Perceptions of Students and Instructors at Penn State's World Campus

Lawrence C. Ragan, Fern K. Willits, Janet May Dillon, Noelle Waggett,

James W. Beierlein, Jeannette Brelsford, Barbara K. Wade, and Mark Brennan,

Introduction by Gary E. Miller,

Executive Director Emeritus, Penn State World Campus

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We Are...
Penn State

The Penn State World Campus was established in 1998 to provide learners around the globe with access to a Penn State education. Currently, it enrolls over 16,000 students in more than 90 online degree and certificate programs. The World Campus has become a major contributor to Penn State's teaching mission, a leader in international distance education, and a driver of new and innovative teaching and learning models. In doing so, it has stimulated a renewed interest in the art and science of teaching in this new environment, building upon a century of leadership in distance education.

Correspondence Study

That leadership dates back to 1892, when Penn State, the University of Chicago, and the University of Wisconsin became the first American universities to offer university-level correspondence study courses. Rural Free Delivery—the idea that farming families could have mail delivered to their homes—was still an experiment. By 1892, the American frontier had closed and the Industrial Revolution had stimulated rapid urbanization in the United States. That, combined with a huge increase in immigration, raised a concern about whether the United States had the agricultural capacity to feed this growing urban population. Rural Free Delivery was an attempt to improve the quality of life in rural areas, encouraging families to stay on the farm and grow the crops needed to feed this rapidly growing urban and industrial population.

Not surprisingly, Penn State's initial distance education program was the Home Reading Program in Agriculture. Over time, the University created a separate division—Independent Study by Correspondence—that worked with departments and colleges across the University to develop and deliver correspondence study courses to students around the globe. The program included some high school and non-credit training programs, but the majority of courses were versions of undergraduate courses that carried the same credit value as their on-campus counterparts.

Students could apply courses to on-campus degree programs or earn associate and, ultimately, a small number of baccalaureate degrees entirely at a distance.

Most courses were developed and taught by full-time faculty who received extra compensation for their work. The central Department of Independent Study by Correspondence provided design and editorial support for faculty, as well as a test proctoring service and support for student registration and advising.

Television

Over the years, Penn State also experimented with other media to deliver courses. In the 1950s, in response to the rapid growth of postwar students through the G.I. Bill, the university developed an on-campus television network that connected 24 classrooms with one-way video, two-way audio, allowing one faculty member to teach students at multiple classrooms. The network was part of a new University Division of Instructional Services that supported faculty use of media, including video and film production studios, still photography, and testing.

In 1965, the university launched its public television station, WPSX-TV (now WPSU-TV) and took video-based instruction into the community. This included producing and broadcasting instructional programs for use in K–12 classrooms and a "University of the Air" that combined television broadcasts with continuing education class sessions.

In the late 1970s, two technological changes dramatically expanded the use of video in distance education. First, the national Public Broadcasting Service (PBS) began using satellite to distribute its programs, making it possible for Penn State to both originate and receive nationally delivered programs. Around the same time, Penn State collaborated with a group of cable television operators to create PENNARAMA, a dedicated statewide educational cable television network, which greatly increased the opportunity to offer video-based courses.

In response, the University integrated its media production resources, combining UDIS, WPSX-TV, Independent Study by Correspondence, and the Audio-Visual Services library into a new division, the Division of Media and Learning Resources, which reported to the Vice President for Continuing Education. A new Department of Instructional Media was established within this Division to coordinate production and use of video materials across the University. Video-based distance education was now integrated with Independent Study by Correspondence, so that courses could be offered nationally.

Penn State joined several new national cooperatives both to gain access to video courses and to open new marks for Penn State productions. These included the PBS Adult Learning Service, the International University Consortium for Telecommunications in Teaching, and the National University Teleconference Network.

It also began to work with academic colleges to produce video courses for statewide and national delivery. Examples include Principles of Accounting, Business Logistics, and a series of interdisciplinary Science, Technology, and Society courses produced in partnership with Temple University and the University of Pittsburgh. Live satellite delivery was used to deliver a postbaccalaureate certificate in Acoustics Engineering to U.S. and Canadian companies involved in submarine manufacture and to deliver national teleconferences to other universities around the nation. The first teleconference allowed Penn State nuclear engineering faculty to share video of the damaged core from the Three-Mile Island nuclear power plant.

By 1990, courses could also be delivered by video conferencing over telephone lines. Penn State used this technology to extend its Master of Education in Adult Education to other campuses around the Commonwealth. Videoconferencing systems were installed at all Penn State locations.

Online Learning

Penn State had begun to experiment with computer-based instruction on campus in the 1980s, with the creation of the Computer-based Education Laboratory (CBEL). With the launch of the first Web browser in 1993, the computer became viable as a distance education tool. Penn State decided in 1996 to shift all distance education activity to the Internet. The result was the World Campus, which, with support from the Alfred P. Sloan Foundation, launched its first four programs in January 1998. For the first time, distance education was focused not on individual courses but on complete undergraduate and graduate degree and certificate programs, moving distance education into the academic mainstream. Today, the World Campus offers certificate and degree programs serving students from all 50 states and 40 countries across the globe.

The World Campus is part of a global revolution in education. Many institutions at all levels of higher education are using the Internet to extend instruction to both traditional and adult students on campus and off.

— *Gary E. Miller,*

Executive Director Emeritus, Penn State World Campus

The Pennsylvania State University

C O N T E N T S

Perceptions of Students and Instructors at Penn State's World Campus

Penn State's World Campus courses are designed to present the same academic rigor as those taught elsewhere in the university. However, World Campus classes are more flexible. Their asynchronous format allows students more opportunity to learn at their convenience rather than attending scheduled and time-bound classes. In the end, students completing their degree or certificate requirements are awarded the same certifications as those awarded to all Penn State graduates.

Technology continues to expand the opportunities for virtual interactions between teachers and students, and among learners with an ever-increasing array of web-based educational resources.

