from 2011 to 2013.

Six key priority areas for 2011-2013 were identified at the SHASS Strategic Planning session:

- Bridging into Science and Health
- Supporting the transition to first year
- Early intervention
- Integration of Aboriginal philosophy/worldview in Science and Health and integration of the SHASS advisors as a valued part of the educational team
- Build external relations and partnerships
- Secure on-going funding

Lessons Learned

SHASS team members shared valuable lessons on how post-secondary institutions can successfully support Aboriginal students:

- Establishing contact with students early is vital. Contacting students prior to the start of classes can be an effective way of increasing students’ comfort level and the likelihood that they will view the advisors as a source of support both in celebrating successes and in overcoming challenges.
- Recognize and respect the diverse values and cultural backgrounds of students.
- The best recruitment tool is often word of mouth from students who have had a positive experience.
- Locate the advisor’s office in a central, accessible location, near the institution’s Aboriginal Centre.
- Partnering with existing services and programs can help to stretch limited budgets and enhance the ability to provide events and workshops to students.
- Advisors should use a variety of communication methods to reach students, including classroom visits, telephone, e-mail, and a newsletter.
- Integrating the sharing of knowledge and food can help to create a culturally supportive atmosphere at events and workshops.
- It is important to ensure that the right candidate is chosen to act as the advisor. The advisor needs to have a strong understanding of First Nations, Métis and Inuit cultures, be respectful, approachable, non-judgmental, and supportive.
- A working group should be established involving key stakeholders both within and outside the institution.
- Securing buy-in from program heads and instructors is necessary for success. Regular contact through attending program head and program advisory council meetings can increase engagement.
6 Preceptor Education Program (www.preceptor.ca)
Preceptor Education Program (www.preceptor.ca)

**Type of Innovation:** Delivery

**Description:** Online clinical education tool including seven interactive modules for preceptors and students.

**Program:** Interdisciplinary

**Sustainability:** PEP infrastructure and content are in place and Western provides Helpdesk and IT maintenance.

**Applicability to Other Allied Health Programs:** Applicable to any allied health program. Some PEP content is applicable to any program that places students with preceptors.

**Transferability to Other PSE Institutions:** Other post-secondary institutions can incorporate PEP into student programming and in preceptor education.

**Limitations:** Ongoing funding is required for IT maintenance and upgrades, content review and enhancements, evaluation, and continued dissemination.

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Innovation Overview

Post-secondary programs that prepare students to enter health professions rely upon experienced health care practitioners (preceptors) guiding and supporting students in clinical fieldwork placements. Few health care practitioners, however, receive formal preparation in how to be preceptors.

To address this need, in 2007 the University of Western Ontario launched the Preceptor Education Program (PEP) – a free, online tool to support preceptors in delivering clinical education and to help students maximize the benefits of practicum learning. Developed with input from faculty, clinicians and students, PEP includes seven interdisciplinary modules, interactive content and video clips, and downloadable resources. Participants can select the modules that best meet their specific learning needs, and print certificates of module completion, which are recognized as continuing education by many professional and regulatory bodies and can be included in the professional portfolios of preceptors and students.

The goal of PEP is to enhance communication and transparency between the student, the preceptor and the institution and increase the number of clinical placement opportunities available to students. Ultimately, the goal is to facilitate student learning by supporting preceptors and ensuring consistent, high quality clinical education for students entering health professions.
"It illustrates that clinical education and preceptorship have common issues across professions and that we’re in the same boat as everybody else facing the same challenges and needing to apply the same innovative solutions.” – Preceptor

The Need

Like many other post-secondary institutions, the University of Western Ontario was facing challenges in meeting the demand for clinical placement opportunities, and providing the supports needed by preceptors. The growing number of nursing and allied health students was increasing the requirement to find placements. At the same time, geographic distance and workload demands were limiting the ability of preceptors to attend sessions provided by the university, and reducing the time available for preceptors to plan for practicum students entering clinical sites. The university also recognized the need to better prepare students for preceptorship by clarifying roles and responsibilities of both students and preceptors.

“It’s really one of the only organized or concrete programs for information about being a clinical instructor or a preceptor. We don’t get any other instruction from the university. A new grad would just be told you’re getting your first student in a couple of months, and you get a little information package before they start, and that’s it.” – Preceptor
INNOVATION CHAMPIONS

Ann Bossers, OT Professor
University of Western Ontario
• PEP Academic Lead
• Catalytic, visionary, collaborative leader and driving force behind development of PEP
• Kept team motivated
Mary Beth Bezzina, OT Instructor
University of Western Ontario
Sandra DeLuca, Nursing Professor
Fanshawe College
Karen Ferguson, Nursing Undergraduate Program Chair, University of Western Ontario
Sandra Hobson, OT Professor
University of Western Ontario
Karen Jenkins, Middlesex-London Health Unit
Anne Kinsella, OT Professor
University of Western Ontario
Jennifer Macnab, Epidemiology & Biostatistics Professor, University of Western Ontario
Ann MacPhail, PT Academic Clinical Coordinator, University of Western Ontario
Taslim Moosa, SLP Clinical Instructor
University of Western Ontario
Lynda Rolleman, Student
University of Western Ontario
Susan Schurr, SLP Clinical Education Administrator, University of Western Ontario
• PEP team members/co-investigators
• Shared a passion for clinical education
• Contributed time and expertise to developing PEP content
• Promoted PEP with professional colleagues at Western and other institutions
Dr Jim Weese, Dean of Health Sciences, University of Western Ontario
• Aware of the need for preceptor education across all schools within the faculty
• Supportive of initiatives to enable faculty collaboration and interprofessional education
Eva Placko and Jean Savage, Information Technology Services, University of Western Ontario
• Interested in the potential of PEP as a significant institutional IT initiative
• Facilitated infrastructure development and committed to ongoing IT support
Directors of OT, PT, CSD, and Nursing Schools, Faculty of Health Sciences, University of Western Ontario
• Agreed to recognize faculty project time as contributing to service and clinical research responsibilities

The goal of PEP is to enhance communication and transparency between the student, the preceptor and the institution and increase the number of clinical placement opportunities available to students. Ultimately, the goal is to facilitate student learning by supporting preceptors and ensuring consistent, high quality clinical education for students entering health professions.
Based on the findings of the needs assessment, seven online modules were developed and tested with 110 students and 65 preceptors, who provided input on content, format, and technology.

Development

In January 2007, the Preceptor Education Program (PEP) received project funding for nine months to hire a project coordinator and build the IT infrastructure. To ensure that the tool was theoretically-grounded and evidence-based, the project began with a literature review and online search of existing preceptor resources, followed by a needs assessment survey of over 450 preceptors on their preferred clinical education formats and topics. Based on the findings of the needs assessment, seven online modules were developed and tested with 110 students and 65 preceptors, who provided input on content, format, and technology. Students from Western’s Faculty of Media and Information Studies were enlisted to assist with scripting and filming the video clips.

- Ministry funding was viewed by the PEP team as the most critical component of the project’s success.
- Equally important was the collegial and effective leadership style of Ann Bossers, as well as the commitment and willingness of team members to share their time and expertise, and the collegial, interprofessional nature of the collaboration.
- Institutional support from Western’s Faculty of Health Sciences and Information Technology Services was also fundamental in moving the innovation forward.
- The most significant challenge for team members was the competing demands placed on their time to develop the innovation while managing faculty responsibilities for academic teaching, research and publishing.
- The tight project timelines that accompanied ministry funding reduced opportunities for reflection and limited research design and evaluation options.
- Another challenge was to create a tool that would add value, but would also be applicable across disciplines, practice settings, and institutional contexts.

Role of the Knowledge Base

explicit knowledge

In developing the grant application, the team drew upon evidence from the Ontario Council of University Programs in Rehabilitation that students who received preceptor training were more willing to become preceptors themselves, as well as data showing declining preceptor attendance at clinical education conferences.

The formal literature on the importance of support for preceptorship and the emerging literature on interprofessional education, together with the principles of adult learning, provided a strong rationale for the PEP grant application, and was followed by a comprehensive literature review and inventory of existing preceptor supports during the project development phase.
TACIT KNOWLEDGE

Significant “learning-through-interacting” resulted from the cross-disciplinary dialogue between members of the Clinical Education Committee of the Faculty of Health Sciences and the success of the Western-Fanshawe Collaborative BScN program. Each member of the PEP team had participated in one or both of these institutional structures, and also brought knowledge gained through professional networks and information-sharing at professional conferences. The knowledge base was strengthened through direct communication between the team and people involved in other online projects (Ontario, Quebec, and Australia), as well as the input and personal experiences brought by the students who participated in the early stages of PEP development.

Implementation

PEP was officially launched in August 2007, and disseminated through a series of road-show demonstrations, conference presentations, and articles in professional association newsletters. To assist with dissemination, the project funding supported the production of branded PEP give-aways (including pens, magnets, lip balm, and other materials), as a means of raising awareness of the tool among preceptors and employers and driving them to the PEP website.

