

PENN STATE QUALITY OF INSTRUCTION 2011

Perceptions of Instructors and Students Concerning the Elements of Teaching Quality

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Introduction

Do instructors and students differ in their perceptions of what is important to achieve quality teaching at the University level? Although both may share the common goal of increasing knowledge and understanding, other goals may also be relevant. To the student, quality teaching may mean that courses are fair, interesting, and “do-able.” To instructors, quality teaching may be defined in terms of knowledge competence, clarity and academic rigor. Although such goals are not mutually exclusive, they can represent somewhat differing emphases in regard to the practices that are associated with teaching quality.

How much do college students and their instructors actually differ in their perceptions of the relevance of various pedagogical procedures and practices? Using data from online surveys of undergraduate students and instructors at the University Park campus of Penn State, this report explores the similarities and differences in students and instructors views concerning the importance of specific instructional elements for achieving quality instruction in college courses.

The Surveys

Surveys of students and instructors, carried out during spring semester 2011 provided data for this analysis. For the student survey, 7,500 undergraduates enrolled at University Park during *both* fall semester 2010 and spring semester 2011 were chosen at random from the 31,103 students meeting these criteria listed in the University’s Data Warehouse. Thus, all of the targeted students had at least one semester of college experience from which to develop their opinions about factors contributing to teaching quality. These students were contacted early in spring semester 2011 using their Access Account email addresses and invited to participate in an online survey dealing with their perceptions of instructional quality. Three subsequent email reminders were sent at approximately one week intervals to encourage response. A total of 219 had changed status between the time of initial selection and data collection, and were excluded from the sample. Of the remaining 7,281 students, 1,837 completed the survey – a 25% response rate.¹

Also during spring semester 2011, a listing of all instructors who had taught one or more course at University Park during the fall semester 2010 were invited to participate in a survey similar to the one students had completed. These included faculty members of varying ranks, staff, and graduate students serving as instructors or teaching assistants. The protocol for soliciting participants was identical to that used in the student study. All instructors were invited via email to participate, with reminders sent to those who had not completed the survey. Of the 3,953

¹ Respondents differed from the relevant student population in regard to the distributions of gender and class standing. Women and freshmen were over represented in the sample data; males and seniors were underrepresented. The analysis reported here was also carried out using weighted data to adjust for sample bias in regard to these factors. The findings from this latter analysis did not differ in any substantive way from that reported here which used unweighted data.

instructors asked to participate, 1,537 did so – a 39% response rate.² Instructors included faculty and staff members (81% of the total) and graduate students, teaching assistants, and others (22%).

Included in both the student and instructor surveys was a list of 39 teaching practices and behaviors indicative of instructional quality. The listing included items drawn from course evaluation forms from other institutions and those utilized in a previous study of students and instructors carried out at Penn State in 1996.³ Additional items, including those dealing with collaborative learning and instructional technology – aspects of pedagogy that have come into common use in the last decade – were developed for the current study.

Classroom Teaching

Both students and instructors were asked to indicate how “important” each of the 39 practices were in determining the quality of instruction of college teaching. Importance was measured on a scale of 1 to 5, where 1 meant “not important” and 5 was “very important”. For this analysis, codes 4 and 5 were combined to represent a response of “important,” with codes 1 and 2 meaning “little or no importance.” Differences in the response patterns of students and instructors to each of the 39 items were tested for statistical significance. Unless otherwise indicated, only those differences significant at the .05 level are described. Factor analysis suggested the items could be interpreted when clustered to describe elements of the following eight dimensions or factors.

- Instructor is *Clear/Understandable*
- Instructor is *Knowledgeable/Organized*
- Instructor is *Fair*
- Instructor is *Enthusiastic and Interested* in teaching
- Instructor promotes a *Positive Social Atmosphere* in the class
- Instructor promotes *Critical Thinking*
- Instructor uses *Technology* for teaching
- Instructor uses *Collaborative Learning* techniques