Online learning has the potential to transform much of current educational practice, to increase audiences, and to reduce costs. While some question its role in replacing more traditional modes in higher education, the majority of the American public views online learning as the same or better than traditional classroom-based instruction providing high quality instruction from well-qualified teachers.[1] However, basic to any evaluation of teaching quality are the expectations and experiences of the learners and instructors who are actually engaged in online teaching and learning. This report explores the views of Penn State's World Campus students and instructors concerning the characteristics of excellent teaching and the perceptions of students in regard to the quality of instruction they receive.

Purpose of this Analysis

Drawing upon data from surveys of World Campus students and instructors carried out in 2012, this report addresses the following research questions:

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

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

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

1   Gallup Poll," In U.S, Online Education Rated Best for Value and Options," October 15, 2113. http://www.gallup.com/poll/165425/online-education-rated-best-value-options.aspx
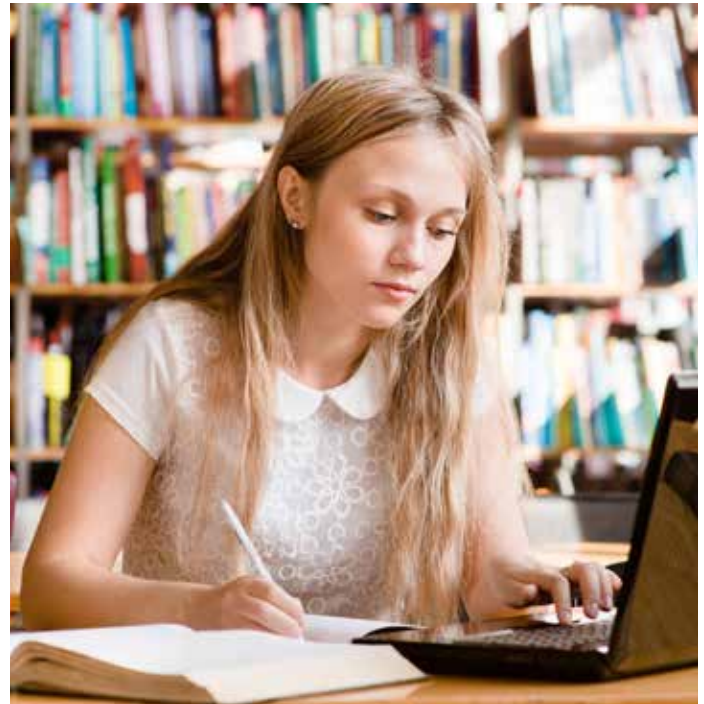
- What factors relate to differences in how these students perceive instructional quality?

- Do the perceptions of World Campus students concerning the quality of instruction differ from students at the University Park Campus and the Commonwealth Campuses that offer undergraduate education at Penn State?

The Surveys

Surveys of students and teachers provided data for this analysis. For the student survey, 2,861 undergraduates enrolled in the World Campus during both fall semester 2011 and spring semester 2012, as listed in the University's data warehouse, were selected for the study. Thus, all of the targeted students had at least one semester of college experience from which to develop their opinions about the teaching they had received. These students were contacted early in spring semester 2012 using their Access Account email addresses and invited to participate in an online survey dealing with their perceptions of instructional quality. Two subsequent email reminders were sent at approximately one week intervals to encourage response. A total of 644 students completed the survey – a 23% response rate.

Also during spring semester 2012, a listing of all instructors who had taught one or more courses at World Campus during both fall semester 2011 and

spring semester 2012 were invited to participate in a survey similar to the one that students had completed. These included faculty members of varying rank, staff, as well as graduate students serving as teachers 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 two reminders sent to those who had not completed the survey. Of the 374 instructors asked to participate, 125 did so – a 33% response rate.

Data from these studies were compared with similar information obtained from surveys of students and instructors at Penn State's University Park Campus and from its 19 Commonwealth Campuses carried out in 2011 and 2012. Overall, World Campus undergraduate students differed somewhat from those at the University Park Campus and those at the Commonwealth Campuses (Table 1)[2]. World Campus students were more likely than resident instruction students at University Park or the Commonwealth Campuses to be female, 22 years of age or older, and to have completed 30 credits or fewer at the time of the survey. It goes without saying that World Campus students are scattered through ot the state, the nation, and the world. They work from homes, offices, and public places. And, most often, they have little or no face-to-face contact with other enrollees or with their instructors. Lessons are accessed online, and contact with other students and teachers occurs almost exclusively through electronic means—including postings, e-mail, and other social media outlets.

Importance of Various Elements for Teaching Quality: Student and Instructor Views

Both students and teachers were asked to indicate how "important" each of 48 items were in determining the quality of college teaching delivered online. 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, 2 and 3 meaning "little or no importance." Differences in the response patterns of students and teachers to each of the items were tested for statistical significance using contingency chi-squares and the .05 significance level (Table 2). Factor analysis suggested the items could

2   Referenced tables are in the Appendix.

interpretatively be clustered to describe the following ten dimensions or factors. These clusters were as follows:

- Instructor is **Knowledgeable/Prepared**

- Instructor is **Clear/Understandable**

- Instructor is **Fair**

- Instructor is **Enthusiastic and Interested** in teaching

- Instructor promotes a **Positive Social/Learning Atmosphere**

- Instructor promotes **Critical Thinking**

- Instructor uses appropriate **Technology** for teaching

- Instructor uses **Collaborative Learning** techniques

- Course material has **Relevance** to students' lives

- Instructor encourages **Participant Interactions** in the online course

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 instructional time wisely.

The overwhelming majority of both students and teachers viewed the instructor's knowledge and preparedness to teach online as critically important elements of quality teaching. For most items, 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. These questions generated no instance of significant difference in perspectives between students and instructors.

- There was no significant difference in the proportion of students (96%) and teachers (95%) reporting that it was important for instructors to demonstrate a thorough knowledge of the subject matter.

- Students (97%) and instructors (96%) were not significantly different in their responses that it was important for the instructor to be well prepared.

- 96% of students and 98% of the teachers indicated it was important for the instructor to present materials in a well-organized fashion – a difference that was not statistically significant.

- Students (95%) in the sample were slightly less likely than instructors (96%) to endorse the importance of well-developed course content, but this difference was not significant.

- The rate of response to the question of importance of how instructional time is used did not differ significantly between students (89%) and instructors (87%).

