

Implementing an evidence-informed faculty development program

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Abstract

Objective To establish an evidence-informed faculty development program.

Design Survey derived from a needs-assessment tool.

Setting Department of Academic Family Medicine at the University of Saskatchewan, which is geographically dispersed across the province.

Participants Full-time faculty members in the Department of Academic Family Medicine at the University of Saskatchewan.

Main outcome measures Creation of an evidence-informed faculty development program.

Results The response rate was 77.3% (17 of 22). The data were stratified by 2 groups: faculty members with less than 5 years of experience and those with 5 or more years of experience. Those with less than 5 years of experience rated the following as their top priorities: teaching, developing scholarly activities, and career development. Those with 5 or more years of experience rated the following as their top priorities: administration and leadership, teaching, and information technology. Although there were differences in overall priorities, the 2 groups identified 17 out of 54 skills as important to faculty development.

Conclusion The results of the needs-assessment tool were used to shape a dynamic, evidence-informed faculty development program with full-time faculty in the Department of Academic Family Medicine at the University of Saskatchewan. Future programs will continue to be dynamic, faculty-centred, and evidence-informed.

EDITOR'S KEY POINTS

- This study used the principles of transformative research, which engaged full-time faculty members and gave them the opportunity to influence and shape the creation of a faculty development program.
- Evidence-informed learning should be a priority in faculty development programs, and needs assessments of learning should be undertaken on a regular basis.
- Great effort is needed to facilitate the process of producing an evidence-informed faculty development program that builds on the strengths of faculty members and subsequently provides them with opportunities to obtain and enhance job-related skills.

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Instauration d'un programme de perfectionnement des professeurs basé sur des données probantes

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Résumé

Objectif Mettre en place un programme de perfectionnement des professeurs basé sur des données probantes.

Type d'étude Enquête à partir d'un outil d'évaluation des besoins.

Contexte Le département universitaire de médecine familiale de l'Université de la Saskatchewan, qui est dispersé un peu partout dans la province.

Participants Les professeurs plein temps du département universitaire de médecine familiale de l'Université de la Saskatchewan.

Principal projet à l'étude La création d'un programme de perfectionnement des professeurs basé sur des données probantes.

Résultats Le taux de réponse était de 77,3% (17 sur 22). Les données ont été réparties entre 2 groupes : les professeurs ayant moins de 5 ans d'expérience et ceux qui avaient au moins 5 ans d'expérience. Ceux qui avaient moins de 5 ans d'expérience choisissaient comme principales priorités : enseignement, développement d'activités de recherche et développement de la carrière. Ceux qui avaient au moins 5 ans d'expérience avaient comme principales priorités : administration et leadership, enseignement et technologies de l'information. Malgré certaines différences pour l'ensemble des priorités, les 2 groupes identifiaient 17 compétences sur 54 comme importantes pour le développement des professeurs.

Conclusion Les résultats de l'outil d'évaluation des besoins ont servi à façonner un programme de perfectionnement des professeurs basé sur des données probantes, et ce, de concert avec les professeurs plein temps du département universitaire de médecine familiale de l'Université de la Saskatchewan. Les programmes futurs continueront d'être dynamiques, axés sur les professeurs et basés sur des données probantes.

POINTS DE REPÈRE DU RÉDACTEUR

- Cette étude a utilisé les principes de la recherche transformative, qui a recours à des professeurs plein temps et leur fournit l'occasion d'influencer la création d'un programme de perfectionnement pour les professeurs et d'y contribuer.
- L'apprentissage basé sur des données probantes devrait être une priorité dans les programmes de perfectionnement des professeurs, et l'évaluation des besoins d'apprentissage devrait être refaite périodiquement.
- Il y a lieu de consacrer beaucoup d'efforts à la création d'un programme de perfectionnement des professeurs qui soit basé sur des données probantes et qui s'inspire des forces des professeurs pour ensuite leur procurer des occasions d'acquérir et d'améliorer des habiletés en lien avec leur travail.

Cet article a fait l'objet d'une révision par des pairs.
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Faculty development programs in academic family medicine are not novel. Many North American academic family medicine programs facilitate access to workshops in developing teaching skills and to career development support from a centralized source. The programs available have most often been created by drawing from the literature on adult education and, in particular, that of medical education. The process has tended to have a somewhat paternalistic, “top-down” feel to it, with the institution playing the role of parent or educational expert.¹ However, a centralized, predetermined faculty development program is unlikely to meet the unique needs of academic family medicine programs in the presence of ever expanding distributed medical education.