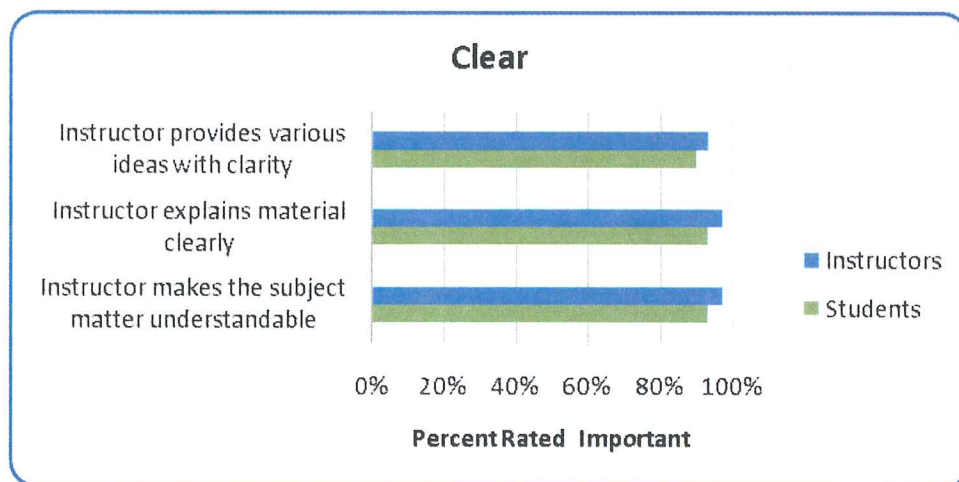
² It was not possible to assess the representativeness of the instructor sample, since comparable information on relevant characteristics included in the sample data were not available in the Data Warehouse..

³ For a report of that study, see Willits, F. K., B. L. Moore, and D. M. Enerson (1997). *Penn State: Quality of Instruction: Surveys of Students and Teachers at University Park*. University Park, PA: The Pennsylvania State University.

Clear/Understandable

If one is to “teach,” it would seem that the ideas being conveyed must be clear and understandable. Both students and instructors in the survey concurred with this idea, with 90% or more of both groups indicating that each of the three items dealing with clarity were important to instructional quality. However, the differences between students and instructors in their responses, while not great, showed that instructors were somewhat more likely than students to feel that these elements were important to quality teaching.

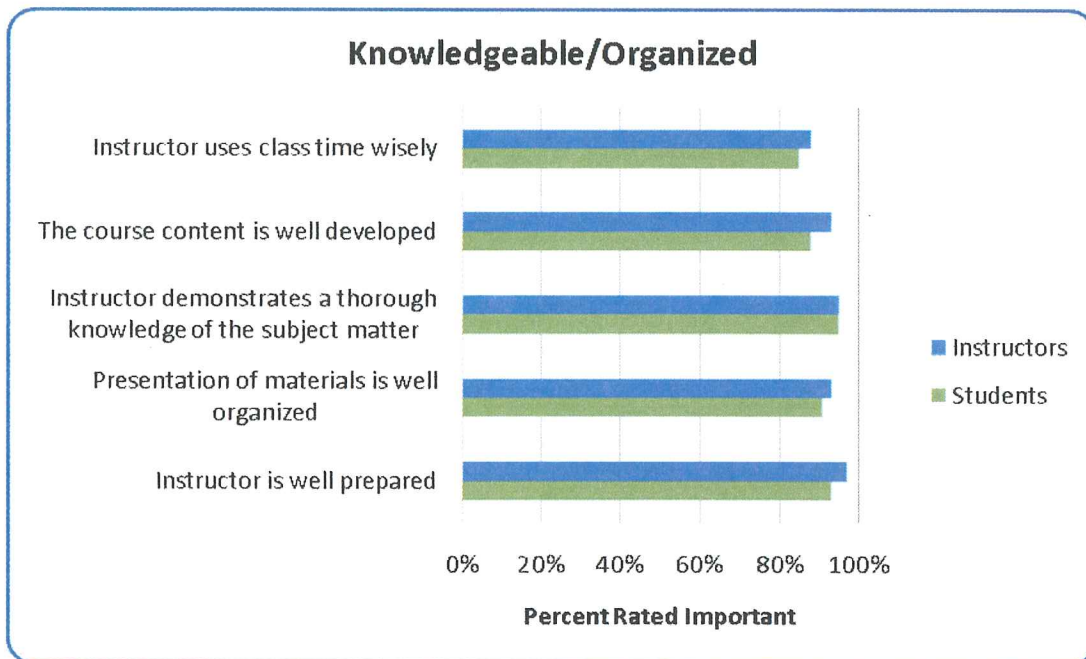
- 93% of the students and 97% of the instructors judged both “Instructor makes the subject matter understandable” and “Instructor explains material clearly” as important elements of quality of instruction. Virtually no one (fewer than 2% of the students and less than 1% of the instructors) reported that either of these items was of no or little importance (ratings of 1 or 2).
- 90% of the students and 93% of the instructors reported that “providing various ideas with clarity” was important; less than 1% of the instructors and 2% of the students reported this was of little or no importance.



Knowledgeable/Organized

Instructor's knowledge and preparedness were also viewed as important elements of quality teaching by the overwhelming majority of both students and instructors. More than nine of every ten respondents in both groups endorsed the importance of the instructor demonstrating knowledge of the subject matter and presenting it in a well organized fashion.