Clear/Understandable

To "teach" is to convey information from expert to novice in an understandable and clear manner. Three items asked about the importance of the clarity of the instructor's teaching:

- Instructor makes the subject matter understandable.

- Course content is presented clearly.

- Instructor provides various ideas with clarity.

Both students and teachers in the survey concurred that being clear is an important indicator of the quality of instruction, with more than 90% of both groups indicating that each of the three items dealing with clarity was important. The differences between students and teachers in their responses were not statistically significant.

- 96% of the students and 94% of the teachers judged the "Instructor makes the subject matter understandable" to be an important element of quality of instruction.

- 96% of students and 99% of the teachers indicated "course content is presented clearly" was an important factor.

- 92% of the students and 94% of the teachers reported that "providing various ideas with clarity" was important.

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 on both progress in the course and final evaluation of performance have become markers for assessing knowledge gained and effort exerted and can have long-range implications for students. 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 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.

- 96% of students and 97% of instructors indicated it was important that methods used for evaluating student work were fair, a difference that was not statistically significant.

- Within this category dealing with fairness, the only statement where there was a significant difference in student and faculty responses was to the question of impartiality in assigning grades. Here, 90% of students rated this as important, whereas 97% of faculty did so.

- When asked about the importance of grades being based on student's understanding of the materials stressed in a course, students (94%) and instructors (96%) did not differ significantly.

- The difference in online student (95%) and instructor (96%) responses to the question dealing with the importance of the instructor to clearly define student responsibilities in a course was not significant.

- 95% of students and 94% of instructors agreed that feedback on exams and other graded material is valuable.

Enthusiastic/Interested

The importance of the affective domain of teacher attitude and interest ranked high among both instructors and learners. 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.

Both students and instructors responded positively to questions regarding the desire for the online instructor to display a genuine interest in the subject matter and in the learners as individuals. Importance rates were also high for questions related to the need for instructor to enjoy the teaching experience. Although learners were slightly more inclined to desire that the instructor make the material interesting, the instructors generally favored the need to demonstrate interest and enthusiasm for the learner and content area.

- Learners responded significantly less positively (80%) than instructors (90%) to the question regarding the importance of the instructor seeming to enjoy teaching.

- Both students (90%) and instructors (93%) felt it was important for the instructors to be enthusiastic about teaching the course – a nonsignificant difference.

- About 85% of both instructor and students felt it was important for the instructor to be genuinely interested in the subject matter.

- The response to the importance of the instructor to demonstrate a genuine interest in students as individuals displayed a significant difference between learners (73%) and instructors (82%).

- There was no significant difference between instructors' and learners' responses to the importance of the instructor making the material interesting (90% for students, 85% for instructors).

- Instructors were not significantly more likely than students (82% vs. 87%) to demonstrate the importance of the subject matter.

Positive Social Atmosphere

In the online classroom, creating a positive social atmosphere presents additional challenges for the instructor. Establishing and maintaining a friendly, open relationship between instructor and student and among students must be somewhat more intentional and planned than in the face-to-face classroom. With no clear definition of what is "in the classroom" and what is "outside the classroom" the boundaries of social and academic relationships can become blurred. 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.

- Instructor is accepting of students from different backgrounds.

- Instructor is sensitive to the diverse needs and interests of students.

- Instructor is accessible to students.

- Instructor is easy to communicate with.

- Instructor maintains an atmosphere conducive to learning.

For the two first items, students and instructors differed significantly in the percentages rating them as important.

- Only 85% of the students, but 92% of the instructors reported it was important for instructors to be accepting of students from different backgrounds.

- There was a significant difference in response rates on the question of the need for the instructor to be sensitive to the diverse needs and interest of the students. Instructors (86%) were more likely than students (78%) to report that it was important.

- Instructors (96%) and students (91%) responded that it was important for the instructor to be accessible to students.

- Instructors and students did not differ significantly in the percentages reporting it was important for the instructor to be easy to communicate with (97% vs. 92%).

- 96% of the instructors and 90% of the students in the surveys reported that it was important for the instructor to maintain an atmosphere conducive to learning. (Not a statistically significant difference.)

Critical Thinking

A university education implies more than the acquisition of a wide a range of information. Students are also expected to develop the ability to conduct analysis based on data and evidence, develop new ideas, and articulate positions reflecting critical thinking. This critical thinking process is expected to be a lifelong skill useful in today's workplace. How important do students and teachers believe the acquisition of critical thinking skills is when evaluating the quality of instruction? Six items on the survey addressed this question:

- 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.

Responses to three of the six items reflected significant differences in how students and instructors responded to questions of importance. Although the majority of both students and instructors felt that each of these behaviors was important, instructors were significantly more likely than students to endorse the importance of class discussion, while students were more likely to endorse the importance of the instructor providing various points of view and encouraging the students to challenge conventional wisdom.

- Students were more likely than instructors to deem as important encouraging students to challenge conventional wisdom (74% vs. 62%).

- Although the difference was not statistically significant, instructors (82%) were somewhat more likely than students (76%) to feel it is important for students to express their ideas.

- Instructors (93%) were similar to students (92%) in reporting it is important for teachers to stimulate students to think.

- Students (86%) and Instructors (88%) did not differ significantly in the percentages rating as important that the instructor stimulate students' intellectual curiosity.

- Significantly more instructors (61%) compared to only 41% of the students felt it was important for class discussion to be an integral part of a course, while 59% of the students and 39% of the instructors felt this was of little or no importance.

- Students (84%) felt it important that the instructor provide various points of view compared to 71% of the instructors who responded in this way — a significant difference in response rates.

Use of Technology

Technology continues to impact the teaching and learning process as both planned, and unplanned aspects of the learning environment. Distinctions between social and academic uses of a wide variety of technologies are becoming increasingly blurred, as are the barriers of class and non-class activities. In the online classroom, the technology constructs the foundation necessary for the learning exchange between student and instructor. Also, in the online setting more than in the traditional classroom there is wider variation of the application of technology to the educational setting. The tools available provide a wider range of synchronous and asynchronous capabilities.

