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STUDENT EVALUATION OF TEACHERS' COMPETENCE AND EFFECTIVENESS.

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TWO POINTS OF VIEW ON WHAT MAKES AN EFFECTIVE TEACHER ARE EVALUATED. THAT KNOWLEDGE OF ONE'S SUBJECT IS ENOUGH TO MAKE AN EFFECTIVE TEACHER WAS QUESTIONED BY NEIDT'S STUDY OF CHANGES IN ATTITUDES DURING LEARNING. CONTINUOUS INTERACTION BETWEEN THE LEARNER'S ATTITUDES AND ACHIEVEMENTS (PROGRESSIVE DISENCHANTMENT BECAME MORE PRONOUNCED AS LEARNING PROGRESSED) WERE EVIDENT. THE QUASIMYSTICAL VIEW OF TEACHING AS AN "ART" WAS PUT IN DOUBT BY THE WORK OF ALLEN (AND OTHERS) IN MICROTEACHING, WHICH USED STUDENT RATINGS OF TEACHERS. RESULTS SHOWED THAT TEACHERS TRAINED WITH ACCESS TO STUDENT APPRAISAL IMPROVED MORE SIGNIFICANTLY THAN THOSE WITHOUT, AND THAT STUDENT RATINGS WERE THE MOST STABLE AND RELIABLE MEASURE (MORE RELIABLE THAN RATINGS OF SUPERVISORS). CLERICAL WORK IN SOLICITING STUDENT EVALUATIONS COULD BE DIMINISHED BY THE USE OF DATA-PROCESSABLE FORMS (EXAMPLES INCLUDED) BY PROFESSORS AND TEACHERS. GATHERING THIS INFORMATION OVER A PERIOD OF YEARS WOULD YIELD VALUABLE NORMATIVE DATA. RELATED PROBLEMS INCLUDE--(1) THE TEACHER AS SOLE AUTHORITY ON SELECTION AND PRESENTATION OF INFORMATION AND EVALUATION OF HIS OWN EFFECTIVENESS, (2) DENIAL OF OPPORTUNITIES FOR STUDENTS TO ASSUME MORE RESPONSIBILITY FOR EDUCATIONAL GROWTH AND THE EVALUATION AND LEARNING, (3) STUDENT FAILURE TO PROVIDE TEACHER STIMULATION, AND (4) DIFFERENT STUDENT AND TEACHER CONCEPTIONS OF COURSES. THIS PAPER WAS PRESENTED AT THE AMERICAN PERSONNEL AND GUIDANCE ASSOCIATION CONVENTION (DALLAS, MARCH 1967). (AF)

STUDENT EVALUATION OF TEACHERS' COMPETENCE AND EFFECTIVENESS*

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The complexities and the confounding effects of the many variables involved in teaching are generally recognized and accepted by students, teachers, and teacher educators. Attempts at measuring and quantifying teacher competencies to appraise teacher effectiveness have been only partially successful. A considerable expenditure of time and effort has been invested on just the criterion problem of measuring teacher effectiveness.

Coupled with the complexities of the problems involved in appraising teacher effectiveness is the issue of the validity and value of student evaluations and attitudes toward teacher effectiveness. It is interesting to note that in the introduction to the development of the Stanford Appraisal Guide to Teacher Competence the review of the basic techniques used to solve the criterion problem of teacher effectiveness did not include student evaluations.

Historically four techniques have been reported as being used in studying the criterion problem: (1) to select "effective teachers" and identify their characteristics. (Ryans, (1952, 1960, 1963) has summarized these attempts in his studies.); (2) to measure changes in pupil behavior (All too frequently changes have been limited to performance on standardized tests or classroom tests designed to measure achievement.); (3) to establish norms for effective teachers through use of a series of standardized measures of personality variables, attitudes, and academic skill (The Wisconsin studies by Barr (1931) are an example of this technique.); and (4) to rate teachers on specific actions which are considered to be associated with competent teaching. (The Purdue

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Scale studied by Brandenburg (1927) and Remmers (1960) has been used extensively for this prupose.)

Assessment of teacher effectiveness is a key factor in improving education and evaluation of educative programs. Without satisfactory criteria for measuring teaching competence it will be difficult to study the interaction of teacher and pupil behavior, evaluate new curriculum, compare methods and instructional media, and conduct evaluation of educational programs. However, there are three issues which need to be considered, one centers around the belief that knowledge of one's subject is all that is needed to be an effective teacher. A second issue is largely ignored through reference to teaching as an "art" implying somewhat mystical qualities to the teaching act, and the third issue raises questions as to the competence and value of student expressions of attitudes and evaluations of teacher effectiveness. It is the authors' intent to address this paper to these issues but not necessarily in the order in which the issues were presented.