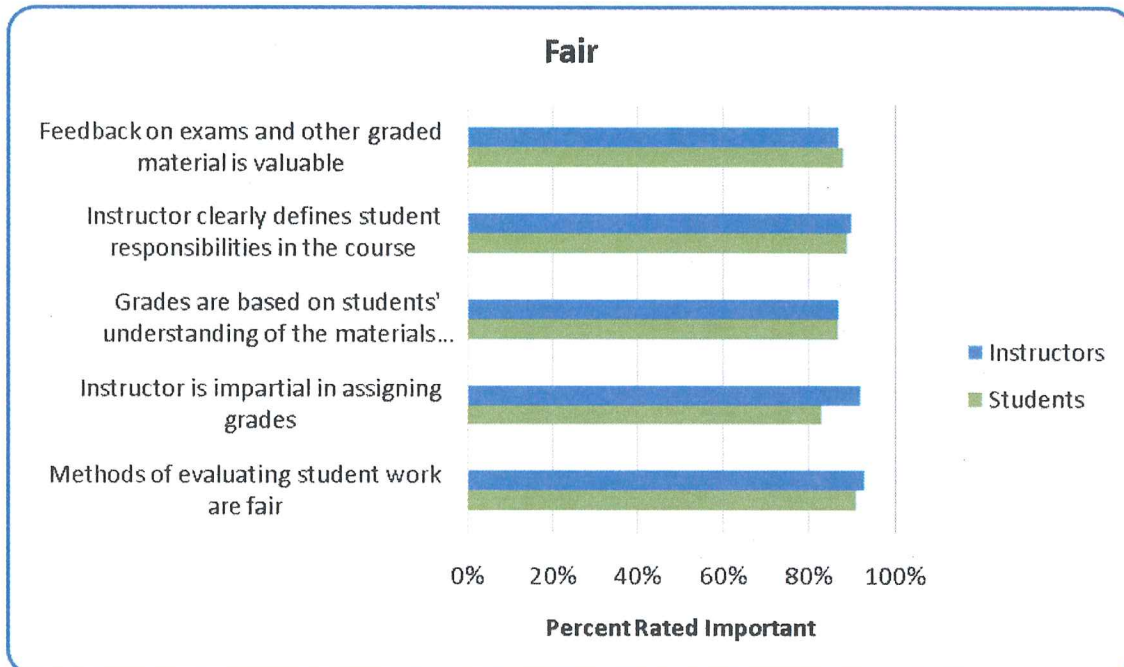
- There was no difference in the proportion of students and instructors (95%) reporting that it was important for the instructor to demonstrate a thorough knowledge of the subject matter;
- 91% of students and 93% of instructors indicated it was important for the instructor to present materials in a well-organized fashion – a difference that was not statistically significant.
- Students (88%) in the sample were slightly less likely than instructors (91%) to endorse the importance of well-developed course content, but this difference was not significant.
- Instructors were significantly more likely than students (97% vs. 93%) to feel it was important for the instructor to be well prepared
- Slightly smaller percentages felt that it was important to use class time wisely, with 85% of students and 88% of instructors responding in this way.



Fair

Fairness would be expected to be a critical element in quality teaching. Evaluation of student performance is part of the instructor's role. Grades have become markers for assessing knowledge and can have long-range implications for students as they move forward. As anticipated, for both students and instructors, fairness on the part of the instructor was seen as an important element in quality teaching. However, instructors were somewhat more likely than students to report it was important to be impartial in assigning grades and to use methods of evaluation that were fair.