The survey asked five questions dealing with the importance of the use of technology in various ways for enhancing the quality of instruction in the online classroom. In response to each of these questions, students and instructors reported that technology use was important for the quality of instruction received.

- Instructor uses technology appropriately to enhance learning.

- Instructor communicates individually with students.

- Supplemental and/or support materials are made available online.

- Assignments require students to access Internet resources.

- Instructor encourages student-to-student interaction.

Students and instructors did not differ significantly in their support for the importance of these uses of technology, except in regard to the last item.

- 88% of the teachers and 90% of the students reported it was important for the instructor to use technology appropriately to enhance learning.

- A majority of instructors (72%) and students (74%) indicated it was important for online instructors to communicate individually with students.

- 84% of the instructors and 81% of the students felt it was important to make available online supplementary and/or support materials for student use.

- Instructors (57%) were somewhat more likely than online students (47%) to report that it was important for assignments to require students to access Internet resources.

- Instructors were significantly more likely than students to report it was important for the instructor to encourage student-to-student interaction in online teaching (57% vs. 34%).

Collaborative Learning

The goal of creating an educational setting where students are "actively engaged" in their learning has led to increased emphasis on the importance of team work, student input into the learning outcomes and goal setting, and active learning strategies. The following items assessed support for collaborative learning methods:

- 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.

Four of the five questions in this category highlighted significant differences between student and instructor responses. However, compared to the other elements discussed above, support for the importance of these collaborative learning items was low among both students and instructors.

- Instructors (25%) and students (22%) differed significantly in their support for the importance of the results of group efforts impacting on individual grades.

- Although the difference was not statistically significant, 20% of the students and 17% of the instructors believed it was important for peer evaluation by students to be a grade component.

- 27% of the students, compared with 41% of the instructors felt it was important for the instructor to use group projects to promote collaborative learning.

- Students were significantly less likely than instructors to report it was important to encourage students to work together (students, 30%; and instructors, 39%).

- Students and instructors had significant differences in their responses to the class helping to define the course goals, with 34% of the students, but only 11% of the instructors reporting this was important.

Relevancy

There is often a strong desire on the part of students to feel their academic endeavors are grounded in the context of their lives and that the skills they gain are applicable to the world of work. Relevancy in the online classroom may be represented instructionally by the use of real-life examples, personal stories, situated learning strategies, and case studies.

- Instructor uses real world examples in teaching.

- Instructor employs practical applications in teaching.

- Instructor helps students apply knowledge to real world situations.

- Instructor demonstrates how content is relevant to achieving life goals.

Students were more likely than instructors to endorse all of these items as important for quality teaching, but for two, the differences were not statistically significant.

- Students (93%) and instructors (88%) believed it was important that instructors use real world examples in their teaching, but this difference was not statistically significant.

- Students were significantly more likely than instructors to rate as important the employing of practical applications in teaching (92% vs.78%).

- Students (91%) and instructors (86%) did not differ significantly in the proportion indicating it was important for instructors to help students apply knowledge to real world situations.

- The percentage indicating it was important for instructors to demonstrate how course content is relevant to achieving life goals was significantly greater for students (78%) than for instructors (59%).

Participant Interactions

One of the more challenging dimensions of the design and delivery of an online course is the interaction that occurs among class participants. Four items sought information on the importance of such interactions as perceived by students and instructors.

- Opportunities are provided for students to interact with other students about course content.

- Opportunities are provided for students to interact with faculty about course content.

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.***

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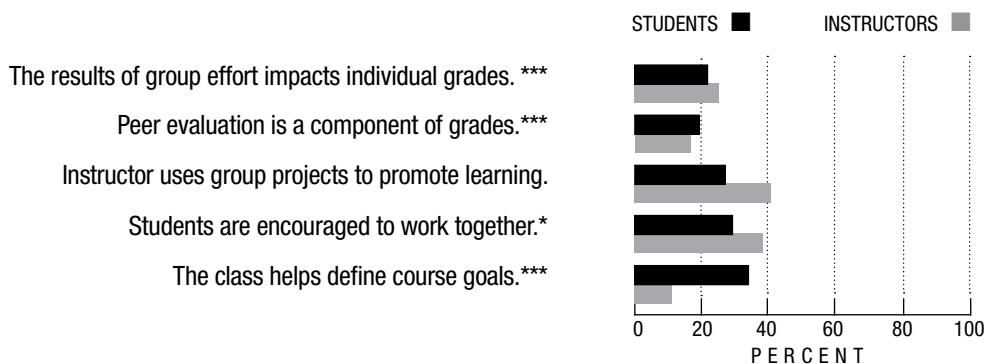
*   Statistically significant at .05 level
*** Statistically significant at .001 level

- Opportunities are provided for students to interact socially with faculty.

- Opportunities are provided for students to interact socially with students

Both instructors and students were likely to report that providing opportunities to interact with faculty and students about course content was important. However, few indicated that social interaction was important. There were significant differences between students and instructors in both areas, however, with instructors more likely than students to emphasize interactions related to course content; students more likely than instructors to endorse the importance of social interaction.

- 70% of online instructors but only 42% of students indicated it was important that opportunities be provided for students to interact with other students about course content.

- Instructors (86%) were also significantly more likely than students (72%) to report it was important to provide opportunities for students to interact with faculty about course content.

- However, students (27%) were more likely than instructors (17%) to report it was important for opportunities be provided for social interaction with faculty.

