Perceptions of Students and Instructors at Penn State's Commonwealth Campuses

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Foreword

Because of its land grant mission, its expansive structure, and the large number of undergraduate students, The Pennsylvania State University describes itself as "one University, geographically disbursed." To insure that "Penn State quality" is delivered consistently, the university must regularly examine its educational products. This report is one of a three-part series designed to explore the quality of the undergraduate education experience at Penn State which is delivered in three instructional domains: the University Park academic colleges located in Centre County, the nineteen Commonwealth Campuses spread across the state, and the fast growing online environment of Penn State's World Campus. This research focuses on one of the most important elements: the perceptions of students and their instructors about teaching and learning across these three domains.

One fact emerges from these data: good teaching is good teaching in any environment. The traditional criteria for teaching quality remain constant: strong disciplinary knowledge, clarity of presentation, good organization, and fairness; all are consistent elements in creating a classroom atmosphere conducive to learning. This study shows that promoting innovation, recognizing creativity, and employing sound pedagogical principles are all powerful elements found in good instruction, and students know it. What emerges is a new look at learner's enthusiasm for seeking more engagement, increased interaction, and some control over their own learning experience.

What the literature tells us about education is that it is all about conceptual change, not just about the acquisition of information. Good teaching helps students to better interact with the world. As they learn, their conceptions of phenomena change. They see the world in different ways. The acquisition of information in itself does not bring about such change but the way the students structure information and think about what it does certainly will initiate change.

As the professoriate strives to better help students through their college learning experience, new metrics are constantly emerging that reveal more about the process of student learning and help to discern "deep learning" as opposed to "surface learning," a hot topic in the educational literature at the present time. In deep learning students use higher order cognitive skills such as the ability to analyze, synthesize, solve problems and think mega-cognitively in order to conduct long-term understanding; it involves the critical analyses of new ideas, linking them to already known concepts, and principles so that understanding can be used for problem solving in new and unfamiliar contexts. Adding potential for how to better evaluate the depth of learning, coupled with the fruits of this study to examine and compare perceptions of students and their teachers, will help the next generation of researchers move to a new and dynamic level of pedagogical research and exploration.

— *Nancy L. Herron,*
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Introduction

Teaching represents a major component of Penn State's mission, and its instructional activities are numerous and multifaceted. They include formal classroom instruction, online and aggregated course sharing, video conferencing, the preparation and distribution of instructional materials, informational meetings, training seminars, one-on-one mentoring, and personal counseling. However, the most visible, and arguably the most far-reaching, teaching activities of the University are in the area of undergraduate instruction. Approximately 18,000 students receive baccalaureate or associate degrees annually from the University.

In addition to the campus at University Park, 19 additional Penn State Commonwealth Campuses, located across the state, enroll approximately 29,000 students each semester. Indeed, more than half of all Penn State undergraduates spend part or all of their college years at one or more of these campuses. For many of these students, these Commonwealth Campuses provide their initial higher education experiences, and lay the foundations on which subsequent learning decisions and pursuits are based. As such, the instruction that occurs at these Penn State campuses is critically important in carrying out the educational mission of the University.

Maintaining and enhancing the quality of undergraduate teaching at all campuses is an ongoing concern of the University. Instructor development and support programs by the Schreyer Institute for Teaching Excellence, and numerous formal and informal mentoring activities for both new and continuing instructors seek to assist teachers in improving their teaching skills. Each semester, Student Evaluations of Teaching Effectiveness (SRTEs) provide information on the positive and negative aspects for individual course offerings. "Teaching quality," along with research and service, serve as the bases of faculty evaluation for tenure, promotion, and salary decisions. Numerous teaching awards publicly recognize and reward stellar instructional quality.

How successful are these efforts? Enrollment statistics, admission applications, alumni accomplishments, philanthropic giving to the institution and legislative support all provide clues for addressing this question. However, basic to any evaluation are the views of current students and instructors concerning their expectations, experiences and perceptions of the teaching/learning environment. This report focuses on the findings from surveys of students and instructors at the 19 Commonwealth Campuses that offer undergraduate instruction.

The Setting

Most of Penn State's Commonwealth Campuses were established during the Great Depression of the 1930s to allow students who could not afford to attend the University Park campus in State College to begin their post high school studies close to home. Although initially developed to prepare students for upper division studies at any institution in the Commonwealth, today they offer both two-year and four-year degrees

and several campuses offer master degrees. The five largest campuses – Penn State Abington (Abington College), Penn State Altoona (Altoona College), Penn State Berks (Berks College), Penn State Erie (The Behrend College), and Penn State Harrisburg (The Capital College) – enroll between 2700 and 4400 students per year. The fourteen smaller campuses (Penn State Beaver, Penn State Brandywine, Penn State Du-Bois, Penn State Fayette, Penn State Greater Allegheny, Penn State Hazleton, Penn State Lehigh Valley, Penn State Mont Alto, Penn State New Kensington, Penn State Schuylkill, Penn State Shenango, Penn State Wilkes Barre, Penn State Worthington Scranton, and Penn State York) serve 500 to 1600 students per location each year.

Overall, undergraduate students at the Commonwealth Campuses differ somewhat from those at the University Park Campus. (Table 1).[1] Thus, they are more likely to be freshmen and sophomore-level students (60% at the Commonwealth Campuses vs. 30% at University Park). They also have disproportionately more students under 20 years of age (32% compared to 23% at University Park), and slightly more (35% vs. 32%) students over 22 years of age. As a result, Commonwealth Campus students may have differing needs and face differing challenges than those at University Park.

1   Referenced tables are in the Appendix.

Purpose of this Analysis

Drawing upon data from surveys of students and instructors at the 19 Commonwealth Campuses during 2012, this report addresses the following research questions:

- What are the instructional elements that Commonwealth Campus students and teachers view as important for quality teaching?

- How frequently are these elements realized in the teaching that actually occurs?

- How favorably do Commonwealth Campus students rate the overall quality of the instruction they receive?

- What factors relate to differences in how students' perceive instructional quality?

- Do the perceptions of undergraduate students at the Commonwealth Campuses concerning the quality of instruction differ from those at University Park?

- How, if at all, have the perceptions and instructors concerning instructional quality changed across time?

The Data

During the 2012 spring semester 9,997 undergraduates who were enrolled for the semester and had also been enrolled during fall at one of the 19 Commonwealth Campuses were chosen at random from the University's Data Warehouse. These students were invited via email to complete an online survey. 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. In addition, the 2,354 instructors who taught during fall semester at these campuses were similarly contacted. A total of 1,566 students and 921 instructors completed the online survey – a 16% response rate for students and a 39% response rate for instructors.

The sample differed from the population of all Commonwealth Campus students in regard to the distributions of gender, age, and class standing (Table 2). Women, those less than 20 years of age, and both freshmen and seniors were over–represented. As a result, the findings from this report should be interpreted with caution, as they may not present a completely accurate summary of all Commonwealth Camus students.

The surveys included questions about the importance of various pedagogical practices or elements for achieving teaching quality. In addition, students were asked to list the courses in which they had been enrolled during the previous semester. The data collection software randomly selected one of these courses and student respondents were asked to respond to specific questions about their experiences in this course. Data from the student and instructor surveys were analyzed to address the research questions listed above.

Perceptions of Instructors and Students Concerning the Importance of Various Elements for Teaching Quality

Both students and instructors reported how "important" each of a listing of 39 elements or pedagogical 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 mean "important," with codes 1 and 2 meaning "little or no importance." Differences between 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. For descriptive purposes, the items were grouped into the following eight categories or clusters (Table 3).

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

Knowledgeable/Prepared

The importance of instructor knowledge and preparation was assessed by the following five items:

- Instructor demonstrates a thorough knowledge of the subject matter.

- Instructor is well prepared.
- Presentation of material is well organized.
- The course content is well developed.
- Instructor uses class time wisely.

More than nine out of every ten teachers and students reported it was important for instructors to be knowledgeable, prepared, organized, and to use class time wisely. Instructors were statistically more likely than students to see these things and the other items dealing with knowledge/preparation as important, but the vast majority of both groups felt these practices were important for teaching quality.

- 97% of the instructors and 95% of the students indicated it was important that the instructor have a thorough knowledge of the subject matter.
- 98% of the instructors and 93% of the students reported it was important for the instructor to be well prepared.
- 96% of the instructors and 91% of the students rated it as "important" that the instructor's presentation of materials was well organized.
- 94% of instructors, 89% of students reported it was important for the course content to be well developed.
- 92% of the instructors and 88% of the students said it was important that the instructor used class time wisely.

Clear/Understandable
Three items asked about the importance of the clarity of the instructor's teaching:

- Instructor makes the subject matter understandable.
- Instructor explains material clearly.
- Instructor provides various ideas with clarity.

Both students and instructors overwhelmingly rated these items as important for quality teaching, although instructors were significantly more likely than students to do so.

- 98% of the instructors and 94% of the students rated the first two items as a 4 or 5 on the five-point importance scale.
- 96% of the instructors and 89% of the students rated the third item as important.

Fair
Most students and instructors were also likely to report that fairness was important for quality teaching. The following items assessed the importance of various aspects of fairness:

- Methods of evaluating student work are fair.
- Instructor is impartial in assigning grades.
- Grades are based on students' understanding of the materials stressed in the course.
- Instructor clearly defines student responsibilities in the course.
- Feedback on exams and other graded material is valuable.

As with the previous items, instructors were somewhat more likely than students to rate these attributes as important.

- 97% of the instructors and 91% of the students felt it was important for methods of evaluating student work to be fair.
- 97% of the instructors indicated that it was important for the teacher to be impartial in assigning grades; just 82% of the students responded in this way.
- 94% of the instructors and 88% of the students felt that it was important for students' grades to be based on their understanding of the materials stressed in the course.
- 96% of the instructors and 91% of the students reported it was important for the instructor to clearly define student responsibilities in the course.
- 94% of the instructors and 91% of the students indicated it was important to have valuable feedback on exams and other graded materials.

Enthusiastic/Interested
There were also high levels of agreement that it was important for teachers to demonstrate enthusiasm, and interest in their teaching. Six items dealt with this idea:

- Instructor seems to enjoy teaching.
- Instructor is enthusiastic about teaching the course.
- Instructor is genuinely interested in the subject matter.
- Instructor has a genuine interest in students as individuals.
- Instructor makes material interesting.
- Instructor demonstrates the importance of the subject matter.

Instructors were somewhat more likely than students to endorse the importance of these behaviors, although both students and instructors endorsed the importance of these elements.

