

IMPROVING TEACHING THROUGH CROSS-COLLEGE COLLABORATION: REFLECTIONS ON A SASKATCHEWAN EXPERIENCE

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ABSTRACT. This report presents findings from a qualitative-research study examining a cross-college initiative designed to enhance the instructional skills of a group of 33 internal medicine residents at a Western Canadian university teaching-hospital. Through collaboration of medical and education staff, a series of instructional-development workshops was conducted with the medical residents. The results not only confirmed what previous research has shown, as to the ability of individuals to transfer newly acquired knowledge and skills into actual teaching practice, but suggested that further cross-disciplinary initiatives of this nature be pursued among colleges and departments in higher education. Such collaborative efforts have potential not only to benefit the stakeholders and organizational units involved, but also to enhance the overall public image of the university as an institution whose departments are able to cooperate in pursuing the goal of good teaching.

RÉSUMÉ. Cette étude expose les conclusions d'un projet de recherche qualitatif qui analyse une initiative transcollégiale visant à améliorer les capacités pédagogiques d'un groupe de 33 résidents en médecine interne dans un hôpital d'enseignement universitaire de l'ouest du Canada. Grâce à la collaboration de médecins et d'éducateurs, une série d'ateliers de perfectionnement pédagogique a été organisée avec les résidents en médecine. Les résultats ne confirment pas seulement ce que des recherches préalables avaient déjà démontré sur l'aptitude des sujets à transférer des connaissances et des compétences récemment acquises dans leur pratique de l'enseignement, mais suggèrent qu'il faut prendre d'autres initiatives trans-disciplinaires de cette nature dans les collèges et les ministères de l'Enseignement supérieur. Ces efforts concertés ne présentent pas seulement des avantages pour les intervenants et les unités organisationnelles concernées, mais ils renforcent l'image globale que le public se fait de l'université comme établissement dont les départements arrivent à collaborer pour atteindre l'objectif d'un enseignement de qualité.

Recent demands for accountability in higher education have created pressure – on an international scale – for colleges and departments to focus attention on improving the quality of teaching offered in their institutions. Medical schools are no exception (Finucane, Allery, & Hayes, 1995; Metcalfe & Matharu, 1995). Furthermore, there is a growing trend toward shifting the sole educational emphasis away from the enhancement of instruction, *per se*, toward the promotion of learning among students (Guskin, 1994). A key element in this paradigm-shift is one that supports an organizational structure characterized by cross-discipline interaction and inter-departmental collaboration, rather than one exemplified by traditional departmentalized units that are typically “insular, defensive, self-governing . . . compelled to protect their interests . . .” (Barr & Tagg, 1995). Even though virtually all colleges and departments would never deny being interested in raising the quality of their own teaching-learning practice, it has only been in recent years that exploration of cross-college and interdepartmental cooperation has emerged as a means of pursuing this goal (Gamson, 1994).

Although the field of medical education has experienced some of this interdisciplinary activity (e.g., Carpenter, 1995; Fields et al., 1995), not many of these efforts have included partners from outside of the medical field (Murray, Jinks, & Modell, 1995). However, one example of this movement toward cross-discipline collaboration (between traditionally diverse agencies) was the present author’s recent experience – as a college of education professor – of being invited to conduct a series of instructional-improvement workshops for a group of internal medicine residents in the department of medicine at the teaching-research hospital located on one university campus in western Canada. In this paper results are shared from an investigation of this cross-college experience.

Historically, colleges of education (sometimes referred to as “teacher-training institutions” by non-teachers) have not enjoyed a particularly high status among university faculties on campuses in general. A remark overhead on one campus – probably typical in many post-secondary institutions regarding this hierarchical status – was: “If you can’t do anything else, go into education . . . their classes are pitifully easy. . . .” Furthermore, some research on the status of teacher educators, as a faculty-body in higher education, has unfortunately produced the following findings: education professors often do not show leadership; they tend to be reactors more than interveners; and they respond slowly to change (Lock & Churukian, 1995). Ducharme (1986) reports that

they are often perceived by fellow university-faculty as being anti-intellectual, as attempting projects better left undone, as mystifying the obvious, as giving every student an "A", as having no unique academic content to teach, as using academic jargon destructive of the English language, and as producing publications of no merit.

However, despite this negative image of teacher education held by some faculty members, other colleges and departments in certain Canadian institutions demonstrate an opposite view. The latter believe that teacher educators do, in fact, possess valuable professional expertise related to the generic skills of teaching that could – and should – be shared with their post-secondary colleagues from other colleges, many of whom have, in fact, had little opportunity to engage in formal teacher-preparation programs. (For reports on recent examples of cross-college collaboration efforts see Ralph & Konchak, 1996; Ralph, 1995; Swanson, Spooner, Reeder, Haight, & Senthilselvan, 1992; Waltz, Robinson, Bader, & Ralph, 1992.)

