A Teaching Scholars Program to Develop Leaders in Medical Education

Yvonne Steinert, PhD, Louise Nasmith, MD, Peter J. McLeod, MD, and Larry Conochie, MD

Abstract

The authors describe a year-long faculty development initiative to develop leaders in medical education. The Teaching Scholars Program for Educators in the Health Sciences at McGill University enables faculty to improve their educational knowledge and skills while maintaining their clinical, teaching, and research responsibilities. The program, tailored to the participant’s individual needs, consists of five main components: two university courses; independent study; participation in faculty-wide faculty development workshops and medical education rounds; a monthly seminar; and attendance at a national or international conference or course. Since its inception in 1997, 22 faculty members have completed the program; four are currently participating in it. This report discusses the experience of 15 scholars who completed the program by September 2000. Evaluations indicate that the scholars achieved most of their stated objectives. The university courses provided a foundation in educational principles and methodology; independent study allowed them to work on educational projects relevant to their disciplines; and the monthly seminars, faculty development workshops, and outside courses offered opportunities for skill acquisition and reflection. Participants also appreciated the opportunity to meet others interested in medical education and to become aware of available educational resources. A year after completing the program, many had joined new educational committees, taken on new leadership roles in medical education, and developed new courses for students and residents. Some of their projects had been presented at national meetings and were being prepared for publication. Two scholars had pursued further study at a master’s level. Despite the ongoing challenge of protecting time for educational pursuits, this program has been beneficial in helping to develop educational leaders in the Faculty of Medicine.


Faculty development programs have become increasingly popular as health care professionals seek to upgrade their skills in teaching, research, and administration. Common faculty development formats include workshops or seminars, short courses, sabbaticals, and year-long fellowships. Although workshops have the stated advantage of increasing motivation for teaching and learning, and promoting skill acquisition, they are often limited by their brevity, lack of built-in follow-up, and limited ability to sustain change over time. On the other hand, faculty development fellowships or sabbaticals, which allow for more in-depth learning, are usually “off-site” and require time away from ongoing responsibilities. Recruitment for such programs is also difficult because of their potential cost and time requirements.

In an attempt to move beyond workshops and seminars, and to make more intensive training available to our faculty members, we developed the Teaching Scholars Program for Educators in the Health Sciences at McGill University. Our program, which was inspired by a program at the University of North Carolina, was designed to create leaders in medical education. Rubeck and Witzke define faculty development as the “enhancement of educational knowledge and skill of..."
faculty members so that their educational contributions can extend to advancing the educational program rather than just teaching with it." Our program falls within this definition of faculty development, and that of Cusimano and David, who stress the need to "educate the educators" in the health professions.

Our teaching scholars program differs from other programs described in the literature in that we emphasize educational leadership, faculty development, and a scholarly approach to teaching and learning rather than the improvement of specific teaching skills. Participants make use of available university resources (e.g., courses outside the Faculty of Medicine) and attend a national or international meeting on medical education. Our program is similar to others in that we encourage peer support and require the development of an educational project or research study. A unique feature is that scholars maintain their other professional responsibilities while participating in this program.

Our goal in this article is to describe the teaching scholars program and to discuss the program's successes and limitations in the hope of encouraging others to consider this model of faculty development.

**The Program**

Goals

The teaching scholars program (TSP) was designed to enable faculty members to improve their educational knowledge and skills while maintaining their clinical, teaching, research, and administrative responsibilities. In particular, this year-long program, which has been carried out since 1997, aims to promote the professional development of health science educators by increasing their expertise in developing educational programs and assuming leadership roles in education. The program emphasizes four major themes: curriculum design and innovation; effective teaching methods and evaluation strategies; program evaluation; and research in medical/health sciences education.

Curriculum

The curriculum is tailored to the needs of the individual participants and consists of five main components:

- Two university courses, in the Departments of Education, Epidemiology, or Management
- Independent study, devoted to curriculum design, the improvement of teaching methods and evaluation strategies, program evaluation, and research in medical/health sciences education
- Participation in faculty-wide faculty development workshops and medical education rounds
- A monthly seminar, designed to review educational issues emanating from the university courses and to discuss independent projects
- Attendance at a national or international conference or course

Each scholar is expected to devote a minimum of two half-days per week to complete the program's requirements. Funding from a private foundation covers tuition costs for the university courses, travel to an outside meeting, and support for the scholars' research projects. This program does not provide salary support. At the end of the academic year, the scholars present their projects at faculty-wide medical education rounds.

