

Program for Faculty Development in the Faculty of Health Sciences: Lessons from the past, directions for the future

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ABSTRACT

The Faculty of Health Sciences (FHS) has long believed in the power of faculty development. Arising originally in the 1970s to serve the need of upskilling physician teachers within the new medical school, the McMaster University FHS Program for Faculty Development (PFD) has helped to translate the latest and greatest health professions education (HPE) innovations into faculty action for decades. This chapter offers a written account of the PFD based on an oral history generated by the living directors and assistant deans that have served to develop, foster, and maintain the FHS PFD to date. Key themes from PFD evolution include faculty development as a vehicle for curricular change, the application of evidence, a mechanism for supporting faculty leaders, and an organizational mandate. The chapter ends with a review of present-day shifts in the PFD brought about by amalgamation and the global pandemic and concludes with a synthesis of five key tenets to guide the PFD's future.

KEYWORDS

faculty development, teacher training, continuing professional development

“Too many professional development initiatives are done to teachers—not for, with, or by them.”

—Andy Hargreaves (n.d.)

In health sciences education, many teachers arrive on their first day of teaching with little or no prior training in education. Some may have had previous teaching assistant roles as graduate students, but most faculty members do not have specialized certifications in education. Clinicians who are recruited to teach within our affiliated academic hospitals are often at a greater disadvantage. While they may have engaged in teaching in more traditional classroom settings, many jump from professional school right into their first teaching or supervisory position as newly graduated healthcare practitioners (e.g., nurses, midwives, rehabilitation specialists) or postgraduate trainees (e.g., residents).

In response to this gap in training, the McMaster University medical school and McMaster Health Sciences professions programs felt that developing a dedicated program focused on raising the skills and capacities of our teachers would be essential. The Faculty of Health Sciences (FHS) established the Program for Faculty Development (PFD) in 1987, with the main mandate of elevating the Faculty’s ability to provide high-quality education to trainees across the spectrum of health professions and along all levels of education. Serving all levels of faculty and senior trainees, the PFD has sought to provide support to both clinical and non-clinical teachers and provide them with the tools and training they need to be successful.

In this chapter, we present a short history derived from the experiences of the PFD leaders over the years, many of whom were assistant deans in the FHS and each of whom sought current and innovative methodologies to both engage and foster skills in faculty teachers in the FHS. We triangulate recollections of the origins of PFD, tracing them back to PFD’s beginnings in FHS’s Program for Educational Development (PED), and then summarize its evolution over time into its present form. We then highlight some key and emergent changes that have occurred during the COVID-19 pandemic, reflecting on how the pandemic and recent technological advances may irrevocably change the future of faculty development at McMaster University. Finally, we end with forecasting what PFD may become in the future.

METHODS

To gather data for this chapter, the lead author conducted a series of unstructured interviews (individual and group) to ask each of the six living leads of faculty development (i.e., directors, assistant deans) to recall their experiences and key mandates. Interviews were conducted using Zoom between January–February of 2021 and included all the authors of the chapter. These interviews were recorded, transcribed, and then chronologically and thematically analyzed by the lead author. The analysis was sent via Google Docs or email to the rest of the authorship group as part of the writing process to conduct a fact-and-member check, as well as to refine and edit the work.

THE PAST

Genesis: Program for Educational Development (1965–1990)

The McMaster medical school, which was rebranded as the Michael G. DeGroot School of Medicine in 2012, was launched in 1965 under the direction of Dr. John Evans and a team of medical leaders as a revolutionary 3-year medical school. It welcomed its first class of students in 1969 and matriculated its first students in 1972. Faculty development was seen as a core imperative by the founders. Since problem-based learning (PBL), a novel approach to medical learning, was developed and deployed in the medical school (see Sherbino et al., 2022, in this volume) and many of the faculty had never been instructed in this method, they required training to engage in this new style of curricular delivery. As such, while PBL was being developed and incorporated into the curriculum, faculty development arose as the concurrently necessary change-management strategy that would allow PBL to flourish.

PBL focused on small tutorial groups that discussed patient cases as a stimulus to learning. To become effective tutors for these learning groups, faculty needed both educational theory and practical experience to guide them. Additionally, the creation of a medical school required that McMaster University find ways to engage frontline clinicians in the newly affiliated teaching hospitals within the city of Hamilton, Ontario. While many of the hospitals had resident physicians training within their ranks, it would not be until the founding of the medical school that students would begin to make an appearance in these hospitals.