- Students were also more likely than instructors to report it was important to provide opportunities for students to interact socially with other students (27% vs. 20%).
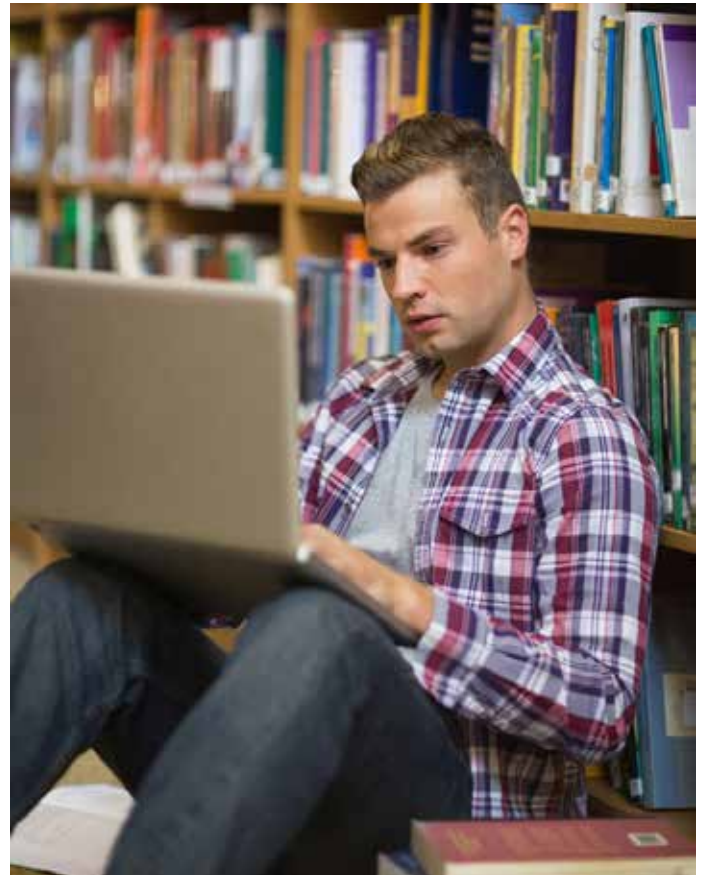
Percentages of students and instructors rating as "important" practices related to Participant Interactions.

STUDENTS ■   INSTRUCTORS ▦

Practice	
Opportunities are provided for students to interact with other students about course content.***	
Opportunities are provided for students to interact with faculty about course content.***	
Opportunities are provided for students to interact socially with faculty.**	
Opportunities are provided for students to interact socially with students.*	

PERCENT (0, 20, 40, 60, 80, 100)
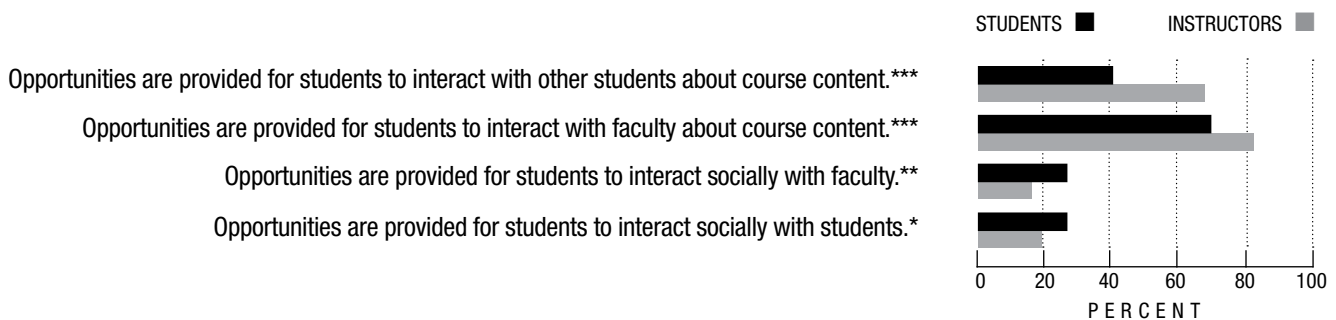
*   Statistically significant at .05 level
**   Statistically significant at .01 level
*** Statistically significant at .001 level

Summary

Online learning presents new educational challenges to both students and instructors. In this environment, face-to-face interactions are replaced with asynchronous contacts. Nonverbal cues concerning students' understanding and instructors' confidence and enthusiasm or lack thereof may be lost. However even in these non-traditional settings, many of the elements traditionally viewed as important for quality teaching were endorsed as "important" by more than nine of every ten students and instructors. Thus, instructors should be knowledgeable, prepared, clear in their presentations, fair, accessible, and easy to communicate with.

Online students were somewhat less likely than instructors to feel it was important for teachers to enjoy teaching, to have an interest in students as individuals, to be accepting of students from diverse backgrounds and those with differing needs, to support the importance of class discussion, and to emphasize student-to-student and student-to-instructor interaction related to course content. Students were more likely than instructors to feel that instructors should encourage them to challenge conventional wisdom, provide various points of view, and to demonstrate the relevancy of the material. Neither group strongly endorsed elements related to collaborative learning, although instructors more than students saw group projects as important. Students, more than instructors, felt they should help to define group goals.

Taken together, these observations suggest that online learners, more than their instructors, emphasized the importance of the course content, critical thinking, and relevancy. They appear to be less interested in teaching fairness or inclusion of diverse student populations and whether or not the instructor appears to be enjoying teaching. They are less inclined toward group work and student-to-student interactions than their instructors. However, in most cases, these differences were not large, suggesting that overall, there was considerable agreement between the two groups in what constituted quality teaching.

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

To ascertain how frequently instructors actually evidenced the various pedagogical practices described above, students in the sample were asked to list all of the online courses in which they had been enrolled the previous semester (Fall 2011). The survey software then randomly selected one course for specific evaluation. Choosing a course taken the previous semester meant the student could look back and reflect on the entire course. Selection across all students in the survey also meant that a random cross section of courses would be evaluated.

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 "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 categories or dimensions defined above (Table 3).

The Instructor was Knowledgeable/Organized

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

- 89% answered their instructor "usually" demonstrated a thorough knowledge of the subject matter; only 4% reported this happened "seldom or never."

- 84% reported the instructor in the evaluated course was "usually" well-prepared; only 6% said this occurred "seldom or never."

- 80% said the presentation of materials was "usually" well organized; 7% reported this occurred "seldom or never."

- 78% said the course content was "usually" well developed; 9% reported this occurred "seldom or never."

- 78% answered the instructor "usually" used instructional time wisely; 6% reported this "seldom or never" happened.

The Instructor was Clear/Understandable

Similarly, three fourths or more of the online students reported the instruction in the course was clear and understandable.

- 78% reported the instructor "usually" made the subject matter understandable; 9% indicated this "seldom or never" occurred, while the remainder said this occurred only "sometimes."

