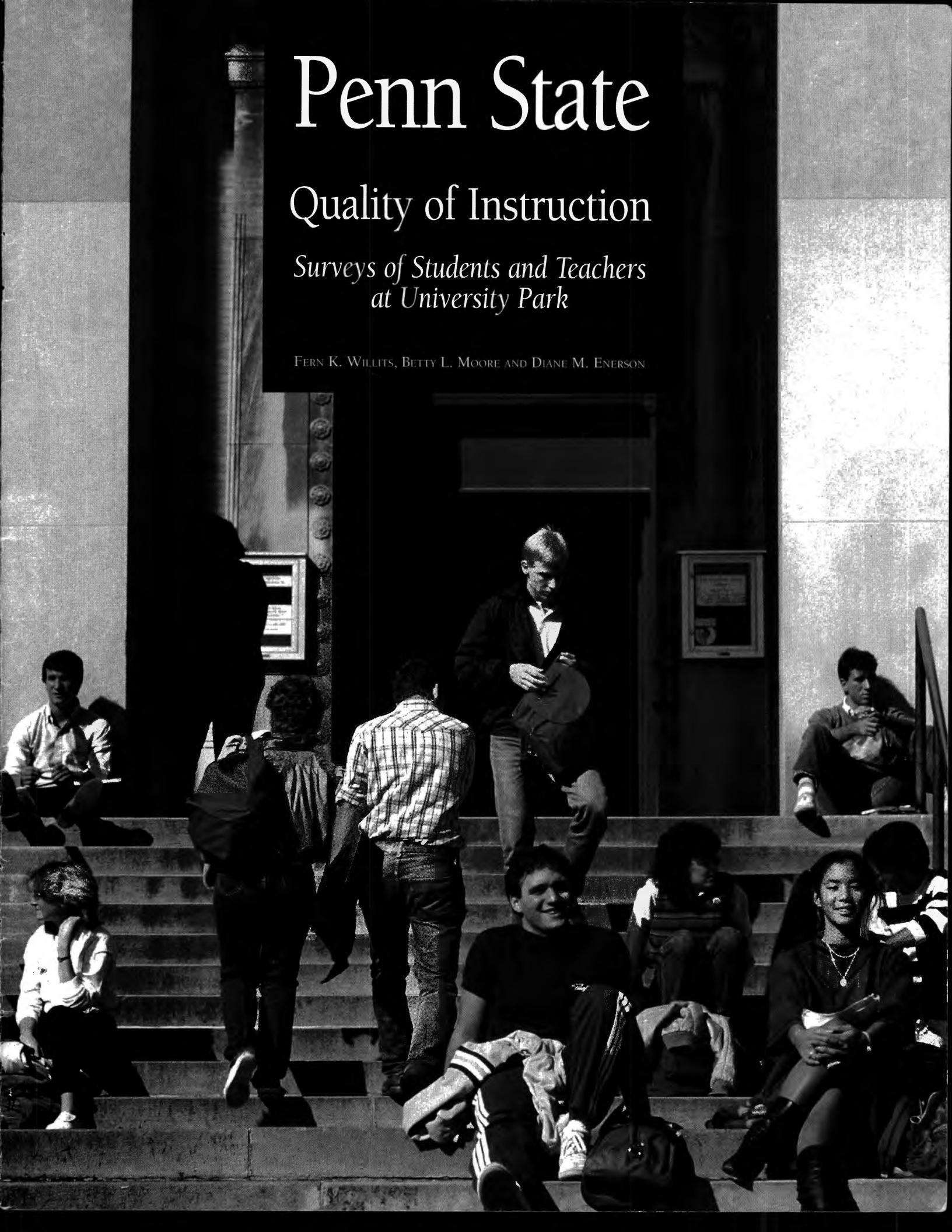


Penn State

Quality of Instruction

*Surveys of Students and Teachers
at University Park*

FERN K. WILLITS, BETTY L. MOORE AND DIANE M. ENERSON



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*An Alumni Teaching Fellow Project in collaboration
with The Center for Excellence in Learning and
Teaching*



Preface

Teaching has always been recognized by members of the Penn State community and the public as a major component of the University's mission. A recent statement of the strategic goals of the University underscores the importance of the instructional function:

The quality of teaching and learning at Penn State ultimately determines the University's impact. Academic quality, therefore, is our highest priority.¹

Such a pledge of excellence is far reaching. The University's instructional activities are multi-faceted. They include undergraduate, graduate, and continuing education. They involve formal classroom teaching, video conferencing, the preparation and distribution of instructional materials, informational meetings, short courses, correspondence courses, training seminars, one-on-one mentoring, and personal counseling. They occur at University Park, at the various Commonwealth Education System sites and Penn-State affiliated campuses, in meeting halls, and in citizen's homes.

This report focuses on one limited, but critically important, aspect of teaching—undergraduate teaching at the University Park campus. More than 33,000 undergraduate students are currently enrolled at University Park. Each semester, several thousand faculty members and graduate students commit part or all of their time to classroom instruction. How do these students and teachers view the instructional process? Information to address this question was obtained by surveying both students and faculty concerning their attitudes and experiences at University Park. The findings of those studies are summarized in the report which follows. In addition, a second survey report (co-authored with Betty Moore of the Office of Student Affairs Research and Assessment), focuses on

students' class attendance. Finally, an epilogue by Diane Enerson of The Center for Excellence in Learning and Teaching, seeks to place the reports in a larger context.

These student and teacher surveys dealing with the quality of instruction were made possible by support of the Penn State Alumni Association provided to the writer as the 1995-96 Alumni Teaching Fellow awardee. The Class Attendance data were collected as part of a Penn State Pulse survey by the Office of Student Affairs Research and Assessment. Appreciation is expressed to the Department of Agricultural Economics and Rural Sociology for additional financial support and encouragement and to Thomas and Deborah Seifried, Mike Dooris and Linda Higginson for their critical reading of parts of the manuscript. Special thanks go to Betty Moore and Diane Enerson for their collaboration and insights, throughout the project.

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FERN K. (BUNNY) WILLITS
1995-96 ALUMNI TEACHING FELLOW

¹ *Intercom*, April 18, 1996, p. 4.



Quality of Instruction: Views of University Park Students and Teachers

Fern K. Willits

College students, teachers, administrators, and the public are interested in the quality of instruction at Penn State. Teaching quality is an important element in the statement of the University's mission, vision, and strategic goals. It is one of three components (along with research and service) of faculty evaluation for purposes of making retention, promotion, tenure, and merit pay decisions. It is the concern of students seeking an academic education and intellectual growth. Alumni are interested in the teaching reputation and stature of the University. State legislators and taxpayers are concerned that the investment of public funds in higher education is well spent. But what is quality teaching? What can instructors do to increase their teaching effectiveness? These issues have concerned educators through the years, and have been the topics of research studies, professional commentary, and popular discourse. Much of this effort has focused on developing guidelines for excellence in college and university instruction, and many books and articles have been published describing techniques and practical suggestions for improving teaching quality.

At Penn State a variety of formal and informal efforts exist to enhance the quality of instruction. The Center for Excellence in Learning and Teaching sponsors workshops and conversations for new and experienced teachers, publishes a periodic newsletter and maintains a web-site. The Schreyer Institute for Innovation in Learning and the Center for Academic Computing (CAC), which includes the Educational Testing Service (ETS), provide information and instruction about the use of new technologies in teaching. Various departments and colleges have organized committees and/or sponsored seminars on teaching. Mentoring programs pair experienced faculty with new teachers. The faculty Senate maintains an active committee concerned with undergraduate education. And,

recently a special committee on Faculty Teaching, Development and Evaluation has sought "to recommend a comprehensive approach to the promotion of excellent teaching and its evaluation at Penn State."

How successful are these efforts? How "good" is the teaching received by undergraduates? While assessment of the work of individual faculty members is ongoing, there has been virtually no attempt to obtain and analyze data on the quality of instruction at the University as a whole. Such an undertaking, to be accurate and complete, should consider both the instruction at University Park and other Penn State locations. It should involve information from a variety of perspectives, including, among others, the views of students, former students, employers, faculty peers, administrators, and the teachers themselves. It should draw upon both subjective perceptions of these persons and objective measures of the success of the educational process. Such a careful appraisal would provide data for determining the present situation in regard to teaching at Penn State and provide a benchmark against which changes could be assessed across time. It would also require considerable time, resources, and commitment by the University. As a small step in this direction, surveys of students and teachers at University Park were recently carried out to obtain their perceptions about teaching quality and their views of the overall educational experience at Penn State. This report presents the findings of that undertaking.

The Surveys

To obtain information on the views of students and teachers at Penn State, the names of undergraduate students, and instructors of courses offered at the University Park campus during fall semester 1995 were randomly drawn from University records.

Questionnaires were mailed to these persons during spring semester 1996 asking about their perceptions of various aspects of their teaching/learning experiences during the previous (fall) semester.

