Conducting Product Evaluation with a Graduate-Level Class: The Reconstruction of Experience.

The involvement of an actual class in the conduct of a product evaluation is described as a powerful learning experience for the students and a valuable service for a client. The essential elements of such a program are: (1) a teacher-negotiated contract for an evaluation; (2) students who sign on by enrolling for credit; (3) background provided by the client; (4) formation of teams of classmates to conduct the work; and (5) reports of evaluation results to the client. The practice of paying the class for evaluation work is advocated as an incentive. Two specific evaluations by graduate students at Utah State University undertaken in this manner, one evaluating an approach to teaching French or Spanish at the elementary level and one evaluating college-level instructional materials for a distance learning course in French, are described. How this evaluation approach relates to the philosophy of John Dewey is explored, and the operation of the concepts of experiential learning is discussed. (Contains 12 references.) (SLD)
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Introduction:

The conduct of evaluation can be viewed as essentially a craft skill, with a need for sustained learning and supervision prior to and during the process of work. Others teachers in the field (e.g. Morris, 1989) have argued that experiential learning, where the learner profits from direct experience, is a powerful teacher. The volume by Mertens (1989) contains numerous examples of those teaching evaluation using direct experience as a teacher (e.g. Preskill, 1989). There seems to be general agreement that learning by direct experience is an ideal way to structure the training of evaluators, if such situations can be devised practically.

In an earlier article (Eastmond, Saunders & Merrell, 1989), I argued that the involvement of an actual class in the conducting of an evaluation could provide a powerful learning situation for students. The essential elements of this kind of learning are (1) the teacher negotiates a contract for a certain evaluation; (2) students "sign on" by enrolling in the course for credit, with the understanding that they will be paid for their work (generally the off-campus field work portion); (3) the client meets with the class -- in person or via electronic distance education means -- to provide the background on the evaluation problem, as well as the expectation that this project is "for real"; (4) class members work in teams to conduct the work, learning how to perform their tasks as they go; and (5) the class reports back to the client, in oral and in written form, to provide the client with the evaluation results. This process provides a powerful learning experience for students and a valuable service for a client.
Three caveats are in order in conducting such a project. First, the client must be aware of the nature of the project as part of the contract and must be willing to meet and work with students in this way. Second, the students must be prepared for the necessary tasks and encouraged to do work for which they inevitably feel inadequate, with the teacher taking final responsibility to edit and ensure the quality of any product. And finally, the project must be managed carefully to see that the work is completed when the school term is finished, so as not to leave the teacher "holding the bag."

Paying students for their work in completing a recognized degree is frequently done in graduate school, although usually on an individual basis and as some form of research or teaching assistantship. The practice of paying an entire class for their work on such a project is less common; however, in this evaluator's experience it is welcomed by students and generally agreeable to both clients and administrators once the nature of the service to be performed is made clear. Once the word of it gets out to students, student enthusiasm certainly can boost enrollment. In the classes under consideration, payment of $75 to $150 per student for their work on the final has been about normal, though the summer course paid $25 per student. The policy formally accepted by the Research and Evaluation Group at Utah State University is that, "if the professor receives payment for work done by a class, then the students should be paid as well."

The Specific Experiment:

In 1993, two specific evaluations were undertaken by graduate students in the Instructional Technology 679: Instructional Product Evaluation, both involving teaching of foreign language. The first (Winter 1993, enrollment 17) evaluated the effectiveness of a novel approach to teaching Spanish or French at the elementary school level, using a videodisc with hand-held barcode reader and accompanying teacher manual and student worksheets. The approach was innovative in that it required no prior language on the part of the foreign language teachers, but rather, they were to learn along with the students. The second instance of the same class (Summer 1993, enrollment 18) was the evaluation of the instructional materials for a distance education course in introductory French, using audiotape, course manual and computer review exercises. This college level course is currently being taught
in three rural high schools in Utah, where students work independently and submit their work to a professor of French at Utah State University. The two resulting reports have been published as local evaluation reports (Eastmond, Durrant, & Samhouri, 1993; and Eastmond and Elwell, 1993).

