

**New techniques will
enhance quality, help
achieve goals**

In-service education in rural areas

By David M. Davison

To keep abreast of the task of educating children for a rapidly changing world, classroom teachers need to continually update their own knowledge, perspectives and skills. Institutions of higher education and local education agencies, sometimes acting together, but more often acting separately, have been the typical source of this in-service education.

The traditional role for colleges and universities involved in the provision of in-service education to schools has been that of expert consultants or program designers. The trend in recent years, however, has been for teachers to expect resource personnel, including those from colleges and universities, to respond more directly to concerns as they have identified them. There are indications that schools are beginning to look elsewhere for expert resources when colleges do not deliver. This means that continued involvement of colleges in in-service education calls for a realistic assessment of how they can help schools achieve the changes they desire. In rural areas, the nature of this help has varied considerably according to the accessibility of the school to the college.

Models of in-service education

In-service education may take a variety of forms, (Howey and Joyce, 1978). The in-service may be 1) embedded in the job, focusing on actual classroom performance. Analysis of video tapes of one's teaching and

exchange visits to a colleague's classroom are typical examples; 2) related to the job, although not occurring during the teaching. An example might be an after-school workshop on team teaching; 3) to improve general competence rather than directly relating to one's classroom performance. An example here might be a workshop in teaching problem solving for mathematics teachers; 4) for the renewal of a teacher's certificate, or for gaining qualifications for advancement; 5) simply for the teacher's personal enrichment.

Teachers tend to be critical of in-service education that does not respond directly to their perceived needs (Olivero, 1976; and Wiles and Lovell, 1975, p. 169). Generally, job-embedded and job-related in-service arises from local problems, identified either by the teachers or by their supervisors. Motivation is high since direct pay-off is evident. One problem has been that resource consultants often have frames of reference that do not address teachers' problems (Davis and others, 1977, p. 185). McLaughlin and Marsh (1978) report that outside experts frequently inhibit effective staff development in school settings by operating outside the constraints set by local planners. Thus, if college faculty are to play a useful role in locally developed in-service programs, they need to participate in the developmental phases of the program and to be genuinely responsive to the perspectives of the local participants. It seems evident that the "hit-and-run" expert, whether delivering a "quickie" workshop or serving as an itinerant consultant, cannot be expected to produce any lasting changes in teacher behavior.

Carey and Marsh (1980) suggest that colleges seeking greater involvement in in-service education should become more involved in the job-embedded and job-related modes. The success of this involvement must be based upon evidence concerning effective staff development. This includes the limited viability of outside consultants, training packages, and one-shot training, the importance of classroom application as a phase in training, and factors influencing successful transfer of training into classrooms. Carey and Marsh (1980, p. 80) indicated that college personnel should expand their roles for involvement in in-service education to include complementor, evaluator, researcher, trainer of trainers, instructional materials developers. These new roles will be quite as relevant in working with schools in rural areas as in working with other schools. These issues will be referred to again later in the paper.

It has been more traditional for college personnel to direct their attention to the other forms of in-service education. Through the medium of regular or specially-designed college courses, in-service education can focus on courses that will enhance a teacher's professional background. This has been a characteristic of coursework available at Eastern Montana college, located at Billings, Montana, the only four-year college in eastern Montana.

In-service education opportunities in Eastern Montana

Relevant courses to this service area are provided in the following ways:

1) Regular college credit courses, conducted on campus. A teacher seeking to update his/her background or renew certification may take courses on the college campus. These courses usually carry graduate credit and may form part of a graduate degree program. While such courses may address immediate concerns of the classroom teacher, for example, "Improvement of Instruction in

Elementary Mathematics," it is not axiomatic that college courses will achieve that end. This is particularly true if college courses are constructed without a survey of the needs of specific content teachers in the region, or if such a needs survey is essentially ignored.

When appropriate courses are being offered, they are typically scheduled for the convenience of teachers within easy commuting distance, most often as part of the college's evening program. While some teachers travel forty or fifty miles to attend those classes, the majority live in the local area.

Summer school attracts teachers from across the region, but the focus then tends to be on recertification and completion of degree and credential requirements rather than on in-service education applied to improving classroom competence.

It would be fallacious to conclude that the evening and summer school program offerings are specifically directed to the concerns of rural area teachers.

2) College credit courses, taught at off-campus locations. Courses packaged for off-campus delivery are typically presented in a workshop format. The college instructor travels to the remote site, perhaps on a weekly basis to deliver ten, three-hour sessions, or perhaps on five Saturdays to present day-long workshops, or some variation of these approaches. These courses are offered on an extension basis and are presented only if enrollments are sufficient to cover the costs of offering the course (including the instructor's overload salary). This offers some assurance that extension courses are somewhat responsive to the needs of the consumer, at least within limits set by regular college credit courses.

3) Extension workshops, perhaps offering college credit. These programs differ from those identified above, in that the consumers identify an educational need with which college faculty are able to assist. Alternatively, such workshops may be designed by college faculty in response to a state or region-wide assessment of the needs of a specific group of teachers. These workshops are typically more relevant to the ongoing school situation than those selected from the college catalog.