PURPOSE

In this report the author presents some research findings and personal insights based on his recent experience as a college of education professor being invited by the department of medicine at his university to conduct a series of instructional improvement workshops with a group of internal medicine residents. In the role of an instructional developer at the university, he also took advantage of this occasion of being involved in this collaborative initiative to assess its overall impact on the participants. Thus, an evaluation of the results of the sessions was conducted by seeking answers to three basic research questions: (1) What did the medical resident participants desire to learn in the workshops? (2) What did they, in fact, end up learning? and (3) What insights could be gained by analyzing these findings for the purpose of informing further instructional development initiatives – both within and outside of the institution?

The findings and reflections of this study were derived from a descriptive research methodology that used a qualitative-interpretive research design. Although initially regarded by traditional quantitative researchers as being inferior, the field of qualitative research in the social sciences is experiencing a growing popularity; and there is emerging evidence of increased dialogue between the traditional and the interpretive research camps (DeZure, 1996; Lancy, 1993). This interpretive inquiry

approach – in contrast to conventional quantitative or experimental research – emphasizes the following: (1) investigating individuals' meanings and interpretations more than calculating large-group statistical norms; (2) exploring idiosyncratic themes and patterns within a single case, more than seeking law-like, universal conclusions; and (3) offering suggestions for transferability to cases with similar contexts, more than fixating on nomothetic generalizability (Anderson & Burns, 1989; Best & Kahn, 1993).

By presenting some of the findings based on his role as a "participant-observer" in this single case, the author anticipates, moreover, that other academic institutions pursuing similar initiatives for instructional-improvement may be able to gain insights to help inform their own future decisions related to this key area of post-secondary education.

METHOD

Because of the present author's involvement with instructional-improvement activities at the post-secondary level, he was invited by the chief medical resident at the university hospital to present a series of three instructional-development seminars (each to be held one week apart) for a group of 33 residents in internal medicine. These sessions were to form one segment of the residents' mandated "academic time" at the hospital, and all residents were therefore expected to attend. By virtue of being graduate physicians – and particularly being resident staff members in this training-research hospital – the subjects were already committed to the enterprise of teaching as part of their duties. For example, in their resident-training program, they all were assigned to teach lower-year medical students – in a variety of settings (e.g., large group lectures, tutorial groups, or small-group seminars). In addition, the residents not only periodically delivered formal presentations to their peers and faculty-members in the College of Medicine (as part of their "educational rounds" during their residency period), but they also occasionally had to "teach" specific medical or health-care procedures to individual patients and their families.

In his invitation to the author to conduct the workshops, the chief medical resident requested him to "spend some time on reviewing basic teaching skills and on presenting some new ideas about teaching in general." The invitation was accepted and the author began this assignment by first designing a participant pre-instruction questionnaire (consisting of four questions) that was administered to the medical-residents

at the beginning of the first workshop session. The purpose of the questionnaire was to determine what participants individually desired to learn from the seminars. A similar post-workshop questionnaire was subsequently administered to ascertain attendees' views on whether their initially expressed objectives on the pre-survey had been met. (The two sets of questions are shown in Tables 1 and 2.) Prior to the beginning of the first workshop, participants were asked to write responses to the questions, thereby providing the author with a list of possible workshop topics, instructional needs, and interests.

Taking into consideration these pre-instruction survey responses, the author then designed a set of pertinent learning experiences for the second and third workshop sessions, which attempted to meet participants' expressed instructional needs. The workshop topic-outline is shown in the Appendix. The basic instructional method that the author, as the seminar-leader, utilized in presenting the three sessions was one that has been identified in the research literature as being effective for instructional-improvement and for adult professional-development (Fullan & Miles, 1992; Knowles, 1989; Ralph, 1996; Showers, Joyce, & Bennett, 1987). This method consists of four parts: (1) presentation of the theoretical foundation, rationale, and supportive research-evidence for a particular skill; (2) demonstration by an experienced person of the instructional skill being learned; (3) practice of the skill or task by the learners; and (4) provision of formative feedback to the learner by individual(s) in the teaching or the leadership role. (In parts "3" and "4", interaction and discussion occur concerning the evaluation, and learners attempt to incorporate the feedback into their future practice [Showers, Joyce, & Bennett, 1987]).

The seven instructional topics selected for the sessions (as shown in the Appendix) were generic teaching skills that were not only in large part suggested by the participants in their pre-surveys, but that were also recognized in the literature as being foundational competencies of effective instruction (Anderson & Burns, 1989; Lorber, 1996).