A perspective from John Dewey:

An early advocate of experiential learning was Dr. John Dewey, a foremost American philosopher of his day whose influence reaches into our own. With only a bit of hyperbole, British philosopher A. N. Whitehead has termed Dewey "the chief intellectual force providing [the North American] environment with coherent purpose." (Johnson, 1949, dust jacket). Dewey was particularly drawn to the problems of education, and his educational philosophy constitutes a vital portion of his total system of philosophy.

Given the extensive work completed in his 93 year lifetime, it is hard to represent Dewey's positions briefly without distorting them. The following will attempt to draw upon direct quotations where possible and to give the reader the flavor of Dewey's robust thought.

Dewey believed that education was essentially the "reconstruction of experience", in helping the person learn to value and learn from happenings in the environment (Brumbaugh & Lawrence, 1963). Dewey taught that the mind and body must both be engaged, and that the dualistic theory that would attempt to separate them, labeling "mind" as the hero to be cultivated and "body" the culprit to be controlled, was doomed to failure when applied to real boys and girls. He felt that the wise teacher took a holistic view of the person in structuring learning experiences. The following quotations attest to the powerful nature of educational experience:

An ounce of experience is better than a ton of theory, simply because it is only in experience that any theory has vital and verifiable meaning.

An experience, a very humble experience, is capable of generating and carrying any amount of theory (or intellectual content, but a theory apart from experience cannot be definitely grasped even as theory. It tends to become a mere verbal formula, a set of catchwords used to render thinking,
or genuine theorizing, unnecessary and impossible. (Dewey, 1944, p. 144).

In an evaluation context, premature emphasis upon verbal (or pictorial) models of evaluation in the absence of concrete experience becomes scholastic and formal. The person who learns formally without direct experience may be able to supply verbal description, but will be unlikely to have the ability (or the confidence) to proceed directly to the completion of an actual evaluation problem. Only when we can ground this knowledge in real experience -- to see the interplay of expectations, constraints, and political forces -- can the student obtain any idea of the complexity of the evaluation enterprise. The direct experience with an evaluation client is a liberating influence, while theorizing in the abstract is more likely to arrest growth and confidence than to promote it.

Dewey frequently makes use of a version of the scientific method. Indeed, for Dewey, the scientific method exemplified how problem solving occurred, and this kind of problem solving formed the basis of all reflective thinking. Taking Dewey's problem solving stages and matching them against the actual experience of a class conducting an evaluation demonstrates the mental effort required to succeed at this enterprise:

General features of a reflective experience (Dewey, 1944, p. 150) are followed by observations of a real class working through an evaluation contract:

1. Perplexity, confusion, doubt, due to the fact that one is implicated in an incomplete situation whose full character is not yet determined.

-- Initial enthusiasm of students quickly gives way to feelings of inadequacy: "You expect us to conduct an evaluation when this is our first exposure to these concepts?" "How can I expect a client to pay me for work that I am just learning how to do?"

2. A conjectural anticipation -- a tentative interpretation of the given elements, attributing to them a tendency to affect certain consequences;
-- Trying to figure out the real motives of the client. "Is he really ready to make revisions if our evaluation shows it is necessary?" "Who is in control in this setting?" "Does their inservice program really work?"

3. A careful survey (examination, inspection, exploration, analysis) of all attainable consideration which will define and clarify the problem in hand;

-- Students working to define parameters and constraints: "What are our limits in terms of budget and timelines?" (And in personal terms:) "How will I be graded on this work?"

4. A consequent elaboration of the tentative hypothesis to make it more precise and more consistent, because squaring with a wider range of facts; and . . .

-- Defining the research (or evaluation) questions: "And so these are the questions our team's evaluation should focus on, right?" "The client says this is a formative evaluation, but aren't they really asking for summative information? What if we get to the end and can't answer questions about overall effectiveness? What then?"

5. Taking one stand upon the projected hypothesis as a plan of action which is applied to the existing state of affairs: doing something overtly to bring about the anticipated result, and thereby testing the consequences.