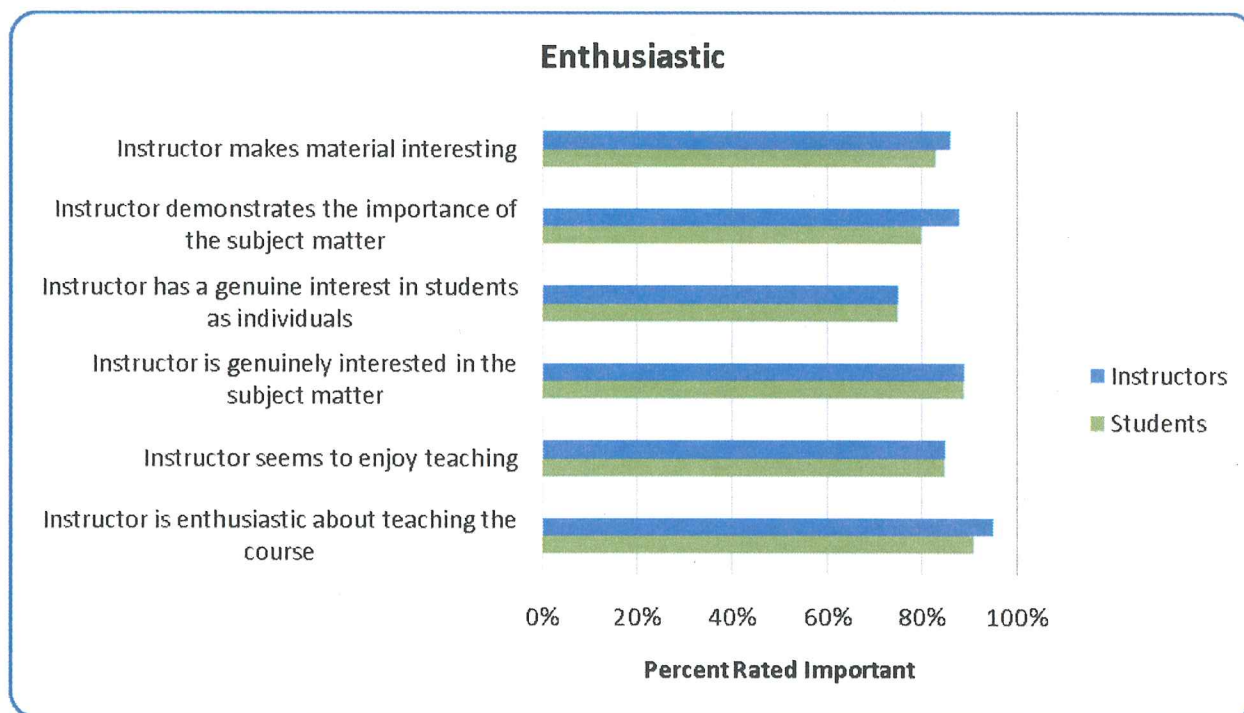
- 91% of students and 93% of instructors reported it was important that methods used for evaluating student work were fair – a statistically significant difference.
- However, “fairness” was not necessarily seen as simply “impartiality” in assigning grades, especially by students. Although 92% of the instructors indicated that such impartiality was important, just 83% of the students responded in this way.
- Asked about the importance of grades being based on student's understanding of the materials stressed in a course, 87% of both students and instructors reported this was important.
- Similarly the differences in student and instructor responses to the question dealing with the importance of the instructor clearly defining student responsibilities in a course and providing valuable feedback on exams and other graded material were not significant.



Enthusiastic

Both instructors and students supported the idea that the quality of instruction is enhanced if instructors are enthusiastic, interested in the subject matter and enjoy the task of teaching. Instructors were somewhat more likely than students to report that enthusiasm, making the material interesting and underscoring the importance of the course material were important.

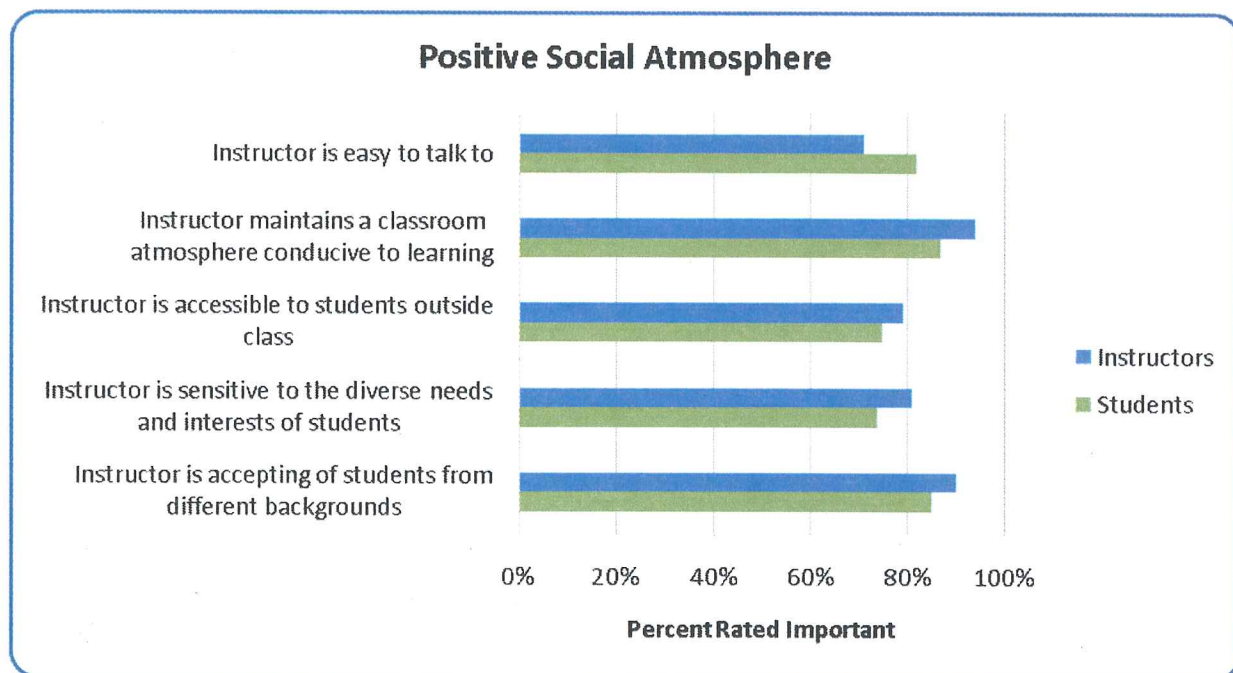
- Although both students and instructors overwhelmingly felt that enthusiasm about teaching the course was important, instructors were somewhat more likely than students to endorse this idea (91% for students vs. 95% for instructors).
- Instructors were also more likely than students (89% vs. 80%) to feel that it was important for the instructor to demonstrate the importance of the subject matter, and to make the material interesting (86% vs. 83%).
- About 85% of both students and instructors reported it was important for an instructor to enjoy teaching.
- 89% of both groups felt it was important for the instructor to be interested in the subject matter.
- However, only about 75% of both instructors and students felt it was important to have a genuine interest in students as individuals.