To illustrate how the sessions were actually conducted, a description is given of the basic steps followed to present some sections of the workshop, the outline of which is shown in the Appendix. In addition – and of equal importance – the author describes the manner in which he adapted his teaching style and instructional dynamics in working with this group of medical interns.

First, using a series of overhead transparencies with subheadings, drawings, and cartoons that illustrated each concept or skill of “effective presenting”, the author described, defended, and demonstrated each of the key research-based skills identified as being fundamental to clear and structured presentations.

During the first session, the author attempted to convey to attendees that: (1) he was there to facilitate their professional growth in teaching; (2) he wished to help meet their specific instructional needs and interests; and (3) he would encourage them to participate in the learning experiences in order for them to achieve maximum benefit. He commended them in that they had already demonstrated exemplary personal and professional achievement in having reached this present stage in their medical careers. He stressed that his purpose in the series of workshops was not to be the proverbial “sage on the stage, but the guide on the side” in order to assist each of them to learn (or to enhance) certain instructional competencies at this particular stage in their professional development. Thus, during the first five minutes, an atmosphere of collaboration and support was established. The socio-psychological tone was both “task” and “relationship” oriented (Ralph, 1996).

During this first workshop, the attendees were also alerted that during the three sessions they would be applying the 4-step professional-development model (as described above); and that the author, as facilitator, would model and demonstrate specific instructional skills for short periods throughout the sessions. He further informed the residents during this first session that each of them should prepare an actual three- to five-minute teaching episode from their own professional field, and that they should be ready to present it to the group during the second or third session. Participants were also advised that the group, as a whole, would informally evaluate these mini-teaching performances, according to the instructional criteria that would be studied in the workshops. Attendees were further encouraged to incorporate and practice as many of the skills as possible within their own teaching situations conducted during their regular weekly routines at the hospital.

Throughout the “formal presentation” part of the first session, the author systematically drew participants’ attention to the fact that he was deliberately modeling each of the listed skills at the same time as presenting them. For instance, a short time after clarifying the objective of the sessions (which he stated as: “In these sessions we will learn – or improve, depending on your particular situation – some instructional

techniques to enhance our overall teaching and communication skills.”), and after briefly describing its rationale and procedure, the author asked the group three questions. The first was: “How did I state my objectives a few minutes ago?” The second was: “To what extent did I meet these criteria?” and the third was “Why should instructors know and state what individuals should ‘learn’ or ‘be able to do’?” The author accepted and reinforced various responses from the participants, and he facilitated limited discussion of, and reactions to, the emerging viewpoints.

A similar pattern was followed with the other ten subskills. Thus, the first workshop session consisted of a blend of teacher-directed and interactive approaches. Throughout the presentation the author consciously integrated occasional bits of spontaneous humor, short question-answer episodes, and supportive remarks to reinforce participants’ input. Interaction was lively.

One week later during the second workshop session three attendees were selected to present their previously prepared “mini-lesson”, and after each one had “taught”, the group briefly provided written or oral formative feedback on the respective teaching performances. The author observed that there was not only a pervasive feeling of camaraderie and cohesion in the group, but that the three “teachers” incorporated several of the instructional subskills discussed at the first workshop. One doctor chose not to present a medical topic, but rather taught “How to replace your toilet” – since he had to perform that very task on the weekend before the session. Not only did he hold the group’s attention with clarity and humor, but he deliberately incorporated several instructional skills – and commented on them as he applied them, as well. Indeed, it was evident that the presenters appeared confident and competent in conducting their “micro-teaching,” and that the observers’ feedback was also largely related to the structuring-presenting behaviours examined previously.

At this stage of the second workshop, the author’s leadership role moved from one of “directing” to that of facilitating and observing: the volunteers “taught”, the observers offered their assessments, and the activity flowed along at a steady pace.

Following this “practice and feedback” interaction, the author presented a portion of the next two topics on the agenda (“questioning” and “responding”) – again reverting back to the first two steps of the professional-development model, namely: a description and rationale for, and a demonstration of, the subskills. During this section of the

second workshop the author's teaching style reflected the one used in the first week: one of direct instruction with some question-answer-discussion incorporated. Participants openly responded and interacted – both with the presenter and with each other – with respect to the skills being examined or issues raised about them.

Later, attendees were informed that during the final workshop session three other residents would be chosen to present their short “micro-teaching” episodes to the group, and, as before, they would be assessed on their teaching behaviours. Participants were advised that they would be permitted to utilize during their presentations any one (or more) of the instructional topics covered previously in the sessions. Presenters were also informed that they would be free to inform the group, prior to the presentation, of any specific teaching area(s) that they wanted observers to evaluate during their mini-lessons. As mentioned previously, participants were again encouraged to implement their newly acquired skills during their weekly hospital routines prior to the third workshop.