Since its initial launch, faculty at some institutions have integrated PEP into course curriculum or program requirements in a variety of ways, introducing the modules prior to students’ first placement or as a final consolidation at the end of the program, and organizing online student discussion forums. In some programs, students are expected to register and complete all or selected modules, and to submit module reflections. They receive a pass/fail for module completion, or are evaluated on specific learning activities, such as developing learning objectives. Currently, all Western students enrolled in the programs that participated in the development of PEP are required to use the modules as part of their preparation for clinical course work.

Efforts have also been made by some post-secondary institutions and employers to encourage preceptors to use the tool. Preceptors may be requested to review the modules prior to beginning a student placement, informed of PEP through preceptor handbooks and resource materials, or directed to preceptor.ca through institutional website links. Unlike students, preceptors cannot be required to do PEP, and in most cases must use their own time to voluntarily complete the modules.

Key stakeholders described PEP’s rich content, accessibility, and individualized learning as its primary benefits.

- PEP content was viewed as comprehensive, resource-rich and evidence-based, offering a useful refresher for experienced preceptors and a good introductory overview for new preceptors. Both students and preceptors valued the common language and shared perspective provided by the tool, and appreciated the practical reference materials and resources relevant to many disciplines and clinical sites.

- As a free, web-based resource, PEP is viewed by preceptors as user-friendly and easy to navigate, with interactive video clips, audio clips, exercises, and role-plays to address a range of learning styles. Its 30-minute modules are “easily digestible” and presented in an engaging, friendly style.

- PEP is customizable to allow users to select the modules – and the topics within modules – to meet their learning needs. It also provides opportunities for users to reflect on their learning.

Monitoring

To deal with the volume of users, Western’s Information Technology Services has taken over responsibility for the management of the Helpdesk and the registrant database, and provides ongoing technical support. PEP registrants who do not access their accounts after six months receive an email notification that their account will be deleted.

PEP content has remained largely unchanged since 2007, with only minor revisions such as the organization of reflective practice module into two parts, and the recent addition of new quiz materials.

Some stakeholders expressed concerns about PEP’s static resources and technology.

- Several preceptors viewed PEP content as too basic, and cautioned that video clips can quickly become dated. At 30 minutes, some viewed the modules as too long: “Give me something I can read in three minutes.”
The technical capacity of some clinical sites, and issues related to firewalls, browsers, pop-up blockers, and connection speeds, presented technology challenges. These were compounded by initial glitches in Western’s technological infrastructure, including timing-out, and inaccurate time recording for certificate completion. Some regarded the log-in/password process as cumbersome, and perceived the requirement to re-register once the account had been deleted as a barrier.

Evaluation

PEP has been recognized as a national preceptor education tool by Dieticians of Canada, and in 2008, received the Canadian Association of Speech Language Pathologists and Audiologists (CASLPA) Award of Excellence for Interprofessional Collaboration.

The main source of evidence about the effectiveness of PEP is from the 2007 pilot evaluation data. Current sources of evaluation data include user statistics (number, discipline, country of residence, years of experience, etc.) and open-ended user comments for each PEP module. While PEP may be mentioned in data gathered for student placement and course evaluations, or preceptor surveys, these instruments do not typically ask about the tool. Unsolicited user feedback about PEP indicates high levels of satisfaction, as indicated in the following comment from August 2011:

“We are in the process of enhancing our training opportunities for MLTs who train our students at clinical sites. I have suggested your modules to several of our preceptors as I completed them myself last year and really enjoyed the process. This recommendation has really snowballed and now I believe there are 10-15 of our preceptors currently working their way through the modules. The feedback so far is excellent. We hope to develop a similar program for our MLT trainers specifically which will be facilitated by a faculty member here. I thought I would say thank you on behalf of our team for developing some great online training and allowing access to anyone who is interested.” – Educator

The lack of resources to conduct regular analysis of user data – particularly the qualitative comments – was acknowledged as a limitation of the PEP evaluation.

- 14,000 participants have registered with PEP since 2007, from 35 disciplines and 33 countries. Uptake has been highest for Nursing (40%), OT (23%), and PT (13%). Students make up 55% of all registrants. About 4% of registrants are new clinicians, and 18% are clinicians with three or more years of experience.

- With increased preceptor awareness and uptake of the tool, there is a sense that the number of users could grow even further. However, expanding preceptor participation in PEP has been an ongoing challenge. Preceptors interviewed for the case study reported that few colleagues used PEP, and students indicated low preceptor awareness of
the resource (with the exception of preceptors who were recent Western graduates, and had used the tool themselves as students).

• Key stakeholders believed that PEP was most effective in increasing preceptor comfort levels, particularly new preceptors. They perceived PEP to be less effective in securing additional preceptors.

Impact on Participants

The case study evaluation revealed strong endorsement from preceptors and students for the practical PEP content and resources, and its contribution to creating a shared perspective. Students viewed the tool as most helpful when introduced early in the program, prior to their first placement. Preceptors considered the content to be particularly beneficial for new preceptors.

“It gave me a few little ideas for how I might continue both during placement but also when I’m actually practicing on my own, and just starting to really think about what my placements are going to be like, and how I might handle situations and how I might be nervous about this, but hey, it’s okay because we’re still just learning.” – Student

“What it did more than anything was consolidate both best practices as well as experiential best practices from across the country into one functional resource.” – Preceptor

“I just remember one module about communication which really helped me. I’m usually a pretty shy person, so starting placement is sometimes hard for me with the initial interviews and all that stuff, and the communication just helped me.” – Student

“I think initially it’s a great teaching tool for the preceptor, just to know what to expect. And even knowing where we at times go wrong, and to combat some of the challenges and the barriers early on during the student placements. You can go to the website and get a better awareness of where you can improve.” – Preceptor

“I did have a bit of a conflict with my preceptor at one point, just about something small, but I was able to go back and say ‘Okay, how should I handle this professionally and still be on really good terms’ and so it worked out really well.” – Student

“The students often come in and sometimes don’t truly appreciate the preceptor’s perspective and vice versa, the preceptors should look at the students’ perspective. I think that’s probably one of the strongest things – the ability to go into both and to consider for a minute the other person’s point of view.” – Preceptor

“I was able to appreciate where my preceptor was coming from, I was able to see things through her eyes, from the preceptor’s eyes, some of the challenges she may have as a preceptor working with a new student.” – Student

Sustainability & Moving Forward

With technology infrastructure and content in place, and the ease with which it can be integrated into allied health program curriculum, PEP offers good long-term sustainability prospects. It may be particularly helpful for employers and institutions facing shrinking budgets and increased health care demands:

“If it saves a lot of faculty time for one thing, because if you’re going to do something like this you’re basically going to be reinventing the wheel to a certain extent. It’s a ready-made product that’s good quality and I think is applicable and usable in multiple situations.” – Educator

“We’ll probably build our education program around something like PEP more. I could see us using PEP as the central piece, having people do their self-education and possibly even do a monthly thing, where we’ll review the orientation module and then have a face to face or a video conference session through the region talking about orientation.” – Employer

PEP also offers the potential for application to peer-to-peer relationships as well as student-preceptor relationships:

“In terms of conflict resolution within my student-to-student experiences, I think it helped me get some perspective on why I would be having negative feelings toward other people or why I’d be getting frustrated. It kind of gives you a structure to resolve the issue.” – Student
Lessons Learned

The PEP team is interested in accessing new sources of funding to support a careful analysis of the qualitative data to enhance content and improve usability, and in leveraging local champions and professional associations to promote the tool and encourage broader participation of students and preceptors.

Institutions integrating PEP into curriculum should introduce the resource early in the student program, and provide students with a clear understanding of the purpose of the resource and how they will benefit.

“Lessons Learned”

The PEP team is interested in accessing new sources of funding to support a careful analysis of the qualitative data to enhance content and improve usability, and in leveraging local champions and professional associations to promote the tool and encourage broader participation of students and preceptors.

Institutions integrating PEP into curriculum should introduce the resource early in the student program, and provide students with a clear understanding of the purpose of the resource and how they will benefit. Students admitted they were unlikely to spend time on PEP unless required to do as part of their program, and felt that grades for module completion would increase their accountability for learning through PEP.

“We literally didn’t get an introduction to it and I feel like it really would have been good to say your preceptors are looking at this, you’re looking at this, and these are some benefits.” – Student

“Get professors or preceptors to actually utilize it and get us to practice it. Make sure that we on some level have done it. Not just to test us, but to see that we’re actually learning or doing.” – Student

Institutions integrating PEP into curriculum should introduce the resource early in the student program, and provide students with a clear understanding of the purpose of the resource and how they will benefit.

“I think it would be a great tool if you were in a hospital setting, and you had a team building session where you looked at giving and receiving feedback and dealing with conflict. And if you had a dysfunctional team, then you could use some of these modules. Some of these things seem applicable to working with your colleagues, not just necessarily students.” – Preceptor

Preceptors, students, educators, and members of the project team offered many suggestions to strengthen sustainability:

• Enhance current modules (new video clips showing different clinical settings, different clinical education models, more disciplines, rural and international practice settings, etc.)