As the field of faculty development in academic family medicine has evolved, findings have demonstrated the need for consultation with faculty members.^{2,3} Quirk et al determined that faculty members in academic family medicine request “a more evidence-based approach to faculty development.”⁴ Atchison described the importance of incorporating the “intangible” aspects of an organization’s membership, such as mission and values, into program development to help facilitate the process.⁵ If the “tangibles” or “black and white” elements guide the process, it might lead to a loss of richness for membership, which in turn leads to less commitment to a change in concepts or programs.⁵

Context

The Department of Academic Family Medicine at the University of Saskatchewan is geographically dispersed (Saskatoon, Regina, and Rural Program) and comprises 6 divisions (Saskatoon, Regina, Rural and Regional Program, Emergency Medicine Program, Northern Medical Services, and the Research Division).⁶ Faculty members consist of family physicians and researchers who teach postgraduate residents.

The *Standards for Accreditation of Residency Training Programs* indicate that faculty members should be knowledgeable about the principles of experiential learning and other appropriate educational theory and techniques, and this must be ensured through an effective program of faculty development.⁷ The document goes on to indicate that departments of family medicine must plan and implement faculty development activities that are appropriate to the context of their development and to the department’s mission, goals, and objectives.⁷ Thus, faculty development should be faculty-centred and based on the needs of full-time faculty, and should encourage a commitment to the faculty’s self-directed and lifelong learning.⁷ Subsequent to this, faculty development should be actively supported and promoted by ensuring that appropriate faculty development opportunities are available.

To integrate the *Standards for Accreditation of Residency Training Programs* into the context of the College of Medicine and the University of Saskatchewan, the Department of Academic Family Medicine faculty developed a strategic plan in which the fifth strategic direction stated the following: “We will increase our emphasis on faculty development.”⁸ Faculty development, in this case, involves promoting growth of faculty members and enabling them to obtain and enhance job-related skills in the areas of clinical practice, teaching, scholarly activity, and administration.^{9,10} Before the process began, it was believed that the skills training provided would lead to capacity building only if the faculty members were partners in the process of developing a curriculum that recognized each faculty member as an expert regarding his or her own self-learning needs.¹¹⁻¹³ If faculty development programs do not meet the needs and identified concerns of the individuals that they were designed to serve, they will be disregarded.¹⁴ Great efforts are needed to facilitate the process of producing an evidence-informed faculty development program that builds on strengths and subsequently provides opportunities for the full-time faculty members to acquire the desired skills.¹⁴

Participation in the development of the curriculum by full-time faculty is critical for meaningful faculty development programs.¹⁵ On the other hand, unclear goals for faculty development in combination with a lack of transparency about the process stimulate resistance to faculty development.¹⁴

The combination of action research, participatory evaluation, and engagement of faculty members in designing an evidence-informed faculty development program is integral to enhancing skill development, while at the same time addressing the accreditation standards and requirements.^{13,14,16} Reflective practice, which includes the process of action and reflection, facilitates the ongoing evaluation required to ensure that skill acquisition continues to meet the needs of full-time faculty members over time. The empowerment resulting from this provides each faculty member with a feeling of mastery over their personal development.^{16,17}

The purpose of this research endeavour was to establish an evidence-informed faculty development program with full-time faculty members in the Department of Academic Family Medicine at the University of Saskatchewan.

METHODS

This endeavour used the process and principles of transformative action research.¹³ Transformative action research is a participatory process, providing individuals (in this case the full-time faculty) with the opportunity to

influence and shape a program that results from reflection upon their data and, subsequently, to have these results put into action (in this case the design of an evidence-informed faculty development program).^{13,18}

The assessment of learning needs has been identified as the starting point in designing formalized educational systems for professional improvement.¹⁸ The needs-assessment tool, from the Faculty Development Department at the University of Toronto in Ontario, was circulated to the members of the Faculty Development Committee to establish relevance and clarity, which resulted in it being adapted. Before the implementation of the assessment tool, permission was sought and an exemption obtained from the University of Saskatchewan's Behavioural Research Ethics Board. Subsequently, the assessment tool was distributed to all full-time faculty members at the Faculty Development Retreat in the fall of 2007, and it was electronically circulated to those who were unable to attend the retreat. Faculty members were invited to rate and rank their perceived needs on the scales provided and return the assessment tool in a brown envelope or send it electronically to the Research Division.