- 81% answered the instructor "usually" explained material clearly; 5% said this occurred "seldom or never."

- 75% responded that the instructor "usually" provided various ideas with clarity; 8% said this occurred "seldom or never."

The Instructor was Fair

Most 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.

- 84% said their instructor was impartial "usually" in assigning grades; only 5% disagreed and reported this "seldom or never" occurred.

- 86% indicated grades were based on students' understanding of the materials stressed in the course; 4% reported was "seldom or never" the case.

- 84% answered that methods of evaluating student work were fair at least "usually;" 6% reported this "seldom or never" happened.

- 87% felt the instructor "usually" clearly defined student responsibilities in the course; 4% reported this happened "seldom or never."

- 78% indicated feedback on exams and other graded materials was "usually" valuable; 11% said this was "seldom or never" the case.

The Instructor was Enthusiastic/Interested

More than 80% of the online students reported their instructor was enthusiastic and interested in the subject matter, with nearly as many reporting he/she seemed to enjoy teaching. Somewhat smaller percentages felt the instructor demonstrated the importance of the subject matter, made the material interesting and had a genuine interest in students as individuals.

- 77% reported the instructor "usually" seemed to enjoy teaching; 9% said this occurred "seldom or never."

- 80% indicated the instructor was enthusiastic about teaching the course; 7% answered this "seldom or never" occurred.

- 83% felt the instructor was "usually" genuinely interested in the subject matter; 5% said this was "seldom or never" true.

- 66% reported they felt the instructor "usually" had a genuine interest in students as individuals; 13% saw this as "seldom or never" manifest.

- 72% felt the instructor "usually" made the material interesting; 10% said this was "seldom or never" the case.

- 75% reported the instructor "usually" demonstrated the importance of the subject matter; 9% indicated this "seldom or never" occurred.

The Instructor Maintained a Positive Social Atmosphere

Those elements associated with maintaining a positive social atmosphere in the learning situation, were reported as occurring "usually" by more than seven of ten of the online students.

- 78% reported the instructor in the evaluated course "usually" was accepting of students from different backgrounds; 4% said this "seldom or never" occurred.

- 71% felt the instructor was sensitive to the diverse needs and interests of students; 10% indicated this "seldom or never" was manifest.

- 80% reported the instructor was "usually" accessible;" 8% reported this as a "seldom or never" occurrence.

- 78% found the instructor "usually" easy to communicate with; 11% reported this as "seldom or never."

- 80% felt the instructor "usually" maintained an atmosphere conductive to learning; 7% reported this was "seldom or never" true.

The Instructor Encouraged Critical Thinking

More than seven of ten of these online students reported the course stimulated them to think and aroused their intellectual curiosity; for other items included in this category, the percentages reporting these practices "usually" occurred were somewhat lower.

- 57% indicated the instructor "usually" encouraged students to challenge conventional wisdom; 19% reported this "seldom or never" occurred.

- 66% felt the instructor encouraged students to express their ideas; 17% felt this "seldom or never" occurred.

- 80% felt the course "usually" stimulated students to think; 6% said this occurred "seldom or never."

- 72% reported the course "usually" stimulated their intellectual curiosity; 10% felt this occurred "seldom or never."

- Perhaps reflecting impediments to online interactions with other students, only 48% reported class discussion was an integral part of the course; 35% saw this as occurring "seldom or never."

- 68% reported the course "usually" provided various points of view; 10% said this occurred "seldom or never."

The Instructor Used Educational Technology Appropriately

For online students the use of technology is integral to the course. Students access course materials, respond to assignments, receive feedback on progress and interact with other learners and the course instructor electronically. The extent to which each of these various types of interactions occurred was reported by students.

- 80% reported the instructor "usually" used appropriate technology to enhance learning; 7% said this "seldom or never" occurred.

- 68% "usually" communicated with students individually; 11% did so "seldom or never."

- 73% reported that supplementary and/or support materials were available online; 9% reported this was "seldom or never" the case.

- 51% said the instructor "usually" encouraged student-to-student interaction; 27% did so "seldom or never."

- 70% reported that assignments required students to access Internet resources; 13% reported this was not the case.

The Instructor Used Collaborative Learning

The use of collaborative learning elements was not greatly supported by either online students or instructors, and reported usage of these practices was relatively low.

- 35% indicated the instructor used the results of group efforts to impact individual grades; a greater percentage (51%) reported this occurred "seldom or never."

- 33% said the instructor "usually" used peer evaluations as a component of grades; 54% reported this occurred "seldom or never."

- 43% reported the instructor used group projects to promote collaborative learning; 40% said this occurred "seldom or never."

- 40% said instructors "usually" encouraged students to work together; 40% "seldom or never" reported this practice.

- 36% reported the class helped to define course goals; 48% reported they did this seldom or not at all.

The Instructor Makes Material Relevant

As described above, more than 90% of the online students, (even more than their instructors) reported that making materials relevant to real world situations was important for quality teaching to occur. However, a somewhat lower percentage reported this usually occurred in the evaluated course.

- 78% indicated the instructor "always or usually" used real world examples; 7% reported this "seldom or never" occurred.

- 77% said the instructor employed practical applications in teaching; 7% reported this happened "seldom or never."

- 75% indicated the instructor "usually" helped students to apply knowledge to real world situations; 9% reported the instructor did so "seldom or never."

- 64% reported the instructor demonstrated how course content was relevant to achieving life goals; 16% indicated this was "seldom or never" the case.

Instructor Provides for Participant Interactions

Although student-to-instructor and student-to-student interactions in distance education differ from the face-to-face situations possible both inside and outside the traditional classroom, online interactions can also be direct, intense and readily carried out. More than half of these students reported that the course provided opportunities for interactions related to cours content. However, opportunities for social interactions not pertaining to coursework were uncommon.

- 58% of the online students reported that opportunities were provided for students to interact with other students on course content; 24% said this happened "seldom or never."

- 60% reported opportunities for student-to-teacher interactions dealing with course content occurred "usually;" 20% reported this occurred "seldom or never."