The third workshop session was conducted in a manner similar to the second, in that the three “micro-teaching” sessions were presented, each followed by the whole group's brief oral or written evaluatory comments. The third session also included the author's “formal presentation” of the remnant of the final two topics on the agenda, which had not been completed during the second session. At the conclusion of the third workshop, participants completed the post-seminar questionnaire (see Table 2). This elicited their views on the extent that they saw themselves having learned or having improved their individual teaching competencies, which they had initially identified on the first survey.

In order to verify the accuracy of the results of the pre- and post-survey results, a triangulation procedure was introduced, whereby data collected from multiple sources were examined in order to gauge the validity of the findings. In this way the primary comparison of the pre- and post-survey results was supplemented with two other data sources, namely: (1) the author's own observations and critiques of the six volunteers' mini-lessons presented during the second and third sessions, and (2) a written and oral report presented to the Dean of the College of Education and the author two weeks after the end of the workshops by the chief medical resident. His report provided a participant-observer's analysis of the workshops – based not only on his own involvement

(because he also attended and participated in all three sessions), but on his subsequent informal meetings and discussions with the 33 participants, in which he solicited descriptions of their perceptions and feelings about the workshop experience. The key purpose of this triangulation process was to establish the validity and reliability of the descriptive research by examining and comparing evidence from the three sources in order to determine the degree of consistency among the various observations and results (Anderson & Burns, 1989; Vockell & Asher, 1995).

The written responses from the participants' pre-instructional surveys, and later the post-instructional surveys, were collected, collated, and categorized using the "constant comparison" technique – a data-processing approach advocated by qualitative researchers (Vockell & Asher, 1995). With this methodology, the accumulated data are continuously categorized, being tested against gradually emerging groupings, and being re-categorized as needed, in order for the researcher to ground any emerging patterns or thematic propositions on the basis of the evidence itself, and not on prematurely formed opinions. These grounded themes were then compared to patterns that emerged from the other two data sources, namely, the author's assessments of the six mini-lessons, and the informal comments by participants recorded by the chief medical resident in his subsequent debriefing meeting(s) with the group. The key findings from the study are summarized below.

FINDINGS

From the outset of the first session – and throughout the workshop series – the author experienced a positive rapport with the medical residents: the author's anticipated apprehension of possible participant coolness, reluctance, or animosity was allayed. Rather, he observed that attendees expressed – both vocally and with body language – a genuine interest in, and desire for, "learning some techniques we had not encountered previously" (as one participant commented). What was noteworthy to the author was that he did not have to expend time and energy attempting to "de-fuse" attendees' negative reactions to, or to persuade unconvinced spectators of, the value of the skills, but that he could engage in encouraging willing learners.

Tables 1 and 2 display the major categories of responses that were extracted from the written comments on the pre- and post-workshop questionnaires. Although the wording of respondents' comments dif-

TABLE 1. Pre-workshop survey: The questions and subjects' responses (in categories)

Question and categories of responses	% rate of response
1. TO YOU, WHAT IS "EFFECTIVE INSTRUCTION"?	
• to present clear, concise information	100
• to show learners, not just tell them, how to resolve problems	24
• to function as a teacher/learner team (two-way communication)	19
• to build on what learners already know	13
• to inspire/interest/enthuse learners to learn/read	13
• to use questioning effectively	6
• to be honest about one's weaknesses	6
2. WHAT SPECIFIC THINGS WOULD YOU LIKE TO LEARN FROM THIS SEMINAR?	
• to be able to do/improve "effective instruction"	33
• to organize and present material clearly	33
• to learn a variety of teaching methods	19
• to ensure that learners remember the material	13
• to conduct small-group instruction effectively	13
• to have better "stage presentation"	6
• to be an enthusiastic instructor	6
• to give helpful feedback to learners	6
3. WHAT DO YOU CONSIDER TO BE YOUR OWN PERSONAL STRENGTHS AND WEAKNESSES REGARDING TEACHING?	
Strengths	
• a good communicator	64
• a desire to be effective	19
• have insight into medical/scientific topics	6
• good planning, preparation skills	6
Weaknesses	
• lack of organizational skill (get "off track")	50
• gaps in knowledge-base	24
• difficulty in condensing material (to make it practical)	13
• lack of skill in using AV material/equipment	6
• lack of confidence as a teacher	6
4. ANY ADDITIONAL COMMENTS?	
• want sessions to be thought-provoking (to promote individual reflection)	6
• want a specific listing of good methods	6

