

80; and (3) those between 81 and 100. Students with good final exam scores (81-100) found the video-cassette programs least effective. Eighty-seven percent of the average students (61-80) rated the programs either very good or good, and about 80 percent of the below average students rated the AVIS programs good or very good. In all, more than 90 percent of the students responding indicated that the video-cassettes were effective as an instructional media. However, a Chi-Square analysis indicated that the results were not significant.

### Conclusions

The students in AEC 100 have access to a wide range of instructional media in addition to the traditional textbook and lecture notes. These media include video-cassettes, workbook, and CAI.

Student use of the workbook was very high (88 percent ownership) and a majority spent from one to three hours per unit on the problems. Student use declined as the quarter progressed due to time pressures of exams. Some of the study unit problems appear to be quite difficult for students, such as circular flow of economic activity, while others such as index numbers may be too easy. Some changes in these units may be warranted to increase student learning.

AVIS is an important supplement for students who encounter difficulty understanding the concepts from traditional lectures. Student reaction to the video-cassettes was very favorable from those who used them. For any one unit about half of those eligible used them. Almost one-half the students rated the usefulness of the video-cassettes as good or excellent. The lowest ratings were from those students who were high achievers and perhaps did not need the supplemental teaching program.

Usage of the video-cassettes and CAI was higher at the beginning of the quarter than at the end. One factor that may account for the decreased use late in the quarter is the time pressure of final exams. Little substitution seems to exist between the video-cassettes and CAI. Rather it appears that students substituted AVIS or CAI for the traditional study of the text and lecture notes.

Little evidence could be found to show that total study time was increased by introducing the instructional media. A high percentage of students spend very little time studying outside of class. Total study time for 60 percent of AEC 100 students was no more than four hours per week outside the classroom. This was less than that for some other introductory courses which these same students had taken.

Students who used the video-cassette program did not obtain better grades on quizzes than the non-users. Some factors which may explain part of this failure to perform better are the experimental design and the location of the tapes. The experimental design only permitted analysis of the impact of the program on quiz grades. Analysis of student performance on midterm and final exams would have been desirable but could not be conducted because students were users for one unit and non-users for the next. Thus, all students had the opportunity

to use some of the video-cassettes during the quarter. The location of the tapes was also a problem which caused relatively low and declining use throughout the quarter. Most students at OSU do not have classes on the West Campus; therefore, they had to make a special trip to the Learning Resources Center if they wanted to use AVIS. More convenient access on other parts of the campus would have increased the number of users. Because of these difficulties, further research on this program seems warranted.

### References

- Ackers, G. W. and J. K. Oosthoek. "The Evaluation of an Audio-Tape Mediated Course - 1." *British Journal of Educational Technology*, (May, 1972), Vol. 3, No. 2.
- Bertrand, John. "Shasta College: Growing Into An Individualized Learning Program," *AV Guide, The Learning Media Magazine*, (June, 1972), Vol. 51, No. 6
- Mohlner, Andrew. "Ten Years of Educational Broadcasting," *Educational Broadcasting Review*, (June, 1969), Vol. 3.
- Riner, John and Bert Waits. "Television and Video-Cassettes for Math at Ohio State," *Videoplay Magazine*, (October, 1973), page 37.
- Utz, Peter. "Is This Any Way to Teach Mathematics," *AV Guide, The Learning Media Magazine*, (June, 1972), Vol. 51, No. 6.

## Avoid Common Pitfalls In Team Teaching

### Abstract

*Pitfalls common to team teaching can be avoided by careful team planning, proper coordination, and effective course review.*

**Stephen F. Matthews**

Team teaching is meant to describe a course taught by more than one instructor, usually two or three instructors. The benefits of team teaching include increased student exposure to related subject matter, integration of previously taken courses, and efficient utilization of teaching resources. On the other hand, team teaching can become a disastrous experience for both instructors and students. This article points out some common pitfalls encountered when team teaching and recommends some preventive procedures to minimize these potential pitfalls.

### Disjointed Course Objectives

A common problem of team teaching is the assumption that each instructor is to exercise sole decision-making power over his part of the course. Before any team-taught course can realistically be offered, the potential instructors must individually develop instructional objectives which clearly express what the student is to learn and how achievement will be measured. After this initial formulation of each instructor's objectives, there should be a careful review by all instructors of each other's instructional objectives.