Faculty

The program faculty includes three physicians and one clinical psychologist, all of whom have a specific interest in medical education and devote part of their professional time to faculty development in the Faculty of Medicine. Each of these individuals also serves as an advisor to one of the scholars.

Participants

Letters describing the TSP are sent to department chairs, program directors, and faculty members involved in medical education. Interested individuals submit an application that describes their goals for the program, their intended educational project or research study, and their perceptions of how involvement in the program will benefit their division or department. Two letters of reference, including one letter of support from the departmental chair, are also required. A selection committee, nominated by the dean, reviews all applications. Successful applicants are chosen based on their previous educational contributions, their stated interest in medical education, the potential value of their independent study to their department, and the anticipated benefit of their participation to the educational mission of the Faculty of Medicine.

At the time this report was written, 22 individuals had completed the TSP since its inception in 1997, and four others were currently involved in the program. This report discusses the experiences of the 15 faculty members who had completed the program by September 2000. These scholars were from the Departments of Medicine (three), Surgery (four), Family Medicine (two), Pediatrics (four), Anesthesia (one), and Otolaryngology (one). Fourteen were practicing clinicians, and one was a basic scientist. All of the scholars had been actively involved in teaching medical students and residents and had been faculty members for an average of seven years (with a range from one to 20 years). Four of the scholars held administrative positions during their TSP year.
one was a department chair; two were residency program directors; and one was an undergraduate program director. In addition, three were undergraduate course directors.

Incentives to participate in the TSP included support and encouragement from the chair of the department, a personal interest in medical education and professional development, and a desire to address an identified curricular need.

**Evaluation**

Evaluation data have been collected for three cohorts of scholars. Two major questions guided the program’s evaluation process: (1) What were the scholars’ and advisors’ perceptions of the program’s strengths and limitations (i.e., process evaluation)? (2) Were the scholars able to accomplish what they had set out to do (i.e., outcome evaluation)?

The evaluation data, which are qualitative, consist of ongoing feedback from the scholars and members of the program committee, written notes recorded during the monthly seminars, and a comprehensive, written evaluation completed by each scholar at the end of the TSP year and one year after program completion. The written questionnaires, which were designed jointly by the scholars and the program faculty, aimed to assess the scholars’ appraisal of each component of the program, their perceptions of the impact of the TSP on themselves and their departments, and their recommendations for change.

**Achievement of Personal Goals and Objectives**

The scholars’ personal goals at the outset of the program can be classified into three main categories: (1) a desire to increase their knowledge about educational theory and methods; (2) a desire to upgrade/improve their teaching and administrative skills; and (3) a desire to learn how to transmit this increased knowledge and skill to their peers.

At the end of each year of the program, the scholars felt that they had been able to achieve their goals related to teaching and learning. That is, they reported that their educational knowledge and skills had increased and that they had become more cognizant of how to transfer this information to their peers. They also believed that they now had a more structured approach to teaching and learning, as well as a context in which to place their daily experience.

As one individual stated: “We now have a framework to understand what we do. We have advanced in the path from amateur to professional.” Examples of new educational knowledge included the need for clearly identified learning objectives and outcomes; the use of concept maps for curriculum design; an appreciation of diverse learning styles and principles of adult learning; methods of student and resident assessment; and principles of program evaluation. Examples of improved teaching skills included interactive lecturing, small-group teaching, and the use of role-plays and videotape reviews to facilitate learning. The two scholars who were interested in improving their administrative skills felt that they would need to devote more time to this part of their learning experience after completion of the TSP.

Other benefits of the program, from the scholars’ perspective, included the opportunity to meet with like-minded people, to become part of a “network,” and to become more aware of available educational resources. They viewed this program as a reaffirmation of the importance of teaching in a university setting and felt that their own interest in medical education had been renewed or further stimulated. One individual commented that this program allowed him “to expand his horizons and now see education as a possible career track”; another said that she now sees her practice “through education-colored glasses.”

As the program’s advisers, we concurred with the scholars’ view that their knowledge and skills about educational issues had improved. In particular, we were impressed by their changes in language and their approaches to educational problems. Lingaard and Haber7 have said that “the language people use makes possible the thoughts they can have,” and that language shapes ideas and the practices that follow. The scholars’ increased understanding of educational terms (e.g., learning outcomes and objectives; concept maps) helped them to modify their educational practices. They also learned to appreciate the link between evaluation strategies and initial learning goals, the need for reliable and valid methods of assessment, and the distinction between formative and summative evaluation. In addition, we noted that the scholars, all of whom regularly taught students and residents, had not been aware of available educational resources, either in the Faculty of Medicine or in the university at large. Networking with other individuals interested in medical education was seen to be an important benefit of the program.