Academic competence can be defined as a multidimensional construct composed of the learner's behaviour, attitudes, and skills that contribute to academic success.¹⁹ The concept of *academic competencies* implies the development of abilities via learning, intellectual discourse, and the successful achievement of these competencies that are judged according to measurable outcomes.²⁰ In the needs-assessment instrument, 54 skills were grouped under 5 competency categories: teaching and learning; developing scholarly activity; information technology; administration and leadership; and career development. Eight other broad competencies that reflected the nature of the program and the context were also included: international medical graduate education; distributed education; core competency curriculum for learners; core competency for family medicine educators; clinical skills; aboriginal health education; needs of rural and underserved populations; and multiculturalism, immigrant health, or global health.

Faculty members were asked to rate each skill on a 3-point scale (1=very important; 2=somewhat important; 3=unimportant). They could also rate the item as not applicable to themselves. They were also asked to rank the 5 competencies and the overall "other" category in order of importance to them.

Data were entered into SPSS, version 15, for descriptive analysis by the Research Division at the university. The analysis was done with all the participants (aggregated) and then with the faculty members in the Department of Academic Medicine divided into 2 categories: members who had had their faculty appointments

for less than 5 years and members who had had their faculty appointments for 5 or more years.

RESULTS

At the time of the survey, there were 22 full-time faculty members in the department. The participation rate was 77.3% (17 of 22). Of the participants, 52.9% (9 of 17) were faculty members with less than 5 years of academic experience, and 47.1% (8 of 17) were faculty members with 5 or more years of academic experience. **Figures 1 and 2** show the top 3 academic competencies identified as important by the 2 groups and include the number of skills within each competency that at least 75.0% of respondents rated as very important or somewhat important to develop.

The skills identified as very important or somewhat important to develop by at least 75.0% of the group as a whole are shown in **Table 1**. In total, 17 of the 54 skills in the competency categories were considered important by both groups. In addition, 75.0% of faculty staff with less than 5 years of experience identified 37 of 54 skills as important to develop relative to 16 of 54 of the skills identified as important by faculty members with 5 or more years of experience.

With respect to the ratings of the other academic competencies, most faculty members in both groups indicated that these were very important or somewhat important (**Table 2**), with the exception of clinical skills among respondents with 5 or more years of experience.

DISCUSSION

The results showed that there were differences in personal priorities and the desire for skill acquisition within the faculty. In terms of overall competencies, the priorities were different for new faculty and senior faculty; however, teaching remained a priority for faculty over the years. As would be expected, administration and leadership took on a higher priority with advancement in the academy.

However, it was clear that regardless of experience, there remained a desire for learning across all competencies by senior faculty. The results indicated that newer faculty members identified numerous skills as important to develop, while senior faculty members had fewer priorities. This provided valuable information for the creation of an evidence-informed faculty development program, as our limited resources could be appropriately targeted to those skills identified as important by most. The results speak to the needs of newer faculty members, who might be overwhelmed with the scope of the position and the breadth of skills to be

Figure 1. Top 3 academic competencies identified by faculty members with less than 5 years of academic experience: $N=9$.