For each question, figures may not total 100, because respondents wrote varying numbers of comments. Percentages are rounded.

ferred, their responses could be grouped into categories of common themes or of similar concepts. What was evident in the results shown in Table 1 was that respondents' views of "effective instruction" and their personal goals for the workshops both generally reflected the fundamental principles and basic practices of "good teaching" as identified in the pertinent research-literature (e.g., Lorber, 1996; Wittrock, 1986). Thus, by presenting in the workshops the generic teaching skills, as listed in the Appendix, the author was able to achieve the dual goals

TABLE 2. Post-workshop survey: The questions and subjects' responses (in categories)

Question and categories of responses	% rate of response
1. HAS YOUR INITIAL VIEW OF "EFFECTIVE INSTRUCTION" CHANGED? EXPLAIN.	
• yes, am more informed (clarity/refinement/awareness)	45
• yes, am more analytical of teaching	19
• yes, ask better questions	19
• yes, excellent overview of methods	6
• no, same view (as before)	6
2. DO YOU FEEL YOU LEARNED WHAT YOU WANTED TO?	
• yes, it met my goals (stated previously)	82
• yes, it was useful (instructive/interesting/effective)	33
• yes, and more	33
• yes, especially in oral questioning	19
• yes, but give more on effective overhead transparencies	6
• yes, but give more on small-group instruction	6
• "hard to say" (need more opportunity to explore)	6
3. HAS YOUR VIEW OF YOUR OWN TEACHING STRENGTHS/WEAKNESSES CHANGED? EXPLAIN.	
• yes, more aware/analytical of mistakes	45
• yes, will work on questioning skills	19
• yes, now have source of information on teaching to consult	6
• yes, but am better than originally thought	6
• no, initial views have not really changed	6
4. ANY ADDITIONAL COMMENTS?	
• workshops were interesting (enjoyable/useful)	82
• had never been taught these things before	6
• want a detailed listing of key techniques	6

For each question, figures may not total 100 because respondents wrote varying numbers of comments. Percentages are rounded.

of: (1) addressing respondents' expressed instructional needs, and (2) introducing the foundational, research-based competencies recognized as being critical instructional techniques (Ralph, 1994).

Another finding extracted from the data in Table 1 was the considerable degree of instructional skill that the residents already appeared to possess prior to the sessions. The responses to question 3, for instance, suggested that the majority of the doctors were, already, experienced communicators – a crucial skill for all effective teachers to possess.

An examination of the results in Table 2 further suggests that these residents appear to have used the opportunity of the workshop experience to engage actively in the instructional improvement process. The affirmative responses for questions 1, 2, and 3 indicate that respondents saw themselves as applying their newly acquired teaching skills (or as "fine-tuning" previously mastered techniques) in actual practice. The

participant's response for question 2 stating that "It was hard to say" whether the individual had shown improvement, was made by a resident who was not able to attend all three sessions. In fact, two respondents expressed experiencing this same frustration during the workshops, in that they were obligated to "come and go" at various times because of other hospital duties. They stated that the continuity and flow of the sessions were thus broken for them. (Yet, both of these subjects also stated that they garnered some valuable insights despite these interruptions.)

The data showed that there were three areas that respondents desired to study more thoroughly, and had there been more time, arrangements could have been made to do so. These areas were: the effective use of instructional AV materials and equipment, the conducting of small-group teaching-learning activities, and the provision of more opportunity for participants to rehearse, review, and reflect – individually and together – on the workshop material.

An overall finding related to the methodology of the study was that the triangulation technique appeared to meet its intended objective, in that the general results that emerged from all three data sources indicated consistent patterns. All findings suggested an affirmative response to the initial research questions, in that the participants did learn new instructional skills (or improved existing ones), and that they were positively disposed to the overall workshop experience. Each one of the submitted post-questionnaires had one or more written comments to the effect that respondents developed their knowledge and skills. Examples of these responses were: "Yes, I learned a lot on my levels of questions. . ."; "Yes, . . . the little pointers (but effective ones) were very enjoyable and useful. . ."; and "I have refined my view of effective instruction . . . I have more specific details to think about. . ."

