

A Comprehensive Approach to Course Evaluation

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EDITOR'S NOTE

In order to meet the diverse needs of *JID's* readership, we have decided to occasionally publish more practically-oriented "tools and techniques" articles. They will deal with specific aspects of the ID process, and will present validated "how-to" techniques useful to experienced developers. As with all other manuscripts, they will meet the criteria of making a contribution to the field, being literature-based, and containing generalizable and useful ideas. The following article, which presents an evaluation checklist, is a good example of this new type of article.

Abstract. Evaluation is an important phase of course development and improvement efforts. This article discusses a number of problems with current approaches to course evaluation. A broader, more comprehensive approach is recommended, and a checklist illustrating the kinds of issues and questions that need to be considered is presented.

The Problem

Under the pressure of state and local agencies, diminishing resources, and

decline in enrollment, academic institutions are becoming increasingly concerned with improving the quality of their courses and instructional delivery systems. Faculties are usually untrained in formal evaluation procedures and, unfortunately, adequate professional assistance is often unavailable. In addition, time and fiscal resources to support an evaluation effort are limited.

In this paper we will focus on two basic questions:

1. What purposes and/or roles can be served by formal, systematic course evaluations?

2. What are the issues that must be explored and the questions that must be asked in attempting to determine the value of a course?

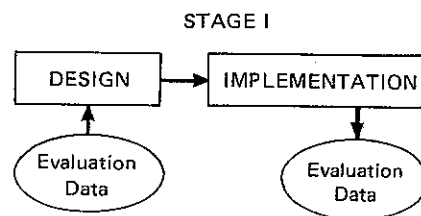
This will be followed by a practical checklist that has been developed to assist in the design of a comprehensive course evaluation.

The Roles of Evaluation

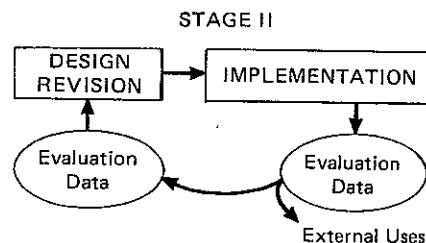
Without the information base that formal, systematic evaluation provides, decisions about content, structure, and revision must be based on hunches, personal preferences, or tradition. And yet, of all the essential elements involved in instructional improvement, evaluation is the one that faculty and administrators feel least comfortable about. As a result, the time and resources necessary for implementing a formal evaluation are rarely provided and their potential benefits are rarely realized. In the end, the student, the faculty members, and the institution suffer.

Evaluation has two distinct roles in the design and implementation of courses and academic programs. First, it provides information essential to those involved in designing the goals, content, and structure of the program (information about the student, the discipline, the profession—in job-focused programs—the institutional priorities, etc.). Second, once the program is under

way, evaluation provides information about what is happening, what is working, and what isn't. (See Stage I.)



The data produced by the evaluation of the ongoing program then serve two additional purposes: (1) to provide a basis for making decisions about revisions in the program, and (2) to provide the basis for external reports on the project. (See Stage II.)



These reports may range from brief descriptions of the program and its impact provided to the department chairman, dean, or faculty curriculum committee to more comprehensive documents required by external sources of financial support and by accreditation agencies. By providing the basic information on which program decisions are made, evaluation, will have a major impact on both the quality of the program and its potential for survival.

Some Observations

Before presenting an array of evaluation questions that should be considered by those actively involved in course and program improvement, some observations based on the present state of the art might be appropriate.

Too Often Evaluation is Only an Afterthought

Often, when projects are planned, too little attention is paid to evaluation. Innovations may be implemented without plans or procedures for formally evaluating the program; when the initial implementation has been completed, those involved find themselves facing a major problem in reporting information and supporting conclusions. Even when an evaluation component is included it may be under-budgeted in terms of time, personnel, and funds. In some instances, where external funding is involved, the guidelines that must be followed exacerbate the problem by limiting both the money and time to be spent in the evaluation function. Failure to plan in advance for evaluation creates problems when one tries to make comparisons without the necessary baseline data—information that can no longer be collected (e.g., entering levels of student achievement, entering student attitudes, success of previous programs, etc.). The checklist presented in this article is designed to help develop a more solid framework for the evaluation process.

Participants in Course or Curriculum Development Projects May Not Be Aware of Evaluation's Scope or Potential Impact

Many faculty members do not understand the impact of formal evaluation; as a result, they are unaware of action on their part that may be required. This not only affects the preliminary design and budget of the project but can also create major traumas later in the process as unaddressed but important issues are identified or major revisions become a necessity. For example, faculty members may find, totally unexpectedly, that new content must be added, that the instructional sequence needs to be substantially modified, or that procedures being used to evaluate students must be altered.