- 94% of the instructors and 88% of the students thought it was important for the teacher to seem to enjoy teaching.
- 98% of the instructors and 91% of the students reported it was important for the instructor to be enthusiastic about teaching the course.
- 94% of the instructors and 89% of the students responded that it was important for the teacher to be genuinely interested in the subject matter.
- 83% of the instructors and 78% of the students endorsed the importance of the instructor having a genuine interest in students as individuals.
- 88% of the instructors and 85% of the students felt it was important for the instructor to make the material interesting.
- 90% of the instructors compared with 83% of the students indicated it was important for the instructor to demonstrate the importance of the subject matter,

Positive Social Atmosphere
The importance of instructors fostering a positive social atmosphere when interacting with students was measured by the following five items:

- Instructor is accepting of students from different backgrounds.
- Instructor is sensitive to the diverse needs and interests of students.
- Instructor is accessible to students outside class.
- Instructor is easy to talk to.
- Instructor maintains a classroom atmosphere conducive to learning.

Instructors were statistically more likely than students to endorse the importance of the first four items.

Students and instructors did not differ significantly in the importance given to teachers maintaining a classroom atmosphere conducive to learning.

- 96% of the instructors and 87% of the students felt it was important for the instructor to be accepting of students from different backgrounds.
- 87% of the instructors and just 79% of the students reported it was important for the instructor to be sensitive to the diverse needs and interest of students.
- 88% of the instructors but 80% of the students indicated it was important for the teacher to be accessible outside class.
- 98% of the instructors, but just 89% of the students said it was important the instructor be easy to talk to.
- Approximately 88% of both students and instructors reported it was important to maintain a classroom atmosphere conducive to learning

Critical Thinking

The importance given to fostering critical thinking in the classroom was measured by six items:

- Instructor encourages students to challenge conventional wisdom.
- Instructor encourages students to express their ideas.
- Instructor stimulates students to think.
- Instructor stimulates intellectual curiosity.
- Class discussion is an integral part of the course.
- Instructor provides various points of view.

Students and instructors did not differ significantly in the percentage reporting it was important for the instructor to challenge conventional wisdom (73% for instructors; 74% for students) or to provide various points of view (81% for instructors; 83% for students). However, instructors were more likely than students to endorse the importance of the other items dealing with critical thinking.

- 90% of the instructors and 82% of the students rated encouraging students to express their ideas as an important element.
- 99% of the instructors felt it was important for instructors to stimulate students to think; 91% of the students responded in this way.
- 94% of the instructors and 82% of the students reported it was important for instructors to stimulate intellectual curiosity.
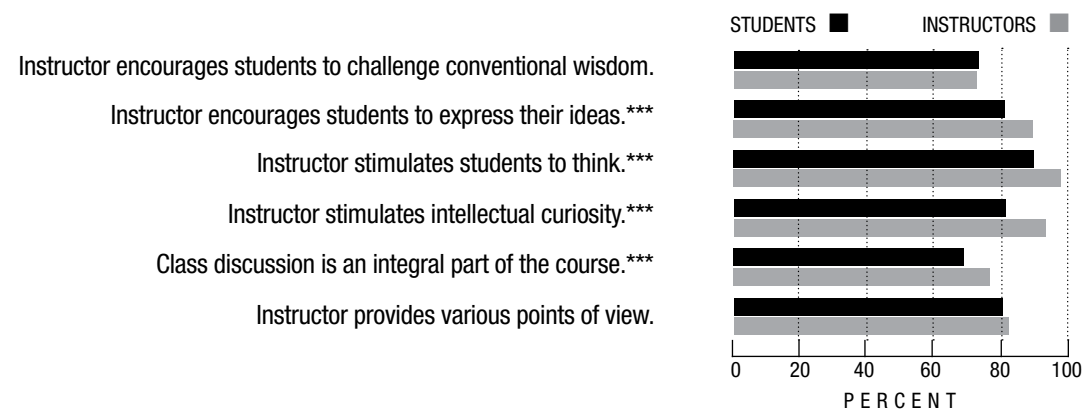
- Both instructors and students were somewhat less likely to indicate it was important for class discussion to be an integral part of the course (77% for instructors; 70% for students).

Technology

The importance of technology usage in teaching focused on four items:

- Instructor uses technology to enhance classroom learning.
- Instructor communicates with individual students via ANGEL, e-mail, listservs, etc. outside of class.
- Lecture notes and/or support materials are available on-line for student use outside of class.
- Instructor encourages students to use technology to facilitate student interaction outside of class.

Although a majority of both teachers and students reported it was important to use technology to enhance classroom learning, to communicate with students outside of class, to provide materials online, and to encourage students to use technology to facilitate out-of-class interaction, these percentages were somewhat lower than for the previous elements. Students were considerably more likely than instructors to endorse the importance of these practices.

- 61% of the instructors and 67% of the students reported it was important to use technology to enhance classroom learning.

- Just 69% of the instructors but 81% of the students felt it was important for instructors to communicate with individual students outside of class via ANGEL, email, listservs, etc.
- Only 56% of the instructors but 88% of the students believed it was important for lecture notes and/or support materials to be available on-line for student use outside class.
- 47% of the instructors and 63% of the students said it was important for the instructor to encourage students to use technology to facilitate student interaction outside of class.

Collaborative Learning

Considerable emphasis has been given to those instructional strategies and techniques that foster learning in groups or teams. The core belief is that students need to be exposed to collaborative learning as a critical workplace skill. The difficulties of designing and implementing effective collaborative learning strategies often make it an unpopular methodology for both instructors and students. Five items explored the importance that students and instructors gave to these ideas:

- The results of group effort impact individual grades.
- Peer evaluation is a component of grades.
- Instructor uses group projects to promote learning.
- Students are encouraged to work together.
- The class helps define course goals.

Compared to most of the other elements addressed above, support for the collaborative learning items was low. Students were significantly more likely than teachers to feel the class should help define course goals, group effort should impact individual grades, and peer evaluation should be a component of grades. There were only small difference in the response patterns of

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Percentages of students and instructors rating as "Important" practices related to Use of Technology.

STUDENTS ■   INSTRUCTORS ▨

Instructor uses technology to enhance classroom learning***
Instructor communicates with individual students via ANGEL, e-mail, listserves, etc.***
Lecture notes and/support materials are available on-line for studet use outside class***
Instructor encourages students to use technology to facilitate student interaction outside of class.***
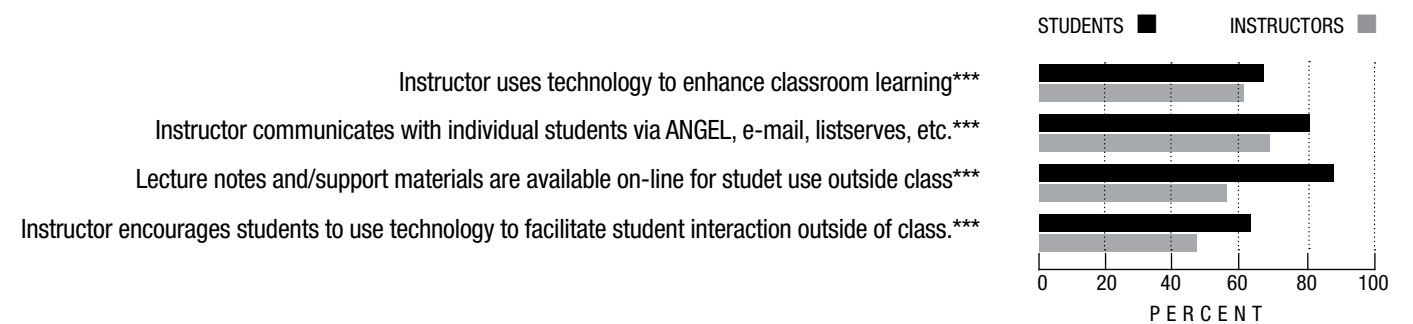
PERCENT

** Statistically significant at .01 level
*** Statistically significant at .001 level

Percentages of students and instructors rating as "Important" practices related to Collaborative Learning.

STUDENTS ■   INSTRUCTORS ▨

The results of group effort impacts individual grades. ***
Peer evaluation is a component of grades.***
Instructor uses group projects to promote learning.
Students are encouraged to work together.*
The class helps define course goals.***

PERCENT

* Statistically significant at .05 level
*** Statistically significant at .001 level

Percentages of students and instructors rating as "Important" practices related to Critical Thinking.

STUDENTS ■   INSTRUCTORS ▨

Instructor encourages students to challenge conventional wisdom.
Instructor encourages students to express their ideas.***
Instructor stimulates students to think.***
Instructor stimulates intellectual curiosity.***
Class discussion is an integral part of the course.***
Instructor provides various points of view.

PERCENT

* Statistically significant at .05 level
*** Statistically significant at .001 level

students and instructors in regard to using group projects or encouraging students to work together.

- 30% of the instructors and 39% of the students supported the importance of the idea of the results of group effort impacting individual grades.

- 20% of the instructors compared to 33% of the students rated as important the use of peer evaluations as a component of grades.

- Instructors and students did not differ significantly in the importance given to using group projects to promote learning (50% and 49%, respectively).

- Instructors were slightly more likely than students to endorse the importance of encouraging students to work together (57% vs. 52%).

- Only 22% of the instructors but 62% of the students reported it was important for the class to help to define course goals.

Applied Learning and Study Abroad

Two additional questions asked about how important students and instructors believed it was for students to be required to apply their learning through volunteer activities and/or internships as part of their degree programs. Students were more likely (60%) than were faculty (54%) to view this as important. Conversely, students were less likely than instructors to see such activities as not very or not at all important (8% vs. 12%).

Asked how important it was for students to study abroad or participate in international experiences as part of their degree programs, 26% of the students and 27% of the instructors reported it was very or extremely important, while 34% of the students and 27% of the faculty indicated it was of little or no importance.

Summary and Discussion

Despite some differences in the responses of students and instructors, both groups overwhelmingly emphasized the importance of instructor's knowledge and preparation of subject matter, clarity in presentations, fairness in evaluating student work, and enthusiasm. More than nine out of every ten students and instructors rated these attributes as important for quality teaching, with instructors generally more likely than students to do so. Although also endorsed by large percentages of both groups as important, teachers were more likely than students to report it was important for

instructors to stimulate intellectual curiosity, exhibit impartiality in assigning grades, be easy to talk with, and to accept students from differing backgrounds.