The medical school originally developed a Program for Educational Development (PED) in 1972. The PED, a unit with faculty members and staff, was charged with three missions: to foster and support faculty in their design of educational programming, to raise capacity of faculty members to engage in teaching, and to engage in the scholarship of teaching and learning (SoTL, a.k.a. education scholarship) around innovations in health professions education. As Dr. Jacqueline Wakefield, one of the first members of PED during that time, recalled:

The Program for Educational Development started [in the second year of the medical school], and they had a responsibility both to do educational research and also faculty development. So, those first faculty-development initiatives were under what we called PED at the time.

Dr. Wakefield expressed that, at the time, faculty development always seemed driven by context: the various workshops provided opportunities for personal experience and reflection based on the role teachers were being asked to take within a program or a faculty. Dr. Wakefield recalled that faculty members were encouraged to “self-reflect and seek out input from others because, [as one of our colleagues] Kevin Eva always talked about, . . . you can’t know what you don’t know.” Kevin Eva and Glen Regehr would go on to write about this later (Eva & Regehr, 2008).

McMaster grew to become a top-ranked medical school with a notable international reputation, in part because of its novel education techniques and contributions to educational scholarship. The creation of the Faculty of Health Sciences (FHS) in 1974 was itself a novel health sciences education model, establishing an overarching, interprofessional faculty structure to network health professionals across schools and programs. With the formation of the FHS, the Program for Educational Development began to function more collaboratively across multiple professions. Alliances began to form between educators of various health sciences programs—leading to the spread of the PBL methodology to other professions beyond medicine.

Early days: Faculty development as a vehicle for curricular change (1970s–1980s)

As discussed, much of the initial faculty-development programming revolved around the novel program that McMaster had developed—problem-based learning, or PBL (Norman, 1988; Servant-Miklos et al., 2019). PBL was a teaching approach that was not dependent on didactic teaching or lecture halls. Similar to the problem-based and case-based approaches at law and business schools (e.g., the case-study method at Harvard’s Law School [Servant-Miklos, 2019]), PBL would later be shown to be as effective as other forms of education, and this led to a diversification of curricular approaches in the health professions education sector. Within the FHS, individual medical school faculty such as Professor Luis Branda, Dr. James (Jim) Anderson, and Dr. Victor (Vic) Neufeld were matched with their peers in nursing, occupational therapy (OT), and physiotherapy (PT) to initially develop the faculty in these units to conduct PBL. It was at this time that Professor Susan (Sue) Baptiste became involved at McMaster’s FHS. Professor Sue Baptiste in the School of Rehabilitation Sciences recalls:

So those three guys [Branda, Anderson, Neufeld] came on board with the OT and PT faculty to educate us on what [PBL] was and what it looked like. So, while I was the department head for OT at Mac, I also assumed teaching responsibilities within the medical school and health sciences faculty.

Impressed by Professor Baptiste, the medical faculty invited her to become a communications preceptor at the medical school. Communication preceptors were non-physician/non-surgeon instructors who worked with a tutor in the medical program to assist the students in their learning of communication skills.

Throughout the 1970s, PED engaged in one-off sessions that aimed to teach faculty members skills to conduct tutorials and to engage with students in ways aligned with the PBL philosophy and approach. By the early 1980s, a well-defined workshop series related to teaching PBL had emerged from this trial-and-error process. During this same period, a standard PBL workshop was offered to health science faculty from around the world who wished to learn how to teach in a PBL format. The development of clinical skills and feedback and assessment workshops followed shortly after.

Hitting our stride: Faculty development as the application of evidence (1987–1999)

By the late 1980s, the growth and success of PED led to a review of mandates. Over the course of the 1980s the program had grown in its capabilities to both upskill FHS faculty members and also to conduct research and evaluation work. In 1987, PED was split into two entities with unique missions: the Program for Education Research & Development (PERD)¹ and the Program for Faculty Development (PFD). The division into these two units likely occurred because the need for faculty development had increased and required specific focus while the need for education research and development were also ramping up. PERD would take the responsibility for advancing the science and scholarship around educating health professionals, and the PFD would provide practical support to inform, educate, and foster educators' development.

Built on the success of the workshops for classroom-based and clinical settings, the FHS leadership noted that it would be a worthy investment to develop the mandate of the Program for Faculty Development. As newer faculty came on board, it became increasingly clear that many of the faculty members within FHS were clinicians who also needed support to carve out their niche as educators. Further changes followed in this phase as Professor Sue Baptiste assumed the inaugural director role for the Program for Faculty Development. Professor Baptiste encouraged members of all health professions programs within the Faculty of Health Sciences to become involved for professional growth. She also knew that it would be important to ensure a mandate to foster others to be faculty developers and step into roles such as facilitators for the burgeoning workshop opportunities; thus, a PFD group with rich expertise and skills was birthed. Initially the PFD had minimal staffing, with a director and a group of experienced faculty facilitators.