• Add new modules (interprofessional education, ethics, leadership, intergenerational differences, gender issues, working with diverse populations)

• Develop differentiated content based on levels of experience (basic, intermediate, advanced)

• Offer French translations of modules

• Streamline and upgrade technology

• Provide a “What’s new” update for repeat visitors

• Create shorter, “more digestible” modules

• Develop a focused strategy to raise awareness among institutions and clinicians

Institutions integrating PEP into curriculum should introduce the resource early in the student program, and provide students with a clear understanding of the purpose of the resource and how they will benefit.


Appendix A: Allied Health Definitions

Statistics Canada’s Classification of Instructional Programs, 2000 classifies the following allied health instructional programs within the series Health Professions and Related Clinical Sciences:

ALLIED HEALTH DIAGNOSTIC, INTERVENTION AND TREATMENT PROFESSIONS

• Cardiovascular Technology/Technologist
• Electrocardiograph Technology/Technician
• Electroneurodiagnostic/Electroencephalographic Technology/Technologist
• Emergency Medical Technology/Technician (EMT Paramedic)
• Nuclear Medical Technology/Technologist
• Perfusion Technology/Perfusionist
• Medical Radiologic Technology/Science – Radiation Therapist
• Respiratory Care Therapy/Therapist
• Surgical Technology/Technologist
• Diagnostic Medical Sonography/Sonographer and Ultrasound Technician

• Radiologic Technology/Science – Radiographer
• Physician Assistant
• Athletic Training/Trainer
• Gene/Genetic Therapy
• Cardiopulmonary Technology/Technologist
• Radiation Protection/Health Physics Technician

ALLIED HEALTH AND MEDICAL ASSISTING SERVICES

• Medical/Clinical Assistant
• Clinical/Medical Laboratory Assistant
• Occupational Therapist Assistant
• Pharmacy Technician/Assistant
• Physical Therapist Technician/Assistant
• Veterinary/Animal Health Technology/Technician and Veterinary Assistant
• Anesthesiologist Assistant

• Emergency Care Attendant (EMT Ambulance)
• Pathology/Pathologist Assistant
• Respiratory Therapy Technician/Assistant
• Chiropractic Assistant/Technician

CLINICAL/MEDICAL LABORATORY SCIENCE AND ALLIED PROFESSIONS:

• Blood Bank Technology Specialist
• Cytotechnology/Cytotechnologist
• Hematology Technology/Technician
• Clinical/Medical Laboratory Technician
• Clinical Laboratory Science/Medical Technology/Technologist
• Ophthalmic Laboratory Technology/Technician
• Histologic Technology/Histotechnologist
• Histologic Technician
• Phlebotomy Technician/Phlebotomist
• Cytogenetics/Genetics/Clinical Genetics Technology/Technologist
• Renal/Dialysis Technologist/Technician
REHABILITATION AND THERAPEUTIC PROFESSIONS

- Art Therapy/Therapist
- Dance Therapy/Therapist
- Music Therapy/Therapist
- Occupational Therapy/Therapist
- Orthotist/Prosthetist
- Physical Therapy/Therapist
- Therapeutic Recreation/Recreational Therapy
- Vocational Rehabilitation Counselling/Counsellor
- Kinesiotherapy/Kinesiotherapist
- Assistive/Augmentative Technology and Rehabilitation Engineering

The Canadian Association of Allied Health Programs (www.caahp.ca) recognizes the following allied health programs:

- Anaesthesia Technology
- Biomedical Engineering Technology
- Cardiac Sciences
- Dental Sciences
- Electro-neurosciences
- Emergency/Paramedic
- Environmental Health
- Food and Nutrition
- Health Information Sciences
- Medical Imaging Sciences
- Medical Laboratory Sciences
- Ophthalmic Sciences
- Pharmaceutic Sciences
- Radiation Therapy
- Rehabilitation Sciences
- Respiratory Therapy
- Traditional Chinese Medicine

The Canadian Medical Association (www.cma.ca/officiallist) recognizes the following list of accredited and registered health science professions:

- Cardiology Technology
- Cardiovascular Perfusion
- Clinical Genetics
- Cytotechnology
- Diagnostic Ultrasound Technology
- Magnetic Resonance Imaging
- Medical Laboratory Assistant
- Medical Laboratory Technology
- Nuclear Medicine Technology
- Ophthalmic Medical Assisting Technology
- Orthoptics
- Orthoptics/Ophthalmic Medical Technologist
- Paramedicine
- Physician Assistant
- Radiation Therapy Technology
- Radiological Technology
## Appendix B: Working Group Subcommittees

**POLICY BLUEPRINT**

- Rae Gropper (Chair)
- Kim Boles, CSDMS
- Ray Bourgeois, Dawson College
- Maureen Coulthard, CAOT
- Angela Coxe, CSRT
- Elaine Dever, CAMRT
- Kathy Hilsenteger, ACMDDT
- Shannon McDonald, NSCRT
- Pam McLaughlin, Fanshawe College
- Christine Nielsen, CSMLS
- Karl Samuelson, CHA

**INNOVATIONS GUIDE**

- Rae Gropper (Chair)
- Cathie Auger, Fanshawe College
- Mary Costantino. LifeLabs
- Maureen Coulthard, CAOT
- Angela Coxe, CSRT
- Elaine Dever, CAMRT
- Margaret Dukes, CMA
- Jane Gamberg, College of the North Atlantic
- Louise Gordon, Red River College
## Appendix C: Theory of Change/Program Logic Models

### La Cité collégiale Interprofessional Health Promotion Fair

<table>
<thead>
<tr>
<th>PROBLEM STATEMENT</th>
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<tbody>
<tr>
<td>The need for interprofessional teaching resulted from challenges and dissatisfaction related to the interprofessional competencies of students entering health care professions. Health Canada has adopted a position supporting a collaborative interprofessional approach and has strongly encouraged relevant training in the education and health fields.</td>
<td>• Develop students’ skills in interprofessionalism (including interpersonal communication, client-centred care, role clarification, team functioning, collaborative leadership, and interprofessional conflict resolution) to support students to work with other health care providers in future work environments.</td>
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<tr>
<th>NEEDS</th>
<th>LOCAL ASSETS</th>
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</table>
| • Health Canada had recognized the need for interprofessionalism to reduce redundancies in gathering clients’ personal data, and enable greater efficiency in the management of complex health situations by rapidly optimizing the expertise of all care providers involved in the case.  
• In order to guide students’ learning process, supervisory support was needed for students to engage in collaborative inter-program teamwork.  
• There was a need to update traditional teaching for new generations of learners, who are drawn to more active learning approaches involving meaningful projects.  
• Work environments were looking for professional staff who were versatile, creative, collaborative, and skilled at problem resolution.  
• New standards related to health promotion recommend that in order to adopt best practices, it is important to pay attention to the health needs of seniors. | • Faculty from the Social Service Worker – Gerontology (SSWG) program had engaged students in developing a health fair as their final academic project since 2006, enabling the interprofessional learning process to be integrated into an existing initiative.  
• Since 2008, a number of La Cité faculty had taken part in conferences and meetings (in Toronto and Ottawa) related to interprofessionalism.  
• Faculty responsible for integrating a more collaborative approach were also interested in the opportunity to experience inter-program team-teaching. |

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<tr>
<th>RATIONALE/ASSUMPTIONS</th>
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</table>
| • In the winter of 2009, La Cité administrators asked faculty to identify an activity to develop interprofessional collaboration that would not require changes to program curricula, and that could be underway by the following autumn.  
• The health promotion fair was the only existing activity that could satisfy the administrative restrictions, institutional requirements, and clients’ needs. The fair provided a suitable degree of complexity for integrating a continuous learning process promoting interprofessional collaboration.  
• During the research stage, an important distinction was made between the activity (the content) and the experiential approach focused on the acquisition of interprofessional skills (the process). It would have been possible, in a different context, to choose another educational activity or other courses/programs while aiming to achieve the same outcomes. | • During meetings in Ottawa’s Champlain region, representatives of area hospitals encouraged students to be trained in interprofessionalism to become “agents of change” upon entering the workforce.  
• From 2007 to 2010, Health Force Ontario provided funding to develop strategies to teach interprofessionalism in both the education and health fields.  
• The Consortium national de formation en santé (CNFS), whose main funder is Health Canada, also provided financial support.  
• There has been a movement to integrate interprofessionalism standards into program accreditation. |

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<tr>
<th>STRATEGIES</th>
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</table>
| • Coordinate schedules of students and faculty workloads across four different programs (five since the addition of public relations in 2011).  
• Choose participating programs based on the existence of a shared clientele (in this case, the seniors targeted by the health promotion activity).  
• Allow changes to teaching methods to condense four hours of interprofessional class instruction into three hours, to free up one hour for fair preparation.  
• Identify a weekly common hour for student groups from the participating programs to work together.  
• Establish a part-time event coordinator position.  
• Plan a bi-weekly meeting for participating faculty to develop strategic teaching plans, and practice their own interprofessional skills. |
## La Cité collégiale Interprofessional Health Promotion Fair