The greatest student/instructor differences were in the area of the technology use. Here students were much more likely than their teachers to report that instructors should encourage students to use technology to facilitate student interaction outside class, to provide lecture notes and other materials online for student use, communicate with individual students via ANGEL, listservs, email, etc., and to use technology to enhance classroom learning.

Although less than half of both students and instructors reported most collaborative learning elements were important, students were more likely than instructors to endorse the ideas that group efforts should impact individual grades, that peer evaluations should be a component of grades, and that the class should help to define course goals. One element included in the Collaborative Learning measure that garnered large and significant differences between students and instructors was in the area of student input on class goals. Such a finding could reflect less about collaboration between learners and more about the desire of students to influence course outcomes.

Technology and collaborative learning practices present key areas for pedagogical development. Technological tools and resources for teaching have increased exponentially in recent decades, allowing greater flexibility and opportunities for blending a variety of instructional methods. Students are often keenly aware of the advantages of using technological tools to aid their studies and may be proficient in their use. The instructional quality of the course may benefit by instructors capitalizing on the wide array of technology-supported tools and systems and actively explore ways to integrate them as part of the teaching and learning process. Even if not directly utilized in the classroom, familiarity with these tools and techniques may encourage instructors to think differently about the way they teach and structure their courses. Technology can enhance the student experience as well as ease the instructional load of the teacher if implemented properly. Technology tools can serve as an alternative delivery method and resource for instruction, foster interaction with students, build constructive student-teacher and student-student interactions, and engage students more fully in the teaching/learning process. To better understand these potentials, faculty or academic units could partner with instructional design and technology experts and others who are well versed in the appropriate, and effective, use of existing and emerging technologies in the classroom.

Students' Views of Instructors' Use of Specific Elements of Teaching Quality

How often do instructors actually engage in the instructional practices judged to be important elements of quality teaching? This question was addressed in the current study by asking students to indicate how frequently the instructor in a randomly selected course in which they had been enrolled during the previous (Fall 2011) semester performed each of these actions. Selection of the course to be evaluated was done by asking each student to list all of the classes in which he/she had been enrolled the previous semester. One of these courses was then randomly selected by the survey software for evaluation and analysis. Choosing a course taken the previous semester meant the student could look back and reflect on the entire course and provided a cross section of courses taught.

Students were asked to indicate how frequently each of the above practices occurred in the selected

course on a scale from 1 (never) to 5 (always). Scores of 4 or 5 on the rating scale, were interpreted as "always or usually;" ratings of 3 were taken to mean "sometimes;" while ratings of 1 or 2 were interpreted as meaning the behavior occurred "seldom or never." For descriptive purposes, these items were grouped into the eight categories or dimensions defined above (Table 4). Students reporting on courses taught by video conferencing or as totally online courses were not used in this analysis.

The Instructor was Knowledgeable/Prepared

Over three-fourths of the students reported their instructors were knowledgeable, prepared, and organized in their teaching.

- 87% answered their instructor "always or usually" demonstrated a thorough knowledge of the subject matter; only 4% reported this happened "seldom or never."

- 82% reported the instructor in the evaluated course was at least "usually" well-prepared; only 6% said this occurred "seldom or never."

- 78% said the presentation of materials was "always or usually" well organized; 8% reported this occurred "seldom or never."

- 76% said the course content was "always or usually" well developed; 9% reported this occurred "seldom or never."

- 80% answered the instructor used class time wisely; 8% reported this "seldom or never" happened.

The Instructor was Clear/Understandable

More than seven of every ten students reported the instructor in the course was clear and understandable in his/her presentation of the course material.

- 75% reported the instructor "always or usually" made the subject matter understandable; 10% indicated this "seldom or never" occurred, while the remainder said this occurred only "sometimes."

- 72% answered the instructor "always or usually" explained material clearly; 11% said this occurred "seldom or never."

- 73% responded that the instructor provided various ideas with clarity; 11% said this occurred "seldom or never."

Percentages of students reporting various frequencies of occurrence of specific pedagogical practices

FREQUENCY OF OCCURRENCES

USUALLY ■   SOMETIMES ▨   SELDOM/NEVER ▨

Knowledgeable/Prepared
Demonstrated knowledge of subject.
Was well prepared.
Presentation was well organized.
Well developed course content.
Used class time wisely.

Clear/Understandable
Made subject matter understandable.
Explained material clearly.
Provided various ideas with clarity.

Fair
Impartial in assigning grades.
Based grades on materials stressed.
Methods of evaluation were fair.
Clearly defined student responsibilities.
Gave valuable feedback on exams, etc.

Enthusiastic/Interested
Seemed to enjoy teaching.
Was enthusiastic about teaching the course.
Was genuinely interested in subject matter.
Had genuine interest in students as individuals.
Made material interesting.
Demonstrated importance of subject.

Positive Social Atmosphere
Was accepting of students from different backgrounds.
Was sensitive to student needs/interests.
Was accessible outside class.
Was easy to talk to.
Instructor maintained a classroom conducive to learning.

Critical Thinking
Challenged conventional wisdom.
Encouraged students to express ideas.
Stimulated students to think.
Stimulated intellectual curiosity.
Used class discussion as integral to course.
Provided various points of view.

Technology
Used technology to enhance classroom learning.
Communicated with students outside class via ANGEL, listservs, etc.
Provided lecture notes/materials on-line.
Encouraged use of technology for student interaction outside class.

Collaborative Learning
Group effort impacted grades.
Used peer evaluation as grade component.
Used group projects to promote learning.
Encouraged students to work together.
Had class help to define goals.

0   20   40   60   80   100
P E R C E N T

The Instructor was Fair

Students viewed their instructors as fair in assigning grades and evaluating their performances with more than three quarters of the students reporting this to be the case.

- 76% said their instructor was impartial "always or usually" in assigning grades; 8% disagreed and reported this "seldom or never" occurred.

- 82% indicated grades were "always or usually" based on students' understanding of the materials stressed in the course; 6% reported was "seldom or never" the case.

- 81% answered that methods of evaluating student work were fair at least "usually;" 8% reported this "seldom or never" happened.

- 83% felt the instructor "always or usually" clearly defined student responsibilities in the course; 5% reported this happened "seldom or never."

- 76% indicated feedback on exams and other graded materials was always or usually valuable; 9% said this was "seldom or never" the case.

The Instructor was Enthusiastic/Interested

More than 80% of the students reported their instructor was enthusiastic/interested in the subject matter and in teaching the course. However, a somewhat lower percentage felt the instructor had a genuine interest in students as individuals, made the material interesting, and demonstrated the importance of the subject matter.

- 83% reported the instructor "always or usually" seemed to enjoy teaching; 7% said this occurred "seldom or never."

- 81% indicated the instructor was enthusiastic about teaching the course; 7% answered this "seldom or never" occurred.

- 87% felt the instructor was "always or usually" genuinely interested in the subject matter; 4% said this was "seldom or never" true.

- 74% reported they felt the instructor "always or usually" had a genuine interest in students as individuals; 11% saw this as "seldom or never" manifest.

- 66% felt the instructor made the material interesting "always or usually;" 16% said this was "seldom or never" the case.

- 75% reported the instructor "always or usually" demonstrated the importance of the subject matter; 10% indicated this "seldom or never" occurred.

The Instructor Maintained a Positive Social Atmosphere

As with the previous elements, those associated with the instructor maintaining a positive social atmosphere in the classroom were reported as occurring "always or usually" by more than three-quarters of the students.

- 89% reported the instructor in the evaluated course "always or usually" was accepting of students from different backgrounds; 3% said this "seldom or never" occurred.

- 76% felt the instructor was sensitive to the diverse needs and interests of students; 9% indicated this "seldom or never" was manifest.

- 78% reported the instructor was accessible outside class "always" or "usually;" 8% reported this as a "seldom or never" occurrence.

- 79% found the instructor "always or usually" easy to talk to; 9% reported this as "seldom or never."

- 81% felt the instructor maintained a classroom atmosphere conductive to learning; 7% reported this was "seldom or never" true.

The Instructor Encouraged Critical Thinking

Although most students reported their instructors encouraged critical thinking, the percentages indicating this occurred "always or usually" were somewhat lower than was true for the previous elements.

- 62% indicated the instructor "always or usually" encouraged students to challenge conventional wisdom; 15% reported this "seldom or never" occurred.

- 71% felt the instructor encouraged students to express their ideas; 14% felt this "seldom or never" occurred.

- 75% felt the instructor stimulated students to think; 8% reported this occurred "seldom or never."

- 71% reported the instructor stimulated their intellectual curiosity "always or usually"; 11% felt this occurred "seldom or never."

- 64% said that class discussion was "always or usually" an integral part of the course; 19% saw this as occurring "seldom or never."

- 68% reported the instructor provided various points of view "always or usually;" 12% said this occurred "seldom or never."

The Instructor Used Educational Technology

The use of technology in teaching was less likely to be endorsed as an important element for quality teaching by instructors than by students. The lower importance attributed to these elements by instructors was reflected in relatively low levels of usage, although a majority of students still reported that technology usage occurred "always or usually" in the evaluated course.

- 67% reported the instructor used technology to enhance classroom learning "always or usually;" 17% said this "seldom or never" occurred.

- 72% "always or usually" communicated with individual students via ANGEL, listservs, or email outside class; 16% did so "seldom or never."

- 62% "always or usually" provided lecture notes and/or other support materials on-line for student use outside class; 27% reported the teacher "seldom or never" did.

- 57% said the instructor "always or usually" encouraged students to use technology to facilitate student interaction outside of class; 25% did so "seldom or never."

The Instructor Used Collaborative Learning

The use of collaborative learning elements was not greatly supported by either students or instructors. Students were more likely than their teachers to feel these practices were important. However, reported usage of these procedures was low.

- 41% indicated the instructor "always or usually" used the results of group efforts to impact individual grades; a greater percentage (44%) reported this occurred "seldom or never."

- 37% said the instructor "always or usually" used peer evaluations as a component of grades; 51% did this "seldom or never."

- 51% reported the instructor used group projects to promote collaborative learning; 35% said this occurred "seldom or never."

- 51% said instructors "always or usually" encouraged students to work together; 28% "seldom or never" reported this practice.

- 57% felt the class helped to define course goals; 23% reported they did this seldom or not at all.