Later, the leadership of the PFD was elevated from a director to an assistant dean role. The inaugural assistant dean, the PFD was Dr. Allyn Walsh and her tenure was marked by her articulation of the support of the clinical teacher (i.e., bedside clinician teachers or PBL tutors who are clinicians that teach students), clinician-educators (i.e., clinicians with a mandate to lead and develop programs, training them to translate theory into practice), and clinician-researchers (i.e., those who engage in both clinical work and conduct research as well). While the PFD and PERD had split into two, the two groups still tended to work quite closely. PERD would conduct research, and the PFD would seek to connect that new evidence with their programming. Dr. Walsh reflected on those early days of education research and the important role that PERD would play in this arena:

The idea for problem-based learning . . . came from studying cases. But my recollection of what the founding fathers [of PBL] would say [was], . . . “We did all our learning when we got into the clinical world. . . . And we could remember things better because they were all applied to people that we knew and people that we worked with and so on.” I think [PBL] started without any evidence at all but a gut feeling, it was experiential is basically what it was. . . . I think the most exciting thing for me professionally has been to see the burgeoning [community interested in] educational research that has come

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out [of those early innovations]. All of the naysayers always say, “What is the evidence?” It doesn't matter if you are talking about clinical or education, [faculty members at McMaster were always asking] “What is the evidence?” And I [thought] to myself, well you can't do clinical trials [for education research] because there are so many variables you can't. You have to do [education research] in a different way. And many different ways have been found. And it is just so exciting really.

The development of the University Teaching Program (UTP) for health professionals, launched in 2006, was led by Dr. Walsh, with support and consultation provided by Dr. Geoff Norman (head scientist of PERD) and the Centre for Leadership in Learning (now the MacPherson Institute). The UTP was collaboratively designed to connect the theory and evidence of teaching to a practice-based portfolio, with a focus on building capacity of faculty members with regards to their teaching practice. The UTP was one of the first teaching certifications in health professions education and helped to set standards for teaching programs nationally at the time. Its portfolio-based approach² to faculty development would become a precursor to other nationally recognized certifications such as the Clinician Educator area of focused competence diploma from the Royal College of Physicians and Surgeons of Canada (RCPSC).

Faculty development as a mechanism for supporting the leaders within FHS (1982–2000s)

The plethora of new clinical teachers at new sites meant that the Faculty would need new educational leaders to manage and support these teachers. Both on the main campus and at the distributed sites, as careers progressed, faculty members needed to acquire a new set of leadership skills. “There was recognition [early on] that there was a need within the Faculty to have a program that would prepare individuals to take leadership roles in education,” recalled Dr. Wakefield. A peer network was also found to be crucial in supporting mid-career faculty members at the time. The Program for Leadership in Education² was originally designed in 1982 to foster these emerging educational leaders. Dr. Wakefield explained:

The Program for Leadership in Education was a fairly significant program for a period of time (1982–91) within the Faculty. And it was because there were a lot of junior people, at least in terms of leadership, who would really benefit from the opportunity to have a peer group that wasn't necessarily within their department that would explore some of the challenges and victories.

From the 1990s and beyond, there was a clear mandate from the frontline of healthcare for educators to develop their leadership skills—especially in clinical spaces. With a significant influx of clinical faculty in the 1990s, Dr. Walsh was tasked with a changing landscape yet again. Dr. Walsh recalled:

We were just coming out of a period of time with a big faculty freeze and starting to expand as well into more distributed sites.³ So, the big need for faculty generally was around clinical teaching because, all of a sudden, we were recruiting new teachers. And the clinical [teaching unit]⁴ is where a lot of [them] went.

Programming created to assist with the Program for Leadership eventually became the precursor for the FHS's current Academic Leadership Program (ALP), established in 2012 (Li et al., n.d.). The ALP continues to train leaders from a mix of professions across the FHS and helps break down institutional silos by bringing leaders together for common training experiences. The ALP was supported by a number of the PFD assistant deans over time and would come to be one of many programs within our faculty-development ecosystem.