Evaluation Instruments May Be Determining the Scope and Focus of the Evaluation Process

When evaluative studies are included, there is a tendency to select prematurely a particular inquiry technique and then allow that technique to determine the issues and questions investigated. Questions that cannot appropriately be addressed with the tool or method chosen

Consider each of the following questions and check those appropriate for the course being evaluated.

I. Course Rationale

- A. What population of students is the course intended to serve?
- B. What student needs is the course intended to serve?
- C. What institutional, community, or societal needs is the course intended to serve?
- D. What other defensible reasons exist for offering this course?
- E. What other courses serve these same needs?
- F. To what extent does this course overlap with or duplicate these other courses?
- G. On what grounds is the continued existence of this course justified and warranted?

II. Development and Current Status of the Course

- A. When and under what circumstances was the course developed?
- B. How frequently and how regularly has the course been offered?
- C. To what extent has the enrollment increased, decreased, or stabilized from year to year?
- D. What problems have been associated with the course and how have they been resolved?
- E. To what extent is the course intended to be replicable from instructor to instructor or from term to term?
- F. To what degree do the plans or design for the course exist in a written or documented form? In what documents (course approval forms, course outlines or syllabi, memos, etc.) do these plans exist?
- G. How does the current version of the course differ from earlier versions? Why?

Credit and Curricular Implications

- A. What credit is awarded for successful completion of the course? On what basis is this credit allocation justifiable?
- B. In what ways can credit for this course be applied towards fulfillment of graduation and degree requirements?
- C. At what level (lower division, upper division, graduate) is the course classified? Why? On what basis is this classification justified?
- D. How does the course fit into the overall curriculum of the sponsoring department and college?
- E. In which departments is the course cross-listed? Why? How does it fit into the curriculum of these departments or colleges?
- F. What prerequisite skills or experiences are needed in order to succeed in this course?
- G. What problems are experienced by students who do not have these prerequisites?

IV. Course Objectives

- A. What are the formal, stated objectives of the course?
- B. How feasible and realistic are these objectives in terms of the abilities of the target population and the available time and resources?
- C. How are the stated objectives related to the adult life-role competencies students will need in everyday life outside school?

FIGURE 1. The course evaluation checklist.

are overlooked. When this occurs, important concerns are likely to be ignored. Consequently, the evaluation effort is likely to be less productive than it could have been. The key is to first identify the necessary information and then select an inquiry technique to provide it. For example, relying solely on student feedback to measure the effectiveness of a program totally overlooks such factors as what actually was learned and how the program prepares students for courses that follow. In addition, instruments of this type are usually administered near the end of a course when the most negative students may no longer be in attendance.

Evaluation Raises Questions That May Otherwise Be Avoided

Thorough evaluation causes us to question what, how, and why we do what we do. It questions the status quo and may force faculty and administrators to face up to key issues that have studiously been avoided. Quite often we find that assumptions are being made that are of major concern to some of the participants, but because of political relationships they cannot be brought out into the open by a member of the content team. These issues can, however, be raised without much difficulty in evaluation reports or by other members of a support team as instructional developers.

Cost and Usefulness Do Not Necessarily Correlate

The most expensive approaches are not always the most useful. In fact, many of the inexpensive, "quick-and-dirty" techniques are not only easy to use but extremely effective ways of collecting essential information. While available dollars may limit some of your options in dealing with a particular question, neither the scope nor long-range quality of the evaluation effort need be substantially restricted. For example, short student questionnaires can provide invaluable data about the time, level, clarity, usefulness, and effectiveness of instructional units. In addition, most campuses have available at very low cost several computerized data processing systems that, if the forms being used are appropriate, can provide a comprehensive analysis of the information collected.

IV. Course Objectives (Continued)

- D. How are the objectives related to the competencies students will need in their subsequent academic careers?
- E. If the course is designed to prepare students for a specific professional or vocational field, how are the objectives related to the competencies they are likely to need in their future careers?
- F. What values are affirmed by the choice of these objectives as goals for this course?
- G. What other purposes, intents, or goals do the faculty, administrators, and other interested audiences have for the course?
- H. What goals and expectations do students have for the course?
- I. To what extent are these additional goals and expectations compatible with the stated course objectives?