A total of 1,958 undergraduate students who were enrolled in at least one course during the fall semester were contacted. Of these students, 1,026 returned completed forms; a 52% response rate. Of the 1,844 teachers who were contacted, 53% (981 persons) answered and returned their questionnaires. More than 7 out of 10 (71%) of the teachers were faculty members holding the academic rank of professors, associate professor, assistant professor, or instructor; 25% were graduate assistants, and 4%

were others or failed to indicate their status. Individual faculty members carried significantly larger class and credit teaching loads during the fall semester than did the graduate assistants and others surveyed.

Data from these surveys were summarized to describe the reported views of students and instructors about the teaching-learning process. Differences in the responses by type of course, student characteristics and instructor's status were examined using contingency chi-square analysis. Unless otherwise indicated, all relationships discussed in this report were statistically significant at the .05 level.



Elements of Quality Teaching

Previous research has suggested the types of instructor behaviors believed to be associated with teaching quality. Good or excellent teachers are seen as those who are, for example, stimulating, clear/understandable in their presentations, knowledgeable, well-prepared, enthusiastic, fair, accessible, and who manage the classroom environment to facilitate learning. Numerous evaluative instruments have been developed to assess instructor performance by focusing on specific elements related to these and other attributes. However, many of the studies on which these instruments were based were carried out more than a decade ago and not all have dealt with large and complex university settings. To ascertain the elements of a teacher's behavior that are viewed as most salient to the quality of instruction at Penn State, the students and teachers surveyed were given a list of 25 statements dealing with instructor activities associated with teaching. Each respondent was asked to rate on a scale of 1 (not important) to 5 (extremely important) how important each item was in determining the quality of instruction in a college course. The items were all drawn from course evaluation forms used at various institutions and, hence, were expected to be viewed as of at least "some" importance by most subjects.

Several items often described as characteristics of quality teaching were chosen to represent each of eight instructor characteristics listed above:

Stimulating

- Instructor stimulates students to think.
- Instructor makes material interesting.
- Instructor stimulates intellectual curiosity.

Clear/understandable

- Instructor explains material clearly.
- Instructor makes the subject understandable.
- Instructor presents difficult ideas with clarity.

Knowledgeable

- Instructor demonstrates a thorough knowledge of the subject matter.
- Instructor demonstrates the importance of the subject matter.
- Instructor provides various points of view.



Well-prepared

- Presentation of materials is well organized
- The course content is well developed.
- Instructor is well-prepared

Enthusiastic

- Instructor is enthusiastic about teaching the course.
- Instructor seems to enjoy teaching.
- Instructor is genuinely interested in the subject matter.

Fair

- Methods of evaluating student work are fair
- Grades are based on students' understanding of the materials stressed in the course.

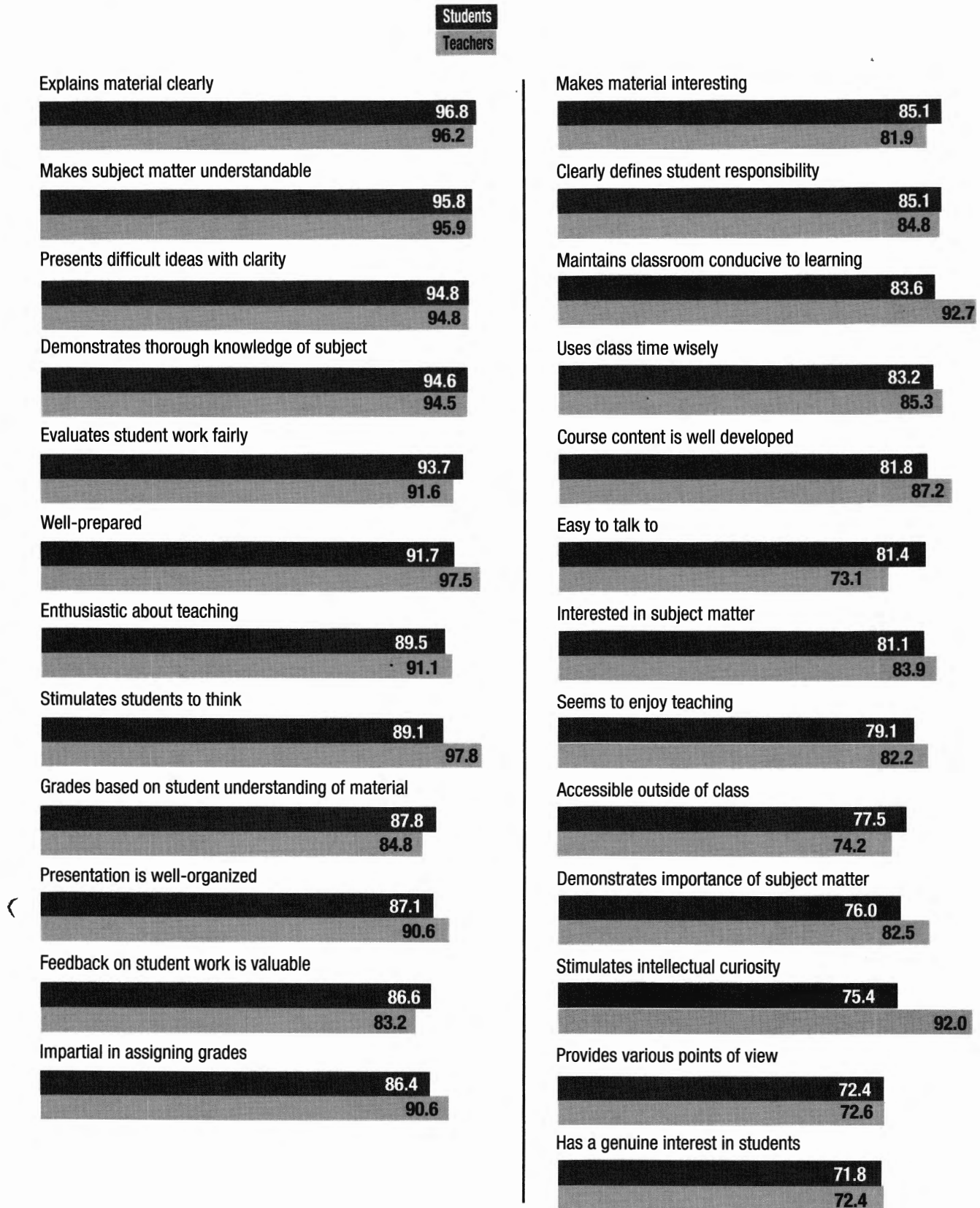
- Instructor is impartial in assigning grades,
- Approachable/interested in students
- Instructor is accessible to students outside class.

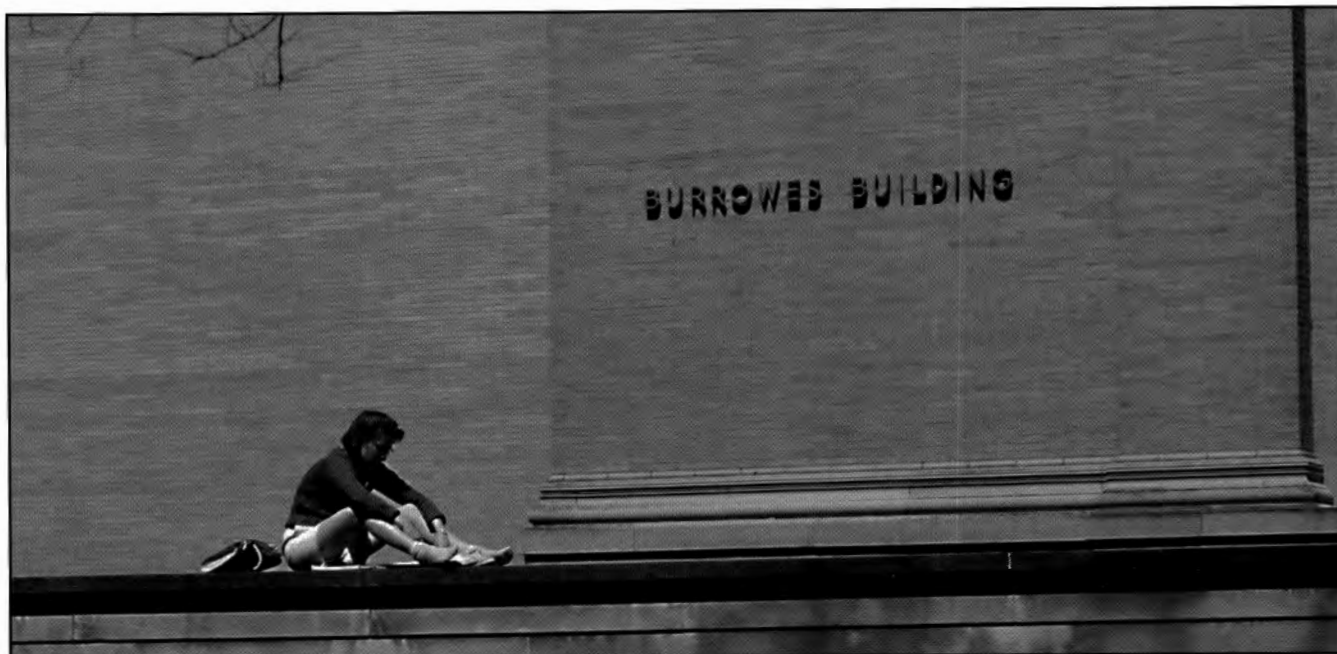
- Instructor has a genuine interest in students as individuals.
- Instructor is easy to talk to.