One year after program completion, all the scholars reaffirmed that their goals had been met and reported that the benefits of the program fell into four main areas. The TSP gave them opportunities to (1) gain a greater understanding of educational theories and principles; (2) meet other individuals interested in medical education; (3) develop new directions in their professional careers; and (4) design and implement undergraduate and postgraduate programs of benefit to their departments and the Faculty of Medicine. Examples of these outcomes are described in the following sections.

When asked to specify the program’s limitations, the scholars mentioned a lack of time as the major challenge. All of the scholars talked about the difficulty of freeing themselves up from their clinical and administrative responsibilities and maintaining their “protected time,” for both their course work and their independent projects. Two scholars recommended that the TSP become a two-year program, and two others reflected on the need for more
support from their department chairs. As program advisers, we observed that time was also an issue, especially for scholars whose clinical responsibilities were intense regardless of attempts to set aside time for the program.

Benefits and Limitations of the University Courses

Most of the scholars opted to take courses in the university's Faculty of Education. Thirteen participated in Teaching and Learning in Higher Education, four registered for Cognition and Learning, and three took Instructional Design. Other popular courses in the Department of Education included Foundations of Adult Education, The Adult Learner, and Values and Morals in Education. One scholar took a course on cross-cultural management, and another completed a distance-education course on creating computer software.

Feedback from the scholars, both at the end of the year and one year later, underscored the value of these courses. From their perspective, the courses had direct applications to the medical curriculum and to their own projects. For example, the course called Teaching and Learning in Higher Education was particularly valuable to the scholars in that it emphasized the principles of course design (e.g., stating objectives; choosing instructional methods; designing course evaluations) and allowed each scholar to develop a course relevant to his or her discipline. The following comments highlight the perceived benefits of this course: "The course gave me an overview of the whole process of designing a course from start to finish. I learned the jargon and I applied it!" "This course was very useful in introducing novel concepts in the development and delivery of teaching material. It encouraged me to experiment with approximately 25 different strategies and I was able to perfect my ability to use them in teaching." In practical terms, this course helped 12 of the scholars develop new courses for medical students or residents, which were implemented and evaluated (e.g., a trauma course in orthopedics; a "life in medicine" course for undergraduate medical students; a computer-based module in anesthesia). Beyond this, one of the scholars revised his journal-club format based on his involvement in this course and was asked to be a group leader for a university-wide workshop on teaching and learning. Eight of the scholars developed additional courses based on their first initiatives. These new initiatives have included a core curriculum for pediatrics, family medicine, and emergency medicine residents; a continuing medical education (CME) course in evidence-based medicine; and a surgical skills course for medical students.

Benefits and Limitations of the Independent Study

The goal of the independent study was to encourage the scholars to address a departmental or divisional need, to reinforce the principles learned in the university courses, and to promote scholarly activity in education. Each of the scholars chose a topic that reflected his or her own discipline and area of interest. The topics selected are outlined in List 1.

From the scholars' perspective, the independent projects were extremely useful and relevant to their own settings and allowed them to work on topics that had been of interest to them for a long time. The projects reinforced course concepts and influenced the scholars' perceptions of the value of research in medical education. This sentiment was most obvious in the following statement made by a clinician researcher: "I would now like to transfer my research expertise to education and pursue this line of research as my career path." Most of the scholars presented their projects, or selected components, to their colleagues at McGill Medical Education Rounds. Eight of the scholars presented the results of their projects at national/international meetings (e.g., the Canadian Association for Medical Education; the annual meeting of the Royal College of Physicians and Surgeons of Canada); five are in the process of preparing their course descriptions and evaluations for publication, and two have published aspects of their independent study. Four of the scholars designed research grant proposals based on their independent projects and were successful in obtaining funding. Examples of these grant proposals included an examination of learning styles among residents; the use of Web-based learning in critical care; and the evaluation of family medicine residents' knowledge and skills of musculoskeletal problems.

From the advisors' perspective, completion of the projects within the one-year time frame was a major challenge. Not surprisingly, the scholars' project objectives changed as they became more knowledgeable about educational theory and research. As well, budgeting time for project completion was difficult, and many of the scholars finished their projects several months after the completion of the academic year. On the other hand, the one-year follow-up further highlighted the value of the independent projects and their relevance to departmental needs, as these original courses continued to thrive and evolve.

