

Planning for Instructional Improvement in Medical Education: A Case Study

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Abstract. The purpose of instructional improvement programs is to assist faculty members in identifying areas of personal strength and weakness in their teaching and, where needed, to develop strategies for change. Rather than utilizing formal coursework, workshops, or retreats, a model has been refined at Case Western Reserve University School of Medicine that emphasizes a working relationship between the interested faculty person and a member of the Division of Research in Medical Education, an educational research and instructional support unit at the school. The approach described comprises five steps in which a consultant relationship is formed, an agreement about the interaction process is reached, data on teaching behavior are gathered and analyzed, feedback is given, and plans for future action are developed. The paper also includes a discussion of the strengths and weaknesses of this model and implications for its use in medical education and elsewhere in higher education.

One of the most complex areas of curricular design in higher education exists in our medical schools. In this en-

vironment faculty-teaching contributions vary from informal contact with students on the clinical wards through very formalized didactic presentations in a traditional classroom setting. In addition, the curriculum is defined on a continuum from undergraduate medical education to specialty or graduate training to postgraduate or continuing medical education. In nearly all instances, faculty are not trained in techniques or strategies for effective teaching.

During the last two decades efforts have been undertaken to improve both instructional approaches and our understanding of the ways in which students optimally learn in these environments. The American Association of Medical Colleges instituted a faculty development program to help medical school faculty improve their teaching skills. Similarly, medical colleges and universities are attempting to sponsor workshops and conferences on various aspects of instruction (Foley, Smilansky, Bughman, & Sajid, 1976). Institutions across the country also have attempted to provide formal academic courses or programs that have a traditional educational format with credit provided (Vanek, Wile, & Kennedy, 1976). However, these efforts generally have failed to demonstrate success, either in terms of number of faculty participating or long-term changes in behavior (Centra, 1976; Gale, Tomlinson, & Anderson, 1976; Joorabchi & Chawhan, 1975).

Among the contributing reasons for limited success is that members of the medical teaching faculty are, in nearly all instances, full-time physicians in clinical practice. Therefore, their time is valuable, and taking practice time to develop skills in education is difficult to arrange. Although other professionals, such as educators, can easily attend a course at their local college or university, physicians' schedules simply do not permit this. Further, issues of time and money often have a direct influence on decisions to participate in instructional improvement activities.

Because medical students and faculty at Case Western Reserve want to improve teaching, the Division of Research in Medical Education (DORIME) developed a strategy for instructional improvement using a consultation approach. The plan was evolved to be reasonable in terms of faculty involvement, interest, and effort. In an attempt to create more personalized long-term interactions with faculty, the division has developed a mechanism whereby individual faculty receive feedback concerning their teaching behaviors while working cooperatively with educational specialists. The model described in this paper involves five steps that have proven valuable in documenting teacher behaviors through direct observation, in providing feedback to individual faculty members concerning these behaviors, and in developing strategies for improved approaches to teaching and student learning.

Background

The Curriculum

The undergraduate medical education program at CWRU is arranged in integrated, interdisciplinary, body-system committees of 4 to 8 weeks duration, i.e., mind committee and gastro-intestinal committee, rather than by traditional course disciplines, i.e., anatomy and biochemistry. Approximately 15 to 20 faculty members from many disciplines and clinical specialties teach in each committee. Classes usually are scheduled from 8 a.m. until noon in four 1-hour blocks of time. Any individual faculty member may teach from 1 to 6 hours during the course of a committee.

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Although a variety of teaching techniques is employed, the lecture method is the predominant mode of instruction. Small group conferences complement either the teaching committees or a separately delineated clinical education program. In these small group conferences clinical faculty members function as group leaders or resource personnel or provide the theme for prior and subsequent discussions.

Role of Educational Specialists

The DORIME was staffed with 11 educational specialists. Five had full-time faculty status and held doctorate degrees in education or a related field, three were full-time staff members with master's degrees in education, and three were graduate students in the health science education program (sponsored by this division).

The members of this group worked for several months to develop strategies to improve teaching in both the formal and informal aspects of the curriculum. Training sessions were held to provide these individuals opportunities to observe videotaped teaching activities, to use various evaluation instruments, and to practice providing feedback in role-playing situations. Since lecturing was the primary mode of instruction, the focus was on the organization and presentation style of the lecture and the effective use of audiovisuals. The emphasis was not placed upon making value judgments about specific teacher behavior, but rather to identify key elements and to examine whether the activity was observed to have occurred. These experiences formed the basis for developing the role of the consultant and for learning how to provide effective feedback.