Team teaching can better benefit instructors when each shares his experience and offers constructive criti-

*Dr. Matthews is an associate professor in the Department of Agricultural Economics, University of Missouri, Columbia MO 65201.*

cism and support. Learning is enhanced considerably when students have clearly defined instructional objectives which are integrated throughout the course. All too often team-taught courses represent fragments of information bearing little relation to each other.<sup>1</sup>

Every course benefits from student criticism and suggestions. Team-taught courses are no exception. A mistake is made from the start if instructors pass up the opportunity to get student input **before** the course is offered. Pre-testing course objectives with students can help the instructors gauge the probable success of their proposed course. The size of the student pre-testing group need not be more than eight or ten in order to get beneficial student input. Most instructors regularly encourage student course evaluations. By taking advantage of student reaction prior to offering the course, team members are more likely to offer a successful course.

A major hazard for team-taught courses is poor team coordination. Certainly, day-by-day responsibilities must be assigned. However, team teaching is more effective if instructors are aware of the learning activities and subject matter covered by the other instructors. Grading standards and weights for exercises, exams, and papers should receive the consideration of **all** the instructors in order to achieve a balanced and integrated course.

The proper time to discuss course coordination is before the course begins, not as the course proceeds and certainly not at the semester's end. One of the single most effective approaches to achieve team coordination is to designate one team member as the course coordinator. This delegation of authority facilitates the mechanics of collecting and returning student papers, recording grades, and handling course-related administration like obtaining audio-video equipment and scheduling classrooms. The coordinator role should alternate among team members to improve the sharing of team responsibilities.

Team coordination can also be improved by instructors visiting class sessions conducted by other team members. This gives each instructor a chance to observe firsthand the teaching techniques being used and to improve his grasp of the subject matter being taught in course segments other than his own. The feedback is beneficial to the teacher, and students witness the sincere interest of their instructors in the whole course. Being able to refer to specific information covered by other instructors adds to overall integration and helps to avoid useless duplication.

Most students are willing to offer their comments on how to improve a course, whether the course has one or several instructors. The difficulty arises in that many instructors utilize standardized course evaluations focusing on course content, instruction, and teaching methods as if there is a narrowly defined course content, only one instructor, and a uniform set of teaching methods employed. Team teaching, obviously, is not adequately evaluated by such standardized forms.

To get constructive student evaluation, instructors of team-taught courses should develop a specially prepared evaluation form. This is a useful method of evaluation as it allows students to comment on each segment of the course. However, tailor-made evaluation forms for team-taught courses are frequently lengthy because students are asked to evaluate each course segment as though it were an entire course.

To supplement any tailor-made evaluation form, team instructors should consider inviting an instructor from outside the course or a specialist in teaching improvement to conduct an in-class oral course evaluation. Regular course instructors should not be present, and the outside evaluator should summarize student comments without reference to any particular student. The outside-evaluator approach works best when team members prepare specific questions for the evaluation session. After the session, a de-briefing conference with the team members and evaluator is held to point out student criticisms and suggestions. While the outside-evaluator approach is also useful in courses with only one instructor, the team-taught course can use it to help overcome the deficiencies of standardized evaluation forms.

Not to be overlooked as a source of student evaluation is a conference with students, either during the semester, at its end, or after the course is completed. Students generally appreciate an instructor's desire to improve his course and may be more willing to discuss their ideas on improvement with the instructors than filling out an impersonal written evaluation or talking to an unfamiliar outside evaluator. The important point is that team instructors need to seek innovative methods to evaluate their course.

### Summary

Team teaching can be an effective method of combining the individual expertise of instructors. However, team-taught courses should not become a series of fragmented lectures. Team members must exhibit a willingness to be involved in formulating course objectives, a disposition toward openness with each other and with students, and an attitude of caring about students and their achievement of course objectives.<sup>2</sup>

Poor coordination of a team-taught course can be overcome with careful team review of each instructor's teaching objectives and learning activities. Designating a team coordinator and visiting classes taught by other team members also improves coordination.

Constructive student evaluation for team-taught courses can be obtained through specially made written evaluation forms, using the outside-evaluator approach, and/or holding small group student conferences.

### References

1. Holcomb, J. David and Arthur Garner. 1974. "Improving Team Teaching," *Improving College and University Teaching*, 22:188-189, 191.
2. Lucas, Christopher J. 1971. "Meaning and Myth in Teaching," *Improving College and University Teaching*, 19:188-189.