

The Art of University Teaching

Nicolás Delgado Betancourt, M. A.

University of Nariño

An impressive number and variety of experiments in teaching are being conducted by university teachers in several fields and disciplines in an attempt to gain a better understanding of the elusive art of university teaching.

Significant Predictors of Teaching Effectiveness

Benton (1979) examined 19 studies that reported the names of factors of student evaluation of instruction instruments. He found that the 113 named factors of the various studies could be classified into eight categories. These categories, in order of the frequency of appearance, were: skill of instructor, student-teacher interaction, course organization and content, feedback to students, course difficulty and workload, motivation, importance of the course, and attitude of instructor. The first three categories listed by Benton were often listed as significant predictors of some measure of teaching effectiveness.

The category most mentioned in the studies as a significant predictor of teaching effectiveness is related to the skill of the instructor. This category appeared more than twice as often as the second best predictor. Factors labeled: skill, lectures, presentations, presentation clarity, presentation skill, expository skills, and class presentations were included in this skill-of-the-instructor category.

The second category most often listed as correlating significantly with achievement was organization and content. Factors

labeled: organization-planning, planning and course organization were included in this category.

The third category most often found as a predictor of instructor effectiveness was interaction, including factors labeled interaction and student-faculty interaction. Although other factors relating to the other five categories reported by Benton were sometimes reported as significant predictors of effective teaching, the infrequency of their appearance gives them much less credibility than the three mentioned above. (Benton,1982)

Factors Critical to Teaching Success at the College Level

Truex (1975) conducted a study of Flanagan's critical-incident technique in college classrooms, involving 144 college-age students ranging from sophomore to seniors. He hypothesized that the personal-social attributes which constituted so many of the behaviors considered critical in previous studies, would be of lesser importance in a college setting. It was expected that those behaviors, which would be termed professional qualities, would be of greater importance for effective teaching at the college level.

The largest percentage of critical requirements necessary to teaching success was found in two broad areas: knowledge of subject matter and class presentation. The one area reflects the intelligence and training necessary to achieve respect in a

college classroom. The other area indicates the need for the dynamic class relationship requisite to continued learning.

A critical requirement is the ability of a teacher to evoke meaningful classroom response. But such response was grounded in knowledge gained from lecture and reading. Alone it was nothing, but preceded by reading and stimulating lecture, it became a culmination in the learning process of total reported effective behaviors.

Two personal-social requirements were of considerable importance: 1) enthusiasm for subject and teaching, and 2) empathetic understanding of the student.

Under professional qualities, knowledge of subject matter was further defined as follows:

- a- Shows and excellent knowledge of subject field; in class discussion displays wide and varied reading background; presents material that is stimulating and appropriate to college level; presents supplementary material relevant to academic subject.
- b- Planning and organization are most important. The development of good course organization is mandatory.
- c- Class presentation. Elicits meaningful classroom response, has interesting, informative lectures; uses varied teaching techniques; makes effective use of group work.
- d- Class evaluation. Evaluation (testing and grading) is fair and adequate. (Truex, 1975)

Redefer (1975), a professor emeritus of New York University, reviewed the awarding of recognition for superior college and university teaching and, based upon a lifetime of apparently effective

teaching, concluded that:

Great teaching should cause students to change in some way. A student who acquires knowledge that makes no difference to him is a student who remains unchanged. Students learn either to behave differently or behave with greater conviction because of what they have learned or have examined. A self-confrontation, which is the essence of great teaching, produces changes in some students.

Redefer concludes that the primary reasons for lack of success in college teaching can be attributed to:

1. Many college teachers do not know their students.
2. Many college teachers are not clear about what they want to achieve in the classroom, with the result that teaching lacks a focus and examinations are meaningless or irrelevant.
3. Many college teachers are ignorant about how to construct a good examination in terms of achievement desired and in terms of the student learning during the examination. This means something more than an exercise in recall.
4. Many classrooms are not learning environments. They are for notetaking, listening and remembering.

Hatch (1975) has spent most of a lifetime in studying university teaching and concludes: "the measure of success of college teachers, irrespective of where they are teaching and what they are teaching, has to be the degree they involve students in their own education".

Bridges, et al. (1971) identified 24 categories of best and worst teachers by surveying administrators, faculty and

students. The students presented 2.726 responses in which they identified the characteristics of the best teachers as follows: **enthusiasm**---- really likes the job, generates enthusiasm, real interest in subject, love of subject, dedicated to teaching, pride in job. **Interest in students**---- empathy, concern for students as individuals (in and out of class), available to students, tries to understand students, approachable, respects students as individuals. **Personal appearance** ---- well groomed, good posture, pleasant expression, neatly dressed. **Presentation** -- -- unique, vitality, flair, sparkle, persuasive, novel, forceful, showmanship, inventive, etc. **Class discussion**---- skillful discussion leader, skilled in group dynamics, stimulates thought, much give-and-take. **Evaluation** (grading, testing assignments)-- -- fair in grading, evaluating, testing, and assignments; good feedback; constructive criticism; lets students know what is expected of them; evaluates students as individuals.