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<tbody>
<tr>
<td>• Dedicated hour in student timetables for team meetings</td>
<td>• Identify participating programs</td>
<td>• Annual one-day health promotion fair</td>
<td>• Improved student ability to plan, conduct and present health promotion research</td>
<td>• Increased student awareness of interprofessionalism</td>
</tr>
<tr>
<td>• Relevant course content and clearly identified learning outcomes within the participating programs</td>
<td>• Align program course content with health fair learning outcomes</td>
<td>• Student booths (Occupational Therapist Assistant-Pysiotherapist Assistant, Personal Support Worker, Social Service Worker-Gerontology)</td>
<td>• Increased student self-confidence, conflict management, and teamwork skills</td>
<td>• Improved interprofessional collaboration during clinical internships</td>
</tr>
<tr>
<td>• Operating budget (promotions, coordinator salary, transportation, lunch)</td>
<td>• Coordinate schedules of participating programs to enable weekly one-hour meeting for student teams</td>
<td>• Workshops (Practical Nursing students)</td>
<td>• Increased sense of student belonging to institution and community</td>
<td>• Improved interprofessional collaboration in the workforce</td>
</tr>
<tr>
<td>• Event coordinator</td>
<td>• Hire event coordinator</td>
<td>• Promotional materials (Public Relations students)</td>
<td>• Recognition of students from peers, faculty, and administrators</td>
<td></td>
</tr>
<tr>
<td>• Digital storage area accessible to students and faculty (Blackboard)</td>
<td>• Identify partner</td>
<td></td>
<td>• Improved student understanding of interprofessional skills in real-life situations</td>
<td></td>
</tr>
<tr>
<td>• Venue for fair</td>
<td>• Book venue</td>
<td></td>
<td>• Greater inter-generational understanding between students and seniors</td>
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</tr>
<tr>
<td>• Community partner/host</td>
<td>• Organize bi-weekly coordination meetings for faculty and event coordinator (12 hours per month)</td>
<td></td>
<td>• Stronger relationships with community partners</td>
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<tr>
<td></td>
<td>• Assign students responsibility to contact organization related to subject of booth</td>
<td></td>
<td>• Greater community visibility for the college through media coverage</td>
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<td></td>
<td>• Issue media release</td>
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**McMaster University Occupational Therapy Examination Practice and Preparation (OTepp) Project**

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<tbody>
<tr>
<td>In the mid-2000s, occupational therapists ranked high on the list of professional skill shortages under the Federal Skilled Worker Program. However, many internationally educated occupational therapists (IEOTs) experienced barriers to entering practice in Canada, including difficulty passing the national certification exam, and registering with the provincial regulatory bodies.</td>
<td>• Increase number of IEOTs successfully passing the national certification exam.</td>
</tr>
<tr>
<td>• A 2002 report by the Caledon Institute of Social Policy and the Maytree Foundation called for a &quot;systems approach&quot; to facilitate the labour market entry of internationally educated professionals in their field of expertise.</td>
<td>• Increase number of IEOTs registering with provincial regulatory bodies.</td>
</tr>
<tr>
<td>• The federally-funded Workforce Integration Project (2005-2006) undertaken by the Canadian Association of Occupational Therapists (CAOT), demonstrated the need for action on the factors that hinder and facilitate the integration of international OT graduates into the Canadian workforce.</td>
<td>• Increase number of IEOTs obtaining employment in Canada.</td>
</tr>
<tr>
<td>• Anecdotal evidence about the lived experiences of IEOTs confirmed the need for supports to assist IEOTs in becoming certified to practice and integrating successfully into Canadian OT practice.</td>
<td>• Enhance ability of IEOTs to retain employment and advance in their careers.</td>
</tr>
<tr>
<td><strong>NEEDS</strong></td>
<td>• Increase knowledge and skills of IEOTs related to OT practice in Canada.</td>
</tr>
<tr>
<td>• McMaster’s informal exam preparation program and experience with the SEPP project provided insights into the mentoring and networking needs of IEOTs.</td>
<td>• Assist IEOTs to integrate into Canadian OT practice.</td>
</tr>
<tr>
<td><strong>LOCAL ASSETS</strong></td>
<td><strong>EXTERNAL FACTORS</strong></td>
</tr>
<tr>
<td>• With an institutional culture built on risk-taking, McMaster’s School of Rehabilitation Science and the Faculty of Health Science were strongly supportive of the OTepp program.</td>
<td>• Although IEOTs are concentrated in Ontario and BC, the integration of IEOTs was recognized by CAOT as a national issue.</td>
</tr>
<tr>
<td>• McMaster’s OT curriculum is highly regarded with a strong reputation and credibility.</td>
<td>• The identification of IEHPs as an immigration priority in Ontario and Canada contributed to the availability of provincial and federal funding.</td>
</tr>
<tr>
<td>• Long-standing relationships between McMaster and community agencies, settlement services, and area employers were available to be leveraged for clinical placements.</td>
<td>• There was strong labour market demand for OTs.</td>
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<tr>
<td>• Since OT is a relatively small, closely-knit profession, personal connections already existed between individuals across different stakeholder groups.</td>
<td>• There was growing social awareness of the challenges experienced by highly-educated immigrant workers unable to obtain employment that aligns with their formal qualifications.</td>
</tr>
<tr>
<td>• OT practice is grounded in a commitment to removing barriers and enabling individuals to fully participate in activities of everyday life.</td>
<td>• Interprovincial mobility across regulated health professions was increasing the need for consistency in standards.</td>
</tr>
<tr>
<td>• A strong, visionary project leader was able to bring together committed and enthusiastic individuals for the research team.</td>
<td>• Without coverage through university group insurance plans, OTs who supervised IEOT clinical placements had to assume personal liability risks.</td>
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<tr>
<td>• Findings from McMaster’s 2007 SEPP project suggested that IEOTs would be interested in a program supporting entry to OT practice, including exam preparation, mentoring, clinical placement opportunities, and education about Canadian health care and current OT practice.</td>
<td>• Problem Based Learning (PBL), which was pioneered at McMaster, is an effective pedagogical approach to successfully engage adult learners by recognizing and responding to individuals’ different needs.</td>
</tr>
<tr>
<td>• Problem Based Learning (PBL), which was pioneered at McMaster, is an effective pedagogical approach to successfully engage adult learners by recognizing and responding to individuals’ different needs.</td>
<td>• By focussing on workplace expectations of practising clinicians, OTepp would provide in-depth, intense familiarization for IEOTs with Canadian OT practice.</td>
</tr>
<tr>
<td>• Enabling IEOTs to fully utilize their professional expertise and to gain competence to enter practice in Canada is a fundamental social justice issue.</td>
<td>• Facilitating the labour market entry of internationally educated professionals is a concern of the governments and the public.</td>
</tr>
<tr>
<td><strong>STRATEGIES</strong></td>
<td><strong>STRIATEGIES</strong></td>
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<tr>
<td>• Develop an academic curriculum to support both exam preparation and transition to professional practice for IEOTs.</td>
<td>• Design and deliver five program modules: Exam Preparation, Core Curriculum (seven courses), Mentorship, Work Readiness, and Transition Counselling.</td>
</tr>
<tr>
<td>• Design and deliver five program modules: Exam Preparation, Core Curriculum (seven courses), Mentorship, Work Readiness, and Transition Counselling.</td>
<td>• Utilize technology to provide an interactive online classroom environment for geographically distant participants.</td>
</tr>
<tr>
<td>• Use the intake process to assist IEOTs in selecting the supports and/or curriculum appropriate to their specific needs.</td>
<td>• Secure Senate approval for recognition of OTepp’s Core Curriculum as a formal university certificate program (as of 2009).</td>
</tr>
<tr>
<td>• Collect feedback from participants and track participant outcomes to inform continuous program improvements.</td>
<td>• Use the intake process to assist IEOTs in selecting the supports and/or curriculum appropriate to their specific needs.</td>
</tr>
<tr>
<td>• Attend conferences, workshops and meetings with regulatory bodies, professional associations, and government representatives to share OTepp findings and advocate for IEOTs.</td>
<td>• Collect feedback from participants and track participant outcomes to inform continuous program improvements.</td>
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### McMaster University Occupational Therapy Examination Practice and Preparation (OTEpp) Project