- Opportunities to interact socially with faculty were uncommon, with only 27% reporting that such interactions "usually" occurred; 57% indicated "seldom or never."

- Opportunities to interact socially with other students at least "usually" were reported by just 29% of the online students, with 54% indicating this occurred "seldom or never."

Summary

More than eight out of ten of these online students reported their instructors were knowledgeable, prepared, fair, and interested in their subject matter. These attributes were also among the pedagogical elements most likely to be described by both students and instructors as "important" for quality teaching. Elements related to developing critical thinking skills such as challenging conventional wisdom, providing various points of view and encouraging students to express their ideas were somewhat less frequently reported, but even here the majority of students indicated these were true of the instruction they received. More than 90% of these students had expressed the idea that their learning should be relevant to real world situations, and about three quarters indicated this was usually true in the class they evaluated. Fewer than half reported the instructor encouraged student-to-student interaction, discussions, and collaborative work with other students. Overall, however, for the majority of undergraduates, online instruction through the World Campus was seen as embracing elements of pedagogy believed by students and instructors to be important for quality teaching to occur.

Student Ratings of Teaching Quality

The survey also asked the World Campus students to rate the teaching quality of instruction they had received through Penn State's World Campus. Two different measures were obtained. First, students were asked to indicate as "excellent," "good," "fair," or "poor/very poor" the overall teaching quality in *all* of the World Campus courses in which they had been enrolled during the previous semester. Second, they were asked to evaluate as "excellent," "good," "fair," "poor/very poor" the quality of instruction they had experienced in the randomly selected course described in the previous section. The overall ratings provided information on students' general evaluation of the teaching quality of World Campus courses. Ratings of the specific course for which additional information was obtained allowed for analysis of the relationships between student evaluations and various course characteristics.

Overall, students evaluated their World Campus courses favorably, with 84% reporting their learning experiences were either "excellent" or "good."

- 37% rated the overall instruction they received in all courses they had taken the previous semester as "excellent,"

- 47% indicated it was "good,"

- 13% reported it was "fair,"

- Just 3% reported it was "poor or very poor".

For the specific course that had been randomly chosen for evaluation and analysis, responses were somewhat more varied.

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

Excellent ■
Good ■
Fair ■
Poor ■

3%
13%
37%
47%
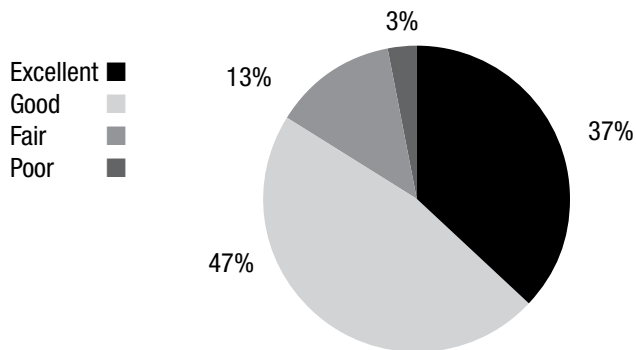
- 40% reported the instruction was "excellent,"
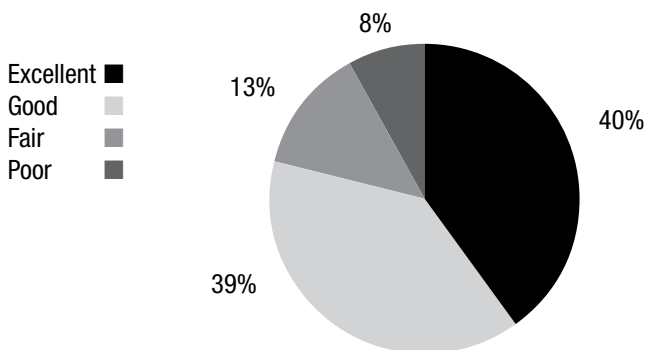- 39% rated it as "good,"
- 13% reported it was "fair"
- 8% indicated it was "poor or very poor."

Students felt strongly that their opinions about instructor quality should be given weight in evaluating the teaching effectiveness of individual instructors. Nearly half (49%) reported student opinions should be given "a great deal" of weight in such evaluations, and an additional 49% indicated their evaluations should receive at least "some" weight. Virtually no students (2%) said their evaluations should have very little or no weight in instructor evaluations. However, when instructors were asked the same question, they were less likely to feel that student ratings should be weighted so heavily. Just 16% of the instructors reported student evaluations should be given "a great deal" of weight, with 73% reporting they should have "some" weight; 11% reported they should receive "very little or no" weight.

Summary

Overall, more than eight out of ten students rated the overall instruction they received through the World Campus as "excellent" or "good" and nearly as many gave such positive ratings to the specific course they were asked to evaluate. The predominance of excellent and good ratings is commendable. However, it was also the case that nearly one in six students reported the overall quality of instruction in all courses and one in five rated the single course as less than "good." These findings speak to the need for maintaining and enhancing current efforts to promote high quality education.

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

Legend:
- Excellent ■ (black)
- Good ■ (light gray)
- Fair ■ (medium gray)
- Poor ■ (dark gray)

40%, 39%, 13%, 8%

Factors Related to Students' Ratings of Teaching Quality

What influences the ratings that students give to their classes? Certainly one would expect that the pedagogical practices of the instructor would be important in determining how positively students evaluated their experiences. However, other factors might also be associated with student course ratings – the size of the class, rank of the instructor, whether the class was required or an elective, credit load, grade received, degree of difficulty, amount of work, or even personal characteristics of the student such as age, gender, or previous educational experiences.

The relationships of these factors to the ratings given by students to the evaluated course were explored. These relationships were tested for statistical significance using contingency chi square analysis, and the .05 level to determine statistical significance. To compare the relative strengths of these relationships, a measure of the degree or 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 the relationship is.

Pedagogical Methods and Course Ratings

Relationships of student ratings of instructional quality in the evaluated course to the frequency with which the teacher demonstrated the following pedagogical practices were examined:

- 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.

- Instructor helped students apply knowledge to real world situations. *(relevance)*

- Opportunities were provided for students to interact with other students about course content (***student participant interaction***).

- Opportunities were provided for students to interact with faculty about course content (***faculty participant interaction***).