Benefits and Limitations of the Monthly Seminars

The scholars and advisors met in a monthly, two-hour session to discuss the scholars' independent projects, to review issues and concepts addressed in the university courses, and to debate issues of common interest (e.g., the role of adult learning in residency education; the use of role plays and videotape reviews to facilitate learning; the role of theory in the design of faculty development activities). The meetings were also designed to allow for group building and support, and to give the scholars an opportunity to reflect on edu-
All of the scholars appreciated the opportunity to participate in interactive discussions of educational topics, to reflect on teaching and learning, and to present their projects. They also valued the collegial atmosphere of the meetings, the escape from other professional obligations, and the peer support. As one individual stated: “The excitement...
of the group is contagious.” A nother made this observation: “Where else do I get an opportunity to close the door and talk about students and residents?”

Benefits and Limitations of the Faculty Development Workshops and Medical Education Rounds

The scholars all participated in faculty-wide faculty development workshops, attending an average of 3.5 workshops during the year. At the beginning of the program, the scholars all participated as group members; by the end of the year, the majority had participated as co-leaders or facilitators, and had had the opportunity to be involved in the design and delivery of a workshop activity. A series of six workshops was offered each year. Topics included small-group teaching, writing for excellence, effective lecturing and audiovisual aids, and teaching in the ambulatory setting. A ll of the scholars valued this experience and commented on the benefit of seeing “what goes on behind the scenes.” T he workshops gave the scholars an opportunity to observe experts in action, to acquire new skills, and to better understand the process of designing a faculty development workshop. Six of the scholars organized faculty development activities for their own divisions or departments, and four conducted educational workshops at scientific meetings organized by their medical specialties.

T he scholars also participated in the faculty-wide medical education rounds that are offered four times a year. A ll of the scholars felt that their participation in these rounds was of benefit to them, especially because it gave them the opportunity to meet colleagues with similar interests. A s one individual commented: “I never knew so many people in our Faculty [of Medicine] were interested in medical education!” I ndeed, the value of networking and meeting colleagues with similar interests was highlighted by all of the scholars.

Benefits and Limitations of Attending Outside Conferences/Courses

T he scholars were encouraged to attend national or international conferences/courses, to increase their skills in specific areas, and to participate in scientific meetings devoted to medical education. T wo of the scholars attended a course on management skills for health care professionals; six attended different medical education meetings in Canada and the United States, and one attended a course on evidence-based medicine in the United Kingdom; two scholars visited another university site that had direct relevance to their project development.

P articipation in outside meetings influenced the scholars in a number of ways. F or example, two individuals became members of the association that sponsored the meeting, and two other scholars started to attend the meeting on an annual basis. A nother scholar developed an interest in peer evaluation following attendance at an education meeting on the topic of evaluation and was asked to participate in a faculty committee on teaching dossiers as a result. O ne scholar developed a new teaching program at M cGill on evidence-based surgery following his visit to a course on this topic, and another decided to pursue a degree in business administration following his involvement in both the T SP and the course on executive management skills.

Overall Impact

F ollow-up data one year later indicate that the scholars continued to achieve changes in specific teaching practices (e.g., resident evaluation), had developed new courses (seven to date), had designed faculty development activities for their own departments, and functioned as a resource for their colleagues and peers. A s one scholar stated, “My education books and course manuals are being used on a regular basis by my colleagues and residents.” T he scholars also had successfully applied for grants in medical education, continued to present at educational meetings (e.g., T he Ottawa Conference on M edical Education), and assumed new leadership roles in medical education. T en of the 15 scholars had joined new education committees at M cGill; two had become active in national committees; and six had taken on new leadership roles in medical education, including that of postgraduate program director in surgery and associate dean for CME. A ll of the scholars have continued to participate in faculty-wide faculty development activities and medical education rounds, and they are frequently asked to consult on educational projects in the Faculty of Medicine. T wo scholars have also pursued further study at a master’s level, one in education and one in administration. T he following quote reflects the perceived impact of the program on one individual: “T he T SP has helped me start a new career path. S ince completion, I have become the undergraduate program director in my department, I have revised the ambulatory care teaching program, designed a survival handbook for students, introduced a problem-based lecture series for students, and developed a new journal club for residents. T ogether with another scholar, I have developed a faculty development workshop on leadership and change, and I am conducting a research project on problem-solving in medical students Without the T SP, I could not have accomplished all that I did in the last year.”