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</table>
| • Operating budget  
• Office and classroom space  
• Laptop, projector, speakers, microphone  
• Participant headsets  
• Curriculum materials  
• Software to deliver online courses (Elluminate)  
• Fast, reliable internet connection  
• Project managers  
• Module coordinators  
• Instructors  
• Tutors  
• Student moderators  
• Researchers (interviewers, transcriptionists, analysts)  
• Advisory Committee members  
• Accounting support  
• Preceptors | • Hire project team  
• Establish an Advisory Committee, including representatives from regulatory and professional bodies, employers, settlement services, and IEOs  
• Develop curriculum and modules  
• Develop learner resources and a participant handbook  
• Recruit clinical placement sites  
• Develop preceptor resources  
• Design a program evaluation strategy  
• Market the program  
• Deliver the curriculum and program modules  
• Implement the program evaluation strategy  
• Adjust and revise program components as necessary, utilizing the evaluation results  
• Promote the program and share evaluation findings at conferences  
• Explore ways to ensure program sustainability (e.g., make program available to non-IEOs, bursaries for IEOs) | • Participant Handbook  
• Learning Modules  
• Core Curriculum  
• Clinical placements  
• Preceptor Guide and pamphlet (USB key)  
• Recruitment materials  
• Conference presentations  
• Marketing materials | • Improved IEO pass rates on the national certification exam  
• Increased number of IEOs registering with provincial regulators  
• Improved IEO employment outcomes (salaries, promotion)  
• Increased knowledge of Canadian practice among IEOs  
• Increased IEO confidence  
• Increased IEO satisfaction with own work  
• Project sustainability  
• Increased awareness and planning before arrival in Canada | • Increased diversity in the OT workforce  
• Increased awareness of IEOs in the OT community, and development of a more organized network of OTs  
• Employer recognition of the workplace contributions of IEOs and benefits to clients and staff of diversifying their workplaces  
• Strengthened relationships between post-secondary institution, provincial regulators, professional associations and clinical community |
## NAIT Learner-Focused Clinical Ultrasound Sites (LF-CUES)

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<tr>
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<tr>
<td>Due to widespread sonographer shortages, industry and government in Alberta requested that NAIT increase student intake in the DMS program. NAIT, however, was limited in its ability to expand student enrolment by the lack of clinical placement opportunities. There was also concern that the quality of the clinical experience was being compromised as a result of clinical sites being overworked and understaffed. This meant less physical scanning time for newer students, and two students often assigned to one preceptor without curriculum for the observing student.</td>
<td>• Increase clinical capacity by creating an effective, engaging, and viable learner-focused model for a 2:1 student to preceptor ratio that ensures quality clinical experiences for students, and enhances the consistency of scanning experience for students early in their clinical placements. • Provide a bridge for students transitioning from the didactic portion of their program to practicum. • Assist in meeting the remediation needs of struggling or “at-risk” students. • Provide preceptors with the knowledge, skills and curriculum to offer valuable learning experiences for both observing and active students. • More fully utilize rural and/or small departments/clinical sites.</td>
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<td>• Industry and government called for a significant increase in DMS student intake to meet demands, setting a target of 48 students at NAIT by 2012 (from 16 in 2006). • NAIT had experienced difficulty finding sufficient clinical placements for DMS students and was concerned that clinical capacity would not be available to accommodate enrolment increases. • Due to staffing shortages and long patient wait lists for ultrasounds, clinical sites were concerned about their ability to take more students. • During clinical visits, some students expressed dissatisfaction with their clinical experience, and felt they were not developing physical scanning skills due to high workloads requiring the preceptor to do the majority of scanning to keep up with the workflow.</td>
<td>• Medical Imaging Consultants (MIC), a longstanding partner, was interested in piloting a new educational model and had clinical capacity available. • Funding for equipment purchases allowed NAIT to supply dedicated scanners to clinical partners.</td>
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<td>• In 2005-2006 SAIT established one-week “Learning Clinics” with a 4:1 student to instructor ratio to utilize hospital scanning rooms in Calgary (vacant because of labour shortages). Students reported they enjoyed the learning experience and felt it provided a good transition to the traditional clinical model. • Literature suggested that collaborative learning and peer mentoring enhances student learning. • Accepting two students under a 2:1 model would have minimal impact on clinical sites that were already accepting one student. • Preceptors would be willing to participate if they knew they would be supported by NAIT. • Clinical sites would be able to maintain patient caseloads while accepting more students with a learner-focused 2:1 model in a dedicated room. • With fewer staff, students on placement in small and rural clinical sites are required to work more independently. Learner-focused clinical sites would enhance students’ skills and allow them to become competent scanners more quickly.</td>
<td>• In recognition of the lack of clinical capacity and the limited ability of institutions to increase enrolments, the government established the Alberta Health and Wellness “Building Educational and Clinical Capacity Fund” Health Workforce Action Plan. • The Provincial Diagnostic Imaging Advisory Committee was concerned about the number of graduates being produced, and advocated to government for an increase in seats at NAIT and SAIT. • Alberta was in an economic boom-time. • Sonographer shortage was exacerbated by employee medical leaves and wave of early retirements. • Health Regions were merging into one large provider (Alberta Health Services) and a freeze had been placed on the projects with which sites could become involved.</td>
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<tr>
<td>• Establish Learner-Focused Clinical Ultrasound Education Sites (LF-CUES) that focus on providing an effective and engaging learning environment on a 2:1 student to preceptor ratio in a dedicated ultrasound room. • Designate one preceptor for each LF-CUES room, and develop curriculum with learning activities for the observing student. • Book patient cases for LF-CUES rooms with the intention of exposing students to a wide variety of ultrasound cases and ensuring sufficient time for quality learning. • Allow the students to work together to manage the case from start to finish. • Provide enhanced debriefing for students after each case, facilitated by the preceptor.</td>
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### NAIT Learner-Focused Clinical Ultrasound Sites (LF-CUES)

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</tr>
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<tbody>
<tr>
<td>• Clinical partners willing to dedicate an LF-CUES room</td>
<td>• Establish a working group comprised of representatives from the faculty, department, and clinical partner</td>
<td>• Learner-focused curriculum</td>
<td>• More students accommodated at clinical sites</td>
<td>• Institutions will be able to maintain and potentially increase DMS student enrolment</td>
</tr>
<tr>
<td>• Two LF-CUES preceptors per site (main and back-up)</td>
<td>• Develop or adopt a learner-focused clinical curriculum</td>
<td>• Preceptor training module</td>
<td>• Increased preceptor focus on teaching students rather than on patient load</td>
<td>• Students trained in LF-CUES sites will be comfortable taking on the role of LF-CUES preceptors in the future</td>
</tr>
<tr>
<td>• Rooms large enough to accommodate three people plus equipment and patient</td>
<td>• Develop specialized preceptor training</td>
<td>• Trained preceptors</td>
<td>• Greater consistency for students by working with a dedicated LF-CUES preceptor</td>
<td>• New clinical partners will be more interested in taking students, since there will be minimal disruption to staffing and patient load</td>
</tr>
<tr>
<td>• Scanning equipment</td>
<td>• Establish LF-CUES rooms</td>
<td>• Students placed</td>
<td>• More opportunities for students to experience a full range of scans and achieve missing competencies</td>
<td>• More students in clinical placements provide clinical partners with opportunities to screen for potential employees</td>
</tr>
<tr>
<td>• Computer available for use by observer student (optional)</td>
<td>• Select preceptors</td>
<td>• Evaluation findings</td>
<td>• Increased comfort for students with their transition to clinical practicums</td>
<td></td>
</tr>
<tr>
<td>• Scanning phantoms (optional)</td>
<td>• Train preceptors</td>
<td></td>
<td>• Active student engagement in the observer role</td>
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</tr>
<tr>
<td>• Textbooks and student resources at LF-CUES site (optional)</td>
<td>• Preceptors book patients for the LF-CUES rooms based on student needs (focusing on lower patient load, variety of types of scans)</td>
<td></td>
<td>• Increased student confidence</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Preceptors provide learner-focused placement to students, allowing students to lead the case from start to finish</td>
<td></td>
<td>• Faster student skill acquisition</td>
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<td></td>
<td>• Enhanced debriefing facilitated by preceptor after each case</td>
<td></td>
<td>• Regular patient caseloads maintained in non-teaching clinical site rooms by down booking LF-CUES room</td>
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<td></td>
<td>• Evaluate students’ progress</td>
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<td>• Reduced patient wait-times for those willing to participate in longer LF-CUES bookings</td>
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### Red River College Paths to Success-Enhanced Student Support Program (Paths-ESSP)

#### PROBLEM STATEMENT
Following the 2001 reinstatement of the MLS program at Red River College (RRC), concerns were consistently raised by the MLS Advisory Committee about the quality and workplace performance of some program graduates. About 90% of students were graduating from the program, but some lacked the skills and competencies expected by industry and only 75% (or fewer) were passing the CSMLS National Certification Examination. Student and graduate feedback indicated dissatisfaction with the MLS program.

#### INNOVATION GOALS
- Enhance skills and competencies gained by MLS students during their instructional program.
- Increase industry satisfaction with RRC MLS graduates.
- Improve RRC student pass rates on the CSMLS National Certification Exam.
- Increase MLS student retention rates.
- Increase graduate satisfaction with RRC MLS program.

#### NEEDS
- With high demand for graduates and the fact that RRC offers the only Manitoba MLS program, there were government and industry pressures for 100% of RRC students to graduate and meet national certification standards.
- Like all Manitoba colleges, RRC has an open access admission mandate, with students accepted on a “first qualified” basis. RRC needed an intervention strategy that would maintain accessibility for all qualified applicants and assist weaker students.
- Since student supports relied on students self-identifying or being referred by faculty, effective assessment tools were needed to improve identification of students at risk of leaving early or failing the national CSMLS exam.