SECTION II

Dr. Charles Neidt (1964) at Colorado State University has been engaged in an interesting study of changes in attitudes during learning. This project was selected for this paper for a number of reasons: (1) The study is based upon the expressed attitudes of more than six thousand subjects in over one hundred learning situations; (2) The design and methodological techniques are considered to be very sound; (3) Specific aspects of formal learning situations can be studied in such a way to remove some of the mystique from teaching; and (4) The study has not been widely disseminated at this time.

The project was undertaken to obtain evidence as to the nature of changes in learners' attitudes toward various aspects of learning during formal learning

experiences. Attitudes toward methods and media of instruction, attitudes toward the subject matter content studied, and feelings of expectation fulfillment experienced during learning were investigated. Attitudes toward the teacher were not studied since some situations involved programmed instruction with no teacher and the investigator felt that the aspect of attitudes toward the teacher would pose a threat to many teachers who might decide against participating in the research.

Five parallel forms of a 26-item scale measuring attitudes toward method, content, and expectation were developed. A fourth score based on a composite of the three area scores was included. Evidence was found to support the concept of obtaining separate subscores within each scale.

The general design employed for most of the learning situations studied involved administering the five forms of the scale in counterbalanced order to learners at five equally-spaced intervals during each learning experience. A modified Solomon design was used to test and control for the effects of repeated measures. Although attitude scale scores tended to decrease during the learning experiences, it was found that this decrease was not associated with the number of scales administered.

The final regression analyses to study changes in attitudes were based upon approximately three thousand subjects in seventy-two situations classified into eleven media groups. Five college level situations involving four media were selected for investigation of personal and environmental factors. Formal learning situations on the junior high and high school level were included in the study.

The regression coefficient representing the slope of the regression line of attitude with time was negative in all analyses made. There was a tendency

for attitudes toward the learning situation to become less favorable during formal learning experiences in all instructional groupings. The "progressive disenchantment" reported in earlier investigations of television instruction was found to be prevalent in all of the instructional groupings studied in this project. Decreases in favorability of attitudes during the initial portions of a learning experience were greater than during the later portions of the experience.

In Dr. Neidt's investigation the concern was with the learner's attitudes related to the learning situation itself. "No attempt was made to assess attitudes that were 'educational outcomes' of a learning experience." The study was not designed to assess the reasons for the decline in favorable attitudes toward the learning situations involved. A variety of hypotheses about the reasons for the decline can be postulated. It might be that decrease in favorability of attitudes is related to evaluation and grading practices; inappropriate pacing; lack of stimulus variation; or lack of knowledge of performance; or lack of opportunities to apply the material learned, or lack of variety in instructional techniques.

Neidt's study has been significant for a number of reasons. Perhaps one of the most important is that certain methodological problems have been at least partially solved in studying teacher effectiveness by studying the learners' attitudes toward various aspects of formal learning experiences. Students' attitudes were valued and were used as the basis to evaluate a number of factors related to changes in attitudes toward formal learning situations. There was evidence of a continual interaction between the learners' attitudes and achievement, this becoming more evident and pronounced as learning progressed. Advocates of the position that knowledge of one's subject is all that is needed

to be an effective teacher now have considerable baseline data from which to test their hypothesis. This would be contingent upon their willingness to value the learners' attitudes toward the learning experience itself.

SECTION III

In the past there has been a considerable tendency to look upon the act of teaching as "mystical art." An art which is either innate or acquired in whatever mystical way is available to the teacher-trainee. Recent work by Allen, et. al. (1964, 1965) at Stanford University has attempted to remove the cloak of mysticism from the act of teaching through concentration on a program of Micro-Teaching. Inherant in the development of Micro-Teaching has been an attempt to utilize student ratings as part of the overall evaluation of teacher effectiveness.

In essence, Micro-Teaching can be described as a scaled down teaching encounter designed to focus on some limited aspects of the teaching act which can be identified, measured and evaluated in short periods of time. The use of video-tape has found great prominence in the Micro-Teaching framework. The Micro-Teaching model has as its basic format the following components. The teacher trainee is asked to teach a segment of a lesson to a group of real, active learners. The teach-session ranges in time from 5 to 20 minutes. Immediately after this initial session, the teacher is rated by supervisors, other trainees, and students. A short supervisory session is then held with the teacher-trainee, discussing various methods of improving the micro-skill just practiced. Then a re-teach session (5 to 20 minutes) is held and the trainee has an opportunity to immediately reorganize his approach along the lines of a more forceful and more adequate presentation. The Micro-Teaching model has the two obvious advantages of concentrating on one specific skill of the more

complex teaching act, while doing so in far less time than previously required under more conventional models of training.