Initial Contact

Faculty received an introductory letter, a brief description of the planned activity, observation forms for the instructional approaches, and a request to participate. In the event that faculty members failed to complete the initial contact form, a member of the DORIME staff would telephone and describe the project and, in most instances, would succeed in establishing a relationship. This procedure proved to be effective in securing faculty participation.

The Model

The model used in the instructional

development approach is presented as a series of five steps that describe the teaching behaviors to be examined, the documentation efforts through direct observation, the feedback provided individual faculty members, and the strategies for behavioral change. The approach implies that formality can be developed to any level desired by the participating resource group and teaching faculty. The emphasis in this description is to categorize the key components of the process. However, in actual practice there is significant overlap from one step to another. For purposes of clarity they are presented as unique areas.

Step 1: Preteaching Interview

After a faculty member asked to participate in a teaching observation program, a conference was arranged between the instructor and the educational specialist. The purpose of this session was to help the faculty member identify with the instructor's perspective. This activity formed the basis for mutual trust and the establishment of a working relationship between the specialist and the instructor and also served as a conceptual rehearsal for the instructor. At this time, the instructor had the opportunity to revise the teaching presentation, if necessary.

In serving as a resource to faculty members regarding teaching methodology, the educational specialist assumed the role of a consultant (Rogers, 1971). Role definition was essential so that the faculty person had a clear understanding of the nature of the activity and the processes to be undertaken. In addition, the consultant learned the reason for the faculty member's interest in securing help and his or her expectations of the consultation. The entire instructional improvement activity was doomed to failure if the faculty member felt forced to participate, i.e., by a department chairman, or felt threatened by the process. Thus, this first critical step was to establish an atmosphere of openness.

The preteaching interview focused on the content of instruction, areas in which the faculty member felt comfortable or uncomfortable in terms of his or her presentation style, and a possible data-gathering instrument. The following questions often provided the framework for the consultant during a prelecture interview with the faculty member.

1. In order to help me (consultant) in

my observation, define your (faculty) purposes or goals for your lecture.

2. Is there a particular area in which you wish me to gather data? Discuss instrumentation (see Figure 1).

3. Can I be of service to you prior to or during the lecture in such areas as developing audiovisuals or writing examination questions?

4. Do you wish to have your lecture audiotaped or videotaped for your future viewing?

5. Will you complete the same or a similar data-gathering instrument so that we may explore our various perceptions/observations?

Step 2: Contracting

From this initial meeting, an informal contract was developed to establish the parameters of the activity, set goals and expectations, and provide a structure to the working relationship (Bergquist & Phillips, 1975a).

An explicit, although informal, agreement about the type of data to be collected under specific circumstances was

RELATED CONTENT TO LECTURE OBJECTIVES
ORGANIZED FLOW OF CONTENT
RELATED LECTURE CONTENT TO CLINICAL APPLICATION
CLARIFIED TECHNICAL TERMINOLOGY
SUMMARIZED IMPORTANT POINTS OR IDEAS PERIODICALLY
DEVELOPED A CONCLUSION RELATED TO THE OBJECTIVE AND CONTENT OF THE LECTURE
SPOKE AT A SUITABLE PACE
MAINTAINED EYE CONTACT
USED APPROPRIATE MEDIA FOR SITUATION
USED AUDIOVISUAL AIDS THAT WERE: VISIBLE READABLE AUDIBLE APPROPRIATE LENGTH/QUANTITY

FIGURE 1. Checklist of selected criteria for observing lecture presentations.

reached between the consultant and the faculty member to prevent making assumptions about what the faculty member wanted or needed. It was found that if such a contract was not made, subsequent interactions were misguided or ultimately fruitless. In addition, the contracting process provided the faculty member with a sense of ownership and control over the situation. He or she had the opportunity to identify areas for data gathering and to choose to collect information in areas where he or she felt moderately competent, thus opening the doors for a deeper involvement (Bergquist & Phillips, 1975b).

The process of contracting and the resultant relationship was viewed in terms of content and process issues. The content consisted of (1) what the faculty member expected to gain from the interaction; (2) the skills the consultant felt he or she could supply; (3) the plan of action, i.e., who did what, under what circumstances, and when; and (4) the desired observable outcomes. The process issues identified the interaction in terms of trust, openness, and ability to relate. Characteristics of a strong contract were a significant commitment from the faculty member, a clear understanding of the goals and objectives, realistic and meaningful action steps, and a positive feeling and openness between the two individuals. In a weak contract the consultant or faculty member generally had an uneasy feeling and other demands and stresses surfaced, thereby interfering with the productivity of the activity. For example, some faculty members said they had to spend more time on research and couldn't afford the time needed to plan a lecture.