#### LOCAL ASSETS
- RRC piloted the Freshman Integration and Tracking (FIT) survey in 2005.
- RRC had an established Learning Assistance Centre (LAC), offering expertise in assessment, adult education and professional academic tutors.
- RRC’s Institutional Research office implemented a new survey platform and in-house survey reporting system, facilitating the administration, analysis and reporting of student survey data.
- There was institutional support at the highest levels (including the Dean, VP Academic and VP Student Services) for the recognition of the MLS program as one of three college priorities for a coordinated intervention strategy.
- MLS program faculty and staff were committed to addressing the problem and willing to be involved in new approaches to supporting students.

#### RATIONALE/ASSUMPTIONS
- All students can succeed if the appropriate assessment tools are used to identify their specific needs and they are provided with targeted, customized supports.
- The one-year university prerequisite provided MLS students with theoretical skills, but limited content knowledge. To be successful in the highly technical MLS program, students needed a combination of program-specific content and academic and non-academic supports.
- The Beatty-Guenter Retention Strategy Model highlighted “sorting” and “transforming” as effective student success and retention strategies.
- Preliminary evaluation of the FIT pilot in 2007 showed higher retention rates among students who participated in FIT than those who did not. Secondary research suggested that earlier intervention could be even more effective.
- A spare reserved for skills workshops and content tutorials that was “landlocked” in the middle of the day would ensure the highest levels of student participation.

#### EXTERNAL FACTORS
- The Council on Post-Secondary Education issued a call for proposals for “System Restructuring.” This provided a three-year source of funding.
- The provincial open access mandate necessitated that potential strategies would support qualified students, rather than raising admission requirements.
- Shortages of MLS graduates in Manitoba and across Canada were being exacerbated by pending retirements.

#### STRATEGIES
- Use an action research methodology that engages all college departments (Registrar, Research, Assessment Services, Learning Assistance Centre, MLS) in a coordinated effort to identify and respond to student needs.
- Redesign assessment services to better predict students at risk prior to enrolment, and provide customized academic and other supports for students at the beginning of their program.
- Assign each student an MLS faculty advisor who is aware of the needs of the student and is supported with advising tools, training and resources.
- Provide program-level supports for students by adjusting curriculum and scheduling a common, weekly “landlocked” spare for learning skills workshops and content-specific tutorials.
- Adjust curriculum to align with CSMLS and workforce needs by focusing on competencies and employability skills, redesigning courses, and providing opportunities for students to write a mock national exam.
### Red River College Paths to Success-Enhanced Student Support Program (Paths-ESSP)

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</thead>
<tbody>
<tr>
<td>Financial resources to support Project Coordinator</td>
<td>Form project team with representatives from all departments of the college involved in admissions, research, assessment, student services and program</td>
<td>Student assessments (pre-enrolment and during first week of classes)</td>
<td>Improved pass rates on the CSMLS National Certification Examination</td>
<td>Improved understanding of factors impacting student success</td>
</tr>
<tr>
<td>Institutional research staff time</td>
<td>Research potential indicators of success and standardized assessment tools</td>
<td>Personalized student success plans</td>
<td>Enhanced student satisfaction with the MLS program</td>
<td>Greater role for research in program decision-making</td>
</tr>
<tr>
<td>Assessment services staff time</td>
<td>Develop strategies to promote program faculty involvement (e.g. allow tutorials to be counted toward student contact hours) and ensure open communication</td>
<td>Faculty advising handbook</td>
<td>Increased industry, Program Advisory Committee, and clinical partner satisfaction with MLS graduates</td>
<td>Improved communication and strengthened connections across all college departments</td>
</tr>
<tr>
<td>Learning Centre staff time</td>
<td>Engage program faculty in developing pre-enrolment assessment tools with a focus on content knowledge</td>
<td>Evaluation reports</td>
<td>Increased MLS faculty investment in student success</td>
<td>Creation of new institutional student support program model</td>
</tr>
<tr>
<td>Survey management software</td>
<td>Develop student success assessment tool with a focus on socio-demographic characteristics and non-academic indicators</td>
<td></td>
<td>Improved MLS retention rates</td>
<td></td>
</tr>
</tbody>
</table>
## SIAST Science and Health Aboriginal Success Strategy (SHASS)

<table>
<thead>
<tr>
<th>PROBLEM STATEMENT</th>
<th>INNOVATION GOALS</th>
</tr>
</thead>
</table>
| Aboriginal peoples in Saskatchewan, a young and rapidly growing population, were not adequately represented in the health workforce, and post-secondary institutions were having difficulty attracting and retaining Aboriginal students in health programs. | • Increase recruitment of Aboriginal students to Science and Health programs, especially those with particularly low Aboriginal enrolment (ie. Health Information Management).  
• Improve Aboriginal student retention in Science and Health programs.  
• Aid the transition of Aboriginal workers into the health workforce. |

<table>
<thead>
<tr>
<th>NEEDS</th>
<th>LOCAL ASSETS</th>
</tr>
</thead>
</table>
| • Provincial data showed that Aboriginal peoples were underrepresented in the health workforce, particularly in professional positions.  
• SIAST statistics showed that Science and Health was lagging other faculties in recruiting and retaining Aboriginal students.  
• While statistics showed that Aboriginal students were more likely to drop out of their program, Aboriginal students were less likely to access school counseling services.  
• There was a lack of understanding as to why Aboriginal students were not completing their programs.  
• Designated seats for Aboriginal students were not being filled. | • The Native Access Program to Nursing (NAPN) program had been operating successfully for over 20 years at SIAST, offering a model for the SHASS program design, as well as the ability to share resources and event planning.  
• Existing supports were available on campus (Aboriginal Student Centre, Aboriginal counselor, visiting Elder program) that could be built on to create a community specifically for Aboriginal Science and Health students.  
• There was institutional support at all levels for attracting and retaining Aboriginal students. |

<table>
<thead>
<tr>
<th>RATIONALE/ASSUMPTIONS</th>
<th>EXTERNAL FACTORS</th>
</tr>
</thead>
</table>
| • A program for Science and Health students, similar to SIAST’s successful Native Access Program to Nursing (NAPN), could achieve similar outcomes.  
• Research has shown that mentorship can help to improve student retention and aid the transition to the workforce for new graduates.  
• Developing personal relationships between SIAST, Health Regions, Aboriginal communities, and Aboriginal students can build trust and address fears, which is vital to enhancing recruitment and retention.  
• A proactive, holistic approach is most effective for enhancing Aboriginal student success. | • There was a young and rapidly growing Aboriginal population in Saskatchewan.  
• Provincial government had implemented the Representative Workforce Initiative in 1995 and renewed the initiative in 2005. A fund had been established to support relevant initiatives.  
• The Saskatoon and Regina Health Regions identified working towards a representative workforce as a key priority, and had signed partnership agreements with the provincial government.  
• Other institutions were beginning to focus on attracting and recruiting Aboriginal students, and there was a desire, and a business incentive, to make SIAST a school of choice for Aboriginal applicants.  
• Legacy of residential schools creates distrust of educational institutions among Aboriginal peoples.  
• Voluntary self-identification creates challenges connecting some Aboriginal students with available supports. |

<table>
<thead>
<tr>
<th>STRATEGIES</th>
</tr>
</thead>
</table>
| • Provide students with a dedicated source of support, the SHASS advisor, who establishes a relationship with incoming students.  
• Provide range of holistic support services to students (assist with funding, child care, transportation, etc.).  
• Deliver a Mentoring Program Networking Series.  
• Provide Lunch and Learn workshops.  
• Connect students with representatives from the health regions.  
• Develop relationships with Aboriginal communities.  
• Establish close communication between program heads and the SHASS advisor.  
• Partner with NAPN program and “It’s about Community” committee to provide cultural events and awareness day. |
### SIAST Science and Health Aboriginal Success Strategy (SHASS)