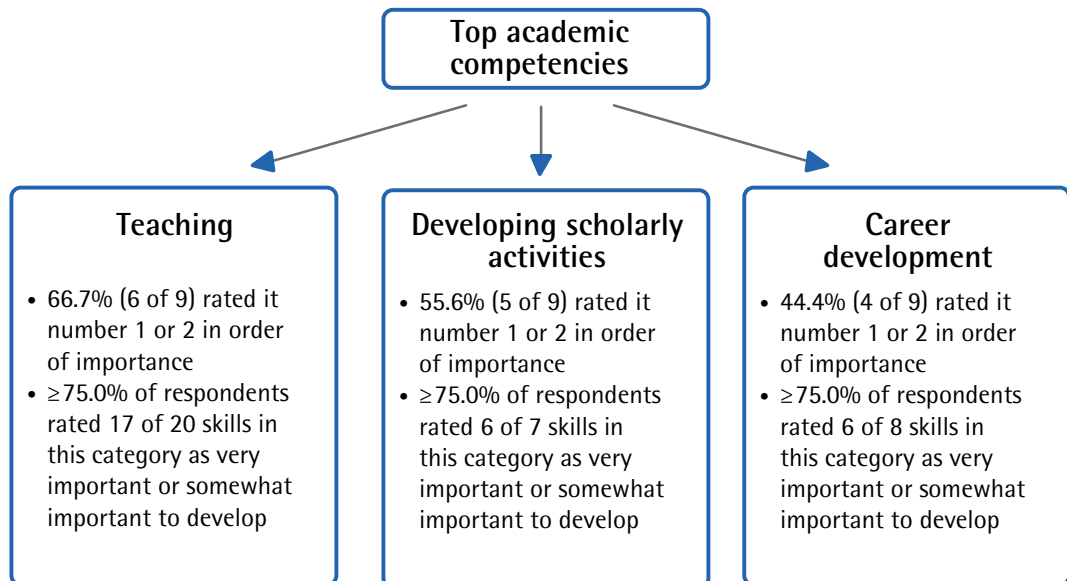
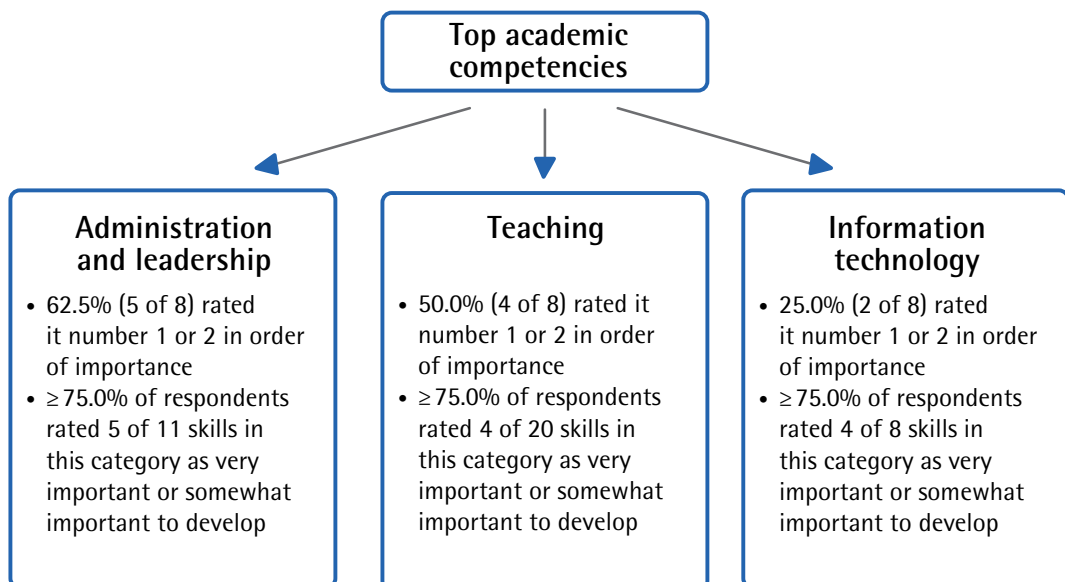


Figure 2. Top 3 academic competencies identified by faculty members with 5 or more years of academic experience: $N=8$.



acquired, and who might require guidance with setting priorities for their own career development. At the same time, addressing the changing needs of more senior faculty might contribute to the development of leadership

within the department and help identify skills that are considered “lifelong” across the career of a faculty member that need to be addressed more frequently in the curriculum.

With respect to the other competencies that relate to this unique faculty and context, it was clear that the faculty rated them as highly important. The achievement of consensus as to the importance of these competencies was necessary in order to continue to work toward many of the department objectives that were based on these competencies.

To date, the evidence-informed professional improvement program that resulted from this needs-assessment process and that was subsequently implemented facilitated access to the development of skills in the following areas: teaching (eg, examination of learners in difficulty, using the RIME [reporter, interpreter, manager, educator] method of student evaluation, integrating CanMEDS–Family Medicine competencies, knowledge of conflict resolution, and marking of simulated office orals and short-answer management problems); administration and leadership (eg, interpersonal effectiveness, authentic leadership); and developing scholarly activities (eg, scholarly activity retreats for residents and faculty members).

Each of the professional improvement programs was evaluated. In addition to this, a second assessment of learning needs will be done in the fall of 2012.