Summary and Discussion

Those elements deemed to be important to achieving quality instruction were judged as occurring "always or usually" in the evaluated class by substantial majorities of these Commonwealth Campus students. Indeed, for most practices, more than three-fourths of the students rated the frequency of occurrence to be at least "4" on a 5-point scale. These included knowledgeable faculty who were well prepared, enjoyed teaching, were enthusiastic, genuinely interested in the subject matter, and accepting of students from different backgrounds. In areas of technology use and collaborative learning – areas that were less likely to be judged to be "important" - there were lower frequencies of use. Thus, it seems clear that, for the vast majority of undergraduates, instruction at the Commonwealth Campus embraces elements of pedagogy believed by students to be important for learning.

While these numbers are impressive, it is also important to note the percentages instructors who did *not* usually or always demonstrate the desired behaviors. Thus, although more than 95% of the students and instructors reported that it was important for instructors to demonstrate a thorough knowledge of the subject matter, nearly one in seven did so only "sometimes," and one in ten did so "seldom or never." Although 94% of the students and 98% of the instructors reported it was important for instructors to make the subject matter understandable, one student in four reported this occurred at most only "sometimes" or less often. Nearly one out of every five students felt the instructor was not "always or usually" fair in the methods used for evaluating student work and almost one in four felt the instructor was at most only "sometimes" impartial in assigning grades. Nearly one in six "seldom or never" made the material interesting. While such negative responses reflected the feelings of only a minority of the students surveyed, they suggest more can be done to improve instructors' effectiveness in these areas.
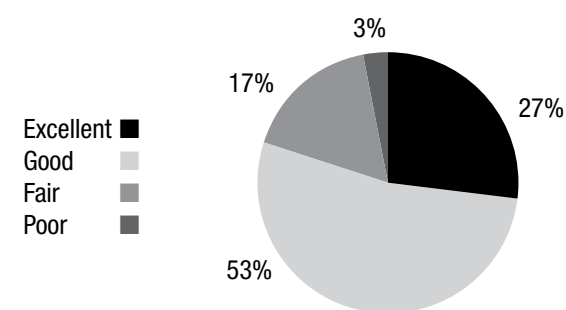
Student Ratings of Teaching Quality

The use of students' ratings to provide information of the quality of instruction in a course is widespread in academic circles. At Penn State, students are asked at the end of each semester to complete a Student Rating of Teaching Effectiveness (SRTE) questionnaire for every course in which they were enrolled. The results of these evaluations are made available to administrators and to the teacher involved and are called into account in tenure, promotion, and salary decisions. Other information such a peer reviews, class enrollments, and exit interviews with students can also provide input for evaluating an instructors teaching quality. However, despite criticism from educators and researchers, student evaluations such as the SRTE continue to be the most commonly used criterion of instructional quality. In the current survey, both students and instructors were asked the following question:

How much weight do you believe should be given to student opinions in evaluating the teaching effectiveness of faculty members? Response categories were: "a great deal," "some," "very little," and "none." There were significant differences in the way instructors and students answered this question, with students much more likely than instructors to feel their opinions should count.

- Although most instructors and students agreed that student evaluations should count at least "some" in evaluating teaching quality, instructors were less likely than students to take this position (80% vs. 96%).

- Only 15% of the instructors indicated they believed student opinions should count "a great deal;" 49% of the students responded in this way.

- 20% of the instructors indicated student ratings should have "very little or no" weight.

- Only 4% of the students felt their opinions should carry "very little or no" weight.

In the current study, students were also asked to rate both the overall quality of instruction felt they received in all of the courses they took the previous semester and the quality of instruction they felt occurred in the specific course randomly chosen for the evaluation described above. Response categories were: "excellent," "good," "fair," "poor," "very poor."

- 27% rated the overall instruction they received in all courses they had taken the previous semester as "excellent,"

- 53% indicated it was "good,"

- 17% reported it was "fair," and just 3% reported it was poor or very poor.

Asked to rate the quality of teaching in the specific course that had been randomly chosen for evaluation and analysis, responses were more varied with:

- 43% reporting the instruction was "excellent,"

- 32% rated it as "good,"

- 16% reported it was "fair" and 9% indicated it was "poor or very poor."

Ratings of the overall quality of all courses taken last semester.

Excellent ■
Good ▫
Fair ▪
Poor ▪

3%
17%
27%
53%

Ratings of the quality of a single randomly selected course taken last semester.

Excellent ■
Good ▫
Fair ▪
Poor ▪

9%
16%
43%
32%
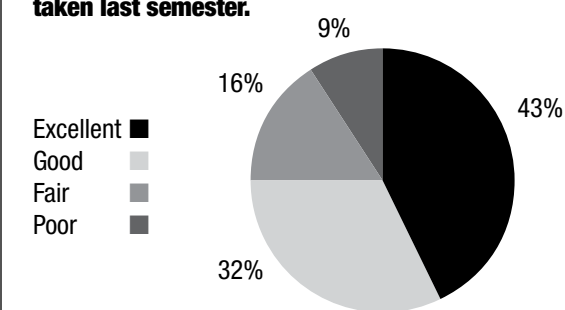
Summary and Discussion

Although students and instructors differed in the emphasis that should be given to student evaluations of teaching quality, like it or not, student ratings of their teachers are likely to continue as important criteria for evaluating the quality of instruction that occurs. The relative ease of obtaining and summarizing such information and the presumed "objectivity" of the data, combined with the current tendency of institutions to characterize students as "customers" whose wants must be satisfied if they are to "purchase" the product suggest these measures will continue to be important in evaluating the performance of instructors.

The majority of students felt overall the instruction they received at the Commonwealth Campuses was "excellent or good," with very few rating it as "poor or very poor." However, one in five reported the quality of instruction in all courses they had taken the previous semester and in the evaluated course was less than "good." These findings speak to the need for maintaining our current efforts to promote high quality education, but also toward our need to remain vigilant of areas where instruction is weak or failing.

Factors Related to Students' Ratings of Teaching Quality

The ratings students give to their courses may be influenced by many factors – the perceived quality of instruction (instructor's knowledge, enthusiasm, etc.), various structural class characteristics (such as time of meeting, class size, whether the course is required or elective, etc.), characteristics of the student (gender, class standing, grade point average, etc.), and course requirements/outcomes (grade received, degree of difficulty, amount of work, etc.). The relationships of these various factors to the quality ratings given to the evaluated course by students in the sample were explored using the student sample data. All relationships were tested for statistical significance using contingency chi square analysis. Unless otherwise indicated only relationships found to be significant at the .05 level are discussed. To compare the relative strengths of these relationships, a measure of the closeness of the association (Cramér's V) was calculated in each case. Cramér's V varies from 0.00 (no association between the variables) to 1.00 (complete or perfect association). Thus, the higher the V, the stronger is the relationship in question.

Pedagogical Methods and Course Ratings

To ascertain whether specific instructor behaviors or practices were associated with how students rated the quality of instruction they received, students' responses to how frequently the instructor performed the following were related to course ratings.

- Instructor demonstrated a thorough **knowledge** of the subject matter.

- Instructor was **well prepared**.

- Instructor made the subject matter **understandable**.

- Instructor was **enthusiastic** about teaching the course.

- Methods of evaluating student work were **fair**.

- Instructor **stimulated students to think**.

- Instructor maintained a **classroom atmosphere** conducive to learning.

- Instructor used **technology** to enhance classroom learning.

- Instructor used group projects (**collaborative activities**) to promote learning.

These items were selected from the total listing of 39 items described above. "Knowledgeable of the subject matter" and "being well-prepared," although grouped together in the previous analysis were treated as separate elements here. Frequency of occurrence of each of these elements was measured in each case and coded as above: "always or usually," "sometimes," and "seldom or never."

The more frequently each of these practices occurred in the course, the higher the student's evaluation of the quality of instruction (Table 5). Although all of these behaviors/elements were positively related to how students evaluated the course, the frequency with which the instructor "made the subject matter understandable" was the strongest determinant (i.e., Cramér's V was the largest) followed by "maintained a classroom atmosphere conducive to learning." "Fairness in evaluating student work," "being well-prepared," "stimulating students to think," "being enthusiastic about teaching the course," and "being knowledgeable about subject matter" were also strongly related to course rating. Frequency of using group works (an aspect of collaborative learning) and the use of technology were the least relevant to course ratings.

- 84% of the cases where the instructor demonstrated a thorough knowledge of the subject matter "usually or always" rated the course as "excellent/good;" nearly 4% rated the courser as "poor/very poor." Among the few students (n=67) who reported the instructor "seldom or never" demonstrated knowledge of the subject matter, the percentage rating the course as "excellent/good" was less than 5%.

- 86% of those who indicated that the instructor was at least "usually" well-prepared rated the course as "excellent or good," that figure declined to 10% for those who reported the instructor was "seldom or never" well-prepared.

- 92% of those students who indicated the instructor "always or usually" made the subject matter understandable rated the class as excellent or good; less than 1% rated it as poor/very poor. Among those students who reported the instructor made the subject matter understandable "seldom or never" the percentage of excellent/good ratings dropped to only 5%.

- 86% of those who indicated that the instructor was "always or usually" enthusiastic about teaching the course, reported the course was "excellent/good," only 3% rated it as "poor/very poor." When enthusiasm was "seldom/never" present only 12% rated the course as "excellent/good;" 64% said it was "poor/very poor."

- 87% of students reporting that the instructor was "always or usually" fair in evaluating student work rated the course as "excellent/good;" Just 10% of those reporting that fairness occurred "seldom or never," reported the course was excellent/good; 64% indicated it was "poor/very poor."

- 88% of those who reported the instructor "always or usually" stimulated students to think rated the course as "excellent/good;" 3% felt the course was "poor/very poor." In instances where students were "seldom or never" stimulated to think, only 13% rated the course highly; 61% gave it a poor/very poor rating.

- 88% of the students reporting the instructor "always or usually" maintained a classroom atmosphere conducive to learning rated the course as "excellent/good"; when this occurred "seldom/never," the corresponding was only 5%.

- As frequency in the use of technology to enhance classroom learning increased from "seldom/never," to "usually/always," the percentages of "excellent/good" ratings increased from 52% to 84%, with percentages of poor/very poor ratings declining from 29% to 4%.

- With increasing use of group projects to promote learning, the percentages of "excellent/good" ratings increased from 62% for those courses where group projects " seldom or never" occurred to 86% for course where such projects occurred often.

Structural Characteristics of the Course and Course Ratings

Conventional wisdom suggests that the course ratings given by students may be affected by the structural characteristics of the course - circumstances/conditions that are often beyond the control of the instructor, such as the scheduled class meeting time, the number of students enrolled, whether the course is elective or required, and/or the mode of instruction used.