Faculty development as an organizational mandate (2000–2010s)

Whereas the PFD had been a part of FHS for a long time, it became apparent that more support for its structures would be required in order to sustain its activities. As time passed and mandates expanded, the PFD experienced its own growing pains, since many of the educational systems were outgrowing the budget allocations required to run them. While the PFD received some direct funding from education services within FHS, it remained consistent from year to year. During this time, the community's needs within FHS were growing—and yet the funding was not growing at a commensurate rate. While, initially, externally facing workshops had attracted paying guests from other universities seeking to learn about PBL, they were only one way of generating a small amount of revenue to support the PFD, and meeting the needs of some faculty, new approaches, and funding structures became necessary.

Under the leadership of Dr. Denise Marshall, the Program for Faculty Development within McMaster's FHS established a more formalized structure and supports in the 2000s. During her term as the assistant dean (2007–2012), Dr. Marshall created several key organizational changes that allowed for the sustainability of the PFD. Fostering connections and identifying specific teaching goals with various clinical department chairs and heads of schools, Dr. Marshall spearheaded a new partnership-based approach for the PFD. This new strategy helped the PFD customize department-by-department teaching but also increased financial support via these new partnerships, a much-needed innovation that would bring more sustainability. Dr. Marshall reflected:

It was really wonderful to meet and work with department chairs and departmentally based faculty-development leads during this time. We learned that working together to foster growth and set individual and department-wide faculty-development [FD] goals could accelerate achievement.

This shift in focus towards organizational alignment with the FHS departments and schools ushered in a new era of interest and excitement in faculty development, including establishing an Annual Day in Faculty Development with peer-reviewed presentations and

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curated posters. Additionally, Dr. Marshall brought in a new focus to help faculty gain skills in personal and professional resilience. She also championed the development of a world-class graduate program: the McMaster Master of Health Sciences Education. This master's program sought to formalize the educational training available to those seeking to become educators within the health-sciences professions. Whereas such programs existed elsewhere, at McMaster the local training for educational enthusiasts had mainly been through the PFD. Alternatively, they could journey to other sites abroad to engage in master's degrees in health professions education or medical education. The creation of the McMaster Master of Health Sciences Education program allowed students to now gain access to world-famous scientists and educators.

Dr. Anne Wong succeeded Dr. Marshall as assistant dean, the PFD, in 2012. Dr. Wong led the PFD's involvement in developing allyships with other groups on campus—the Centre for Simulation-Based Learning (CSBL),⁵ the Continuing Health Sciences Education (CHSE) program,⁶ the MacPherson Institute, and PERD (which would soon become the McMaster Education Research, Innovation and Theory [MERIT]⁷ program). Each of these other programs or units (CSBL, CHSE, MacPherson, PERD) were all separate programs within the McMaster community that had overlapping interests with the PFD. Although these programs were freestanding and self-contained unto themselves, Dr. Wong saw the great potential of sharing resources and combining efforts to achieve the same aims. She reflected:

[At PFD we] saw ourselves as being small but personal. And really sort of advocating for the faculty. I think that's how, and as a service, our mandate was to serve the needs of our faculty and help them to find their path, and really develop and find their potential. And we . . . were often called upon . . . to give sort of specific, tailored workshops locally at the department level.

For instance, to meet national accreditation standards for healthcare simulation centres, the CSBL needed to have faculty development around their simulation procedures (e.g., debriefing, case design). Hence, the PFD linked with CSBL to provide these workshops. Evolving the PFD into a unit that integrated well with other educational groups on campus helped to further embed it within the fabric of FHS and would foreshadow its next stage in development.

THE PRESENT

Today, the McMaster FHS spans multiple cities and municipalities across Ontario (including regional campuses in Niagara and Kitchener-Waterloo, as well as all the communities in between). It has oversight to provide training for a diverse group of healthcare professionals including physicians/surgeons, nurses, occupational therapists, physiotherapists, speech language pathologists, physician assistants, integrated biomedical engineering students, and graduate students of all types (e.g., biochemistry, medical sciences, global health, health management, neuroscience, public health, health policy). Two contemporary evolutions of the PFD are those related to amalgamation and the global pandemic.