In its attempt to break down the complex teaching act into more definable, specific skill, Micro-Teaching has identified and utilized a number of micro-skills. Included among these have been attempts to concentrate upon: (1) establishing set, or immediately attempting to involve the learners in the lesson; (2) establishing appropriate frames of reference, or attempting to teach initially from one main point of view, then expanding to other frames of reference to broaden learner's knowledge of the subject matter; (3) achieving closure, or attempting to present a complete unit, rather than leave the learners "hanging"; (4) using questions effectively in an attempt to actively involve the learners in the lesson; (5) utilizing rewards and punishments effectively to enhance the learning of material; (6) recognizing and obtaining attending behavior to maximize the learning experience of the student.

In the summer of 1963, Bush and Allen (1964) put many of the above skills to the test in an experimental clinic at Stanford. Trainees were assigned at random to two groups, one half given the standard observation and teacher-aide experience while the other half were offered concentrated experience in the Micro-Teaching clinic. Results were most impressive. Among the most significant to the present discussion was the finding that candidates who had access to student appraisal of teacher effectiveness improved their teaching performance significantly more that did those trainees who had no such access to student appraisal information. In addition to this finding it was found that student ratings of teacher effectiveness were the most stable and reliable ratings of teacher performance---including those of supervisors! Other significant findings of this summer clinic included: (1) teacher trainees in the micro-teaching

clinic demonstrated a higher performance level than those in the standard observation and teacher aide group---even though the micro-teaching group spent an average of 10-15 hours per week less in training; (2) performance in micro-teaching predicted subsequent classroom performance; (3) in micro-teaching the group's self-perception of their own performance increased significantly over the 8 week period.

Similar findings were obtained by Fortune, Cooper & Allen (1965) in a 1964 summer clinic at Stanford. In essence the findings reemphasized the value of student appraisal of teacher effectiveness, and the value of the micro-teaching model in the training of effective teachers.

Micro-teaching has been demonstrated to be an effective, time saving model for the training of teachers, particularly in improving the effectiveness of teachers in the classroom setting. It has been a major attempt to study and validate various technical skills involved in the more complex act of teaching. Its emphasis on evaluation of teacher effectiveness, particularly, through the use of student appraisal, marks a significant advance in the removal of the act of teaching from the realm of a "mystical art."

SECTION IV

A comprehensive program of student evaluation need not be curtailed because of the clerical work involved in tabulating and reporting results. Professors and teachers should be provided with assistance in the development of forms which may be adapted for data processing. Scoring and tabulation of results can be handled entirely with data processing equipment. Examples of forms which have been adapted for data processing have been distributed. The first two forms, "Teaching Analysis Sheet", represent a compilation of several forms and adaptation of the response categories to a stock IBM answer sheet which can

be run through an IBM 1230 optical reader to punch cards.

The red and whiteform (IBM Document No. 509) is used to record the responses to the items on the second "Teaching Analysis Sheet." The 509 form is fed through the 1230 optical reader which has a keypunch attached for punching cards. The punched cards can be processed with a sorter, but a simple numerical analysis or frequency count program can be written for a computer which will very quickly and efficiently tabulate the data. A copy of the format for reporting the results has been included.

One of the most comprehensive but flexible rating forms available has been developed at Stanford University as part of the Secondary Teacher Education Program. Responses to the first thirteen items on the (STCAP) Stanford Teacher Competence Appraisal Guide may be recorded on an IBM electrographic mark sense card for data processing. All seventeen item responses on the STCAP may be recorded on tear sheets from which item responses may be keypunched for data processing. The STCAP is an example of a form which has been designed to obtain maximum information utilizing both data processing and written comments or suggestions. The guide was designed to obtain evidence for appraisal from the teacher trainee himself, from experienced teachers and administrators, from University teachers who instruct and supervise the trainees, and from the students taught.

The "Course and Faculty Evaluation Questionnaire" has been included as an example of a form which obtains a lot of relevant information, but the laborious task of tabulating the responses discourages instructors from using it. It would be possible to develop response categories and redesign the questionnaire in such a way that most of the useful information now obtained could still be gathered and tabulated with only a fraction of the effort which is now required in using the form.