Skilled Classroom management

- Instructor maintains a classroom atmosphere conducive to learning.
- Instructor clearly defines student responsibilities in the course.
- Feedback on exams and other graded material is valuable.
- Instructor uses class time wisely.

Percentages of students and teachers rating various instructors behaviors as “very” or “extremely” important for quality teaching.





The undergraduate students surveyed overwhelmingly endorsed all 25 of the faculty characteristics as "important" in determining the quality of instruction in a course. In every case, more than 7 out of every 10 students gave "4" or "5" ratings for the importance of each item, indicating that they felt the attribute was "very important" or "extremely important." Those items receiving the largest proportion of such ratings (more than 90%) were concerned with the instructor explaining material clearly, making the subject matter understandable, presenting difficult ideas with clarity, demonstrating thorough knowledge of the material, using methods of evaluating student work that are fair, and being well prepared.

For only six items was the proportion of "very" or "extremely" important ratings less than 80%. These were: instructor seems to enjoy teaching (79%), instructor is accessible outside of class (78%), instructor demonstrates the importance of the subject matter (76%), instructor stimulates intellectual curiosity (75%), instructor provides various points of view (72%), and, instructor has a genuine interest in students as individuals (72%).

More than 70% of the teachers surveyed also reported that they believed each of the characteristics were "very" or "extremely" important in determining the quality of teaching. There were

some slight and statistically significant differences in the items given high importance ratings by students and teachers. Thus, teachers were more likely than students to report as at least "very important": stimulating students to think, stimulating intellectual curiosity, demonstrating the importance of the subject matter, being well prepared, having well developed course content, presenting materials in a well organized fashion, being impartial in grading, and, maintaining a classroom atmosphere that is conducive to learning. A significantly higher percentage of students than teachers reported that it was at least "very important" for the instructor to be easy to talk to, and to provide valuable feedback on exams and other graded material.

Overall however, the differences between students and teachers in their evaluations of the importance of all of these instructor characteristics were overshadowed by their similarities. Both groups emphasized the importance of clarity in presentation, fairness in evaluation, the preparation and organization of materials, and knowledge of subject matter. They were somewhat less likely to report that accessibility of the instructor and his/her interest in students as individuals were critical determinants of teaching quality.

Student Perceptions of Quality

The use of student course evaluations to obtain feedback on the quality of instruction in specific classes has become one of the most widespread procedures for evaluating the teaching proficiency of faculty members at colleges and universities throughout the nation. At Penn State the current student evaluation procedures include use of the SRTE (Student Rating of Teaching Effectiveness) Forms. These have been in continuous use for nearly a decade and represent an institutionalized part of end-of-the-semester ritual in most courses. They are included in the faculty dossiers prepared for tenure and promotion decisions, and forwarded to administrators for use in personnel decision-making. Although most scholars recognize that data from multiple sources are necessary for the adequate evaluation of teaching quality, these student end-of-course ratings have become synonymous in many peoples' thinking with teaching evaluation.

Previous Research

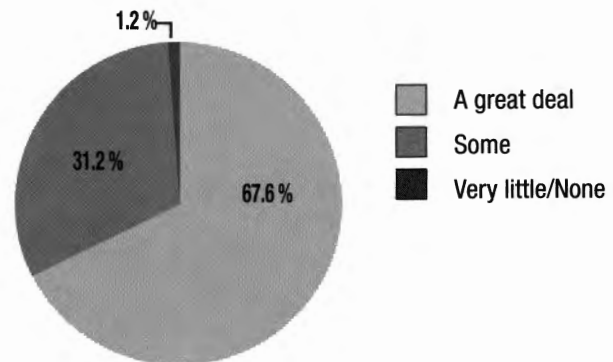
Despite their omnipresence, student course/instructor ratings are frequently viewed with suspicion and distrust by faculty and administrators. In the Penn State surveys, faculty respondents were much less likely (25%) than the student subjects (68%) to indicate that "a great deal of weight" should be given to student opinions in evaluating the teaching effectiveness of faculty members.

Critics of the use of student evaluations assert that students are unable to make consistent judgments about the quality of a course because they lack the necessary experience and maturity to do so; that student ratings are simply popularity contests, with warm, friendly, humorous instructors judged most favorably; that demanding or difficult courses are down-graded, while easy courses are rated highly; that students cannot make accurate judgments until they have been away from a course for several years; and that essentially uncontrollable characteristics of the class, such as size, time of day, course level, or rank of the instructor impact strongly on ratings.

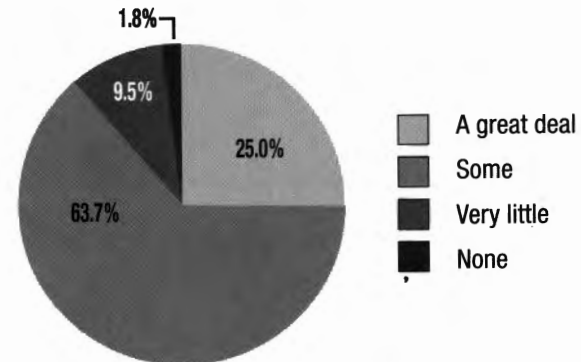
However, more than 70 years of research on student evaluations has resulted in a considerable

How much weight should be given to student opinions in evaluating the teaching effectiveness of faculty members?

% of Students' Responses



% of Teachers' Responses



log of empirical evidence which calls into question all of these assertions.¹ In fact, student ratings have been found to be stable from one year to the next. Students have been shown to be discriminating judges of teaching effectiveness and are unlikely to rate instructors highly simply because they are likeable or humorous. Student and peer ratings tend to be highly correlated. Class characteristics (size, time of day, course level, instructor rank, etc.) are only moderately, if at all, associated with student ratings. Student grades have often been found to correlate positively with course evalua-

¹ For a discussion of the research evidence contradicting these and other common misperceptions about student ratings, see the list of suggested readings at the end of this publication.



tions, but it is unclear whether they reflect satisfaction with what has been learned or satisfaction with receiving a high grade. Regardless of the empirical evidence compiled on these issues, many Penn State teachers continue to argue that their observations and their experiences are at variance with these findings; that the situation here “must be different.” The analysis which follows provides recent data from the University Park campus pertaining to some of these issues.

Obtaining Student Evaluations

Students in the sample were asked to indicate how frequently each of the instructor behaviors included on the list of elements of quality teaching described above were evidenced in one of the

classes in which they were enrolled during fall semester 1995. The specific course was selected by having student respondents list all of their courses for that semester. They were then instructed to select the *second* one listed. Responses to all of the teaching evaluation items were to be answered in terms of the selected course. Focusing on a specific course rather than “teaching in general” lessened the likelihood that responses would simply reflect generalized stereotyping. The method of selection sought to eliminate any tendency for respondents to systematically answer in terms of either their “best” or “worst” courses. Asking for information from the previous semester meant the subjects would have had some opportunity to reflect upon their experiences.

Student evaluations of the quality of teaching in the selected course consisted of two types of questions. First, the survey form asked each student to rate how often, on a scale of 1 (never or almost never) to 5 (always or nearly always), the teacher in the selected course had demonstrated each of the 25 behaviors described in the section dealing with the "importance" of various instructor activities in determining the quality of instruction. Second, students were asked to indicate the overall quality of the course as "excellent", "good", "fair", or "poor."

Rating the 25 Elements

More than seven out of every ten students gave "4" (often) or "5" (always) ratings to the following seven items: the instructor demonstrated a thorough knowledge of the material (86%), the instructor was well prepared (79%), the instructor was genuinely interested in the subject matter (79%), the instructor was impartial in assigning grades (77%), the instructor clearly defined student responsibility in the course (74%), methods of evaluating student work were fair (71%), and the instructor used class time wisely (71%). Only four

Percentages of students reporting the instructor "always" or "often" demonstrated various behaviors

Demonstrated thorough knowledge of subject	86.3
Well-prepared	79.0
Interested in subject matter	78.7
Impartial in assigning grades	77.0
Clearly defined student responsibilities	73.7
Evaluated student work fairly	70.9
Used class time wisely	70.6
Grades based on student understanding of material	68.7
Seemed to enjoy teaching	68.4
Enthusiastic about teaching	68.2
Maintained classroom conducive to learning	66.7
Presentation was well organized	66.6
Accessible outside class	65.0

Made subject matter understandable	61.8
Easy to talk to	61.0
Explained material clearly	59.4
Feedback on student work was valuable	58.1
Course content was well developed	58.0
Demonstrated importance of subject matter	54.4
Presented difficult ideas with clarity	52.8
Stimulated students to think	51.1
Had a genuine interest in students	48.4
Made material interesting	46.7
Stimulated intellectual curiosity	45.8
Provided various points of view	42.5



items received less than a majority of “4” or “5” ratings—the instructor made the material interesting (47%), the instructor had a genuine interest in students (48%), the instructor stimulated intellectual curiosity (46%), and the instructor provided various points of view (43%). As indicated previously, the last three items were the least likely to be judged as “very important” by the student respondents.