The following questions included on the survey allowed for addressing some of these issues:

- What time of day did this class begin? (morning; afternoon; evening)
- How many total hours a week was the class scheduled? (Less than 2 hours; 2 but less than 3 hours; 3 but less than 4 hours; 4 hours or more)
- How many students were in this class? (fewer than 20; 20-49; 50 or more)
- What was the major mode of instruction? (purely lecture; lecture and discussion; discussion/seminar; other)
- How many credits the student earned for the course? (Less than 3; 3; 4 or more)
- How much choice the student had in deciding to take this course? (none, it was required; some, it was selected from a required list; free choice, it was an elective)

Only two of these six course characteristics were significantly related to Course Rating: mode of instruction and the amount of choice the student had in taking the course (Table 6). Time of day, hours of class time per week, class size, and number of course credits earned were not statistically associated with students' ratings of the quality of instruction in the class.

Courses that used only lectures as the mode of instruction were the least likely (57%) to be given "excellent/good" ratings. For those taught using both lectures and discussion, and those using only discussion, more than eight of ten students rated them as "excellent" or "good."

Free electives were the most likely to be rated as "excellent or good," (87%) followed by those chosen from a list of required courses (76%) with required courses having the lowest percentage of "excellent or good" evaluations (72%).

Student Characteristics and Rating

The relationships of student's gender, class standing, number of credits in which he/she was enrolled, and overall grade point average (GPA) to how he/she evaluated the course were tested for statistical significance. Only University GPA was statistically associated with how students evaluated their courses (Table 7).

- 80% of those students reporting their GPA were 3.50 or higher rated the class as "excellent or good," while for those with GPAs of 2.50 to 3.49, the corresponding percentage was 73%." Only 67% of those with a GPA of less than 2.50 reported ratings of "excellent or good" for the evaluated course.
- Males were not found to differ significantly from females in how they rated the quality of instruction in the evaluated course.
- There were no statistical differences in course rating related to the student's status (freshman, sophomore, junior, senior); or to the number of credits in which he/she was enrolled.

Grades, Work, Difficulty, Learning and Course Ratings

The grades students receive in a course would be expected to affect their course evaluations, both because of the positive outcome, but also because they may be likely to feel the course was "well taught." However, other course characteristics, in addition to grades, might also influence student ratings. Workload in the class could impact perceptions; difficulty in meeting the requirements, and personal perceptions of how much they learned might also be relevant. To explore these ideas, the relationships of course rating to grade received and students' perceptions of the level of work in the course, the degree of difficulty of the material, and amount learned were tested (Table 8).

Grade received in the course was reported by the student respondent. To obtain information on the other factors, students were asked to rate the course relative to other courses they had taken at Penn State on a scale of 1 (much lower) to 5 (much higher) in regard to: 1) amount of work; 2) degree of difficulty; 3) amount they felt they learned. All four of these factors were significantly related to how positively students rated the course.

The higher the grade received in the course, the greater the likelihood the course would be evaluated highly.

- 84% of those students who received grades of "A" or "A-" rated the quality of teaching in the class as "excellent or good;" only 5% reported the quality as "poor or very poor."
- 73% of those receiving "B+, B, or B-" grades rated the class as "excellent or good;" 10% felt it was "poor or very poor."

- For those receiving "C+, C, or C-" grades the percentages were 63% "excellent or good" and 13% "poor or very poor."
- Among those receiving grades of "D or F," 30% reported the course was "poor or very poor," but an even greater percentage (38%) rated it as "excellent or good."

Students' ratings of the amount of work required in the class relative to other courses was significantly associated with instructional evaluation, but the relationship was positive, not negative as might be expected. That is, courses rated as requiring *more* work than other courses were more likely to be rated highly than were those requiring *less* work.

- 55% of those students reporting the amount of work required was "much lower" than other courses they had taken rated the class as "excellent or good."
- As the relative amount of perceived work increased, the from "much less" to "much more," the percentages of "excellent or good" evaluations increased from 55% to 70% to 74% to 79% to just over 79%.

Overall, as the degree of difficulty increased the percentage of students rating the quality of instruction as "excellent or good" increased up to the highest degree of difficulty where this percentage declined somewhat.

- Only 57% of the students who rated the class as "much lower" in difficulty relative to other courses they had taken evaluated this class as "excellent or good."
- As difficulty increased from low ratings of "1" to higher ratings of "4", the percentages of students evaluating the course as "excellent or good" increased from 57% to 71% to 75% to 80%.
- However, for courses that were rated as "much higher" than other courses in difficulty ("5" on the difficulty scale) the percentage of "excellent or good" evaluations of the quality of instruction declined somewhat to 74%.

Relationship of Course Difficulty to Course Rating.

Course Rated Excellent/Good
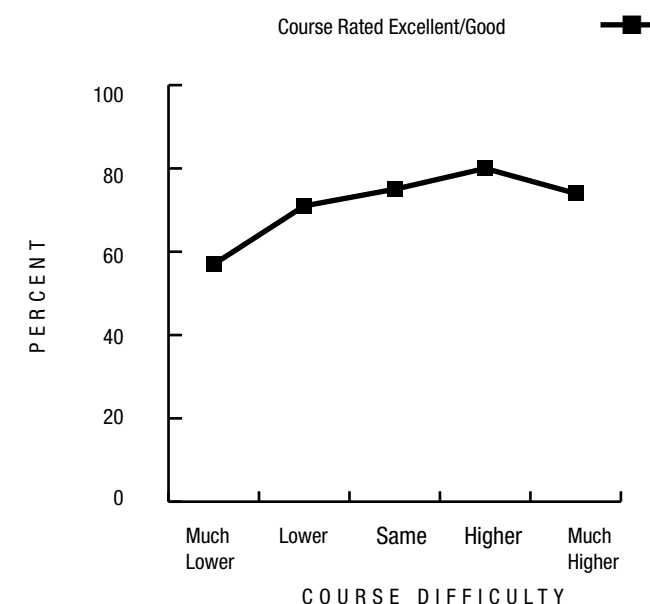
Relationship of Amount of Work to Course Rating.

Course Rated Excellent/Good

Relationship of Amount Learned to Course Rating.

Course Rated Excellent/Good

How much students reported they had learned in the class relative to other courses they had taken was strongly and positively related to their evaluation of the quality of instruction the received.

- Less than 7% who reported the amount they had learned in the class was "much lower' than in other courses they had taken rated the quality of instruction in the evaluated class as "excellent or good."

- As students' ratings of the amount they felt they had learned relative to other courses increased over a 5-point scale from "much lower' to "much higher, the percentage of "excellent or good" course evaluations increased steadily from less than 7% to 32% to 65% to 88% to 97%.

Summary and Discussion

Clearly the frequencies with which instructors utilized those pedagogical elements that had been judged by both students and instructors to be important were directly related to how students rated their courses. The most important elements were that the instructor made the subject matter understandable, maintained a classroom atmosphere that was conducive to learning, and was fair in evaluating student work. Also important were how often the instructor was well-prepared, stimulated students to think, demonstrated enthusiasm, and was knowledgeable of the subject matter. Frequency of use of technology and collaborative work were also positively associated with evaluations, but these were of somewhat lesser importance.

There was no evidence that time of day, class size, or number of credits were associated with how students rated the class. Purely lecture courses were less likely to be favorably evaluated than were those involving at least some discussion, and free electives were somewhat preferred over required offerings. College grade-point average (GPA) had a modest positive relationship with how students' rated teaching quality, but student's gender, class standing, and semester credit load were not statistically related to their course evaluations.

Students' perceptions of the workload in a class and the difficulty of the material covered relative to other classes they had were both associated with how favorably they rated the quality of instruction. Ratings were lowest when the workload required was less than other courses and increased as perceived amount of work increased. Moreover, courses rated as "much

lower" relative to other classes in degree of difficulty were the least likely to be rated as "excellent or good." As degree of difficulty increased the percentages of students indicating the class was "excellent or good" also increased until the course was rated as "much higher" in difficulty than other classes, when that percentage declined slightly. The grade a student received in the course was positively associated with how he/she rated the quality of instruction in the course. However, the strength of this relationship paled when compared to the positive relationship between how much a student felt he/she had learned relative to other classes. The amount of perceived learning was by far the most important of these characteristics in affecting the ratings students gave to a course.

Perhaps the most important finding here was the seeming desire of students to learn and be challenged. Obviously this is the goal of higher education, but much anecdotal evidence suggests otherwise. Students are often viewed as simply "putting in time" to get their degrees, with little interest in serious scholarship. However, this study suggests this is not the case. Rather, it appears that students see value in their courses and have a desire to be challenged and to learn. Moreover, these interests are major factors shaping their satisfaction.

While it may seem obvious that courses should convey learning, often courses and instructors fail to challenge their students. They may believe that presenting "easy" courses will assure higher student evaluations. However, this analysis suggests such classes may not be seen as "gifts" by the students. In the current economic climate, students are keenly aware of the costs of tuition, long-term student loans, and financial hardship. If they perceive a course as being useless or a waste of time/money, they may well feel cheated with the end result dissatisfaction with the class, the instructor, and perhaps their total learning experience at Penn State.

Should instructors feel pressured to present 'easy' courses to insure good student ratings, they should be made aware that such activities are contrary to student satisfaction and can in fact result in lower course rating scores. Such information should be directly conveyed through departments, teaching enhancement programs, and curricular design programs.

Comparing the Commonwealth Campuses and University Park

How, if at all, do the views of students and instructors at the Commonwealth Campuses differ from those of students and teachers at Penn State's University Park campus?

- How, if at all do they differ concerning their perceptions of the importance of various elements or pedagogical practices?

- Are there overall differences between instructors at the Commonwealth Campuses and those at University Park in regard their uses of various pedagogical practices?

- How, if at all, do students at the Commonwealth Campuses compared to those at University Park view the quality of the instruction they receive?

These questions can partially be addressed by comparing the findings from the present study with data from similar surveys of students and instructors carried out during spring semester 2011.[2] The reader is encouraged to compare the specific findings of that research with those in the current report. Some general comparisons and conclusions are particularly noteworthy.

Importance of Various Elements for Teaching Quality

In general, the responses of students and instructors at the Commonwealth Campuses differed very little from those at University Park in regard to their importance ratings of the various teaching elements as indicators of the quality of instruction. Instructors at the Commonwealth Campuses were somewhat more likely than those at University Park to endorse as "important" almost all of the pedagogical elements included on the survey. The largest differences were in regard to the following:

- 83% of the Commonwealth Campus instructors compared with 76% of the University Park instructors felt it was important for a teacher to have a genuine interest in students as individuals.