Perhaps the most significant aspect of the use of data processing is the gathering of data year by year for purposes of establishing baseline or normative data from which comparisons may be made. This would enable individuals to study their relative effectiveness in different courses, with varying class sizes, and make comparisons with other instructors teaching the same or related courses. Data processing should be considered in the development and implementation of any comprehensive evaluation program.

SECTION V

This paper has not attempted to summarize the work that has been done to evaluate teacher effectiveness but an attempt has been made to direct attention to certain crucial issues. Student evaluations will not be valued or even seriously considered as long as the belief prevails that knowledge ofone's subject matter is all that is needed to be an effective teacher. Knowledge of one's subject, however, is a prerequisite to effective teaching.

With the continued development and application of micro-teaching we can no longer honestly present teaching as an "art" with some degree of mysticism. Components of the complex teaching act may be identified, studied, and acquired by beginning teachers as well as by experienced teachers. Student evaluation of the teacher's effectiveness in the use of specific skills in teaching have been noted and have proven beneficial..Dr. Neidt's investigation is based on the premise that students' opinions and attitudes are to be valued very highly in studying a number of problems related to teaching effectiveness.

There are perhaps even more basic issues related to evaluating teacher effectiveness than have been presented. One of which centers around a rather prevelent attitude of a "closed" classroom in which the teacher is the sole authority as to selection and presentation of information and evaluation of

his own effectiveness.**

Another even more basic issue is the problem of denying students the opportunity to assume more responsibility** for their educational growth and evaluation of their learning. We lack a broad conceptual framework from which to view learning and teaching. Perhaps a developmental approach might provide such a framework or guideline for learning and for evaluating students' growth. The idea of developmental sequence in acquiring information, interpreting the information, integrating and applying the findings, and pursuing new ideas while not new, has not been systematically implemented in the classrooms.

Still another basic issue revolves around students' impact upon teachers and students' failure to provide stimulation for the teacher. Frequently students have neither the imagination or desire to create a stimulating and exciting environment for learning. Many students weigh each bit of information and decide on relegating it to "retain" or "not retain" in response to two questions: (1) Will this be on the next exam? and (2) What is the probability that I will have to know this for comprehensives?** Students are not entirely to blame in view of the fact that our procedures for evaluating learning encourage and foster this kind of attitude.

Another common source of frustration and confusion has been the differing conceptions of the purposes and objectives of the course held by students and instructors. Furthermore we have just begun to consider a number of ways in which the student-faculty dialogue on evaluation may be continued. Hopefully student-faculty dialogue may even become a scholarly endeavor with sufficient educational value to the participants that it is considered to be worthy of our attention and effort to warrant institutionalization along with publications and

"funded" research.

**Editorial comments

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TEACHING ANALYSIS SHEET

Student: Your cooperation is sincerely desired in filling out this questionnaire. The following, when completed, will aid the instructor in obtaining an evaluation of the success of the methods which he has employed and the classroom environment which he has created. Because of the benefit to both instructor and students, please be sincere in answering these questions. DO NOT SIGN YOUR NAME.

Identify your answer sheet by filling in the blanks to the right of "grade or class" (i.e., M125) and the "instructor."

Indicate your opinion by blackening the corresponding space on the answer sheet. If an item does not pertain to this course, leave it blank.

1-Poor 2-Below Average 3-Above Average 4-Good 5-Excellent
blank - Does not pertain to this course.

INSTRUCTOR EVALUATION

1. Knowledge of the subject
2. Interest and enthusiasm
3. Stimulation of your interest
4. Definite, clear-cut presentation of subject matter
5. Criticism of students' efforts on a constructive basis
6. Voice qualities
7. Awareness of students' failure to understand
8. Understanding attitude toward students' efforts and difficulties
9. Approachability of instructor
10. Freedom of student to express his own ideas
11. Preparation for class meetings

COURSE EVALUATION

12. Clarity of course objectives
13. Use of recent developments and material in this field
14. Logical arrangement of topics and material
15. Clear examples and illustrations
16. Utilization of supplementary material
17. Effective use of class time
18. Clarity and readability of text
19. Value of text for course
20. Value of this course in relation to other CSU courses
21. Value of this course in the relation to other CSU courses in same department

GRADING EVALUATION

22. Value of exams for measuring your knowledge
23. Clarity of assignments and exams
24. Fairness of grading system
25. Is the amount of work required appropriate for credit received
26. Prompt return of assignments and exams

Please list on the back of the answer sheet any constructive remarks or suggestions which will assist the instructor in evaluating the effectiveness of his teaching or the content of this course.