Positive Social Atmosphere

How important to quality education is a friendly, open relationship between instructor and student both in and outside the classroom? Five separate items on the survey asked students and instructors about differing aspects of this question, including instructor acceptance of different types of students, accessibility of instructor outside class, ease of conversation with instructor, and general classroom atmosphere. Although all of these items were endorsed by large percentages of both students and instructors as being important, there were significant student-instructor differences in their responses.

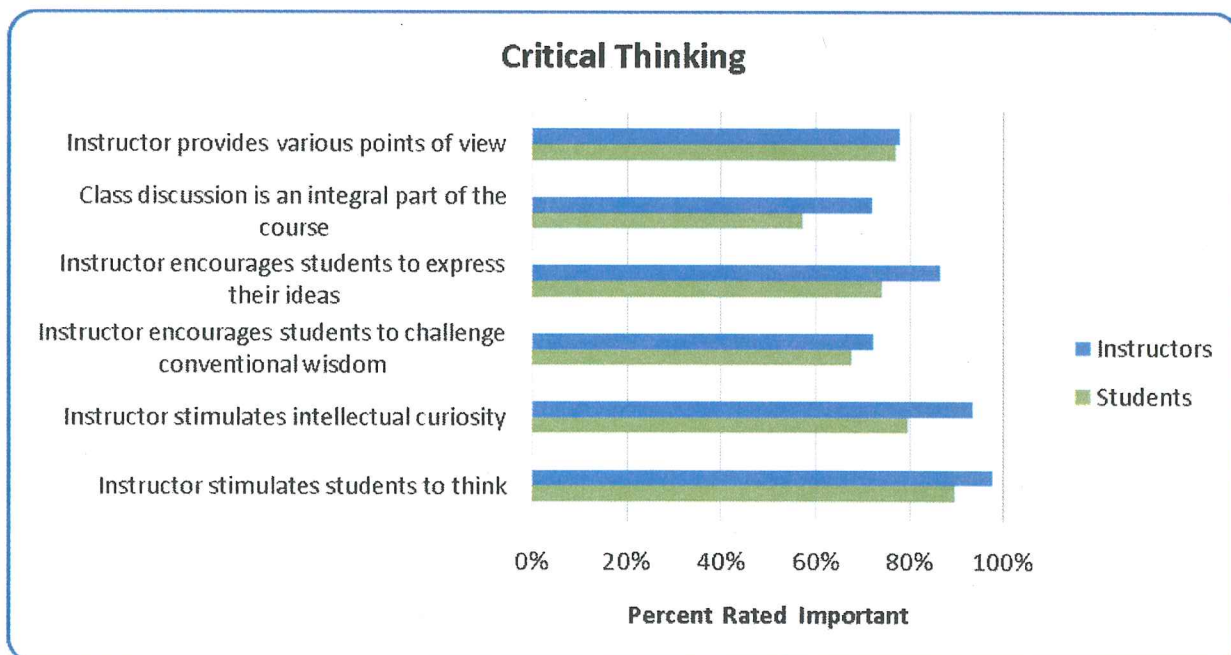
- 94% of the instructors and 87% of the students in the surveys reported that it was important for the instructor to maintain a classroom atmosphere conducive to learning. Only about 1% of both groups felt this was of little or no importance.
- Instructors were also more likely than students to report that it was important for the instructor to be accepting of students from different backgrounds (90% vs. 85%), sensitive to the diverse needs and interests of students (81% vs. 74%), and accessible outside class (79% vs. 75%).
- Conversely, instructors were less likely than students to report that it was important for the instructor to be easy to talk to (71% vs. 82%), while 3% of the students and 5% of the instructors reported this was of little or no importance.