- 94% of the Commonwealth Campus instructors reported it was important for an instructor enjoy teaching, while 86% of the University Park instructors responded in this way.

- 98% of the Commonwealth Campus versus 71% of the University Park instructors felt it was important for the teacher to be easy to talk with.

2   Willits, F. K., J. G. Beierlein, B.K. Wade, M.A. Brennan, L.C. Ragan, J.M. Dillon, J. L. Brelsford, and N. R. Waggett, (2013) *Quality of Instruction: Perceptions of Students and Instructors at Penn State's University Park Campus*. University Park, PA; Schreyer Institute for Teaching Excellence.

- Accessibility outside class was listed as important by 88% of the Commonwealth Campus and 79% of the University Park instructors.

- 57% of the Commonwealth Campus instructors compared with 46% of those at University Park indicated it was important for the teacher to encourage students to work together.

- Commonwealth Campus instructors were also more likely than those at University Park to endorse the importance of all of the items dealing with the use of technology.

The largest difference between students was in regard to the importance placed on class discussion as an integral part of the course.

- 70% of the Commonwealth Campus students rated this as important while only 57% of the University Park students did so.

- Commonwealth Campus students were also somewhat more likely to endorse the importance of: instructor being easy to talk to (89% vs. 82%); students being able to express their own ideas (82% vs. 74%); and instructor encouraging students to challenge conventional wisdom (74% vs. 68%).
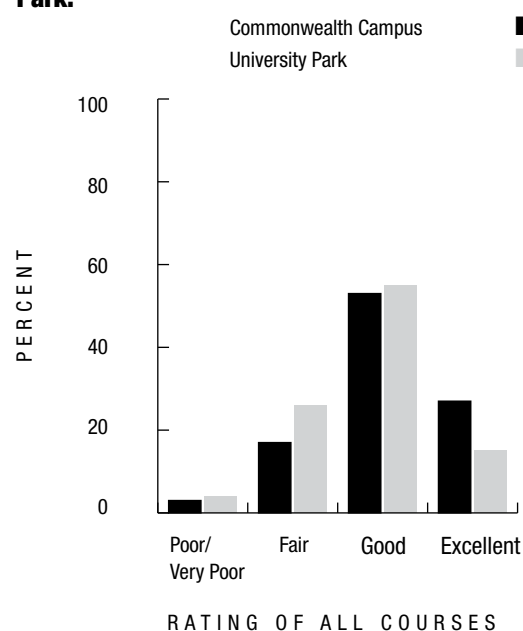
Instructors' Use of Teaching Quality Elements

When asked about how often the pedagogical practices described above were manifest in the course chosen for evaluation, Commonwealth Campus students were slightly more likely than their University Park peers to report the these elements occurred always or usually in their classes. The greatest differences between the two types of campuses were:

- 76% of the Commonwealth Campus students but only 62% of those at University Park reported feedback on exams and other graded materials was valuable.

- 74% of the Commonwealth Campus students and 65% of the University Park students reported the instructor had a genuine interest in students.

- Commonwealth Campus students were more likely than students at University Park to report their instructors encouraged critical thinking by: encouraging students to challenge conventional wisdom (62% vs. 55%); express their own ideas (71% vs. 62%) incorporate class discussion as an integral part of the course (64% vs. 49%); and stimulate intellectual curiosity (71% vs. 62%).

- Commonwealth Campus students compared to their University Park peers were also more likely to report their instructors made greater use of collaborative learning by using group projects (51%
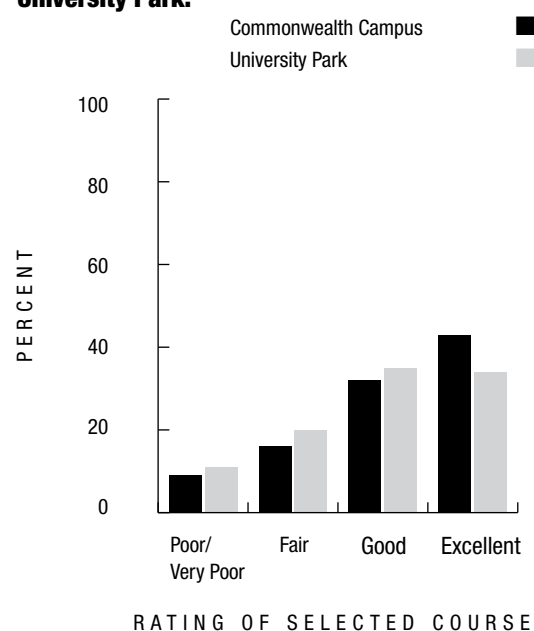
vs. 38%); having the class define course goals (57% vs. 48%); using peer evaluation as a component of grades (37% vs. 26%); and using the results of group effort to impact individual grades (41% vs. 33%).

Student Ratings of Teaching Quality

Asked to rate the overall quality of the teaching they received, the majority of both Commonwealth Campus and University Park students responded positively. However, students at the Commonwealth Campuses were more likely than their University Park peers to rate their instruction as "excellent"

- 27% of the Commonwealth Campus students reported the overall instruction they received the previous semester was "excellent" and an additional 53% rated it as "good." Just 17% reported it was "fair" and 3% said it was "poor or very poor".

- 15% of the University Park students rated their overall instruction during the past semester as "excellent" 55% reported it was "good," 26% gave it "fair" ratings, and 4% reporting it was "poor/very poor."

Commonwealth Campus students were also more likely than those at University Park to rate the quality of instruction in the single (random) course evaluated in the current studies.

- Among the Commonwealth Campus students, 43% rated the teaching quality in the evaluated course to be "excellent, 32% rated it as "good," 16% indicated it was only "fair", and 9% gave this course "poor/very poor" ratings.

- For the University Park students, the corresponding percentages were: 34% "excellent," 35% "good," 20% "fair and 11% "poor/very poor."

Summary and Discussion

Taken together, the differences between the Commonwealth Campuses and University Park suggest a somewhat greater importance given at the former sites to personalized contacts between students and teachers and somewhat greater emphasis on encouragement of individualized learning. Perhaps these differences reflect, at least partly, the smaller settings of the Commonwealth Campuses and their dominant focus on undergraduate education in contrast to the large, multifaceted University Park setting where research may have a more dominant focus. Whatever the source, it seems clear that the Commonwealth Campuses today contribute meaningfully to the quality of undergraduate instruction at Penn State.

Changes in Perceptions of Teaching Quality 1997-2012

The availability of data from a previous study at Penn State's Commonwealth Campuses[3] allowed for a tentative appraisal of changes in the views of students and instructors concerning the importance of various pedagogical practices, and the quality of teaching at these sites. In 1997, surveys of students and instructors at the same Commonwealth Campuses obtained information similar to that obtained in the current study. Not all of the issues addressed in the 2012 surveys were part of the earlier assessment. Technology in the classroom was not considered at all in the 1997 study, and little emphasis was given to collaborative learning issues. Other items also differed between the two studies. However, a sufficient number of the questions were the same that comparisons of the responses provided limited insight into changes in the perceptions of students and instructors that occurred during the 15 years between the two studies.

Importance of Various Elements for Teaching Quality

The percentages of students and instructors reporting that it was important for instructors to be knowledgeable, well organized, prepared, and clear/understandable in their presentations, to use class time wisely, to be impartial in assigning and evaluating student work fairly differed little between 1997 and 2012. However, some important differences were found:

- For students, the percentage reporting that it was important for instructors to clearly define student responsibilities in the course rose from 85% in 1997 to 91% in 2012.

- Students in 2012 were more likely than those in 1997 to report that it was important that instructors seemed to enjoy teaching (88% vs. 82%).

- In 2012, students and instructors were both more likely than their counterparts in 1997 to indicate it was important for instructors to provide various points of view. For the instructors, this percentage increased from 74% to 83%. For students, the increase was from 67% to 81%.

3   See Willits, F. K., T. J. Seifried, and L. C. Higginson (1998). **Penn State Undergraduate Education Across the Commonwealth.** University Park, PA: Center for Excellence in Learning and Teaching. **http://www.schreyerinstitute.psu. edu/pdf/Quality_of_Instruction_1998.pdf** (retrieved 05-10-2013).

Student ratings of overall quality of all courses taken last semester, Commonwealth Campuses compared to University Park.

Student ratings of the teaching quality in a single randomly selected course, Commonwealth Campuses compared to University Park.

- 84% of the instructors in 1997 felt it was important that instructors be easy to talk to; in 2012, the comparable percentage was 98%.

- Both students and instructors in 2012 were more likely than those in 1997 to indicate that it was important for the instructor to demonstrate the importance of the subject matter (79% to 83% for students and 85% to 90% for instructors).

- The percentage of instructors reporting it was important to maintain a classroom atmosphere conducive to learning declined from 96% in 1997 to 89% in 2012.

- 39% of the students in 1997 felt it was important for students to work on group projects; in 2012, that figure was 49%. For instructors comparable percentages were 42% in 1997 and 50% in 2012.

Instructors' Use of Teaching Quality Elements

Between 1997 and 2012 there were increases in the percentages of students reporting their instructors frequently used the various pedagogical practices addressed in these surveys.

- In 1997, 68% of the students indicated their instructor in the evaluated course frequently made the subject matter understandable; in 2012, that percentage had increased to 75%.

- The percentage of students reporting their instructor frequently explained material clearly increased from 66% in 1997 to 72% in 2012.

- 75% in 1997 and 80% in 2012 said the instructor frequently used class time wisely.

- 74% of the students in 1997 reported the instructor clearly defined student responsibilities in the course; in 2012 that percentage was 83%.
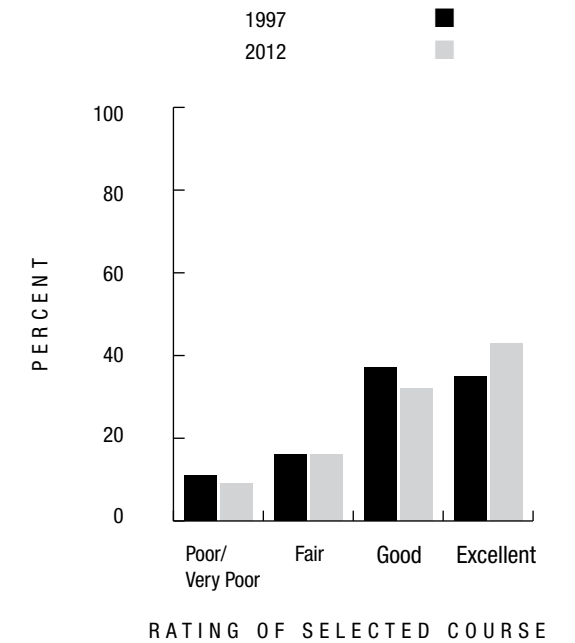
- The percentage of students reporting their instructor frequently seemed to enjoy teaching rose from 77% in 1997 to 83% in 2012.