Course Characteristics and Ratings

There were some differences in the frequency with which the various behaviors were seen as occurring depending upon the class size, whether the instructor was a faculty member or a graduate assistant, and course level.

As class size increased, the extent to which students felt that the instructor was accessible outside of class, genuinely interested in students, easy to talk with, stimulated students to think, piqued their curiosity, and presented various points of view declined. However, teachers of large classes were judged to be well prepared more often than were instructors in smaller classes. Valuable feedback on exams and other graded material was most

often reported for classes of less than 50 students, but the frequency of such feedback did not continue to decline as class size increased above 50 students. More noteworthy than these few differences in ratings by class size was the failure to find any significant negative relationships between class size and the remaining 17 behaviors assessed.

Classes taught by faculty members were more likely than those taught by graduate students to be given “4” or “5” ratings in regard to instructors being knowledgeable, interested in the subject matter, demonstrating the importance of the materials, being well prepared, having well developed course content, being impartial, defining student responsibilities, and using class time wisely. Graduate students serving as course instructors were more likely than faculty members to be seen as accessible, easy to talk with, and genuinely interested in students as individuals. The remaining 14 items showed no significant differences between faculty and graduate student instructors in regard to the frequency with which students reported these desirable teaching behaviors actually occurred in the evaluated course.



Grades, Work, Learning and Ratings

There were very few differences between lower level (undergraduate) courses and 400-level courses (those available only to upper-class and graduate students) in regard to student evaluations. Instructors in 400-level courses were slightly more likely than were others to demonstrate the importance of the subject matter, to stimulate intellectual curiosity, and to be seen as interested in students as individuals, but no other significant differences by course level were found.

The grade that a student received in the course was significantly related to the proportion of "4" and "5" ratings for every one of the 25 behavioral items. As grade level increased, the frequency of

positive evaluations of the instructor's behavior increased. To ascertain whether the positive evaluation associated with high grades reflected a tendency of students to rate easy or undemanding courses most highly, they were asked to indicate whether the course they were evaluating was "higher", "about the same", or "lower" than most other classes in regard to the amount of work required, the degree of difficulty, and the amount they had learned.

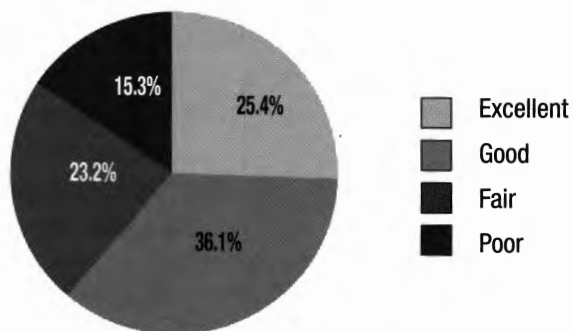
Amount of work required in the course was significantly related to only four of the 25 elements assessed and for two of these, higher work level was associated with more positive evaluations. Instructors who demanded more work were seen as more likely to stimulate students to think and to stimulate students' intellectual curiosity than were those who did not require as much work. However, relatively greater work loads in a course were also associated with somewhat lower ratings in regard to the perceived fairness of the instructor's evaluation of student work and to the impartial assigning of grades.

Degree of difficulty relative to other courses was significantly related to 11 of the 25 items, but the pattern of the relationships was inconsistent. For those courses judged as relatively more difficult than others, there was a tendency to rate instructors somewhat lower in regard to whether they explained the material clearly, made the subject matter understandable, presented difficult ideas with clarity, evaluated student work fairly and were easy to talk with. However, the more difficult the course, the more likely the student was to indicate that the instructor frequently stimulated students to think. Classes which were rated as "the same" as other classes in regard to the degree of difficulty, received the highest ratings in regard to whether the instructor was enthusiastic, made the material interesting, seemed to enjoy teaching, and was interested in the subject matter. Courses rated as having lower levels of difficulty were the least likely to rate the instructor as using class time wisely.

While the relative amount of work and degree of perceived difficulty were significantly related to only some of the elements judged to be important in determining teaching quality, the amount that

Students' overall ratings of the quality of instruction in the course

% of Students' Responses



students felt they had learned in the course relative to other classes was significantly and positively related to favorable ratings on all 25 elements. Moreover, these relationships were all much stronger than any of the other associations observed, including those involving course grade.

Overall Evaluation of Course

When asked to evaluate the overall quality of instruction in the course as "excellent", "good", "fair", or "poor", one fourth of the students indicated that it was "excellent", an additional 36% reported that the course was "good", 23% replied that the instruction was "fair", while 15% gave a "poor" rating.

All of the 25 elements believed to be associated with quality of instruction were significantly related to the overall evaluation; correlation coefficients ranged between +.40 and +.66. The highest correlations between the ratings of the separate elements and the overall evaluation of the course dealt with the instructor presenting the ideas with clarity ($r=.66$), making the subject matter understandable ($r=.66$), explaining the material clearly ($r=.65$), making the material interesting ($r=.62$), stimulating intellectual curiosity ($r=.60$), stimulating students to think ($r=.60$), enjoying teaching ($r=.59$), maintaining a classroom atmosphere

Percentages of student giving "excellent" or "good" course evaluations by size of class

Class size	Good	Excellent	Total
Class size <50	33.8	29.9	63.7%
Class size 50-99	32.0	27.4	59.4%
Class size 100-299	37.7	24.2	61.9%
Class size 300+	41.5	16.5	58.0%

conducive to learning ($r=.59$), being easy to talk to ($r=.58$), presenting well-organized materials ($r=.58$), having well-developed course content ($r=.57$), and having a genuine interest in students as individuals ($r=.57$). While many of these elements were among those most likely to be viewed as important, several (stimulating intellectual curiosity, enjoying teaching, and having a genuine interest in students as individuals) were among those least likely to be rated as extremely important in response to direct questioning about their relevance to teaching quality. Nevertheless, these attributes were strongly correlated with student evaluations of the quality of instruction in the course as a whole.

Course Characteristics and Overall Evaluation

Class size was significantly related to overall instructional rating of the course, although the relationship was not strong. In general, as class size increased the proportion of "excellent" ratings declined somewhat. Whether the course was taught by a faculty member or a graduate student, and whether it was a 400-level or lower level course made no significant difference in overall course rating.

Percentages of students giving "excellent" or "good" course evaluations by grade received

	Good	Excellent	Total
Grade A	39.0	40.7	79.7%
Grade B	38.0	21.9	59.9%
Grade C	31.3	10.2	41.5%
Grade D/F	24.1	7.4	31.5%

Grades, Work, Learning and Overall Evaluation

Student's grade was strongly related to the overall course evaluation with the proportion of "excellent" responses increasing from less than 10% for students with C-grades or lower to more than 40% for those with A-grades. The amount of work relative to other courses (higher, the same, lower) was not significantly related to the overall course evaluation. Perceived relative degree of course difficulty was only slightly related to overall evaluation, with courses that were judged to be both more and less difficult than most classes being somewhat less likely to receive excellent evaluations than were those that were similar to the norm in difficulty level.

By far the most powerful predictor of the students' overall evaluations was the amount they felt they had learned. Where learning was perceived to be less than in other courses, virtually no one (less than 1%) rated the course as "excellent", 18% of those who saw the learning as "the same" as most other classes reported that the course was "excellent", but, for those who reported that this class resulted in *greater* learning than most other classes, 53% reported the course was "excellent."

Percentages of students giving "excellent" or "good" course evaluations by reported degree of difficulty relative to other courses

	Good	Excellent	Total
Difficulty compared to other courses			
Lower	39.2	20.3	59.5%
Same	37.7	28.0	65.7%
Higher	32.4	23.4	55.8%

Percentages of students giving "excellent" or "good" course evaluations by reported amount learned relative to other courses

	Good	Excellent	Total
Amount learned compared to other courses			
Less	16.1	0.8	16.9%
Same	46.2	18.4	64.6%
More	37.2	53.4	90.6%



Teachers' Perceptions of Instructional Quality

For most people, self evaluation represents a continuous, if sometimes haphazard, process. Teachers gain insight into their success in engaging students by observing in-class reactions. Level of learning can be judged by considering student performances on assignments or tests. The evaluation of clarity, organization, and fairness can occur by reflecting upon the content and methods utilized. And, more than anyone else, instructors know the amount of time and effort they have committed to the teaching task.

Self assessment can, and perhaps should, play a role in any evaluation process. However, although self evaluative materials are employed at some institutions, their use remains somewhat controversial. Asking instructors to assess their own teaching performance is problematic, both because people may tend to view their own behavior and efforts in positive terms and because they may be unwilling to be completely honest about any perceived weakness for fear of negatively impacting on

tenure, promotion or merit evaluations. Some research has suggested that faculty may tend to over-rate their teaching relative to the evaluations of students and peers and that self evaluations of teaching do not correlate highly with either peer or student evaluations. Nevertheless, in a multifaceted approach, self evaluation by instructors provides an additional perspective for evaluating teaching quality.

Obtaining Faculty Evaluations

The teachers in the sample were asked to reflect upon their teaching and to indicate on a scale from 1 (never or almost never) to 5 (always or nearly always) how frequently they believed each of the 25 behavioral elements discussed previously occurred in their teaching of one course they had taught during fall semester, 1995. They were also asked to provide a self appraisal of the overall quality of their teaching in that course as "excellent", "good", "fair", or "poor." If the respondents taught more than one course that semester, they were asked to focus on the one that was the *second* class to meet each week.