Teaching styles

Baird (1973) conducted research on six dimensions of teaching: didactic, generalist, and research approaches to subject matter, and the dimensions of student response, ambiguity and warmth. Indices designed to measure the dimensions in the framework were developed and related to various criteria in a large sample of 2nd year college students.

The first three dimensions in the framework reflect the instructor's values, that is, his interest in facts, people, or ideas. His interest helps determine the degree to which he employs a didactic, generalist, or researcher approach to the subject. The didactic approach emphasizes specific detailed knowledge of facts, and

comprehensive coverage of the field. The generalist approach is concerned with helping students apply the ideas and facts of the field in their lives and helping them gain insights into current problems. The research approach places importance on the interpretation and analysis of information in the current topics and disputes in the field.

The fourth dimension is the relevance of student response to classroom activity as reflected in the amount of time spent in direct teacher/student contact. It is concerned with the importance of student response to the goals of the teacher – whether in the questions he directs to students, the discussions he encourages, or in his use of verbal reports.

The fifth dimension is concerned with the relative clarity or ambiguity of the teacher's expectations.

The sixth and final dimension concerns the affective rewards given by instructors to their students. This dimension takes into account the general degree of friendliness, informality, supportiveness, and warmth shown by teachers to students in class and out.

Results:

The generalist approach had the highest positive correlations, particularly with the ability of the instructor to stimulate students to think and do reading in the field beyond class work. The pattern of correlations suggests that students tended to feel they had become more aware and more concerned with ideas when taught by teachers who used a generalist approach. Correlations were generally positive for the research, didactic, student response, and warmth approaches.

The ambiguity index had significant negative relations to all of the students' ratings of instructors, sense of progress, and satisfaction items. The correlations suggested that students who had to deal with ambiguous teaching tended to feel they had not been well-prepared for further education and generally had not received good instruction.

The general approach consistently had stronger associations than did the ratings of instructors' sense of progress and satisfaction variables. Perhaps involving the student in the subject matter of the class so that he can see its relevance to his own life is more important than the friendliness of the teacher.

Grades seem to be enhanced by friendly instructors concerned with the impact of their subject on the lives of their students. Grades seem to be depressed by vague, contradictory instruction. This interpretation assumes that friendly, generalist teachers do not just give higher grades. The students who get lower grades would not be more likely than other students to describe teachers as vague.

The results from relating the indices to grades also suggest that teaching styles may be an important variable in elevating or depressing student achievement, possibly through their power to involve the student.

Creating an Effective University Instructional Climate.

Romine (1973) sought to ascertain perceptions of an effective instructional climate by students and faculty through use of a 71-item questionnaire. Usable responses were received from 1,237 students and 268 faculty members.

Statistical analysis yielded a list of 40 "significant" attributes grouped into 7 clusters. Factor-loading values were derived for the attributes to make them easier to use in describing and assessing instructional climate. Students and faculty agree generally on the global concept of instructional climate and as to the "significance" of many individual attributes. Greater "significance" was attached to instructors and their teaching role than to students and their learning role.

Students seem to place primary importance upon instructors, the kind of people they are, what they know, and their manner of handling classes. Faculty, too, perceive the importance of the instructor's role, but are somewhat more concerned with content than teaching techniques.

It was possible to describe an effective university instructional climate in terms of grouping the more critical attributes as follows:

1. Instructors are dynamic and personable people who are enthusiastic about their courses and sincerely interested in their students, whom they respect as individuals.
2. Instructors know their fields of study thoroughly and are well-prepared for their courses; the latter are well-organized, utilize well-written materials that are readily available to students, and involve properly coordinated experiences conducted in adequate facilities.
3. Students are actively involved in credible, meaningful, and useful courses which contribute to important learning outcomes and to personal student objectives.
4. Instructors communicate well with students, and the manner in which they

conduct their classes reveals a knowledge of how learning takes place and may be facilitated; in short, they know how to teach as well as what to teach.

5. Instructors regularly employed fair, impartial, and reasonable assessment as a means of encouraging learning, and they also seek to improve their courses and their own performance on the basis of the feedback from students.
6. Supplemental assistance is provided for students who may need it, including such things as counseling, tutorial assistance, group health, and remedial or developmental instruction in the basic skills.
7. Students are encouraged to work independently, and they assume much personal responsibility for their own learning.

College Teachers and their Impact on Students

Teaching is more than meeting students for class. In fact, the most important purpose of scheduling professors and students for classes may be to provide meeting places where they can make other arrangements; or, some classrooms should be converted to more impactful environments; or, preferably, both should be pursued.

An investigation by Evan (1962) revealed that most professors spend the majority of their time talking to students via lectures on content, while another study by Gruber and Witman (1962) indicated that this "talking to" technique is used with similar frequency in both freshman and senior level courses.