- 73% in 1997 indicated the instructor frequently was enthusiastic about teaching the course; in 2012 that percentage was 81%.

- 56% of the students in 1997 felt the instructor made the material interesting; in 2012, 66% reported this to be the case.

- In 1997, 63% said the instructor demonstrated the importance of the subject matter; in 2012, 75% felt this occurred frequently.

- The percentages of students reporting their instructor usually stimulated students to think increased from 67% in 1997 to 75% in 2012.

- 53% reported in 1997 that their instructor usually provided various points of view. In 2012, that percentage had increased to 68%.

- In 1997, 73% indicated their instructor was easy to talk with; in 2012, 79% did so.

- 70% reported the instructor was accessible outside class in 1997; in 2012 that figure was 78%.

- The use of group projects was reported by 37% of the students in 1997 and by 51% of those in 2012.

- In 1997, 45% indicated the instructor usually encouraged them to work together; in 2012, 51% so reported.
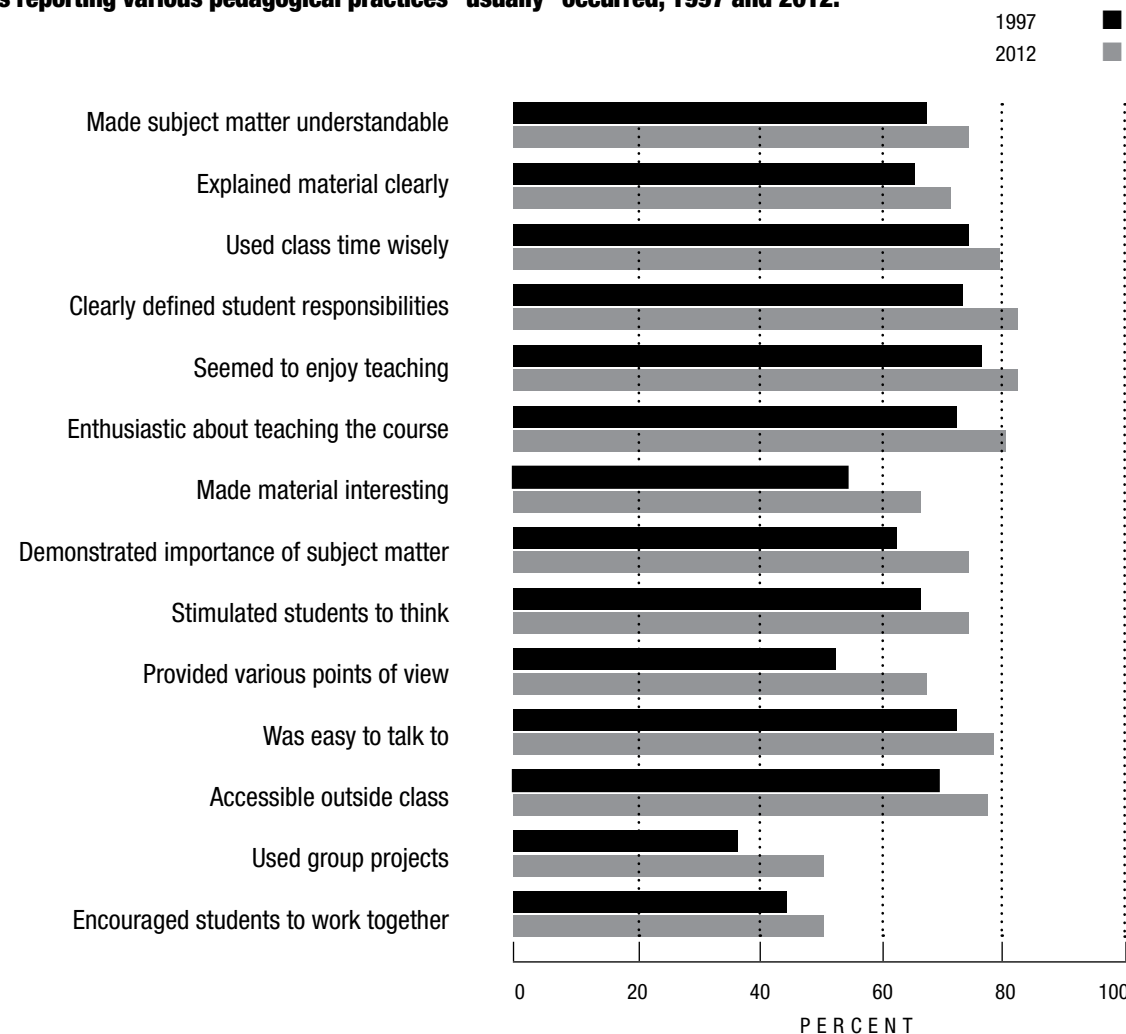
Student Ratings of Teaching Quality

In both the 1997 and 2012 surveys, students were asked to rate the quality of the instruction in a randomly selected course in which they had been enrolled the previous semester. There was an increase between 1997 and 2012 in the percentage students rating the course as "excellent" and a decrease incidence of "poor/very poor" ratings.

- In 1997, 35% of the students rated the quality of instruction as "excellent," 37% gave it a "good" rating, 16% said it was "fair," and 11% gave it a "poor or very poor" rating.

- In 2012, these percentages were 43% "excellent," 32% "good," 16% "fair," and 9% "poor/very poor."

Commonwealth campus student ratings of teaching quality in a randomly selected course, 1997 and 2012.

Summary and Discussion

Although the importance given to most of the traditional criteria of teaching quality such as instructors' clarity of presentation, knowledge, organization, and fairness were consistent across the last 15 years, there were several noteworthy shifts in the importance given to selected pedagogical elements. Thus, both students and instructors became more likely report it was important for instructors to provide various points of view and to demonstrate the importance of the subject matter. Instructors were more likely in 2012 than in 1997 to feel it was important for a teacher to be easy to talk with and to clearly define student responsibilities in the class, but they were somewhat less likely to emphasize maintaining a classroom atmosphere conducive to learning. These shifts suggest an increase in the desirability of greater openness of the learning experience intellectually (by embracing consideration of varying perspectives), socially (though greater interaction between teachers and learners) and through dealing with real-world issues.

More noteworthy were the changes in the behaviors of teachers over this same time period. Across time, students were more likely to perceive their instructors as meeting the traditional criteria of quality teaching – clarity of presentation, using class time wisely, and clearly defining expectations. They were

Percentage of students reporting various pedagogical practices "usually" occurred, 1997 and 2012.

also more likely to report increased enthusiasm and commitment on the part of their teachers to making the learning experience more personal, engaging, and stimulating. These shifts were also reflected in somewhat higher course ratings across time among Penn State's Commonwealth Campus students.

Some of the changes between these surveys may also reflect a change in the understanding of the roles and responsibilities of both students and instructors. Students indicate a desire and expectation for more engagement and interaction, as well as some degree of control of their learning experiences. Instructors appear to have also changed their teaching expectations in the intervening years. In particular at the Commonwealth Campuses where there may be a stronger emphasis on teaching, the instructors express an increased awareness of their role in serving the learners and creating environments more conducive to learning. In almost all scenarios however, there were demonstrated increases, some significant and some not, towards a more engaged, personalized and connected classroom.

Appendix

Table 1. University Park and Commonwealth Campus student population comparisons.

	University Park Campus	Commonwealth Campus
	(N=36,724)	(N=29,278)
Variables	%	%
Gender		
Male	54.3	54.1
Female	45.7	45.9
Total	100.0	100.0
Class Standing		
Freshman (<30 credits)	10.5	28.5
Sophomore (30.5-60 credits)	20.1	31.6
Junior (60.5-90 credits)	22.7	21.2
Senior (more than 90 credits)	46.8	18.6
Total	100.0	100.0
Age		
Less than 20 years	22.7	32.2
20-21	45.1	32.4
22 years and older	32.3	35.4
Total	100.0	100.0

Table 2. Distributions of gender, class standing, and age in the student sample and the population of Commonwealth Campus students meeting the criteria for the study.

	Population	Sample	
	(N=29,278)	Number of	
Variables	%	cases[a]	%
Gender			
Male	54.1	667	43.0
Female	45.9	883	57.0
Total	100.0	1550	100.0
Class Standing			
Freshman (<30 credits)	28.5	557	35.8
Sophomore (30.5-60 credits)	31.6	238	15.3
Junior (60.5-90 credits)	21.2	274	17.6
Senior (more than 90 credits)	18.6	487	31.3
Total	100.0	1556	100.0
Age			
Less than 20 years	32.2	740	47.7
20-21	32.4	433	27.9
22 years and older	35.4	379	24.4
Total	100.0	1552	100.0

[a] Number of cases in the sample varies from the total of 1566 because some students in the sample failed to answer one or more questions.

Table 3. Percentages of Commonwealth Campus students and instructors rating as "Important" various pedagogical practices.