V. The Content of the Course

- A. What (1) information, (2) processes, and (3) attitudes and values constitute the subject matter or content of the course?
- B. How are the various content elements related to the course objectives?
 - 1. Which objectives receive the most coverage or emphasis? Why?
 - 2. Which objectives receive only minor coverage? Why?
- C. How is the content sequenced or arranged? Why is this sequence appropriate/inappropriate?
- D. What means are used to integrate and unify the various content elements into a coherent pattern or structure? To what extent does fragmentation or lack of coherence appear to be a problem?
- E. What values and assumptions are implicit in the decisions which have been made regarding content selection and emphasis?

VI. Instructional Strategies

- A. What kinds of learning activities are utilized?
 - 1. What activities are the students expected to engage in during class sessions?
 - 2. What assignments or projects are students expected to complete outside of class?
 - 3. In what ways are these activities appropriate or inappropriate in light of the course objectives?
 - 4. How could these activities be made more effective?
- B. What instructional materials are utilized?
 - 1. How and for what purpose are the materials used?
 - 2. How accurate and up-to-date are the materials?
 - 3. In what ways do the materials need to be improved?
 - 4. How could the materials be utilized more effectively?
- C. What instructional roles or functions are performed by the teacher(s)?
 - 1. How could these roles be performed more effectively?
 - 2. What important instructional roles are not provided or are performed inadequately? Why?
- D. What premises and assumptions about learning and the nature of the learner underlie the selection of instructional strategies? How and to what extent are these assumptions warranted?

FIGURE 1. The course evaluation checklist. (Continued)

There Is No Single Approach to Course Evaluation

Each approach to course evaluation has its limitations. In the classical approach developed by Tyler (1950) emphasis is placed on assessing the value of a course in terms of whether or not it has been shown to be effective, i.e., whether the course objectives have been achieved. Scriven (1967), on the other hand, has maintained that the purpose of evaluation is to answer questions about the *worth* and *value* of a course or a program. He contends that the question "How good is the course?" is a different question than "How well have the course goals been achieved?" According to Scriven, the total value of a course is determined by more than just its effectiveness.

Eisner (1972, 1976) has maintained that instructional experiences can be worthwhile even if their effects are not immediately observable or consistent with some prespecified objectives. Diamond (1975) identified a series of additional limitations related to the emphasis on behavioral objectives. These included the often negative impact on faculty of the stress of generating objectives and the fact that some objectives cannot be measured during the period in which the course is taught. This approach, therefore, tends to yield many low-level, easily measured objectives.

Smith (1976) has stressed that it is important to examine the merits and shortcomings of the various component parts of a course independently, since they may have intrinsic value, even if their effect is not immediately observable or consistent with some prespecified objectives. Regardless of whether or not the students master the intent of a course, the course may still have inherent value. In addition, students may still master course content in spite of some strongly negative components such as a weak seminar series or a lack of coherent structure within a large lecture course.

These approaches are not mutually exclusive. They address different issues and answer different questions. A comprehensive course evaluation may include elements of different approaches.

Course Evaluation Should Be an Ongoing Departmental Activity

Course evaluation is not an easy task, but institutions serious about improving

VII. Procedures and Criteria for Evaluating Students' Achievement

- A. What instruments and procedures are employed as a means of collecting evidence of students' progress and achievement?
- B. What criteria are used to assess the adequacy of students' work and/or achievement? On what basis were these criteria selected?
- C. How well do the assessment procedures correspond with the course content and objectives? Which objectives or content areas are not assessed? Why?
- D. To what extent do the assessment procedures appear to be fair and objective?
- E. What evidence is there that the assessment instruments and procedures yield valid and reliable results?
- F. How are the assessment results used? Are the results shared with the students within a reasonable amount of time?
- G. How consistently are the assessment criteria applied from instructor to instructor and from term to term?
- H. What indications are there that the amount of assessment is excessive, about right or insufficient?

VIII. Organization of the Course

- A. How is the course organized in terms of lectures, labs, studios, discussion sections, field trips and other types of scheduled class sessions?
- B. How frequently and for how long are the various types of class meetings scheduled? Is the total allocation of time sufficient/insufficient? Why?
- C. If there is more than one instructor, what are the duties and responsibilities of each? What problems result from this division of responsibilities?
- D. What outside-of-class instruction, tutoring, or counseling is provided? By whom? On what basis?
- E. How well is the student workload distributed throughout the course?
- F. To what extent are the necessary facilities, equipment, and materials readily available and in good working condition when needed?

IX. Course Outcomes

- A. What proportion of the enrollees completed the course with credit during the regular term? How does the completion rate vary from instructor to instructor or from term to term?
- B. What proportion of the enrollees withdrew from or discontinued attending the course? Why?
 - 1. To what degree does their discontinuance appear to be related to factors associated with the course?
 - 2. How does the attrition rate vary from instructor to instructor or from term to term?
- C. At the end of the course, what evidence is there that students have achieved the stated objectives?
 - 1. For which objectives was the course most/least successful?
 - 2. For what kinds of students was the course most/least successful?
- D. What effects does the course appear to have had upon students' interest in the subject matter and their desire to continue studying and learning about this subject?