Rating the 25 Elements

More than 80% of the teachers who responded to this question gave ratings of “4” or “5” to 20 of the 25 items, indicating that they felt that they frequently or always engaged in these actions in the course on which they were reporting. They were less likely to believe that they frequently stimulated students to think (66%), made the material interesting (68%), stimulated intellectual curiosity (68%), provided various points of view (64%), or demonstrated the importance of the subject matter (78%). Such high ratings could be taken to mean that most instructors saw little need for improvement of their teaching. Indeed, for 10 of the items, more than half of the teachers gave themselves “5” ratings indicating that they believed they were “always or nearly always”: impartial in assigning grades (72%), genuinely interested in the subject matter (65%), enthusiastic about teaching (59%), easy to talk to (58%), genuinely interested in students (56%), enjoying teaching (54%), clearly defining student responsibilities (54%), fairly evaluating student work (53%), basing grades on stressed material (52%), and demonstrating a thorough knowledge of the subject matter (52%). However, for 10 items, fewer than 1 in 3 instructors reported ratings of “5”. These were: stimulated students to think (12%), made material interesting (15%), stimulated intellectual curiosity (16%), presented difficult ideas with clarity (18%), explained material clearly (23%), provided different points of view (24%), made subject matter understandable (25%), demonstrated the importance of the subject matter (30%), had a well developed course content (32%), and used class time wisely (32%). Thus, while overall the teachers surveyed reported that they usually engaged in most of the desirable behaviors on the survey, for nearly half of the items, there was acknowledged need for improvement.

Instructor/Course Characteristics and Ratings

For 15 of the 25 items, graduate students were less likely than faculty members to report that their teaching evidenced the desirable behaviors “frequently” or “always”. However, there were exceptions to this general pattern. Graduate students serving as teachers were significantly more likely

than faculty members to indicate that they believed they were frequently accessible outside of class and were easy to talk to. There were no significant differences between the graduate-student and faculty teachers in regard to their responses to the items dealing with the fairness of evaluating student work, whether grades were based on student understanding of materials stressed in the course, whether they had a genuine interest in students as individuals, whether their presentations were well organized, their success in maintaining a classroom atmosphere conducive to learning, and whether they had clearly defined student responsibilities, provided feedback on work, and used class time wisely.

There were differences by academic rank among the faculty teachers in regard to only five items. Professors and associate professors were more likely than assistant professors and instructors to report that they frequently demonstrated a thorough knowledge of the subject matter. Instructors were more likely than those faculty with higher academic ranks to feel that they were easy to talk to and that they showed a genuine interest in students; instructors were the least likely to report that they were frequently or always impartial in assigning grades. Associate professors and assistant professors were less likely than instructors or full professors to report that they emphasized the importance of the subject matter.

Teachers in 400-level courses felt that they were more successful than those in lower level courses in stimulating students to think, making the material interesting, demonstrating an interest in the subject matter, and being impartial in assigning grades.

Class size impacted negatively on only the teacher’s indication of the frequency with which they demonstrated a genuine interest in the students and the frequency of their stimulation of intellectual curiosity. Otherwise, there were no significant differences by class size in responses of teachers to the 25 items detailing teaching quality.

Overall Evaluation of the Course

Most (61%) of the teachers surveyed evaluated their quality of instruction as “good”, and an additional 31% felt that it “excellent.” Faculty

members were more likely than the graduate-student teachers to view their teaching positively. There were no significant differences among the overall course ratings by the academic rank of the faculty members.

Research vs Teaching

Some believe that good teaching and good research go “hand-in-hand” and that good researchers make good teachers. Whatever the truth or falsity of this assumption for graduate education, the research record clearly does not support its validity for undergraduate instruction. Studies have repeatedly shown that there is virtually no relationship between an individual’s research quality or productivity and the quality of his/her teaching of undergraduate students. Teaching excellence may depend more upon the instructor’s ability to make materials understandable, to motivate students, to maintain a classroom environment focused on learning, and to provide prompt and useful feedback to students than upon their knowledge of the “cutting edge” issues or sophisticated methodologies that can contribute to renown as a researcher.

For most college and university teachers, research responsibilities represent a competing use of time. The strain between teaching and research on college and university campuses has been widely discussed. Students and faculty members alike often assert that the quality of instruction is negatively impacted by the emphasis placed on research. The survey asked the sample of instructors whether their interests lay primarily in teaching, leaning toward teaching, leaning toward research, or primarily in research. While 8% failed to answer the question, of those who did respond, 55% indicated that they were primarily interested in teaching or they were leaning toward teaching, 35% reported that they were leaning toward research. Only 10% said that they were primarily interested in research. Faculty members were slightly more likely than the graduate-student teachers to indicate that they were leaning toward research (38% vs 30%), but for both groups just 10% reported that they were *primarily* interested in research.



Interference with Teaching Quality

To ascertain the extent to which the teachers surveyed felt that various responsibilities or circumstances interfered with the quality of their teaching, respondents were asked whether each of a series of factors represented “no interference”, “some interference”, or “a great deal of interference.” Research responsibilities were the most likely to be seen as interfering some (47%) or a great deal (19%). However, nearly as many indicated that inadequate student background was some (44%) or a great deal (18%) of an impediment to teaching quality. Other factors reported as interfering some or a great deal were: physical facilities in the classroom (54%), University service responsibilities (52%), large class sizes (42%), personal/family responsibilities (40%), limited instructional materials/textbooks/equipment (39%), other teaching responsibilities (38%), inadequate teaching assistance (32%), and inadequate staff/secretarial support (27%).

Faculty members reported higher levels of interference due to their research, other teaching, University service responsibilities, and inadequate teaching assistants than did the graduate students who were teaching. Faculty members holding the rank of instructor were less likely than those of higher academic rank to report that research and University service interfered with the quality of their teaching; they were more likely to indicate that personal/family responsibilities were impediments.

Percentages of teachers reporting that various things interfered “some” or “a great deal” with the quality of their teaching.

	Some	A great deal	Total
Research responsibilities	47.2	19.3	66.5%
Inadequate student preparation	43.9	18.2	62.1%
Physical facilities of classroom	38.2	15.5	53.7%
University service responsibilities	36.5	15.1	51.6%
Large class sizes	21.8	20.5	42.3%
Personal/family responsibilities	30.5	9.0	39.5%
Limited instructional materials/books/equipment	26.4	13.0	39.4%
Other teaching responsibilities	30.2	7.9	38.1%
Inadequate teaching assistance	18.6	13.3	31.9%
Inadequate staff/secretarial support	17.7	9.7	27.4%



General Views of Penn State

While the quality of the instruction that occurs in classrooms is clearly important for educating students in specific subject matter areas, for helping them to develop a general base of knowledge, and for fostering academic growth, much of the intellectual and social development experienced at colleges and universities may be only indirectly (if at all) related to specific courses or individual teachers. How favorably do students view their overall educational experience at Penn State? To address this question, the student survey included three items:

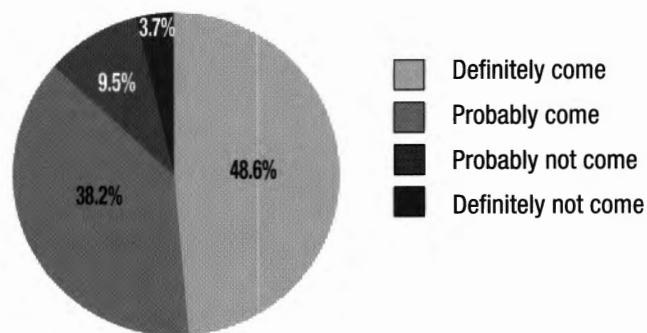
1. If you could make the decision to attend college at Penn State over again, would you:
 - 1 Definitely come to Penn State
 - 2 Probably come
 - 3 Probably not come
 - 4 Definitely not come to Penn State
2. On a scale from 1 (very undesirable) to 7 (very desirable) how would you rate Penn State as a place to get a college education?
3. On a scale from 1 (very unprepared) to 7 (very prepared) how well do you think the education you are getting at Penn State is preparing you for life after you complete college?

Nearly half of the students surveyed (49%) answered that they would “definitely come to Penn State” if they could make the decision again and an additional 38% reported that they would “probably come.” Only 13% indicated that they would probably or definitely not come. Gender and all-University grade point average were not significantly associated with differences in student responses on this item. Semester standing was significantly related to this item with freshmen the most likely to report that they would “definitely come to Penn State.”

The majority (62%) of the students gave the University “6” or “7” ratings on a 7-point scale as a desirable place to get a college education; and an additional 24% gave it a “5” rating. Only 14% rated it midway on the scale or lower. Freshmen were the most likely to give “6” or “7” ratings; juniors (5th or 6th semester students) were the least likely to do so. Neither gender nor grade point average related

Student responses to whether they would attend college at Penn State if they could make their decision over again

% of Students' Responses



to responses to this question.