The evidence from these post-session self-reports was substantiated by the groups' evaluatory comments on the teaching performance of the six participants who presented their mini-lessons. A synthesis of the author's assessments of (and the groups' oral comments on) all six presenters revealed the following general observations of their micro-teaching episodes: (1) The overall quality of their presenting skills met or surpassed the standard considered as "competent" in relation to the assessment criteria established by the University of Saskatchewan's Centre for School-Based Experience (University of Saskatchewan, 1995). (These criteria are used to determine teacher-interns' mastery of basic teaching skills during their 16-week extended practicum at the end of their B.Ed. program.) (2) The presenters demonstrated both strengths

and weaknesses in their instructional skills – but the former were more numerous than the latter. (3) The subgroup of six presenters exhibited a higher degree of confidence and ease during their micro-teaching, as compared to that typically demonstrated by final-year education interns – when considered as a group – with whom the author has habitually worked over the past decade). (4) They demonstrated deliberate effort toward a conscious reflection upon and a desire to internalize specific teaching skills. (This was shown by their vocalizing of distinct, self-evaluatory comments during their mini-lessons. For instance, one subject stated (immediately after saying “I’m gonna attempt to. . .”): “Oops, I **am going** to. . .”. Another participant turned toward the author during her presentation, and declared (just after posing an oral question to the group): “Oh, oh . . . wasn’t I supposed to wait a few seconds before answering this?”

Another overall finding that was synthesized from the triangulated data was that the results from both the self-reported written responses and the assessments of the mini-lessons were generally consistent with those derived from the feedback that the chief medical resident reported in his final assessment of the workshops. In a follow-up letter to the author, he wrote, in part:

. . . thank you for your time and involvement. . . the sessions were eloquently presented and the Internal Medicine Residents were enlightened. . . I would certainly like to invite you back. . . for some additional sessions. One session in particular would be on the use of audio-visual and overhead material. . . .

Thus, with respect to the original research questions that guided this present study, the consistency of evidence extracted from the triangulated analysis suggests that the collaborative initiative achieved the intended goal of helping participants to improve their overall instructional competence. The third research question is now addressed: “What insights have emerged to inform future cooperative efforts in this area?” Some of these insights are presented in the following section.

DISCUSSION

Related to the examination of insights from this study on collaboration is a more direct question: “How may college of education faculty make distinct contributions to the instructional improvement of medical faculty?” There are at least three ways that are supported by a synthesis of findings derived from several sources: the present case-study, recent related research conducted by the author (Ralph, 1995b, 1996), and the

extensive body of literature both on effective professional development in instructional and supervisory contexts (e.g., Knowles, 1989; Showers, Joyce, & Bennett, 1987; Ralph, 1993), and on successful change initiatives in educational organizations (e.g., Fullan, 1991; Fullan & Miles, 1992; Marchese & Pollack, 1996).

Provision of reciprocal benefits

One way that faculties of education could contribute to developing medical residents' teaching is to be willing to offer their pedagogical knowledge and services to the latter. Collaborative efforts between the two units have potential to meet professional needs of both groups. Medical personnel (most of whom have never had any formal teacher-education) may gain desired pedagogical knowledge and expertise from a faculty typically well-versed in that field. At the same time, the latter could experience an elevation in their "campus-status" through their engagement in such professional relationships with a traditionally regarded prestigious group.

In the present study, the author detected no "territorial or turf protection" sentiments among the medical participants; in fact, the opposite was evident. For instance, the majority of the attendees wrote on their post-surveys, with various wording, that through participating in the workshops they either gained the satisfaction of having some of their own previous instructional methods confirmed as "being effective" by educational research and "experts", or that they learned some useful new techniques to apply to their teaching situations.

At the same time, the College of Education as an entity, and the author himself, received recognition both on campus and beyond for participating in such a cross-college project.

Matching style to needs

A second way that education faculty could collaborate with medical personnel in the area of teaching effectiveness is for the former to synchronize deliberately their leadership or teaching style to match the particular development level and needs of the latter. A helpful method of achieving this goal is through an application of "Contextual Supervision" (CS), a leadership model developed by the author (Ralph, 1993, 1996). With CS, the person in the supervisory (or assistance) role adjusts his or her "task" (or directive) and "relationship" (or supportive) behaviors in inverse proportions to the levels of "competence" (or ability) and "confidence" (or assurance) exhibited by the individual in

the supervisee (or learner) role, for the purpose of performing a particular instructional task.

As confirmed by the results of the present study, and by research on the effects of CS (Ralph, 1993, 1996), and of similar supervisory models (Glickman, 1990; Gordon, 1990; Hersey & Blanchard, 1988), the best initial approach to use in helping such individuals as resident medical-interns to enhance their instructional competence is for the workshop leader to use a leadership style that at first exhibits a relatively high degree of both "task" orientation and "support" behaviors.

This initial combination – as employed by the author during the first workshop session in the study – served to match the early developmental levels of most of the participants, which consisted of relatively low levels of competence and confidence to perform the particular teaching skills. At this preliminary stage, the attendees were generally uncertain as to their abilities and to the workshop expectations.