<table>
<thead>
<tr>
<th>INPUTS</th>
<th>ACTIVITIES</th>
<th>OUTPUTS</th>
<th>RESULTS SHORT TO MEDIUM TERM</th>
<th>IMPACTS LONG TERM</th>
</tr>
</thead>
<tbody>
<tr>
<td>• FT SHASS Advisor (one per campus)</td>
<td>• Establish a steering committee with representatives from the dean’s office, student development centre, program heads, Health Regions, and ministries of health and education</td>
<td>• Number of Aboriginal students recruited</td>
<td>• Greater awareness among Aboriginal students of Science and Health programs</td>
<td>• More Aboriginal people working in health professions; a representative workforce</td>
</tr>
<tr>
<td>• Access to administration support staff</td>
<td>• Draft a Memorandum of Understanding with the Health Regions</td>
<td>• Number of Aboriginal students accessing SHASS Advisor</td>
<td>• More Aboriginal peoples applying to Science and Health programs, and a greater variety of programs</td>
<td>• More role models for youth in Aboriginal communities</td>
</tr>
<tr>
<td>• Office space, ideally located in central area, close to existing Aboriginal-focused supports</td>
<td>• Determine the staffing and resources required</td>
<td>• Number of events attended by students, instructors and program heads</td>
<td>• Greater awareness among instructors, program heads, and non-Aboriginal students about Aboriginal issues</td>
<td>• Increased interest in health professions in Aboriginal communities</td>
</tr>
<tr>
<td>• Office equipment (telephone, computer, printer)</td>
<td>• Conduct background research on strategies for Aboriginal student recruitment and retention, including talking with students and local communities about specific supports needed</td>
<td>• Number of Aboriginal students retained to graduation</td>
<td>• New connections between Aboriginal students and the Health Regions, and increased student comfort applying for work</td>
<td>• Stronger partnerships between the institution and Health Region employers</td>
</tr>
<tr>
<td></td>
<td>• Establish partnerships with existing support services for Aboriginal students</td>
<td>• Number of Aboriginal graduates employed in the health field</td>
<td>• Enhanced confidence and self esteem among Aboriginal students</td>
<td>• Increased retention of Aboriginal students</td>
</tr>
<tr>
<td></td>
<td>• Develop promotional materials</td>
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</tr>
<tr>
<td><strong>University of Western Ontario Preceptor Education Program (PEP)</strong></td>
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<tr>
<td><strong>PROBLEM STATEMENT</strong></td>
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</tbody>
</table>
| Health care faculty and preceptors – especially in geographically distant settings – identified a need for timely, accessible preceptor education and training to increase the number of clinical placements, improve the quality and consistency of clinical placements, and enhance communication and transparency between the student, the preceptor and the institution. | • Provide resources and supports for preceptors across settings and practice areas, and with different levels of experience.  
• Improve clinical education for students by better preparing them for placements, supporting better prepared preceptors and providing higher quality clinical placement experiences.  
• Make clinical education more collaborative by creating a common framework across health care disciplines to identify roles and responsibilities of students and preceptors.  
• Maintain or increase the number of preceptors willing to provide clinical placements.  
• Prepare students to become preceptors by providing information about preceptorship. |
| **NEEDS** | **LOCAL ASSETS** |
| • Health programs at Western were growing, increasing the need for clinical placement sites locally and across the province.  
• Western Health Science faculty were experiencing challenges finding clinical placements and supporting preceptors.  
• The shift to Master’s-level education for OT, PT and SLP had increased the expectations of students, and caused some preceptors to feel less comfortable taking on students.  
• Organizing preceptor workshops was time-consuming and costly for the university, and many preceptors were unable to attend because of geographic distance and professional demands.  
• Students were sometimes unsure what to expect during their placements, and unaware of the preparation involved for preceptors. | • The Clinical Education Committee, formed in 2004, brought together Health Science disciplines at Western that had previously been working independently (OT, PT, SLP, Nursing) and provided opportunities to collaborate in addressing shared concerns.  
• The team included faculty and clinicians who were passionate about preceptorship, committed to collaboration, and generous in volunteering their time, specialized skills and expertise to the development of preceptor resources.  
• The university setting provided access to students, both graduate and undergraduate, who could assist with project work.  
• There was strong institutional support for the project, demonstrated through letter of support from the Dean of Health Sciences, school directors and academics for the grant application, and ongoing IT support and resources for PEP development and implementation.  
• Western was willing to recognize faculty involvement in PEP as faculty service and research contribution.  
• Western had in-house technological capabilities to create an online learning platform. |
| **RATIONALE/ASSUMPTIONS** | **EXTERNAL FACTORS** |
| • Adult learning principles suggested that self-directed learning would be effective for preceptors and appropriate given work realities.  
• Due to the demanding workloads of health care professionals, preceptors would be more likely to utilize education that was quick, practical, and easily accessible.  
• The same tool would give preceptors and students a common language, and they could review the materials together during the placement.  
• Given the trans-disciplinary nature of the theoretical underpinnings of clinical education, a common curriculum could be used by preceptors and students across various health professions. | • The Ontario Ministry of Health and Long-Term Care identified interprofessionalism as a health care priority.  
• Government funding was available through the MOHLTC Inter-professional, Mentoring, Preceptorship, Leadership and Coaching Fund.  
• Health care restructuring created added pressures on clinicians, decreasing their willingness to take on students.  
• Job insecurities and shift to more part-time clinicians limited available placements.  
• Demographics of health care professions meant that many preceptors were retiring but were not being replaced.  
• Increased privatization of allied health services was reducing organizational support for clinical placements and for continuing professional education. |
| **STRATEGIES** | |
| • Provide a free, user-friendly, online education tool for both preceptors and preceptees.  
• Engage students, faculty and clinicians in developing content and online resources (videos, tip-sheets, etc.).  
• Allow participants to print certificates showing module completion, as continuing professional education (for preceptors) and for inclusion in professional portfolios (for students).  
• Encourage faculties across Ontario to incorporate PEP in student curriculum and raise awareness of the modules among clinicians. | 

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### University of Western Ontario Preceptor Education Program (PEP)

<table>
<thead>
<tr>
<th><strong>INPUTS</strong></th>
<th><strong>ACTIVITIES</strong></th>
<th><strong>OUTPUTS</strong></th>
<th><strong>RESULTS</strong> SHORT TO MEDIUM TERM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial resources</td>
<td>Form a steering group</td>
<td>Learning modules</td>
<td>Reduced training gap for preceptors who are distant from the academic institution</td>
</tr>
<tr>
<td>Academic Lead</td>
<td>Conduct literature review (identify comparator models)</td>
<td>On-site PEP educational sessions/powerpoint for preceptors</td>
<td>Better trained students through successful placement experiences</td>
</tr>
<tr>
<td>Project Coordinator</td>
<td>Conduct needs assessment</td>
<td>Web-based learning tool</td>
<td>Better prepared preceptors</td>
</tr>
<tr>
<td>IT consultant</td>
<td>Identify modules needed</td>
<td>Promotional materials</td>
<td>Increased number of clinical placement sites due to health professionals feeling more capable and supported</td>
</tr>
<tr>
<td>IT infrastructure and web address</td>
<td>Develop learning modules</td>
<td></td>
<td></td>
</tr>
<tr>
<td>In-kind support from team members as content experts</td>
<td>Pilot test tool</td>
<td></td>
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</tr>
<tr>
<td>Institutional support (recognition of project time as service and research hours)</td>
<td>Integrate pilot feedback</td>
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<tr>
<td></td>
<td>Develop promotional plan (events, materials)</td>
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<tr>
<td></td>
<td>Launch the tool</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Conduct dissemination and promotional activities (conferences, professional events, publications)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Update tool and IT platform as needed</td>
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</tbody>
</table>

**IMPACTS LONG TERM**

- Better trained students through successful placement experiences
- Better prepared preceptors
- Increased number of clinical placement sites due to health professionals feeling more capable and supported
- Increased comfort among graduates to become preceptors once they enter the workplace

- Increased comfort among graduates to become preceptors once they enter the workplace
## Appendix D: SWOT Analysis

### RANKED STRENGTHS

<table>
<thead>
<tr>
<th>Health Fair</th>
<th>OTep</th>
<th>LF-CUES</th>
<th>SHASS</th>
<th>Paths-ESSP</th>
<th>PEP</th>
</tr>
</thead>
</table>
| • Impact on students as agents of change  
  • Collaborative experience for students  
  • Ongoing evaluation  
  • Challenges students to learn  
  • Quality promotional materials  
  • Student-senior interactions  
  • Partnerships with francophone community  
  • Cross-disciplinary  
  • New faculty perspectives  
  • Positive media coverage  | • Collaborative, committed team  
  • Innovative  
  • Fully funded until 2012  
  • Quality and responsive curriculum and resources  
  • Informed by comprehensive learning and understanding about IEOTs  
  • Stakeholder partnerships (PSE, employers, regulators, OT profession)  
  • Technology (can engage OTs anywhere)  
  • Participant success and engagement  
  • OTep reputation and recognition  
  • Knowledge translation | • Learner-focused  
  • Consistency  
  • Enhanced teaching effectiveness  
  • Increases practicum capacity  
  • Reduces impact on clinical site workload  
  • Cost-effective  
  • Supportive peer learning environment  
  • Encourages student accountability for learning  
  • Enhanced patient care and engagement  
  • Increases collaboration with clinical sites | • Holistic/cultural student supports  
  • Active program involvement  
  • Fosters relationships/partnerships (internal and external)  
  • SHASS staff (knowledgeable, versatile, empathetic, trusted)  
  • Institutional support  
  • Evolving program  
  • Available to students (can address immediate needs)  
  • Communication  
  • Accessible location  
  • Program autonomy | • Focused on student success  
  • Trained faculty advisors  
  • Early individualized student assessment  
  • Transferable, flexible and adaptable  
  • Networks students to personal and academic supports  
  • Evidence-based model for assessment and program improvements  
  • Landlocked spare encourages student participation in tutorials  
  • Leverages cross-college collaboration  
  • Cost-effective to operate  
  • Fully integrated into MLS program | • Generosity and commitment of team (knowledge and time)  
  • Ministry funding (IT, project coordinator, dissemination)  
  • Strong leadership  
  • Institutional and IT support (development and ongoing delivery)  
  • Collaborative, interprofessional development team  
  • Accessible (web-based, user friendly, free)  
  • Practical, resource-rich, evidence-based content (downloadable, modifiable)  
  • Needs-based (short, concise, relevant modules)  
  • Shared perspective for preceptor and student  
  • Broad applicability (across disciplines and experience levels) |
## RANKED WEAKNESSES