4) Training courses, offered for college credit. Special courses funded, for example, by National Science Foundation grants, may be conducted to train trainers of teachers in different regions. The intention is to prepare a cadre of teachers located in different areas with the background to offer in-service to teachers in their own region. This method has been used to prepare teacher trainers in metric education, metrics for special education and, most recently in the use of microcomputers in the classroom. This model addresses the current need to conserve energy resources in that the college faculty member works on campus with a selected group of teachers who will be responsible for dealing with the in-service needs in their own geographical area. Not only does this constitute a considerable saving of time and fuel, but a substantial benefit accrues from teachers working with peers who have been equipped to provide them with classroom-relevant training.

5) Courses taught using modern technology. An alternative way of responding to the energy crisis is for the college instructor to use technological devices to teach the course, so that he does not need to travel the long distances involved in reaching the more remote rural areas. One such approach is the Educational Teleconferencing System recently adopted at Eastern Montana

College. In this system the instructor teaches the class from a room on campus equipped with a microphone and speaker while the class at the target site has a speaker and up to four microphones. This system permits interaction between the instructor and the students, with several students typically sharing each microphone at the remote site. For a description of the operation of this system, see Lee and Nowotny (1980). The author has incorporated this method in teaching a three-course sequence for prospective elementary mathematics teachers to a single remote site (Davison and Lee, 1980).

Another technique would be to use an electronic blackboard, whereby the instructor's chalkboard presentation would be visible to a remote class. Other alternatives reflecting the use of later 20th century technology include television and computer-assisted instruction. With all of these media, the instructor has to be especially careful that the personal touch is not lost. This is as much a function of the instructor as of the technology. In interactive systems such as those involving the use of teleconferencing and the electronic blackboard, the instructor needs to establish rapport with the students and to build on this relationship while teaching at a distance. With television and computer-assisted instruction, however, the presentation is independent of a particular group of students, and the instructor must pay greater attention to communicating his personality to a remote audience. In preparing lesson material for computer-assisted instruction use, for example, the author has found it helpful to visualize relevant classes that he has taught. Computer-based learning does not directly respond to the concerns of any specific group of students, but if well planned and directed at a variety of distinct learning patterns, it can create the impression of being individualized for each learner.

The influence of technology will be increasingly significant in curriculum planning in the next decade. Not only will it permit remote instruction of the type described, but it will allow, for example, a distant consultant to visit with a class via a conference telephone call. In this respect, the college can function as a resource locator; it can maintain a comprehensive consultant file and, via ETS, can provide rural areas with the resource assistance that it needs.

The different technologies discussed in this section are all accessible now, although not always in a cost efficient manner. When face-to-face instruction ceases to be the most feasible alternative, we can expect to see greater use of these technologies combinations varying so as to maximize learning.

Prospects for in-service education in rural areas

While the packaging techniques described above do provide a mechanism for responding to the needs of rural teachers, it is clear that a commitment to education in rural areas will call for some new directions. College courses or in-service workshops, offered in response to local demand, may be managed by any one of several of the above modes. If a college is sensitive to what its constituency is requesting, there can be more distinctive programming for schools in rural areas.

However, programs and courses designed by college personnel represent just one of the ways that teachers in rural areas can be assisted with their in-service needs. In line with the emerging direction for college involvement identified earlier, college faculty can assist with planning

in-service programming, can monitor its progress and generally exercise some direction. In particular, training local teachers to execute their own programs seems most sensible. The college representative becomes responsible for maintaining quality control, but is able, in the main, to monitor the program from a distance. This is consistent with the model outlined in (4) above, but as teachers increasingly adopt a professional stance we can expect more impetus and direction to come from the local area rather than being determined by college personnel.

Regional conferences for teachers, where many of the presentors are classroom teachers, support the notion of local initiative. Such conferences serve a worthwhile in-service function, especially since they are job-related. The trend toward school districts assuming more of the responsibility for in-service education places greater emphasis on local leadership, affording school personnel with the opportunity to design in-service education that is more directly related to what happens in the classroom. In this case, the role of the college consultant becomes one of assisting in the attaining of objectives.

This paper has addressed different ways in which a

college with a rural education mandate is involved in the provision of in-service opportunities for teachers in rural areas. The primary format to date has been courses and workshops for teachers, typically focusing on recertification requirements, and incidentally addressing problems that the teachers want to solve. As teachers increasingly become able to assume leadership roles, they can better define what help they need from college faculty. Then teachers will look to college personnel to help them achieve the objectives they have set for themselves. Thus, the emphasis is to be on quality not quantity of college assistance. The use of modern technology, not merely as instructional media, but also as means of conducting in-service education planning and review sessions, seems promising. In this sense, consultant advice will be immediately accessible, even to schools in the most remote areas. The effective use of media enhances the possibility that colleges will continue to cooperate closely with schools in providing in-service education opportunities for teachers in rural areas. As college personnel adapt to new demands for their in-service expertise, they should also reflect the latest strategies for communicating with these rural teachers.

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