After the goals were established, methods for data collection were developed, and procedures for feedback to the faculty member were outlined.

Step 3: Data Collection

Data were collected by various methods from many sources including direct observations by consultants or peers, student interviews, consultant review of syllabi or teaching materials, and an analysis of a recorded teaching encounter by the instructor. This self-analysis was beneficial in pointing out the discrepancies between faculty and observer perceptions.

Step 4: Data Analysis and Feedback

The consultant analyzed all data sources including both peers and stu-

dents, when possible. Then a meeting with the faculty member occurred to identify teaching strengths and weaknesses. It is important that the feedback be specific and descriptive in nature and based on behavior that is both observable and amenable to change (Bergquist & Phillips, 1975b). By presenting information in a descriptive manner, we have found that faculty identify with the critique and alter their lecture activities accordingly. As with all steps in this process, consistency of the feedback with previously agreed-upon goals was a key concern.

Feedback was given in both written and oral form. Written communication had the advantage of giving a faculty member the opportunity to privately analyze and synthesize the data and compare that information with his self-perceptions. In either case, it was important that the feedback occur as soon after the observation as possible.

Feedback ultimately should create a sharing of information and perception. The following questions illustrate those used during a feedback session and when planning for future interactions.

1. What did you (faculty) think of the lecture presentation I (consultant) observed?
2. Would you do anything differently another time?
3. Did our previous discussion change your teaching behavior?
4. Were your perceptions consistent with mine?
5. Would you like to work with me in the future?
6. What changes would you like to see made in a project of this nature?

Step 5: Postteaching Conferences

Following the written feedback report, a meeting was held to discuss the report and to develop plans for future action. In the case of an oral feedback session, the development of a plan for future action occurred at that time or within a few weeks of the session. Depending upon the length and depth of the relationship between the consultant and faculty member such "action planning" often included (a) a specific design for the next instructional activity, (b) a new contract based upon newly identified problems or areas for exploration, and/or (c) specific techniques for future self-assessment of teaching effectiveness for use by the faculty member.

Discussion

This model of instructional improvement can be implemented in a variety of ways. Faculty may elect to receive feedback on a single lecture or on an entire teaching unit. The feedback may be oral or written. This flexibility provides faculty who have less of a commitment to instructional improvement activities or have time constraints the opportunity to participate and receive meaningful feedback about their own skills.

This model encourages faculty, who may be insecure about their teaching abilities, to share their insecurities or problems concerning teaching and at the same time develop an organized approach to altering their teaching strategies. The ability to develop a trusting relationship is critical to the design of this model. The data belong to the faculty member and remain confidential.

Two-way communication is fostered during this feedback process through carefully planned pre- and postteaching conferences. Faculty can share their perspectives on medical education with individuals trained in instructional methodologies. Through this sharing and the ability of the educational specialist to act as a synthesizer of data from many sources, feedback can be more relevant to the faculty member. Evaluation of teaching by students, peers, or administrators via questionnaires, in the name of "instructional improvement" efforts, without two-way communication merely puts the faculty member on the defensive.

Although faculty report that feedback given in a formalized model of instructional improvement is useful, our data suggest that few faculty ask for it. When specifically asked whether they would like to receive feedback, however, most faculty answer positively. Clearly, instructional improvement activities are viewed as a "fringe benefit" of which few take advantage.

A critical component in the successful implementation of a formalized program is strong administrative support. In our experience, a committee chairperson's support and influence directly influenced participation, even though all personal data remained confidential.

Presently, many colleges of medicine are instituting mechanisms whereby educational contributions can be considered for promotion and tenure. Such is the case at Case Western Reserve University. For these endeavors to be

successful, careful documentation and evaluation of teaching is needed. The model described here can be applied in these circumstances, however, only if requested by the faculty member.

Institutional reinforcement such as promotion may not be sufficient to create an impact on the quality of medical education. Faculty must receive personal input and support for their teaching contributions. Because this approach provides formative evaluation and consultation for teaching, it has the potential to shape behaviors. Behavior change is rarely due to a single event; rather, it is a process involving trust, mutual respect, credibility, and sharing. Ultimately, this process can lead to the continued improvement of the curriculum and the educational experiences of medical students.

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