Critical Thinking

A university education implies more than the acquisition of specific information. It also implies learning critical thinking skills. How important do students and instructors believe this latter function is when evaluating the quality of instruction? How important are various instructor behaviors directed to encouraging critical thinking in the classroom? Six items on the surveys addressed these questions – stimulating students to think, stimulating intellectual curiosity, challenging conventional wisdom, encouraging students to express their own ideas, utilizing class discussion methods, and providing various points of view. The majority of both students and instructors felt that these behaviors were important, but instructors were significantly more likely than students to endorse the importance of five of the items. For the sixth item (instructor presenting various points of view) there was little difference between student and instructor responses.

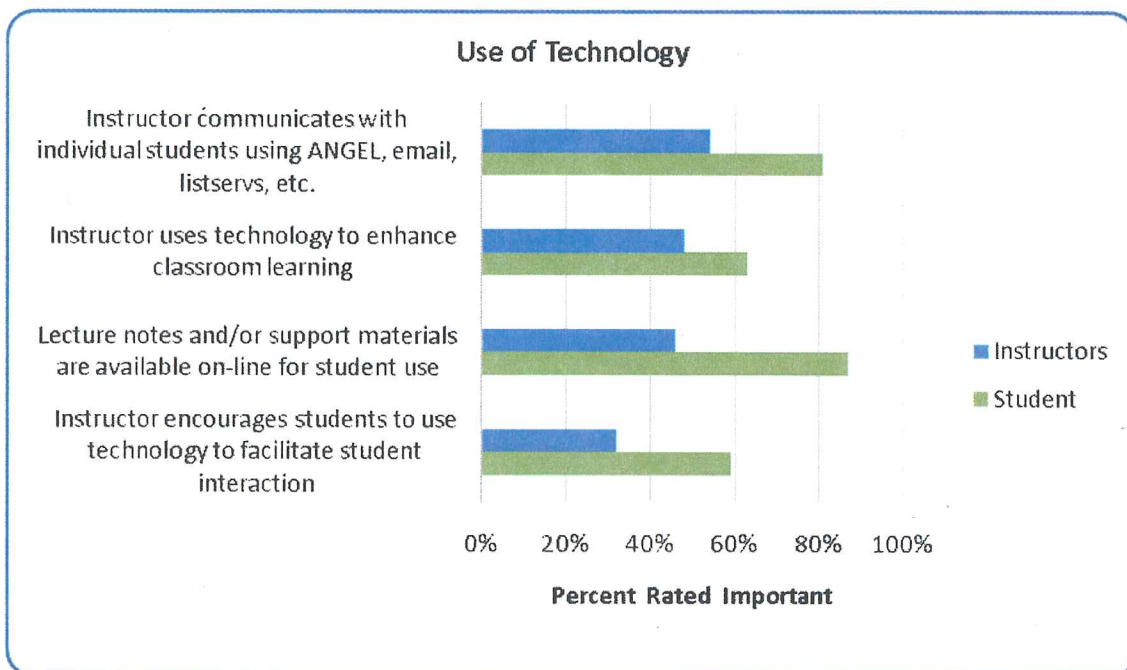
- Instructors (98%) were more likely than students (90%) to report that it is important for instructors to stimulate students to think, and to stimulate their intellectual curiosity (93% for instructors, 80% for students).
- Instructors were also more likely than students to deem as important encouraging students to challenge conventional wisdom (72% vs. 68%); 7% of both groups reported this was of little or no importance.
- 86% of the instructors but just 74% of students felt it was important to encourage students to express their ideas; 6% of the students and 3% of the instructors indicated this was of little or no importance.
- 72% of instructors but only 57% of the students felt it was important for class discussion to be an integral part of a course, while 12% of the students and 7% of the instructors felt this was of little or no importance.
- Students (78%) and instructors (77%) did not differ significantly in their likelihood of rating as important the presentation of various points of view (5% of both groups felt it was of little or no importance).