Items	Students (N=1837)	Instructors (N=1537)
	---------------%----------------	
Knowledgeable/Prepared		
Instructor demonstrates a thorough knowledge of the subject matter.**	95.2	97.4
Instructor is well prepared.***	93.4	98.3
Presentation of materials is well-organized.***	91.1	95.7
The course content is well developed.***	89.3	94.0
Instructor uses class time wisely.***	87.5	92.3
Clear/Understandable		
Instructor makes the subject matter understandable.***	93.8	98.2
Instructor explains material clearly.***	93.5	98.4
Instructor presents various ideas with clarity.***	88.8	95.6
Fair		
Methods of evaluating student work are fair.***	91.0	96.9
Instructor is impartial in assigning grades.***	81.5	96.6
Grades are based on students' understanding of the materials stressed in the course.***	88.1	93.5
Instructor clearly defines student responsibilities in the course.***	90.9	95.7
Feedback on exams and other graded material is valuable.**	91.1	94.3
Enthusiastic/Interested		
Instructor seems to enjoy teaching.***	87.7	93.6
Instructor is enthusiastic about teaching the course.***	91.0	98.0
Instructor is genuinely interested in the subject matter.***	88.8	93.6
Instructor has a genuine interest in students as individuals.***	77.9	83.3
Instructor makes material interesting.*	84.8	88.2
Instructor demonstrates the importance of the subject matter.***	83.2	90.1
Positive Social Atmosphere		
Instructor is accepting of students from different backgrounds.***	87.3	96.1
Instructor is sensitive to the diverse needs and interests of students.***	78.5	87.4
Instructor is accessible to students outside class.***	80.0	88.0
Instructor is easy to talk to.***	89.2	97.6
Instructor maintains a classroom conducive to learning.	87.4	88.9
Critical Thinking		
Instructor encourages students to challenge conventional wisdom.	73.9	73.3
Instructor encourages students to express their ideas.***	81.7	90.4
Instructor stimulates students to think.***	90.7	98.8
Instructor stimulates intellectual curiosity.***	82.1	94.2
Class discussion is an integral part of the course.***	69.5	77.4
Instructor provides various points of view.	81.2	83.0
Technology		
Instructor uses technology to enhance classroom learning.***	67.0	60.9
Instructor communicates with individual students via ANGEL, e-mail, listserves, etc.***	80.8	68.9
Lecture notes and/support materials are available on-line for student use outside class.***	87.8	55.8
Instructor encourages students to use technology to facilitate student interaction outside of class.***	63.1	46.9
Collaborative Learning		
The results of group effort impacts individual grades.***	38.5	29.8
Peer evaluation is a component of grades.***	33.1	20.4
Instructor uses group projects to promote learning.	48.7	49.7
Students are encouraged to work together.*	52.3	57.3
The class helps define course goals.***	62.2	21.7

≥ Number of cases varies from the total due to missing data   * Significant .05, ** Significant .01, *** Significant .001

Table 4. Frequency of occurrence of specific pedagogical practices reported by Commonwealth Campus students. (N=1566)[a].

Instrctor was…	Frequency of Occurrence (%)		
	Usually	Sometimes	Seldom/Never
Knowledgeable/Prepared			
Demonstrated knowledge of subject.	86.6	9.0	4.4
Was well prepared.	82.0	11.6	6.4
Presentation was well organized.	78.0	13.7	8.4
Well developed course content.	76.2	14.7	9.0
Used class time wisely.	79.8	12.2	8.0
Clear/Understandable			
Made subject matter understandable.	75.1	15.0	9.8
Explained material clearly.	72.1	17.1	10.8
Provided various ideas with clarity.	72.6	16.1	11.3
Fair			
Impartial in assigning grades.	75.5	16.6	8.0
Based grades on materials stressed.	81.9	11.9	6.1
Methods of evaluation were fair.	81.1	11.2	7.8
Clearly defined student responsibilities.	83.4	11.8	4.8
Gave valuable feedback on exams, etc.	75.5	15.2	9.3
Enthusiastic/Interested			
Seemed to enjoy teaching.	83.1	10.3	6.6
Was enthusiastic about teaching the course.	80.7	12.2	7.1
Was genuinely interested in subject matter	87.0	8.7	4.4
Had genuine interest in students as individuals.	73.5	15.5	10.9
Made material interesting.	65.8	18.7	15.5
Demonstrated importance of subject.	75.2	14.8	10.0
Positive Social Atmosphere			
Was accepting of students from different backgrounds.	89.3	7.7	3.0
Was sensitive to student needs/interests.	76.1	15.2	8.7
Was accessible outside class.	78.4	13.9	7.7
Was easy to talk to.	79.4	11.1	9.4
Instructor maintained a classroom conducive to learning.	80.6	12.2	7.2
Critical Thinking			
Challenged conventional wisdom.	62.4	22.4	15.2
Encouraged students to express ideas.	70.6	15.8	13.7
Stimulated students to think.	74.9	17.2	7.9
Stimulated intellectual curiosity.	71.0	12.7	11.3
Used class discussion as integral to course.	64.4	16.4	19.2
Provided various points of view.	68.3	19.7	12.0
Technology			
Used technology to enhance classroom learning.	67.0	15.7	17.4
Communicated with students outside class via ANGEL, listservs, etc.	72.0	12.5	15.5
Provided lecture notes/materials on-line.	61.9	11.4	26.6
Encouraged use of technology for student interaction outside class.	56.9	18.0	25.1
Collaborative Learning			
Group effort impacted grades.	41.3	14.4	44.3
Used peer evaluation as grade component	36.5	12.8	50.6
Used group projects to promote learning.	51.1	14.3	34.7
Encouraged students to work together.	51.2	21.0	27.8
Had class help to define goals.	57.3	19.8	22.9

[a] Number of cases varies due to missing data.

Table 5. Relationships of the frequency of occurrence of selected pedagogical elements to course rating by Commonwealth Campus students.

Frequency of occurrence of elements	Number of cases	Course Rating Excellent/ Good	Fair	Poor/ Very poor	Cramér's V
		------------------------------ % ------------------------			
Knowledgeable of subject matter					.447***
Always/Usually	1319	83.9	12.7	3.5	
Sometimes	137	25.5	41.6	32.8	
Seldom/Never	67	4.5	20.9	74.6	
Well-prepared					.472***
Always/Usually	1246	86.2	11.2	2.6	
Sometimes	176	33.0	43.2	23.9	
Seldom/Never	98	10.2	22.4	67.3	
Makes subject matter understandable					.585***
Always/Usually	1143	92.2	7.5	0.3	
Sometimes	229	35.8	47.6	16.6	
Seldom/Never	150	5.3	28.7	66.0	
Enthusiastic about teaching					.464***
Always/Usually	1229	86.4	10.7	2.9	
Sometimes	186	36.6	44.1	19.4	
Seldom/Never	108	12.0	24.1	63.9	
Fair in evaluating student work					.494***
Always/Usually	1232	87.2	10.9	1.9	
Sometimes	170	31.8	44.1	24.1	
Seldom/Never	118	10.2	24.1	64.4	
Stimulates students to think					.468***
Always/Usually	1140	88.3	9.2	2.5	
Sometimes	262	45.4	39.3	15.3	
Seldom/Never	121	13.2	25.6	61.2	
Maintains learning environment					.578***
Always/Usually	1223	88.2	10.2	1.6	
Sometimes	186	29.0	52.2	18.8	
Seldom/Never	109	4.6	15.6	79.8	
Uses technology					.257***
Always/Usually	1014	83.7	12.3	3.9	
Sometimes	237	64.1	25.7	10.1	
Seldom/Never	262	51.5	19.5	29.0	
Uses group work					.205***
Always/Usually	775	85.5	11.2	3.2	
Sometimes	217	68.2	23.5	8.3	
Seldom/Never	525	62.1	19.2	178.7	

***Significant .001

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Table 6. Relationships of structural course characteristics to course rating by Commonwealth Campus students.

Course characteristics	Number of cases	Course Rating Excellent/ Good	Fair	Poor/ Very poor	Cramér's V
		-------------------------------%------------------------			
Time of day					.046
Morning	712	74.2	15.7	10.1	
Afternoon	641	77.4	14.4	8.3	
Evening	163	68.7	20.9	10.4	
Hours of class time per week					.031
Less than 2 hours	276	75.7	17.0	7.2	
2 but less than 3 hours	516	76.0	14.3	9.7	
3 but less than 4 hours	561	74.0	16.4	9.6	
4 hours or more	164	75.0	14.6	10.4	
Class size					.054
Less than 20 students	418	71.3	17.6	10.8	
20-49 students	907	77.1	15.0	7.9	
50 students or more	162	73.5	13.6	13.0	
Mode of instruction					.199***
Lecture	402	56.5	24.1	19.4	
Lecture and discussion	912	82.2	13.2	4.6	
Discussion/seminar	78	84.6	10.3	5.1	
Other	127	76.4	11.0	12.6	
Credits					.038
Less than 3	134	76.9	12.7	10.4	
3	1161	74.7	15.5	9.8	
More than 3	225	76.0	17.8	6.2	
Choice					.091***
No choice (Required)	868	71.7	16.7	11.6	
Selected from a required list	446	76.2	15.6	7.8	
Free elective	208	87.0	10.1	2.9	

***Significant .001
 **Significant .01

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Table 7. Relationships of student characteristics to course rating by Commonwealth Campus students.

Student characteristics	Number of cases	Course Rating			Cramér's V
		Excellent/ Good	Fair	Poor/ Very poor	
		----------------------------- % -----------------------			
Gender					.042
Male	649	76.7	14.0	9.2	
Female	865	77.5	17.0	9.5	
Class standing					.024
Freshman	549	75.0	15.1	9.8	
Sophomore	478	74.3	16.6	8.8	
Junior	231	77.1	14.7	8.2	
Senior	262	74.0	15.6	10.3	
Semester credits					.045
< 14	352	71.0	18.8	10.2	
14-15	447	75.8	14.5	9.6	
16-17	492	76.8	13.8	9.3	
18 or more	227	74.9	17.6	7.5	
GPA					.084**
< 2.50	168	66.7	24.4	8.9	
2.50-2.99	313	72.8	16.9	10.2	
300-3.49	486	72.8	17.3	9.9	
3.50 and over	541	80.4	11.1	8.5	

*Significant .01

Table 8. Relationships of grade, work, difficulty, and amount learned to course rating by Commonwealth Campus students.

Grade Work, Difficulty, Learned	Number of cases	Course Rating (%)			Cramér's V
		Excellent/ Good	Fair	Poor/ Very poor	
		----------------------------- % -----------------------			
Grade in course					.200***
A, A-	755	84.2	10.5	5.3	
B+, B, B-,	468	72.6	17.1	10.3	
C+, C, C-	195	63.1	23.6	13.3	
D, F	86	38.4	31.4	30.2	
Amount of Work relative to other courses					.124***
1 Much lower	60	55.0	21.7	9.9	
2	161	69.6	12.4	18.0	
3	620	73.5	17.4	9.0	
4	417	79.1	16.1	4.8	
5 Much higher	264	79.5	11.7	8.7	
Degree of Difficulty relative to other courses					.116***
1 Much lower	61	57.4	14.8	27.9	
2	183	70.5	19.1	10.4	
3	544	75.0	17.8	7.2	
4	462	79.7	13.2	7.1	
5 Much higher	268	73.9	13.4	12.7	
Amount Learned relative to other courses					.498***
1 Much lower	76	6.6	18.4	75.0	
2	126	31.7	34.9	33.3	
3	447	64.7	28.9	6.5	
4	446	88.1	9.2	2.7	
5 Much higher	425	97.2	2.4	0.5	

*Significant .001

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