The learning needs assessment was facilitated by faculty and staff in the Department of Academic Family Medicine. The design and implementation of the evidence-informed faculty development program were made possible through funding from the Department of Academic Family Medicine and Faculty Affairs of the College of Medicine at the University of Saskatchewan. This was an important collaboration, as many of the desired speakers and facilitators were from outside of Saskatchewan.

We are currently in the process of engaging the community faculty in a similar process; thus, developing a faculty-centred, evidence-informed faculty development program that is designed to enhance the skills needed by the community faculty in the

Table 1. Skills in competency categories identified as very important or somewhat important to develop by at least 75.0% of respondents

COMPETENCY CATEGORY	SKILLS WITHIN COMPETENCY CATEGORIES IDENTIFIED AS VERY IMPORTANT OR SOMEWHAT IMPORTANT BY RESPONDENTS
Teaching and learning	4 of 20 skills: <ul style="list-style-type: none"> • Teaching clinical reasoning skills • Teaching professionalism • Teaching communication skills • Teaching evidence-based medicine
Developing scholarly activity	3 of 7 skills: <ul style="list-style-type: none"> • Writing articles and abstracts • Writing ethics proposals and grant applications • Research and evaluation skills training (eg, statistics)
Information technology	4 of 8 skills: <ul style="list-style-type: none"> • Knowledge of presentation software • Using online research tools; collecting data • Accessing medical information online tools • Presentation skills for national and international conferences
Administration and leadership	4 of 11 skills: <ul style="list-style-type: none"> • Conflict management and negotiation • Team building • Organizational management • Family medicine accreditation standards
Career development	2 of 8 skills: <ul style="list-style-type: none"> • Career planning and promotion • Wellness (stress reduction, time management, work-life balance)

Department of Academic Family Medicine at the University of Saskatchewan.


Table 2. Percentage of respondents who indicated that various academic competencies were very important or somewhat important

COMPETENCY	% OF RESPONDENTS WHO INDICATED THAT THE COMPETENCY WAS VERY OR SOMEWHAT IMPORTANT	
	RESPONDENTS WITH < 5 YEARS' EXPERIENCE (N = 9)	RESPONDENTS WITH ≥ 5 YEARS' EXPERIENCE (N = 8)
International medical graduate education	100.0	87.5
Distributed education	88.9	75.0
Core competency curriculum for learners	88.9	100.0
Clinical skills	77.8	37.5
Aboriginal health education	100.0	100.0
Needs of rural and underserved populations	88.9	87.5
Multiculturalism, immigrant health, or global health	88.9	75.0

Limitations

The limitation of this study is that the results are not generalizable; however, the processes are transferable.

Conclusion

The results of the learning needs assessment were used to shape a dynamic, evidence-informed faculty development program with full-time faculty in the Department of Academic Family Medicine at the University of Saskatchewan. Future programs will continue to be dynamic, faculty-centred, and evidence-informed. 

Dr Danilkewich is Associate Professor, **Dr Kuzmich** is Assistant Professor, **Ms Greenberg** is Clinical Faculty, **Dr Gruszczynski** is Assistant Professor, **Dr Hosain** is Assistant Professor, and **Dr McKague** is Associate Professor, all in the Department of Academic Family Medicine at the University of Saskatchewan in Saskatoon. **Ms Bonnycastle** is Clinical Teaching Development Coordinator for the Education Support and Development program at the University of Saskatchewan. **Ms McKay** is Coordinator, Research Division, and **Dr Ramsden** is Associate Professor and Director, Research Division, both in the Department of Academic Family Medicine at the University of Saskatchewan.

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Contributors

Dr Danilkewich made substantial contributions to the concept of the study, the collection of data, and reviews of the manuscript. **Dr Kuzmich** made substantial contributions to the concept of the study, the writing of the manuscript, and reviews of the manuscript. **Ms Greenberg**, **Dr Gruszczynski**, **Dr Hosain**, **Dr McKague**, and **Ms Bonnycastle** made substantial contributions to the concept of the study and reviews of the manuscript. **Ms McKay** made substantial contributions to data entry, data analysis, writing aspects of the manuscript, and reviews of the manuscript. **Dr Ramsden** was involved in all aspects of the project, from conception of the study to writing of the manuscript.

Competing interests

None declared

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