Use of Technology

Technology has transformed many aspects of college teaching – both inside and outside the classroom. The survey asked four questions dealing with the importance of the use of technology in various ways for enhancing the quality of instruction at the university. In response to each of these questions, students were much more likely than instructors to report that technology use was important for the quality of instruction they received.

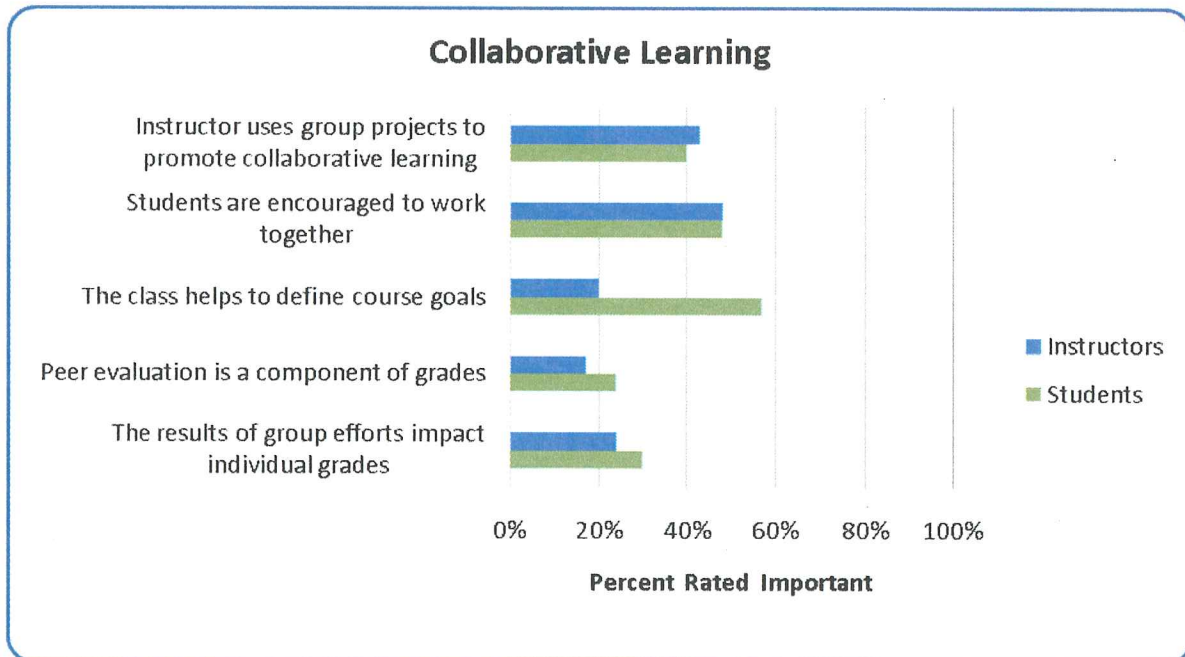
- Less than a third of the instructors surveyed rated the use of technology as important: to facilitate student interaction outside of class (32%); 59% of the students rated this as important; 35% of the instructors and 12% of the students reported this was of little or no importance.
- 46% of the instructors, but 87% of the students felt it was important to provide lecture notes and/or support materials on-line for student use. Just 3% of the students but 28% of the instructors felt this was not important.
- 48% of the instructors, but 63% of the students reported it was important for the instructor to use technology to enhance classroom learning.
- Just over half (54%) of the instructors compared with 81% of the students indicated it was important for instructors to communicate with individual students via ANGEL, e-mail, listserv, etc. Only 5% of the students, compared to 20% of the instructors felt this was of little or no importance.



Collaborative Learning

In recent years, there has been increasing discourse on the importance of engaging students in the learning process, not only by requiring their participation in group activities, but also in course planning, grading, and goal setting. Overall support for the importance of most of these activities was low among both instructors and students, although students were more supportive than instructors for several elements.