Students were somewhat less likely to report that their Penn State education was preparing them for life, but even here nearly half (48%) rated the University as a “6” or “7” on a 7-point scale.

The teachers surveyed were also asked to rate Penn State as a place for students to get a college education and to indicate how well a Penn State education prepares students for life after graduation. The same 7-point scale was used. Teachers were significantly less likely than students to rate the University highly on these items, with only 43% giving “6” or “7” ratings for the desirability of Penn State as a place to get an education, and 31% giving such high ratings to the University in preparing students for life after college. Faculty members were more likely than graduate students who were teaching one or more classes to report that they believed students were being well prepared for life after college (“6” and “7” on the scale). Academic rank was significantly related to how faculty members rated the University as a place to get a college education. Full professors were the most likely (66%) to give “6” or “7” ratings to these items, while associate professors were the least likely (37%) to do so.



Conclusions

More than 85% of the students indicated that Penn State was a "desirable" place to get a college education and 87% reported that they would probably or definitely choose to come to the University if they could re-live that decision. More than 60% rated the quality of instruction in the sampled course as "good" or "excellent", and the overwhelming majority reported that their instructors were knowledgeable, well-prepared, interested in the subject matter and impartial in assigning grades. There was also, however, some evidence of student dissatisfaction. Fewer than half indicated that their instructors made the material interesting, had a genuine interest in students, or stimulated their intellectual curiosity. Thirty-eight percent reported that, overall, the quality of teaching was only "fair" or "poor".

Class size, level (400-level vs undergraduate), and rank of instructor were only moderately, if at all, related to the various indicators of teaching quality. Grade received in the class was positively related to student evaluation of the quality of

instruction received, but this should not be taken to imply that instructors who teach "easy" courses or are "easy" graders are thereby rewarded with high evaluations. On the contrary, courses that were seen as more difficult or involved more than usual work loads were not evaluated any less positively than were those which were easier or involved less work; the most powerful predictor of high course evaluations, was student perceptions of how much they had learned in the course.

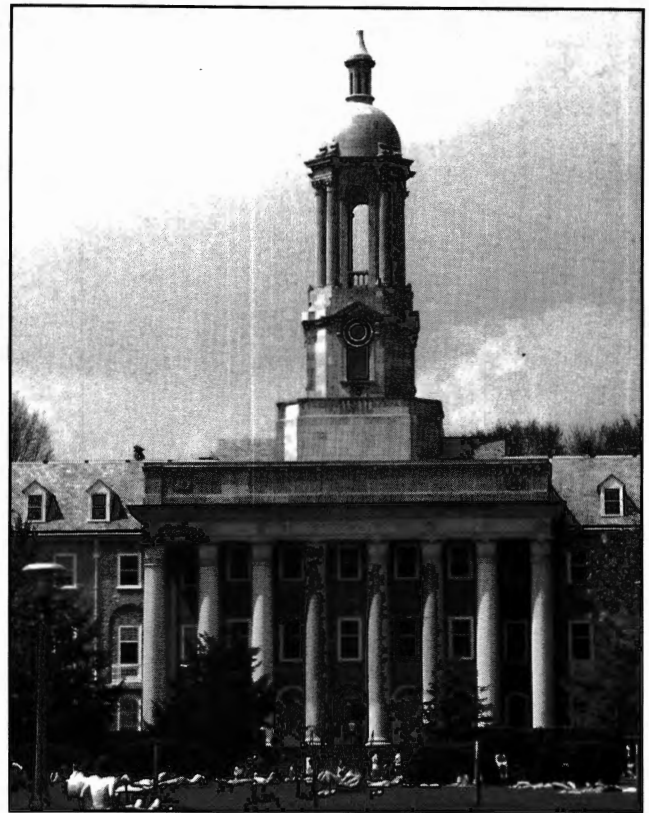
Respondents were invited to write comments on the survey forms indicating any other ideas that they considered important; many students did so. By far the most common criticism voiced in these comments dealt with the failure of some instructors to have a sufficient command of the English language to perform their teaching role adequately. Graduate assistants were most often noted as lacking English language skills, but faculty members were not immune from criticism. The University has long been aware of this problem and for some years has required graduate students who are teaching classes to pass an English proficiency test.

The comments received on this survey suggest that this has not erased the difficulty.

A number of students also complained that they disliked being taught by graduate students rather than faculty members. Those who wrote comments in this regard felt that graduate students were less knowledgeable, more time-stressed, and less interested in teaching; a few asserted that they had "paid" for faculty instruction and felt that they deserved to be taught by faculty. However the results of this survey indicated that courses taught by graduate students did not differ significantly from those taught by faculty members in regard to the overall quality of instruction. Moreover, in general, graduate students were viewed as more likely to be accessible, easy to talk with, and genuinely interested in students as individuals than were faculty-teachers. A few students echoed these findings by noting that often their courses taught by TAs were excellent. Often overlooked in any discussion of graduate students teaching undergraduate classes is the fact that the experience of teaching represents an important element in the training of graduate students. Many advanced degree candidates will themselves go on to fill academic posts that will involve teaching. Instructing a class, especially if carried out under the direction/guidance of faculty members, can represent a true internship for the graduate student that is clearly a part of the larger teaching responsibility of the University.

There were also some negative comments by students concerning large classes, diversity requirements, teacher's preoccupation with research, the quality of advising available, and the impersonal nature of the campus environment. Others summarized their perceptions in positive terms such as:

- Overall, I have been very pleased with my educational experiences here.
- Penn State is #1 in academics as well as research and athletics.
- Penn State has taught me so much, both in and out of the classroom.
- The majority of my instructors care about the progress of their students.



- Like many things, you get out of PSU what you put into it.

University instructors were more cautious than students in applauding the quality of the overall learning experience. However, when asked to evaluate their own teaching, they rated their performances quite highly. Previous research has found that teachers are likely to rate their own work somewhat more positively than are peers or students and this tendency may have been exacerbated by some respondents' fears that the data would find its way into administrator's hands to be used in performance evaluation. Despite the researcher's assurances of confidentiality contained in the cover letter included with the survey form, a few subjects noted these concerns and refused to answer. The degree to which this also colored the responses of those teachers who did respond is unclear. However, to the extent that the instructors' self ratings accurately represented their beliefs about their own teaching quality, the overwhelming majority see themselves as at least "good" teachers



and more than 3 out of every 10 expressed the opinion that overall their teaching was “excellent”.

There is some danger that such high positive self evaluations could result in a smug complacency in which teachers come to believe that they have nothing more to learn about quality teaching. If that were to occur, it would indeed be unfortunate. However, there was evidence that these instructors were also able to view the various elements of their teaching behavior critically and to recognize that they were not always successful in making the subject matter interesting, clear, or understandable; in stimulating students to think; and in using classtime wisely. These especially represent areas in which teachers may be amenable to help in improving their instructional skills.

Although a substantial majority of instructors indicated that they believed they were usually accessible, easy to talk with, and had a genuine interest in students, these behaviors were among those which students were least likely to indicate characterized their instructors. If students underes-

timate teacher accessibility and interest, it may be that teachers have failed to adequately convey their feelings and orientations to their students.

Overall, these data contradict the stereotype of the disinterested/disengaged college faculty more interested in research and scholarly recognition than committed to students and the teaching/learning process. Only one in every ten of the instructors surveyed indicated that they were “primarily” interested in research. More than 8 out of 10 reported that they enjoyed teaching, felt that they were knowledgeable, were interested in the subject matter, and felt enthusiastic in their teaching role. Why then did a sizeable minority of students (38%) report that their teachers were only “fair” or “poor”? Perhaps, despite the instructors’ interest in teaching and their efforts to be good teachers, they are less than completely successful because they do not have the necessary teaching skills and pedagogical knowledge. With the possible exception of those in the College of Education, most university teachers have never received

formal training to be teachers, despite often intense and prolonged schooling in their major disciplines. Indeed, many academicians assume that if one knows the subject matter, one can teach. However, it seems fair to say that disciplinary excellence does not necessarily imply that an individual will be an excellent teacher. Effective teaching is a complex process and one that requires not only interest, commitment, and enthusiasm, but work, skill development, and practice. For most university instructors, whatever teaching skills and philosophies they have acquired have been based on their experiences in the counter-role of student or by trial and error in their own teaching assignments. University sponsored structured opportunities to improve one's teaching skills, such as workshops provided by the Center for Excellence in Learning and Teaching, or other groups, may attract new teachers, but those who have been involved in instruction for a few years may view participation in such activities as irrelevant or as a reflection that they do not know how to do their jobs.

Moreover, even if instructors would like to learn more about teaching techniques, strategies, and philosophies, they may find that other responsibilities interfere with their commitment of time to the teaching/learning process. The instructors surveyed in this study reported that research, University service, and other teaching responsibilities all interfered at least somewhat with their teaching. There appears to be a widespread belief that the University's reward system fails to recognize excellence in teaching and "if you want to get tenure [or promotion or pay raises], you'd better concentrate on research". Many of the instructors who participated in this survey expressed this view when invited to comment on important issues not covered in the questionnaire. The truth or falsity of these impressions is unimportant. What matters is that many believe that quality teaching is unappreciated and unrecognized at Penn State. This image, and the reality that supports it, must be substantially altered to encourage continuing teacher development and to reward those who contribute to the enhancement of Penn State as an educationally purposeful community.