However, the leader was soon able to reduce the degree of his task and support responses, because the participants quickly grew more competent and confident in practicing their instructional and evaluatory skills during the second and third sessions. The author adjusted his "supervisory style" according to his observations of the "supervisees' changing development levels."

A key aspect of applying the contextual supervision principles is that a leader remaining fixated to a single teaching or supervisory style with skilled adult learners – such as medical doctors – will not only be ineffective in facilitating their professional development, but such intransigence could tend to bolster the traditional image of education-faculty members held by some of their university peers (mentioned earlier), as being "heavy on rhetoric and light on reality."

Modeling professional practice

A third way that educators could provide meaningful instructional assistance to persons who are studying medicine is for the former to model consciously the generic instructional skills in their own teaching and communication. If education faculty would exemplify good teaching through their own professional practice and conduct, then the principles and practices they promote and advocate would tend to be more convincing to observers.

This study also confirms previous research that has suggested that educational leaders who model enthusiasm in teaching, expertise in

their field, and a desire to empower team-members to share experiences and knowledge en route to the common goal (and who will do so with a spirit of humility) tend to be successful in helping both the individual and the group to develop in knowledge and experience (Brandt, 1992; Glickman, 1992; Sergiovanni, 1992).

In this study, the author was able to convey this message, in that he informed the group that he was willing to share his accumulated knowledge in the generic skills of pedagogy, but also that participants must feel free to draw on their own experience, and then to combine these sources and apply this "new knowledge" to their own specific field of subject matter. The ongoing task is for participants to continue to create their content-specific "pedagogical content knowledge" (PCK) (Shulman, 1987). PCK relates to specific teaching techniques or unique instructional tactics that professional teachers in each field gradually develop through instructional experience, as they learn to assist students to master specific concepts or skills, particular to each field of knowledge.

Although the overall findings from the triangulated data in this study were positive in nature, there were some limitations that need to be identified and accounted for in interpreting these results, and in conducting further future research related to enhancing teaching-learning on a cross-college basis. How is one to regard the accuracy of respondents' written self-reports on the post-surveys that recorded virtually no negative comments about the sessions? For instance, one potential weakness that has been identified in using the self-reporting technique in social-sciences research is that respondents may tend to rate themselves more favorably than they actually are (Best & Kahn, 1993; Borg & Gall, 1989). Yet, on the other hand, in a recent ERIC search of twenty-eight articles reporting on the accuracy of self-reporting as a social-sciences research approach, it was found that eighteen of these studies reported moderately to highly accurate results (as compared with results in those same studies that were derived from related data sources). The other ten articles reported inconclusive results as to the accuracy of self-reports (Ralph, 1995a). Furthermore, the degree of reliability and validity of self-reports apparently increased when respondents clearly understood the assessment criteria used in the evaluation.

A second possible limitation in the methodology of the present study was the fact that only six of the 33 participants actually taught a mini-lesson in front of the group. These individuals were not randomly selected, in that all attendees were reminded (at the conclusion of

sessions one and two) to be prepared to teach the following week. Then, at the beginning of each of those sessions, the author asked, "Who is ready? . . . Who would like to present, today. . . ?" Thus, it could be argued – as is also supported in the social-sciences research (Borg & Gall 1989) – that the six volunteers (three each week) were in all probability typical of most such volunteers: they tended to be keen participants, and they generally already modeled some of the attributes and skills being sought. Moreover, it is also reasonable to assume that if all the other twenty-seven nonvolunteers had performed and been evaluated (or if, at least, the actual selection of the six subjects had been conducted on a purely random basis), then the probability of having observed the high degree of instructional competence (as happened among the six) would have been reduced. As a consequence, the results of the study may not have been as positive, in that some of the presenters could have thus demonstrated a lower quality of instructional performance.

However, a counter-argument to these possibilities is the fact that the six subjects who did volunteer may have actually been more "typical" of the group than one might have at first considered. For instance, all thirty-three group-members possessed the following characteristics: (1) they had been previously assigned to instructional roles at the hospital, and had already been teaching in diverse contexts (and had expressed a desire to do it well); (2) because they had never previously taken formal teacher-training, they may have found the workshop material pertinent, or novel and motivating; (3) by virtue of the fact of their past successful accomplishments (i.e., in being selected and completing the rigorous medical program, and of reaching the status of "M.D.") they had already demonstrated a superior level of intelligence, achievement, and competence – as compared to the general population (Collins, White, & Kennedy, 1995); and (4) they displayed the general psychological qualities attributed to those who are high achievers (Buskist & Gerbing, 1990).