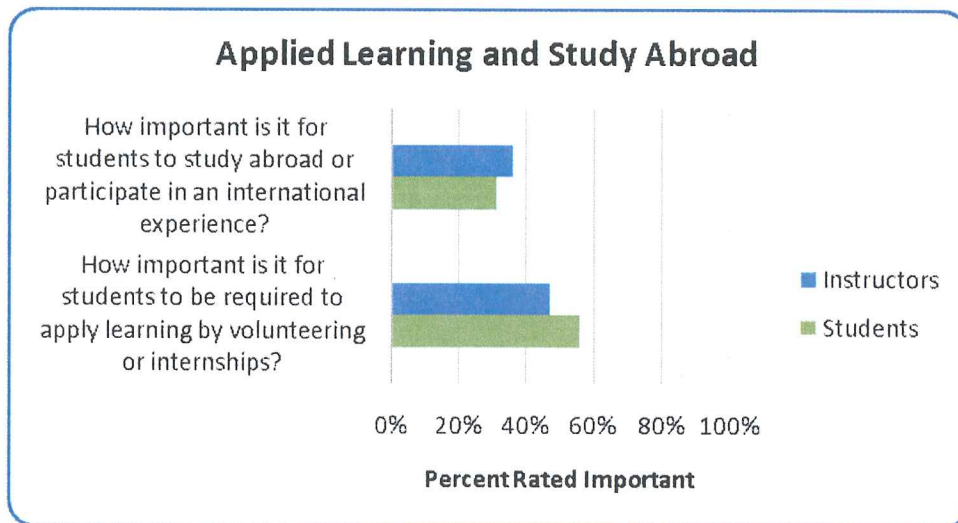
- 30% of the students, compared with 24% of the instructors felt it was important that the results of group efforts impact individual grades; 42% of both groups reported this was of little or no importance.
- 24% of the students, but only 17% of instructors believed it was important for peer evaluation by students to be a grade component; 50% of the students and 54% of the instructors rated this as of little or no importance.
- However, 57% of the students felt it was important for the class to help define course goals; only 20% of the instructors did; 15% of the students but 49% of the instructors saw this as of little or no importance.
- Instructors and students did not differ significantly in their views of the importance of students being encouraged to work together, and a slightly smaller percentage supported the importance of using group projects to promote collaborative learning.



Applied Learning and Study Abroad

Two questions on the surveys asked how important it was for students to be required to participate in extra-classroom learning through internships or volunteer work, and how important it was to require as part of their degree program that they study abroad or participate in other international experiences. Although both students and instructors were more inclined to support internships/volunteer work than international work, there were differences in the response patterns of students and instructors.

- Students (56%) were more likely than instructors (47%) to report that applying their learning through internships or volunteer activities was important and should be required as part of their degree program.
- Instructors (36%) were more likely than students (31%) to report that studying abroad or engaging in other international activities should be required.



Conclusions

In today's environment, students and instructors alike face a rapidly changing learning environment. Widespread use of emerging technologies, diverse and innovative teaching styles, and unique classroom experiences both supplement and challenge traditional instructional methods. Some have argued that the notion of the instructor as a "sage on the stage" is (and should be) replaced by a "guide on the side."⁴ In such a setting, the definition of what constitutes quality instruction at the college level is ambiguous. Moreover, the perceptions of students and instructors may differ dramatically as each brings different experiences and expectations to the learning process.

For many key elements, students and instructors were in agreement on their importance. Thus, both groups overwhelmingly emphasized the importance of clarity in presentations, knowledge of subject matter, preparation and organization, fairness in evaluating student work, and instructor enthusiasm about teaching the course. These elements are the cornerstones of pedagogy, and students and instructors alike see them as such. These conditions will need to remain at the forefront of the college learning environment and quality teaching efforts.

Equally important were the dimensions where instructors and students differed in their opinions. Based on their responses, students were interested in developing stronger ties, relationships, and interactions with their instructors. This is supported by emerging research, which indicates that students today are increasingly relationship driven in their approaches to life and learning.⁵ Efforts to connect and interact with students through a variety of methods (such as face to face, via email, listserv, text, and social media) would likely prove useful in fostering a more conducive learning environment.

The area of critical thinking and inquiry also showed notable student-teacher differences. Although a majority of both students and teaches felt that developing critical thinking skills was important, instructors were significantly more likely than students to assign importance to stimulating intellectual curiosity, encouraging students to express their ideas, and including class discussion as an integral part of the course. This suggests that, while students viewed expertise and interaction with instructors as important, they were also somewhat less likely than instructors to believe that going beyond the course materials to dissect and critically examine the ideas were important components of instructional quality. There was also little support among either students or instructors for the importance of collaborative learning practices. However, students were desirous of technological benefits associated with their courses (lecture notes posted on-line, communication linkages with the instructor and classmates outside the classroom setting). Some educational researchers have questioned whether the use of these technologies creates a passive learning environment. If so, this, partnered with lower levels of emphasis on critical thinking skills and little value given to engagement in collaborative work, could leave students ill prepared for the challenges they will face. Instructors may want to consider these conditions as they organize course activities and materials, inside and outside the classroom.

⁴ King, A. (1993). "From Sage on the Stage to Guide on the Side." *College Teaching* 41(1): 30-35.

⁵ Komaraju, M., Musulkin, S. and Bhattacharya, G. (2010). "Role of StudentFaculty Interactions in Developing College Students Academic Self-Concept, Motivation, and Achievement". *Journal of College Student Development*. 51(3): 332-342.