Intravenous Therapy

tequity, impairment
is related to

fluid
subcutaneous
Subcutaneous Infiltration
Cool & clammy
swollen
pallor
pain

Phlebitis

redness
swelling
pain along vein
inflammation of the vein -> can include chem irritation

HCO_3^- K^+
 Na^+ Mg^{++}
 Ca^{++} Cl

Class Attendance

Betty L. Moore and Fern K. Willits

Student absenteeism (cutting classes) is often viewed as an almost universal problem in higher education. Moreover, many observers believe that the incidence of cutting classes has increased as colleges and universities changed from a fairly rigid and controlled setting where the institution functioned as *in loco parentis* to the more open environment that characterizes campus life today. Concerns about class absenteeism are based on the belief that it represents undesirable behavior on the part of students, impedes the operating effectiveness of the institution, hinders student performance, is a factor associated with student attrition, erodes the effectiveness of teacher-learner interaction, and reflects the quality of instruction in the class.

Much of the research on class attendance has utilized data from students in a single course. These studies have generally reported that cutting is inversely related to a student's grade in the class, although the strength of this relationship varies widely from study-to-study. There has been little research examining either incidence of cutting across a wide spectrum of students and classes.

How frequently do students cut classes? Are there variations in class attendance by time of day, day of week, and type or size of class? What are the student characteristics associated with absenteeism? What reasons do students give for failing to attend class? Answers to these questions were sought by means of a telephone survey of students at the University Park campus of Penn State.

The Survey

During fall semester, 1996, 705 randomly selected undergraduates at University Park were contacted by telephone and asked to participate in the survey.¹ Of

¹ This was one of a series of telephone surveys carried out as part of The Penn State Pulse, a project of the Office of Student Affairs Research and Assessment that gathers and analyzes data from students concerning various campus issues.

these, 511 agreed—a 72% response rate.

Students were asked to list all of the courses in which they were currently enrolled. From each student's list, three courses were randomly selected for assessment. For each course the student was asked to indicate the type of class (lecture, lab, discussion, studio, etc.), the days of the week and the time of day the class was scheduled to meet, whether the course was required or an elective, the class size, whether the instructor was a faculty member or teaching assistant, and whether class attendance was recorded.

Respondents were then asked how many times in the preceding week they had actually attended the scheduled meetings of each of the three selected courses. When a class meeting was *not* attended, the reason for not attending was requested. Focusing on a recent one-week period and on specific class meetings minimized the likelihood of global generalization and inaccurate recall. Student interviewers and interviews that were structured to be non-threatening and factual were used to decrease the possibility that subjects would feel the need to underreport their class-cutting. The interviewers expressed confidence that respondents had accurately reported their recollections and suggested that student culture was essentially non-judgmental concerning student cutting. Nevertheless, there is a possibility that under-reporting or over-reporting of the incidence of absenteeism may have occurred in these self-report data.

Personal information on semester standing, gender, on- versus off-campus residence, and cumulative grade point average were also collected.

The 511 students who participated in the survey provided data on a total of 3,844 class periods for 1,533 courses. To maintain confidentiality, the specific course names and numbers were not recorded.

Cut-rates were calculated, based on the total number of classes surveyed for individual students,

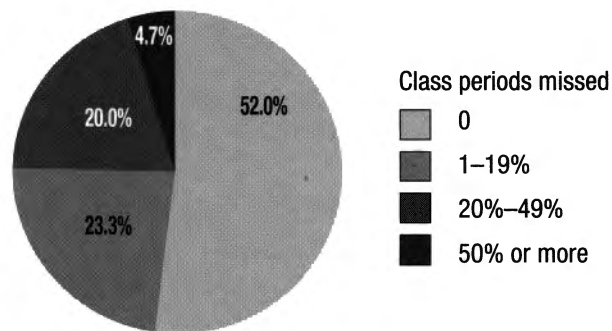
courses, and class meeting periods. Differences associated with various course characteristics, and student attributes were tested using chi square and analysis of variance procedures. The .05 level was used to determine statistical significance.

Incidence of Absenteeism

Of the 3,844 class periods for which data were obtained, students reported missing 462 times—a 12% cut rate. The proportion of classes missed varied markedly among the students surveyed. More than half (52%) reported that they had attended all of the class periods surveyed; 23% indicated they had missed fewer than one in every five sessions; 20% said they had missed at least one fifth but fewer than one half, and 5% failed to attend half or more of the periods covered in the study.

Percentages of students reporting various rates of absenteeism

% of Students



Absenteeism by Course Characteristics

There was some variation in the incidence of class absenteeism by day of the week, with Tuesday having the lowest (10%) and Friday having the highest (15%) cut-rates. Friday's cut-rate differed from all other days, but the differences among the remaining days were small and not statistically significant.

Rate of absenteeism by time of day

Time of Day

Early morning (9:30 a.m. or before)	14.5%
Mid-morning (9:31 a.m.-noon)	12.3%
Early afternoon (12:01 p.m.-3:30 p.m.)	11.2%
Late afternoon (after 3:30 p.m.)	11.7%

There were also differences by time of day of the class meetings. Early morning class sessions (those beginning before 9:30am) were the most likely (15%) to be cut. The incidence of absenteeism declined to 12% for classes starting later in the morning, and to about 11% for those meeting later in the day.

Size of class was significantly related to the incidence of class absenteeism, with large classes more likely to be missed than smaller ones. Thus, less than 7% of the sessions involving classes of fewer than 30 students were missed; the incidence of cutting increased steadily as class size increased to nearly 20% for classes of 200 or more students.

Classes described as "discussion" and lab/studio/other courses were less likely to be cut (6%) than were lecture courses (15%) or lecture courses including recitation or lab periods (10%).

When instructors recorded whether students attended their classes, the incidence of class absenteeism was less than half as great (7%) than when attendance was not recorded (15%).

When class size was controlled, there was no significant difference in cut rates for classes taught by faculty and those taught by teaching assistants. Class attendance did not differ significantly by whether the course was specifically required for the student's major, one of a group of courses required, necessary to fulfill some other requirement, or a free elective.

Rates of absenteeism by class size

Class size	
1-29	6.8%
30-69	8.4%
70-199	13.4%
200+	19.6%

Rates of absenteeism by type of class

Type of class	
Discussion	5.8%
Lecture	15.1%
Lecture and recitation/lab	10.0%
Other (lab, studio, etc)	6.4%

Absenteeism by Student Characteristics

There were no significant differences by gender, age, semester-standing or on- versus off-campus residence in the proportion of classes missed.

There were significant differences in cut-rates by student's self-reported all University grade point average. Students with grade point averages of less than 2.70 reported a cut-rate of 17%; those with GPAs of between 2.70 and 2.99 missed 15% of the surveyed classes; those with grade point averages of 3.00 to 3.49 cut 8% of the classes. However, students with GPAs of 3.50 or more reported a somewhat higher (11%) rate of absenteeism.

Rates of absenteeism by student's GPA

GPA	
< 2.70	17.0%
2.70-2.99	14.8%
3.00-3.24	8.3%
3.25-3.49	7.8%
3.50 and over	10.7%

Reasons for Missing Classes

When students indicated that they had missed a class, they were asked: "Could you tell me why you did not attend?" A wide variety of specific answers were offered. These were classified into six general categories.

Of the reasons given, 24% were attributed to the students' general assessment that the class was not worth attending. Included were reasons such as: the information was available elsewhere (in a text, purchased notes, recitation meetings, etc.); the course was so easy that class attendance was unnecessary; the material had already been covered in other college or high school courses; the instructor was boring or not seen as contributing to the students' learning.

Fatigue, tiredness, and sleeping through class accounted for 23% of the reasons given for missing class. Information was not available as to whether the respondent was "too tired" because of academic, employment, extracurricular, or social activities.

Nearly 19% reported that they had other commitments which prevented them from attending one or more of the surveyed classes. These included studying or preparing assignments for

Percentages of students reporting various reasons for missing class

Not worth going/boring	23.8%
Slept through/too tired	23.3%
Other responsibilities/too busy	18.8%
Ill/didn't feel well	16.1%
Went home	9.5%
Other	8.5%

other classes, meeting family/personal responsibilities, working, and interviewing for jobs. Just over 16% indicated that they had missed class due to their own illness.

Approximately 10% reported that they had been "out of town" or had "gone home". The remaining 9% indicated a variety of "other" reasons.

Conclusions

The 12% absenteeism rate found in this survey was somewhat lower than many observers may have anticipated. While it is possible that students under-reported the extent to which they missed class, there was no reason, given the context and nature of the data collection procedures, to expect that they would have felt pressure to provide false data. It is possible that the week surveyed was atypical of class attendance patterns since the Thanksgiving holiday was only two weeks away. As a result, there may have been a tendency for tests to be scheduled prior to the holiday break which could have lowered absentee rates and/or students

may have been more diligent in attending classes when a short vacation period was on the horizon. The present study provided no information on variation in class cutting by week of semester. Some previous studies have suggested that absenteeism may increase as the semester progresses, but more detailed analysis of intra semester fluctuation in attendance is lacking.