D iscussion

A s this report indicates, our Teaching Scholars Program designed to promote educational leadership in medical education can be considered successful based on participant feedback, follow-up data, and the assessments we made as
program advisors. To date, faculty development programs for physician educators have primarily consisted of year-long fellowships or master's degree programs.\(^4\) Integrated, longitudinal programs such as the one described in this article are not common.\(^6,11\) Moreover, the majority of similar programs have primarily focused on teaching improvement.\(^12\) This program was designed to develop leaders in medical education.

This experience has demonstrated that faculty members can increase their skills in particular areas while maintaining most of their clinical and research responsibilities, and that program goals can be achieved through a different model of faculty development. In many ways, the TSP features many of the benefits of fellowships described by Ullian and Stritter: the availability of faculty expertise; multiple opportunities for feedback; collegial networks; and sufficient time to learn new concepts and ideas. This program has also demonstrated the benefit of going beyond teaching improvement. Although it is still early to assess the long-term development of educational leadership over time, the preliminary results are encouraging. Program participants have reported changes in their identities as medical educators and have taken on new roles and responsibilities in medical education. In addition, the TSP has helped to promote the concept of teaching as scholarship\(^13\) and to increase the critical mass of faculty members interested in medical education.

The value of specific program components has been identified by the preliminary evaluation reported earlier in this article. For example, in contrast to other programs, we did not develop our own seminar series.\(^2,12\) Instead, we relied on university courses to promote skill acquisition. In our opinion, this approach was very successful, as we were able to make use of available resources, promote intra-university collaboration, and encourage the development of new inter-departmental relationships.

Saroyan and her colleagues\(^8\) have stated that change in teaching practice is an introspective and lengthy process that is mediated by questioning personal assumptions and by learning from risks in instructional contexts. These authors also contend that peer and institutional support facilitate this process. The TSP provided this opportunity to faculty members, both in the university courses and in the monthly meetings. The value of peer support in educational\(^13,14\) and patient-centered activities\(^15\) has been reported previously. Feedback from the scholars highlighted the benefit of peer companionship, camaraderie, and interpersonal support,\(^12\) as well as the need to become aware of available educational resources. The monthly seminars underscored the value of protected time for discussion and reflection. Many authors have described the value of reflection in teaching.\(^16,17\) The TSP is one example of reflection-in-action, as the scholars had an opportunity to reflect on the principles that they learned during the year and to apply them in practice, with constructive feedback from their students and colleagues.

Other faculty developers have reported some of the changes we observed among our scholars. For example, the change in language and increased use of educational terms was noted by Elliot and her colleagues.\(^12\) The value of educational projects was emphasized by Marks,\(^14\) Talbot et al.,\(^18\) and Wilkerson and Hodgson,\(^13\) and the limitation of time has been noted by many. Indeed, 18 months may be a more realistic time frame.\(^12\)

The TSP evaluation process was similar to the one used by Elliot and colleagues,\(^12\) who assessed perceived program usefulness from both the participants' and the program directors' perspectives. Our evaluation is limited, however, in a number of ways. To date, only 15 scholars have completed the program; we have not yet obtained systematic feedback from the scholars' students, colleagues, or chairs; and we have not yet conducted a longer-term evaluation. As well, our program evaluation pertains to a unique group of individuals in a particular educational environment. However, as others have pointed out,\(^12\) the similarity of findings across institutions helps to increase the reliability of our joint findings.

Based on this experience, we offer the following recommendations for others interested in developing similar programs:

- Take advantage of university courses and other existing resources.
- Capitalize on the value of peer support and do not underestimate the importance of networking.
- Ensure that each individual applies his or her increased knowledge in a concrete fashion (e.g., independent study) and whenever possible, encourage publication or presentation of the results.
- Make the program requirements and time allocation explicit before the scholars apply and work with them to ensure "protected time."
- Build in flexibility to allow for individually tailored program activities.

Cusimano and David\(^4\) have described the need for more health care professionals trained specifically in the methods of educating others to ensure that medical education is responsive to the driving forces of change. As the health care delivery and educational system evolves, we will need to consider alternative ways of preparing our faculty members for their new roles and responsibilities. A teaching scholars program, as described here, is one way in which to achieve this goal.

The authors gratefully acknowledge the Henry and Berenice Kaufmann Foundation for financial support of this program, colleagues from the Center for University Teaching and Learning and the Faculty of Education at McGill University for contributing to the scholars' development, and the
teaching scholars for their active participation and involvement in the program.

REFERENCES