-- Moving ahead to gather data and draw conclusions, based upon a working hypothesis: "O.K. Let's assume that (our client) really wants to know if this program works. Here is what we have to do to find out." "Based upon these surveys of participants, as well as our use of the materials, we can conclude that these features of the program are working well, and these (others) are not."

The point is that having a real evaluation contract raises the stakes of these steps. Knowing that someone will make use of the results, and is paying to have them, helps the student to understand the seriousness of this training. Having to verbally report back to the client and to justify any conclusions drawn simply reinforces that sense of purpose.
And from a teaching standpoint, the point of this exercise is not simply the fulfilling of a contractual obligation. It is the cultivation of mental skills in students, the skills necessary to take on a contract and to perform a worthy evaluation. For many of these students, it is the first time that they have tried to obtain a fee for their services in any sort of consulting arrangement. The notions of written contract, a daily rate, managing activities and budget, and providing deliverables to a client are all rather new concepts for all but a few of the students. The experience plunges them into a new environment where they have to "sink or swim". With a little coaching, they invariably "swim", even the most reluctant or modest in their abilities. And in doing so, they experience an intellectual exercise of the first order.

In Conclusion: Dewey is quite explicit in his praise for "education through occupations", in some settings as "vocational education", and the kind of experience the contractual evaluation exercise provides:

An occupation is a continuous activity having a purpose. Education through occupations consequently combines within itself more of the factors conducive to learning than any other method. It calls instincts and habits into play; it is a foe to passive receptivity. It has an end in view; results are to be accomplished. . . (O)bervation and ingenuity are required at each stage to overcome obstacles and to discover and readapt means of execution (p. 309).

The only adequate training for occupations is training through occupations (p. 310).

Dewey would, as much as possible, remove the line between work and other activities. He makes a point that such a change must happen gradually, however:

As we have seen (in an earlier chapter) in older pupils work is to educative development of raw native activities what play is for younger pupils. Moreover, the passage from play to work should be gradual, not involving a radical change of attitude but carrying into work the elements of play, plus continuous reorganization in behalf of greater control (p. 315).
Even though the evaluation class under consideration is part of a graduate program leading to a professional specialization as an instructional technologist, one criticism of the program could be that the transition into the world of work is too abrupt. Because other classes in the program seldom engage in contractual activities with an outside client and because the work must be undertaken under time constraints of no more than ten weeks, the change can be an abrupt one for students. Some relish it and cite it as the high point of their coursework in the department; others resist it for a variety of reasons, the main one being that the experience is so different from their other coursework and may be something quite different than what they had expected in enrolling in the course. Some resist the lack of structure and feel that excessive demands are being put on their time ("Welcome to graduate school!").

Student course evaluations are generally positive, but not overwhelmingly so. Because each evaluation contract has a specific set of demands and challenges, the work lacks the relaxed feel and predictability of some of the students' other coursework. For example, in the evaluation of the Spanish/French videodisc program "Hablar et Parler", students received the course outline in three installments, since it was impossible to predict the quarter's activities with accuracy. And it may be unrealistic to keep the majority of other class assignments when an evaluation contract is underway. The class taught summer quarter was conducted in exactly four weeks, and student complaints about workloads reached a new high. They completed the work, satisfied the customer, and grew from the experience, but some felt that quality had been sacrificed to quantity and that the experience had been just too intense. Some of the assigned work may be consolidated in the future, but only with some concern by the instructor. The in-class learning must not supplant the contract experience, but rather should be a supplement to it. Students need to read the text material to obtain the theory to back the actual work they are conducting.

But these are the considerations one wrestles with as an instructor in a demanding class. In any case, the value of the contractual work, in Dewey's terms, must be in reflective practice. Schon (1983, 1987), who describes such work as the ideal for training in the professions, appears to have gained immensely from Dewey. The class members must grapple with real issues, in groups or on their own, to devise unique solutions to the problem posed by
evaluating a program or product. If they can be paid for their work, so much the better. But in any case, the framework provided by Dewey will be of help in prescribing the kind of thinking one could expect in this situation and why its effects are so powerful.

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