Meanwhile, a careful appraisal of at least 100 method studies about the teaching of content- -size of classes, lectures,

discussions, frequency of class meetings, television, and others --in many disciplines and in a broad spectrum of colleges and universities has provoked this conclusion: if the content of a discipline can be identified as a body of information and concepts, the way or ways in which ideas or concepts are organized, and the methods by which knowledge is sought, and if it is conceded that class examinations measure content primarily, there being no research evidence to the contrary, then the explanations of such content by an instructor in the classroom, by whatever method, contribute little to the learning of content. (Milton, 1973)

Professors seem to have more impact on students outside than inside the classroom. For example, in one study of nine institutions, ranging in size from very small to very large, striking differences were found by Wood and Wilson (1972) between those students who were "high" interactors with instructors (having three or more discussions of 10 minutes or longer outside of class during a 1 month period) and those who were "low" interactors (having no informal discussions during a 1 month period). In contrast to the "low" ones, the "high" interactors reported: 1) more progress in a variety of academic skills - - knowledge of specifics and of universals in a field, ability to comprehend, to evaluate, and to apply abstractions or principles; 2) greater satisfaction with virtually all aspects of their college experience; and 3) more commitment to a life style and to a vocation.

In his study of the effect of college teachers on the creativity of students, Chambers (1972) found:

Apparently the teachers who most affect the creative development of students who

ultimately receive the Ph.D., do so in the course of graduate programs, not during undergraduate days. In addition, the significant effect upon the students appears not to be as a result of classroom experiences, but rather results from experiences in the laboratory, the office, the home or other informal settings.

The interaction that results in significant change for the student is usually a number of one-to-one experiences with the teacher over considerable periods of time, during which strong emotional ties are formed, and mutual respect is developed.

A study by Gaff (1975) shows that a college teacher's chances of being regarded as effective are significantly affected by the extent of interaction with students beyond the classroom.

His studies of several hundred college freshmen and seniors show that students who change the most (intellectually, politically, and creatively) had more frequent interaction with faculty outside of class; more frequent out-of class discussions with faculty concerning campus or social issues and academic or intellectual issues.

Students in the change group said the teachers influencing them the most were those who stimulated them intellectually, demanded high quality work, helped them feel confident of their own abilities, and were available and open to any discussions.

These findings suggest that the relationships faculty and students develop outside the classroom may well be the part of teaching which has the greatest impact on students (Wilson, 1975)

Siegel and Siegel (1964), however, inject a

cautionary note. In their research, they found that high-ability students benefited from personal contact when the contact involved exploration, but the low ability student benefited from clarification. Thus, getting to know the instructor personally may not answer some students' problems. The effect of personal contact depends upon the sort of goals, method used and the interaction between the teacher and students.

Wilson (1975) found that faculty reported by both students and colleagues to be especially effective:

1. Evidence a greater commitment to undergraduate teaching;
2. Can readily name students whom they have found especially enjoyable to teach;
3. Strive to make their course presentations interesting, using stories and analogies to make a point and sharing examples from their own experiences or research;
4. Are more likely to talk with students about a variety of contemporary issues of importance, and even urgency, to young adults;
5. Interact with students outside the classroom;
6. Are aware of the impact they have on students, particularly the student's personal philosophy, decisions about careers and majors, and appreciation of values and methods of scholarly inquiry.

Pascarella and Terenzini (1977), in a test of Tinto's theoretical model of attrition (1975), investigated 1) the pattern of relationships between different types of student-faculty interaction beyond the classroom and 2) college persistence during the freshman year. They found that

freshmen persistors had a higher frequency of interactions with faculty beyond the classroom than the comparison group. Discriminate analysis indicated that student-faculty interactions focusing on discussion of intellectual, or course-related concerns contributed most to group discrimination.

The second most effective discriminating variable, and the only other category of interactions to make a significant contribution to discrimination when entering the step-wise analysis, involved discussions related to student's career concerns.

It is probably also true that as a result of these relationships, these same students tend to develop higher levels of academic and social integration and, in turn, are more likely to persist in college.

Finally, we should say that the personal orientations and characteristics of faculty to whom freshmen are exposed early in their academic experience, (i.e., those who teach freshmen) may be an important determinant of students' subsequent willingness to seek contact with faculty beyond the classroom.

Bridges, Charles M., Ware, William B., Brown, "Characteristics of Best and Worst Teachers", *Science Education*, 1971, Vol. 55, No. 4.

Gaff, Jerry G., *Making the Difference: The Impacts of Faculty*, *The Journal of Higher Education*, 1975.

Grubber, H. E. And Weitman, M., *Self-Directed Study: Experiments in Higher Education*, Boulder, Colorado, Behavior Research Laboratory Report, No. 9, 1982.

Hatch, Winslow, *New Dimensions in Higher Education*, USOE, Distributed by Oregon State University Press, 1985.

Pascarella, Ernest T. And Terenzini, Patrick T., *Patterns of Student-Faculty Informal Interaction Beyond the Classroom and Voluntary Freshman Attrition*, *Journal of Higher Education*, Vol.5, 1987.

Redefer, Frederick L. *To Teach Youth Better, Improving College and University Teaching*, 1975.

REFERENCES

Baird, Leonard., "Teaching Styles: An Exploratory Study of Dimensions and Effects", *Journal of Educational Psychology*, 1973, Vol. 64, No. 1.

Benton, Sidney E., *Rating College Teaching: Criterion Validity Studies of Student Evaluation of Instruction Instruments*, Higher Education Research Report No. 1, Washington D.C., 1982.