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Amalgamation into the FHS Office of Continuing Professional Development

The next milestone in the evolution of the Program for Faculty Development within the McMaster FHS would come in the form of a transformative amalgamation. In 2019, a new office was formed within the FHS: the Office of Continuing Professional Development (CPD). Under the leadership of Dr. Khalid Azzam, the FHS had seen the need to harmonize the portfolio of the continued development of practicing healthcare providers and educators under one associate dean. Both McMaster faculty members and healthcare providers would now have a unified program that sought to attend to a variety of their academic needs. This new CPD office brought together three portfolios — the PFD, Continuing Health Sciences Education (CHSE), and the Learning Technologies Lab (LTL). CHSE was largely an externally facing program that sought to provide high-quality continuing education to healthcare professionals both within McMaster and beyond within the community. LTL is a unit that seeks to upskill faculty members in their use of learning technologies.

Dr. Teresa Chan became the assistant dean of the Program for Faculty Development in 2019. One of the first tasks she undertook was to engage in a strategic analysis via stakeholder engagement and service-oriented consultations, which revealed that there were four core pillars of programming that the FHS leadership could address: inspired teaching, leadership and management, creativity and humanism (e.g., connecting faculty members to their humanity through mindfulness, wellness, and creative pursuits), and scholarly practice (e.g., development of research and scholarly skills—grant writing, academic writing, career crafting, knowledge translation, science communication). The PFD expanded to these four strategic pillars to support faculty members in finding their niche. This aligned well with the new FHS strategic plan and allowed for an expanded mandate for the PFD to support faculty members from hiring to retiring.

Dr. Chan also brought expertise in the realm of health professions SoTL and research. Cross-appointed as a MERIT scientist, Dr. Chan worked to bridge the worlds of education research (i.e., discovery-based education scholarship) and implementation, especially in the digital and social media domains (Chan et al., 2020; Ruan et al., 2020). Dr. Chan championed an infusion of technology-enhanced faculty development, with the intent of better connecting the faculty members at the various clinics, schools, hospitals, and regional campuses together in a digital environment (Yilmaz et al., 2020). This digital transformation created a common space where the FHS community could grow and learn together without the environmental impacts of extensive travel. This digital transformation of faculty development within the FHS allowed the PFD to become a leading force in faculty-development innovations.

Faculty development in a global pandemic

In March 2020, the COVID-19 pandemic brought about an unprecedented need for real-time faculty development. With little notice, tight timelines, and unprecedented mandates, faculty members of all types were being asked to reinvent their curricula for a new digital landscape.

With the assistance of Learning Technologies Lab (LTL) Director, Dr. Ilana Bayer, the PFD teams pivoted quickly, and, within a few weeks, a digital community of practice created a virtual “incident command system” for creating new resources and activities for FHS’s newly digital teachers. Incident command systems are used when coordinating an emergency response (Jensen & Thompson, 2016). Using the digital platform Slack, the PFD was able to create a digital meeting ground where members of the PFD committees and teams could develop, plan, and decide upon new faculty-development programming. The CPD office, with both the LTL and CHSE faculty and staff, worked together to help this strategic move towards a new digital reality. Open education resources were curated or created, and hundreds of digital events in the form of webinars, panels, workshops, and lectures occurred during the pandemic. This transformation included three digital conferences, the 13th and 14th Annual Days in Faculty Development, and a new FHS women’s symposium. Recordings were repurposed to create a new video archive and a new podcast, *MacPFD Spark*. With nearly 4,000 registrants to digital events between March 2020 and July 2022, the pandemic ushered in a new era of digitally based faculty development that demonstrated that the PFD could adopt a more “glocal” approach, addressing local needs with resources that could be shared with a global audience. Consequently, the PFD not only survived during the pandemic but thrived by linking thousands of learners to new educational experiences and helping other health science faculty around the world learn and grow together. Prior to 2020, the PFD events had usually welcomed a few hundred participants in total annually with no external guests; in 2020 we had more than 1,900 internal registrants to the PFD digital events and more than 500 external registrants. This momentum continued in the second year of the pandemic with more than 700 external visitors in 2021. An important factor that facilitated success was the unexpected rate at which faculty members were willing to learn new technologies. The variable availability of healthcare providers posed a challenge; whereas some groups (e.g., surgeons) had more time than usual, other faculty were harder hit (e.g., academics needing to flip their entire curricula overnight into a completely different format, frontline physicians needing to attend more COVID-related clinics or wards).

THE FUTURE

What is the future for McMaster FHS’s Program for Faculty Development? The pandemic has revealed that new opportunities can come at a time of crisis! The merger of the PFD into the Office of CPD is anticipated to precipitate some changes in approaches (e.g., operational approaches to processes, streamlining ideas), but also to enhance and make the program sustainable over time by decreasing overhead costs and pooling resources.