<table>
<thead>
<tr>
<th>Health Fair</th>
<th>OTepp</th>
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<th>SHASS</th>
<th>Paths-ESSP</th>
<th>PEP</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Lack of communications coordination</td>
<td>• Lack of time (planning, doing, reflecting)</td>
<td>• Needs preceptors committed to the model</td>
<td>• Passive program involvement</td>
<td>• Success depends on staff strengths and commitment</td>
<td></td>
</tr>
<tr>
<td>• Lack of time to resolve conflicts and address student concerns</td>
<td>• Complexity and number of partnerships across provinces</td>
<td>• Requires more of preceptor’s time (student evaluations, preparation)</td>
<td>• Resources not keeping up with need</td>
<td>• Time/resource intensive to develop (customized assessment tools, tutorials, advising)</td>
<td></td>
</tr>
<tr>
<td>• Late entry of PR students</td>
<td>• Lack of timely dissemination</td>
<td>• Perceived as less effective in later practicums</td>
<td>• Potential few initial short-term outcomes for funders</td>
<td>• Limited qualitative evaluation</td>
<td></td>
</tr>
<tr>
<td>• Variation among supervising faculty in levels of experience and familiarity with interprofessionalism</td>
<td>• Technology glitches</td>
<td>• Observing student may get bored</td>
<td>• Logistically complex</td>
<td>• Short time-lines for grant</td>
<td></td>
</tr>
<tr>
<td>• Low visitor participation</td>
<td>• Limited interest in French program</td>
<td>• Variation in paired student abilities</td>
<td>• Relies on students self-selecting</td>
<td>• Lack of ongoing funding</td>
<td></td>
</tr>
<tr>
<td>• Limited use of central communications platform (Blackboard)</td>
<td>• Communication challenges with two faculty teaching single course</td>
<td>• Fewer solo exams</td>
<td>• Continual improvements create measurement challenges</td>
<td>• No control over preceptor uptake</td>
<td></td>
</tr>
<tr>
<td>• Communication challenges with two faculty teaching single course</td>
<td>• Need for sensitivity to student diversity</td>
<td>• Does not appeal to all learning styles</td>
<td>• Technical challenges</td>
<td>• Web-based tool needs regular content updates</td>
<td></td>
</tr>
<tr>
<td>• Single faculty member responsible for project monitoring</td>
<td>• Student weaknesses in written French language is time-consuming for supervising faculty</td>
<td>• Needs a teaching room</td>
<td>• Lack of discipline specificity</td>
<td>• Limited qualitative evaluation</td>
<td></td>
</tr>
<tr>
<td>• Student weaknesses in written French language is time-consuming for supervising faculty</td>
<td></td>
<td></td>
<td></td>
<td>• Competing time demands on team</td>
<td></td>
</tr>
</tbody>
</table>
## RANKED OPPORTUNITIES

<table>
<thead>
<tr>
<th>Health Fair</th>
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<th>PEP</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Revise and clarify Health Fair parameters</td>
<td>• Enrich relationships and collaboration with regulators</td>
<td>• Expand to more partners (increase clinical capacity)</td>
<td>• Offer seamless student support</td>
<td>• Build stronger faculty-student relationships</td>
<td>• Access new funding (research, updates, coordinator)</td>
</tr>
<tr>
<td>• Develop task-oriented conflict resolution process</td>
<td>• Broader scope of application to non-IEOTs</td>
<td>• Develop students as future preceptors</td>
<td>• Increase industry support and involvement</td>
<td>• Identify program-level improvements</td>
<td>• Enhancements (new content, interactivity, language translation)</td>
</tr>
<tr>
<td>• Clarify logistical aspects</td>
<td>• Develop new offerings and resources (pre-arrival, expanded mentoring)</td>
<td>• Alleviate shortages of specialty skill sites</td>
<td>• Grow internal and external partnerships</td>
<td>• Demonstrate action to external partners</td>
<td>• Leverage local champions</td>
</tr>
<tr>
<td>• Work with PR to better promote the fair</td>
<td>• Reinforce existing and building new relationships with PSE institutions</td>
<td>• Develop consistent curriculum (all students, all sites, all levels)</td>
<td>• Increase visibility (internal and external)</td>
<td>• Enhance collaborative problem-solving</td>
<td>• Ensure on-going evaluation</td>
</tr>
<tr>
<td>• Periodic supervision by PR faculty during common hour</td>
<td>• Greater responsiveness to employer needs</td>
<td>• Work with outside communities</td>
<td>• Identify system-level improvements</td>
<td>• Grow internal and external partnerships</td>
<td>• Increase uptake (students and preceptors)</td>
</tr>
<tr>
<td>• Engage seniors to assist teams</td>
<td>• Leverage growing understanding of IEOT issues</td>
<td>• Transferable to other professions</td>
<td>• Expand model to other SIAST divisions</td>
<td>• Transfer model internally and externally</td>
<td>• Increase endorsement by professional associations</td>
</tr>
<tr>
<td>• Require student use of TrempLinguistique, with penalties for not using services</td>
<td>• Develop students’ self-learning skills</td>
<td>• Reduce costs for clinical sites</td>
<td>• Develop resources (curriculum and Aboriginal education)</td>
<td>• Integrate into curriculum</td>
<td>• Integrate into curriculum</td>
</tr>
<tr>
<td>• Record student comments for evaluation or promotional uses</td>
<td>• Continuing individual and team growth</td>
<td>• Applied research</td>
<td>• Increase public awareness of profession</td>
<td>• Ongoing dissemination/promotion</td>
<td>• Ongoing dissemination/ promotion</td>
</tr>
<tr>
<td>• Create a partner network for alternate locations</td>
<td>• Further dissemination of learning</td>
<td>• Expand to more partners (increase clinical capacity)</td>
<td>• Offer seamless student support</td>
<td>• Increase program relevance of mandatory tutorials</td>
<td>• Potential cost recovery (fee-for-service workshops, sponsorship)</td>
</tr>
<tr>
<td>• Develop pool of supervising faculty trained in IPE</td>
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</tr>
<tr>
<td>Health Fair</td>
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<td>---------------------------------------</td>
</tr>
<tr>
<td>• Lack of consistency among supervising faculty</td>
<td>• Loss of program funding</td>
<td>• Lack of buy-in from clinical sites</td>
<td>• Lack of faculty buy-in</td>
<td>• Requires continual faculty buy-in for tutorials and advising</td>
<td>• Loss of IT support</td>
</tr>
<tr>
<td>• Possible loss of funding</td>
<td>• Financial barriers for IEOs to access OTepp</td>
<td>• Difficulty recruiting preceptors</td>
<td>• Lack of knowledge transfer (if staff turnover)</td>
<td>• Requires leadership at multiple levels</td>
<td>• Lack of ongoing funding for evaluation and improvement</td>
</tr>
<tr>
<td>• Hours completing workload forms</td>
<td>• Different and sometimes competing stakeholder priorities</td>
<td>• Misconceptions of the model (students, preceptors, partners)</td>
<td>• Lose funding</td>
<td>• Requires ongoing commitment of financial and staff resources</td>
<td>• Maintaining currency</td>
</tr>
<tr>
<td>• Potential reassessment of SSWG participation related to new curriculum</td>
<td>• Provincial regulatory differences</td>
<td>• Ineffective implementation of model by clinical partner</td>
<td>• Lack of awareness of SHASS</td>
<td>• Logistically complex</td>
<td>• Limited opportunity for evaluation</td>
</tr>
<tr>
<td>• Student resistance</td>
<td>• Future governance structure</td>
<td>• Need for effective preceptor training</td>
<td>• Institutional/program policies</td>
<td>• More effective when students share Paths results with advisors</td>
<td>• Limited penetration among local preceptors</td>
</tr>
<tr>
<td>• Requests to expand to additional programs</td>
<td>• Need to constantly recruit OTepp resources (tutors, preceptors, etc.)</td>
<td>• Potential student dissatisfaction with the model</td>
<td></td>
<td>• Changing technology</td>
<td>• Competition from similar resources</td>
</tr>
<tr>
<td></td>
<td>• Language comprehension and communication of some IEOs</td>
<td>• Loss of site has greater impact on student placements</td>
<td></td>
<td>• Time pressures on preceptors</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Small numbers of IEOs transitioning to Canada reduces demand for OTepp</td>
<td>• Expectation for NAIT equipment</td>
<td></td>
<td>• Maintaining team commitment</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Lack of patient buy-in</td>
<td></td>
<td>• Competition from similar resources</td>
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</tr>
</tbody>
</table>