FIGURE 1. The course evaluation checklist. (Continued)

the quality of higher education must take this task seriously. This will require building in a reward system for faculty members who participate in the process. Unfortunately, at present there is little incentive for faculty to take part in activities of this type. Every department should periodically review and examine each of its courses. In conducting this review it must be kept in mind that the design of a course on paper may not be synonymous with the course offered. The implementation of the planned course should not be taken for granted. It is not enough just to review a course syllabus. What happens in the course when it is actually offered may differ substantially from what was intended; consequently, the course, as it is offered, must be evaluated.

Perhaps the best approach is to establish a rotating schedule of reviewing a few courses each year on a cyclical basis. Courses with limited enrollments or infrequently offered courses may have to be given lower priority and examined less frequently than others. Nevertheless, some sort of rational schedule for reviewing each course should be established.

We suggest that a committee of faculty members from both inside and outside the department be charged with the responsibility of conducting the inquiry for a particular course or sequence of courses. Hard questions should be investigated and not glossed over. It is important, therefore, to involve individuals external to the department who will question issues insiders might no longer question or prefer to avoid.

Appropriate Options Must Be Selected From a Wide Range

We have choices in dealing with the scope of our evaluation and the procedures we wish to follow. No single project can do everything: Time, budgets, and resources make this impossible. We can, however, select the combination of options that makes sense for us. No two combinations will be the same. The factors influencing which questions to consider in the checklist include:

1. Purpose of the evaluation. Are you in the first stages of designing a new course or are you evaluating an on-going program?

2. Who will receive the information. Is it for the faculty and staff involved in the project, an administrator, or for an

IX. Course Outcomes (Continued)

- E. What other effects did the course have upon the students?
 - 1. How were their values, attitudes, priorities, interests, or aspirations changed?
 - 2. How were their study habits or other behavioral patterns modified?
 - 3. How pervasive and/or significant do these effects appear to be?
- F. What evidence is there that students who have completed this course were adequately/inadequately prepared for subsequent courses for which this course is intended to prepare them?
- G. To what extent do students rate their experience in the course as producing a meaningful and worthwhile contribution to their self-development?
 - 1. In what ways were the students satisfied or dissatisfied with the course?
 - 2. What suggestions do they have for improving the course?
- H. What evidence is there, if any, that the experience of teaching the course has a positive or negative effect upon faculty members?

X. Institutional Costs and Benefits

- A. What are the time, space, equipment and facilities requirements of the course?
- B. What are the requirements of the course in terms of faculty and staff?
- C. What other support services are required by the course?
- D. What direct instructional costs are associated with this course?
- E. What benefits derive to the department, the college and the institution for having offered the course?

*This checklist may be reproduced if appropriate credit is given.

FIGURE 1. The course evaluation checklist. (Continued)

1. Course Objectives

- A. What are the formal, stated objectives for each course? In what ways are the objectives similar? How are they different?
- B. How appropriately do the stated objectives of each course match the needs of the target population?
- C. What other unstated purposes, intents or goals do faculty members, administrators, and other interested persons have for each course?

2. Student Population Served

- A. How comparable are the groups in terms of demographic variables such as age, sex, high school rank, SAT scores, academic major, and full-time student status?
- B. Why do students choose to enroll in one course instead of the other? Were students turned away from CMS 100X because of a ceiling on enrollment? How many?

FIGURE 2. Questions to be investigated in evaluating two interdisciplinary communications skills courses.

external source sponsoring the activity?

3. What resources are available. Are professional evaluators available? What levels of computer processing exist? How much money is available for staff time and computer processing?

4. How much time is available. When does the program begin? When are the data needed?

5. How the findings are to be used. Is the information to be used to help improve the program or to decide if it should be continued? What are the specific questions to be answered?

6. The nature of the project. Are you involved with a single course, an entire curriculum, or a specific activity?

In every project there will be trade-offs. Decisions must be made as to which data are most important and which questions deserve the most attention. A limited evaluation is not necessarily a poor evaluation. It is far better to do a few things well than to design an evaluation plan that is so broad that the information generated is either inaccurate or unavailable until after it is needed.