In July of 2021, Dr. Chan succeeded Dr. Azzam as the new associate dean of Continuing Professional Development and began the process of fully integrating the portfolios of the Office of CPD and carving out a new direction that brings faculty development into the forefront of both faculty and practicing health professionals’ education in our community teaching sites. Dr. Chan’s successor in the assistant dean for the PFD is Dr. Ruth Chen, the first nurse to assume the role, who is set to make a mark on the FHS Program for Faculty Development.

Throughout the years, each leader of the PFD has provided wisdom and innovation during their terms as the director or assistant dean. Some key themes from those times provide us with a suite of observations which might serve us going forward as core tenets:

1. Faculty development must be individualized and career-stage-specific

As faculty members evolve in their roles (from clinical teacher to educational leader), faculty development must acknowledge their journeys and support them through their careers. As such, it is crucially important that educational organizations invest in faculty members' development and wellness. Financial and institutional support for faculty development is key for the vibrancy of any higher education institution. Examples of individualization would be e-modules, libraries of podcasts/videos to allow greater choice, and 1:1 development programming (e.g., mentorship, coaching, etc.).

2. Interprofessional and interdisciplinary learning is crucial

Interprofessional and interdisciplinary approaches to faculty development are important for a diverse Faculty and a team-based healthcare world. Cross pollination and inspiration can be found when open-minded individuals are brought together for the common purpose of teaching. Through common experiences, faculty members can learn to value and model interprofessionalism.

3. Individuals must be supported to find their niche

While any individual hired onto faculty is expected to teach, they may vary in their execution. How they teach and where they teach varies widely. What teaching environment will they thrive in? Some will be excellent clinical supervisors, while others may be best at didactic teaching. A key role of the PFD is to help faculty find their teaching and scholarly aptitudes.

4. Faculty development can and should be evidence-driven whenever possible

In the absence of high-quality health sciences-education evidence, consideration should be given to how to contribute to this education-sciences literature by investing in scholarship as part of an innovation. We, the authors and former the PFD leaders, have always sought to encourage faculty members to go beyond implementing their curricular or educational innovations and to conduct evaluations and/or research projects around their teaching and engaging in the scholarship of teaching and learning (Boyer, 1996).

5. Faculty development is dynamic and requires ongoing review, reiterations, growth, and development

The world of health sciences is never static. Learners change, core teaching changes, and both new and established faculty are called to be both stable yet evolving. Faculty members, especially when given teaching support, are agile and resilient. They will pivot well if programs such as PFD lead in pivoting with them as was evidenced in the pandemic. Rotational leadership, as has been the case for the PFD, can create a rich succession of new ideas and

allow each leader to leave indelible and sequential improvements on a portfolio. Understanding an innovation and gleaning the essence of it to foster the next iteration can serve the academy very well.

We are extremely proud of how the McMaster FHS has invested in creating a structure that allows for professional development to be done by and for teachers and scholars within our university. We hope that these lessons from our experiences may serve to help others who follow us to continue to evolve the portfolio of faculty development within the FHS, and in the rest of the world.

NOTES

1. The Program for Education Research and Development (PERD) would later be rebranded as the McMaster Education Research, Innovation and Theory (MERIT) unit. Today, it is a leading health professions education unit with a number of scientists hired within departments and situated within MERIT, similar to how PERD was originally structured.
2. A portfolio-based approach is where participants assemble a portfolio of works which scaffold their development and learning while providing samples of their work, much like an artist's portfolio.
3. The term "distributed sites" refers to distributed sites such as the Niagara Regional Campus, Waterloo Regional Campus, and MacCARE program sites.
4. A Clinician Teaching Unit (CTU) is a learning structure within the clinical setting that aggregates learners within a specific discipline during a specific time period to provide in-unit training during clinical rotations (e.g., a surgical rotation at a particular hospital ward may have a fellow, junior residents, medical students, and physician assistant students all within a CTU for a given month of time. This duration is usually at least one month.).
5. The CSBL houses a core component of training for health professionals including high-fidelity simulation and the standardized patient program. The CSBL serves all three schools of health sciences (medicine, nursing, rehabilitation sciences) and all levels of learners (bachelor's, master's, professional students, residents, fellows, and practicing individuals). Read more: <https://simulation.mcmaster.ca/>.
6. Continuing Health Sciences Education became the hub for providing education to those in practice within the health sciences. Read more about CHSE here: <https://chse.mcmaster.ca/>.
7. PERD evolved into MERIT. MERIT continues to support education research, innovation, and theory-generation work. Read more about MERIT here: <https://merit.mcmaster.ca/>.

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