Thus, it is reasonable to assume that all group members in the study were motivated to learn new (or to improve current) teaching methods, and that they were willing to "fine-tune" the communication skills that they already were competently using. Over the three-week period, the author observed among them a lower degree of nervousness and anxiety than has often been detected among similar-sized groups of teacher-interns embarking on their extended-practicum experiences.

A third limitation to the study that is related to the question of transfer of knowledge – and one that appears in the research examining the transfer of new professional skills into practitioners' daily routines – is the extent of learners' achievement of mastery and internalization of the task at hand. Such internalization not only means that the skill becomes a permanent part of the learner's instructional repertoire, but also that the individual develops the reflective capacity to discern when, where, and how to apply or to modify it, according to each unique context.

That medical practitioners can acquire new instructional skills in a relatively short time-frame is known (Swanson et al., 1992); moreover, the results of the present study lend support to this finding. However, a more pressing question emerges, and that is: "Over the longer term, have these medical practitioners mastered the new techniques to the extent that they will be able to recall and to apply them, at will, weeks, months, or years later?" With respect to this issue of enduring internalization of learned skills, Showers, Joyce, and Bennett (1987) – on the basis of their synthesis of the research on professional development in education – concluded:

For a complex model of teaching, we estimate that about 25 teaching episodes during which the new strategy is used are necessary before all the conditions of transfer are achieved . . . Skill developed in training does not appear sufficient to sustain the practice until transfer is achieved. (p. 86)

Thus, even though the results of this study suggest that participants initially internalized certain instructional skills, further research would be needed to investigate the permanency of the transfer of this pedagogical knowledge.

This study has nevertheless shown that members from two historically diverse colleges were able to cooperate in successfully conducting an instructional-improvement initiative. Although a negative image of "teacher-educators from faculties of education" may well exist in some higher education circles, no evidence of this view was found in any of the interactions with the participants, or in the analysis of responses from the three data-sources in the study. On the contrary, the author's personal experience throughout the project corroborated the evidence drawn from the triangulation process: all of the results were consistent in endorsing the effectiveness of the entire workshop. One respondent's written comment on the post-survey, which was typical of many responses, illustrates this finding:

This course was a good idea. [His] teaching and [demonstrating the models] were very good. I now have information to consult before I teach and I can work on improving my teaching skills. . . . I found it very worthwhile. . . .

Therefore, in the light of this case and others like it, it is evident that we who work in the field of higher education need to affirm proactively the following assertions in our institutional life: that cross-disciplinary collaboration is possible; that each academic unit has something specific and worthwhile to contribute in reaching toward our common goal of improving the teaching-learning process; and that traditional institutional reactions – often characterized by ego- and turf-protection, departmental jealousy, and group isolation – should give way to increased inter-disciplinary cooperation. Indeed, as Fullan and Miles (1992) observe – based on their extensive review of research on change in educational organizations – that effective and lasting improvement occurs when the change process is managed by a “cross-role group” (p. 751). Such a cooperative team consists of members from all stakeholder groups, who are legitimized, empowered, and supported by senior administrators to engage in planning, implementing, assessing, and adjusting the specific change initiative(s).

The present study has provided some evidence that such collaborative relationships across departments can function – and can do so, effectively. As we contemplate entering the new millennium, may engaging in such initiatives become more common within and among our institutions.

APPENDIX

Instructional Skills¹ Presented in the Workshops

1. ATTRIBUTES OF EFFECTIVE TEACHERS
 - Human/supportive characteristics
 - Task/competency elements
2. STRUCTURING/PRESENTING SKILLS
 - states objectives
 - uses a motivational set (maintains enthusiasm)
 - gives clear directions/instructions
 - breaks information into manageable segments
 - uses clear transitions
 - summarizes during/at end of session
 - asks key questions
 - presents with clear sequence and appropriate momentum
 - demonstrates both general and specific knowledge of subject
 - provides for student practice/review (monitoring these)
 - models correct oral and written language
3. ORAL QUESTIONING
 - poses questions to monitor learner understanding
 - demonstrates clear/concise questioning patterns
 - asks a variety of levels of questions
 - used a directed questioning pattern with appropriate wait-time
 - distributes oral questions equitably
4. INSTRUCTOR RESPONDING
 - shows respect for learners
 - uses various forms of reinforcement/praise/probing
 - states reasons for rejecting student answer(s)
 - shows sensitivity to students nonverbal behaviour
 - avoids "echoing" student answers
 - encourages student interaction
 - demonstrates active listening to learners' input

¹ Adapted from: University of Saskatchewan. (1996) *The Internship Manual*. College of Education, Saskatoon, Saskatchewan, Canada.

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