Evaluation Checklist

Evaluations, as noted previously, must be planned. The design of a particular course evaluation should be determined by the study's purpose and the information needs of the decision makers. No two evaluation designs are likely to be the same. However, there are questions which tend to show up recurrently in course evaluations. We have compiled a list of such questions presented in the form of a checklist (See Figure 1.) This list is designed for use by faculty members and administrators with responsibility for evaluating courses. The list is intended to serve as a functional guide to the kinds of issues to be addressed in evaluating a course. It is presented as a checklist in hopes of increasing the probability that all relevant questions will be considered in the planning stage of a course evaluation.

Keep in mind, however, that because of limitations of time, staff, and money, *not all of the suggested questions are likely to be feasible or appropriate in evaluating any one particular course.* However, in many instances you will find that it is relatively easy to collect important data. Those involved in planning an evaluation must select the specific questions to be addressed and tailor the design to the particular situa-

3. Types of Learning Encounters & Opportunities Provided
 - A. How do the two courses differ in terms of content and organization?
 - B. What are the primary modes of instruction used in each course? Approximately what proportion of the students' time (in class plus time spent on assignments) is devoted to listening to lectures, reading, writing, taking tests, or small-group discussion?
 - C. What are the criteria for determining passing grades in each course?
4. Attendance and Course Completion Rates
 - A. To what extent do the courses differ in terms of average daily attendance?
 - B. What proportion of the students withdraw from or discontinue each course? To what extent was their discontinuance associated with factors related to the courses?
 - C. How do the courses compare in terms of the proportion of students who complete the course with passing grades (full credit)?
5. Observable Student Outcomes
 - A. What gains in students' writing skills appear to have occurred in each course?
 - B. What gains in performance on a test of English grammar and usage appear to have occurred in each course?
 - C. What gains in students' oral presentation skills appear to have occurred in the trial course?
 - D. What effects did participation in the courses have on students' writing apprehension and speech apprehension?
 - E. What effects did participation in the courses have upon students' attitudes towards the practical value and importance of clear and persuasive expression in both oral and written forms?
6. Student Satisfaction
 - A. To what extent were students' expectations of the courses met? In what ways were their expectations not met?
 - B. To what extent did students perceive the content and learning activities to be relevant to their needs and interests?
 - C. How did students rate the quality of the instruction provided?
 - D. What suggestions and recommendations did students have for improving the course?
7. Impact on Course Instructors
 - A. What activities do the instructors of the trial course perform as a team? What activities do they perform individually?
 - B. What effect does participation as an instructor in the trial course appear to have upon faculty members? How does it affect their philosophy of teaching? To what extent do they borrow ideas and methods from the trial course for use in other courses they teach?
 - C. What proportion of the instructors want to continue teaching the course? What proportion prefer to discontinue their involvement? Why?
8. Support Requirements
 - A. What are the space, time, physical facilities, and equipment requirements of each course?
 - B. What instructional materials and support services are required by each course? What are the relative costs involved?
 - C. What are the requirements of each course in terms of full-time equivalent faculty and staff? What dollar outlays per student are required?
 - D. What policy and/or logistical changes would be necessary to support the continued use of each course?
9. Feasibility of Expansion
 - A. What is the feasibility of creating additional sections of the course and offering it to a greater number of students each term? What problems would likely be encountered?

FIGURE 2. Questions to be investigated in evaluating two interdisciplinary communications skills courses. (Continued)

tion. It is our hope that the checklist will lead to more comprehensive course evaluations. Questions not raised in evaluating a specific course should be omitted intentionally rather than accidentally. The approach selected should be determined by the questions being investigated rather than vice versa. The place to begin in designing a course evaluation is selecting the issues and questions to be studied.

An example of the use of the checklist, a list of questions that were used in evaluating and comparing two communication skills courses being taught simultaneously on a university campus, is shown in Figure 2.

Conclusion

Evaluation is an inquiry process which involves seeking answers to questions as a basis for making informed judgments about the value of some object or event. The scope of an evaluative study is determined largely by the range of questions investigated. Course evaluations that focus on trivial questions may produce precise and un-

equivocal answers, but the findings are likely to be irrelevant or superficial. Course evaluations that focus solely on questions about students' reactions to the course may be interesting, but they are not sufficiently informative to serve as a basis for judging the worth of the course or its component parts. A more comprehensive approach to determining the merits and shortcomings of a course would address a broader range of questions. The accompanying checklist is submitted as a means of encouraging educators to broaden their vision of the kinds of issues and concerns that need to be addressed in attempting to determine the value of a course. The suggested questions are intended to be illustrative rather than prescriptive. Thoughtful consideration of the kinds of questions and issues suggested in the checklist should help educators design more comprehensive and more revealing evaluations. Better evaluations should lead to more informed judgments as to where and how courses need to be improved and which courses should be continued or discontinued. Courses of better quality should result.

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