Class cutting is generally taken as a "problem" by teachers and administrators, and those who cut classes are often viewed as failing to meet their responsibilities as students. Congruent with previous research, there was some evidence of a general negative relationship between student grades and frequency of absenteeism. However, class cutting was not limited to students with low GPAs. Indeed, nearly half (48%) of the students surveyed reported that they had cut at least one class meeting of the sampled classes, and one in every four students failed to attend 20% or more of these sessions. Moreover, students with GPAs of 3.50 or more were somewhat more likely than those with slightly lower averages to cut.

For many students, missing some classes likely represented a means of time management. Requirements in other courses, nonacademic responsibilities, and the need for sleep sometimes took priority over attending specific class sessions. While the choice to miss classes for these reasons could be taken as "irresponsible" or "inappropriate", it seems likely that if attendance were seen as important or necessary, their choices might have been different. Students would most certainly sometimes miss classes regardless of the quality of instruction they received. However, for nearly one-fourth of the cuts surveyed, the students indicated that there was little learning incentive to attend the class—it was too easy and/or too boring, or the material could better be obtained elsewhere. In such cases it seemed likely that virtually any alternative activity was likely to take priority over attendance.

Epilogue

Diane M. Enerson

Statements such as: “students don’t value learning or many only rarely attend classes;” “faculty don’t value good teaching;” “students can’t be trusted to evaluate instruction.” can commonly be heard on college campuses, including Penn State. But as Willits notes in the conclusion of her report, *Quality of Instruction: Views of University Park Students and Teachers*, “The truth or falsity of these impressions is unimportant. What matters is that many believe that quality teaching is unappreciated and unrecognized at Penn State.” Her point here is an important one, and one that clearly alludes to the significance and power of what people believe, beliefs that can often achieve mythological proportions. Myths are in fact an integral part of every community and can serve any of a number of different functions. They can provide comfort and continuity by justifying why we behave as we do. They can also help to resolve conflict or inspire by providing explanations for why things happen, especially when ordinary reason and observation are not available.

But sometimes myths persist even when directly contradicted by the evidence at hand. Terenzini and Pascarella have recently noted that “when myths continue to guide thought and action, despite evidence that they are without empirical foundation, they become dysfunctional and counterproductive.”¹ One such dysfunctional myth they report that still clearly persists in most universities and colleges—despite overwhelming evidence to the contrary—is the myth that “good teachers are good researchers.” Seventy years of research on the relationship between research and teaching unequivocally reveals no correlation between research and teaching. Knowing someone can do one thing tells you nothing about whether they can do the other. Yet as Terenzini and Pascarella note, we continue to behave as if research productivity were

the only standard against which to measure college and university faculty. Imagine the ultimate dysfunction of an institution full of researchers, none of whom could teach. (While unlikely, it is nonetheless possible). A frightening prospect indeed.

Happily, the preceding reports suggest this is not wholly the case at Penn State. The majority of students who were surveyed attend their classes most of the time and rated those courses as “good” or “excellent.” And the overwhelming majority report that their instructors were knowledgeable, well prepared, interested in the subject matter, and impartial in assigning grades. For the most part, the attributes Penn State students ascribe to the courses they have taken mirror precisely those that both faculty and students agree are hallmarks of excellent teaching. Students and faculty clearly agree that good teachers are knowledgeable of the subject matter and sufficiently informed about their students needs and backgrounds to be able to prepare educational experiences that clarify rather than obscure. Good teachers are also prepared for class and available to their students outside of class. Good teachers evaluate student work fairly.

But this agreement seems oddly in contradiction to a common question—a question that may have achieved the status of dysfunctional myth—that is often raised in discussions about teaching and learning. Can we really measure teaching? Clearly, the data reported here would suggest that we can. Not only were high levels of agreement found within each group of respondents—students and teacher—but there were also high levels of agreement between the two groups as well. These attributes will undoubtedly come as no surprise to those who have or would reflect collectively on the simple question underlying this report, What is good teaching? And such concurrence is also not at variance with student reports that if the course offered something beyond what was available elsewhere they attended those courses most of the

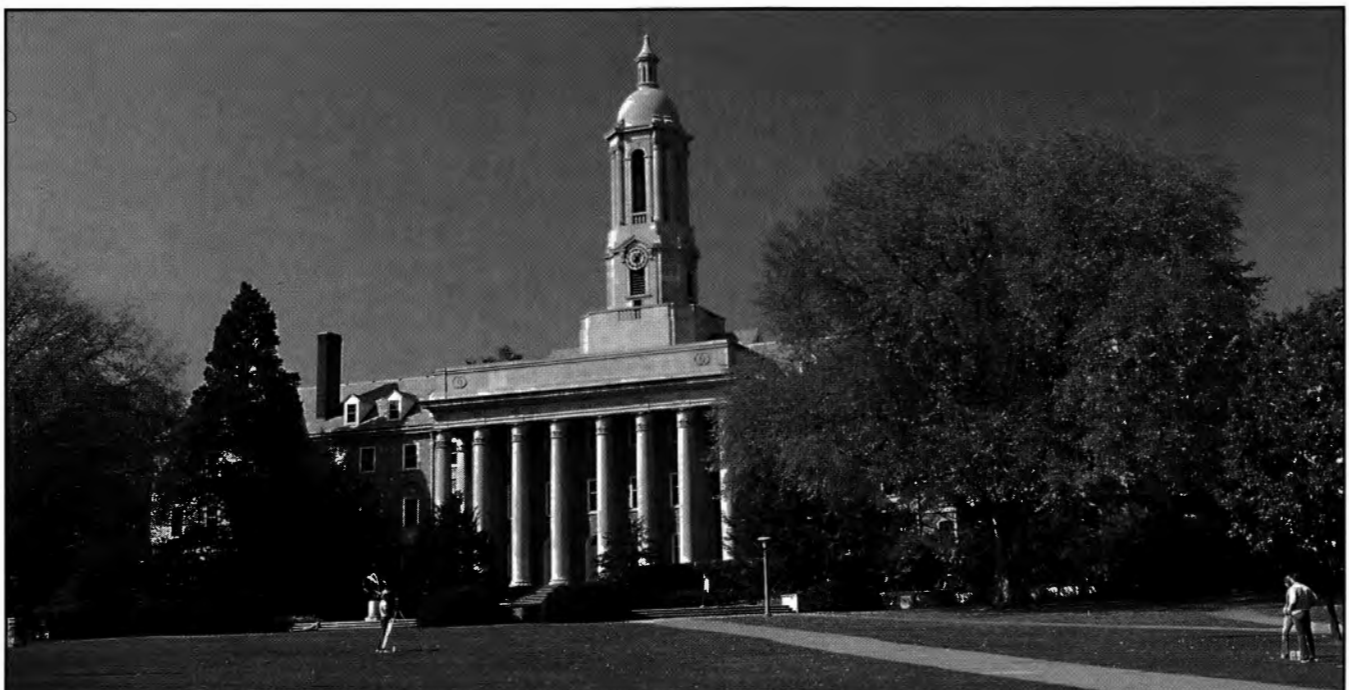
¹Terenzini, P.T., and E.T. Pascarella (1994) “Living with Myths: Undergraduate Education in America,” *Change* (Jan/Feb): 28–32.

time. Such convergence in the data quite clearly suggest that teaching can in fact be measured.

But perhaps the single most stunning finding in all the student data reported here is that *the most powerful predictor of students' overall evaluations of a course was the amount they felt they had learned in the course*. This, along with the high levels of agreement between faculty and students on the attributes of good teaching, underscores the need to critically examine another dysfunctional myth. Namely, that "students are in no position to judge the quality of the teaching they receive." The prevalence of this myth is certainly evident in the finding that only a fourth of the Penn State teachers viewed student input into the evaluation of teaching as "a great deal" of value. More than two-thirds of the students felt that their input was valuable. However, what is noteworthy is that there were *any* respondents who did not highly value student input. As Peter Seldin has recently argued, assuming that students are irrelevant to the process of assessing teaching is analogous to assuming that those who eat the dinner are irrelevant to judgments of how it tastes.²

² Seldin, P. (1993) "The Use and Abuse of Student Ratings of Professors," *Chronicle of Higher Education* (July 21): A40.

Clearly, there are many more questions that might have been asked to give a more detailed portrait of the quality of instruction at Penn State. But it is less clear if such details would add any to the obvious task that confronts the institution as a whole. Namely, how do we dislodge these myths now that they have been exposed for the charlatans they are? What functions did they originally serve? What functions do they continue to serve? Why do they persist? What impact do the myths themselves have on student attendance? What are the curricular implications of the findings regarding student attendance? What impact do they have on the development of excellence in teaching in a unit? Obviously these are questions that many groups of faculty, students, and administrators may want to ponder. Although the answers that each group arrives at may vary considerably, hopefully the outcome of those discussions will be equally productive. That is, by wrestling with and confronting the data in these reports—the dysfunctional myths that are exposed—the groups who read and give time for reflection will come to a new understanding of one another and themselves as teachers and learners. And in so doing, they will have a hand in shaping a more positive culture for teaching and learning at Penn State.



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PENNS^TATE