These items were selected from the total listing discussed above to represent the various dimensions described therein. Frequency of occurrence of each of these elements was coded: "always or usually," "sometimes," and "seldom or never."

In every case, as the frequency of usage of the behavior increased, the percentage of students evaluating the course as "excellent or good" increased and the percentage of evaluating it a "poor or very poor" declined significantly (Table 4). However, although all of these behaviors were positively related to students' ratings of course quality, the strength of the observed relationships (as measured by Cramér's V) varied.

The strongest relationships involved the instructor maintaining an atmosphere conducive to learning, fairness in evaluating student work, making the subject matter understandable, and being enthusiastic about teaching the course. Frequency of being well prepared, stimulating students to think, using appropriate technology, and helping students to apply knowledge to real world situations were also important in determining course evaluations. Of somewhat lesser importance were the items of using group work projects and providing opportunities for student-to-student and student-to-faculty interactions.

- 92% of the students reporting the instructor "always or usually" maintained an atmosphere conducive to learning rated the course as "excellent/good." When this occurred only "sometimes" the percentage of "excellent/good" ratings declined to 44%, and when it happened "seldom or never" only 4% rated the course as "excellent/good."

- 89% of students reporting that the instructor was "always or usually" fair in evaluating student work rated the course as "excellent/good;" Just 8% of those reporting that fairness occurred "seldom or never," reported the course was "excellent/good;" 74% indicated it was "poor/very poor."

- 91% of those students who indicated the instructor "always or usually" made the subject matter understandable rated the class as "excellent or good;" 2% 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 was 16%, with 58% rating it as "poor/very poor."

- 91% of those who indicated that the instructor was "always or usually" enthusiastic about teaching the course, reported the course was "excellent/good," only 2% rated it as "poor/very poor." When enthusiasm was "seldom/never" present only 2% rated the course as "excellent/good;" 60% said it was "poor/very poor."

- 89% of those who indicated that the instructor was at least "usually" well-prepared rated the course as "excellent or good." That figure declined to 16% for those who reported the instructor was "seldom or never" well-prepared.

- 91% of those who reported the instructor "always or usually" stimulated students to think rated the course as "excellent/good;" only 2% felt the course was "poor/very poor." In instances where students were "seldom or never" stimulated to think, only 6% rated the course highly; 58% gave it a "poor/very poor" rating.

- 91% who reported the instructor "usually or always" used appropriate technology rated the course as "excellent or good," while only 1% gave it a "poor/very poor" rating. However, for courses where students reported the instructor "seldom or never" used appropriate technology, 24% still rated

the course as "excellent/good", while 52% rated it as "poor/very poor."

- 91% of the students who said the instructor "always or usually" helped students to apply knowledge to real world situations rated the course as "excellent/good" and only 1% rated it as "poor/very poor." When instructors "seldom or never" helped student to apply their knowledge, 31% of their enrollees rated the course as "excellent/good" with 43% rating it as "poor/very poor.

- 86% of the students who reported the instructor demonstrated a thorough knowledge of the subject matter "always or usually," rated the course as "excellent/good;" 4% rated the course as "poor/very poor." Among the few students (n=23) who reported the instructor "seldom or never" demonstrated knowledge of the subject matter, the percentage rating the course, as "excellent/good" was just 4%.

- In classes which provided opportunities for student-to-faculty interaction "always or usually," 94% of the students rated the course as "excellent/good". For courses where such opportunities occurred "seldom or never," 49% rated the course as "excellent/good."

- When opportunities for student-to-student interaction on course content occurred at least "usually" 89% evaluated the course as "excellent/good." When this "seldom or never" occurred, still 61% rated it as "excellent/good."

- With increasing use of group work to promote learning, the percentages of "excellent/good" ratings increased from 69% for those courses where group projects "seldom or never" occurred to 89% for course where such projects occurred often.

Structural Characteristics of the Course and Course Ratings

Online education differs markedly from the traditional classroom in the physical setting in which learning takes place. Rather than teacher and students coming together in face-to-face situations that facilitate personal interactions and sharing, students in distance education are generally physically isolated from their learning peers, and much of the delivery of information is asynchronous so that time and place constraints present in the traditional classroom setting may not apply. Thus class size and meeting times are not likely to be relevant considerations to online students in evaluating course quality. However, other course characteristics may affect how students evaluate their online courses. Thus, *where* students access the course materials (at home, at work, in a public place, etc.), the total number of enrollees, methods of content presentation, the rank of the major instructor, the amount of choice the student has in taking the course, and the number of credits earned may influence how favorably students rate the course.

The following items included on the survey addressed some of these issues:

- From what location do you most frequently access your course? (place of residence vs. other)

- How many students were enrolled in the course? (fewer than 20, 20-49, 50 or more, don't know)

- How was the course content presented? (text? video? audio? Powerpoint? discussion board? synchronous video conferencing? blog?)

- What was the rank of the major instructor? (faculty/staff or other)?

- How much choice did you have in deciding to take this course? (none, selected from a list of courses, a free elective).

- How many credits did you earn for the course? (1or 2, 3, 4 or more)

Only two of these course characteristics were found to be significantly associated with differences in how students evaluated the quality of the course (Table 5).

- Most of the students in the sample accessed the course material from their private residences (94%), with a few (3%) doing so from their workplaces. The remainder reported they used fee-based (e.g. hotel) connections, free Wi-Fi in businesses, public spaces or other facilities (e.g. coffee shops, libraries, etc.). However, there were no significant differences in students' evaluations of the course depending upon the type of access used.

- 56% of the students reported the total enrollment in their World Campus class was less than 50 students, with 7% reporting the enrollment was greater than 50 students. The rest (37%) did not know the class enrollment. There were no significant differences among these size categories in regard to course ratings.

- Students were asked to indicate whether each of seven different means were used to present course content. Indicated usage rates were: text (93%), video (49%), audio (35%), Powerpoint (29%), discussion boards (62%), synchronous conferencing such as Skype, Connect Pro, Blackboard Collaborate (8%), and blogs (4%). Most students reported that more than one method of presentation was used. Type of presentation was not significantly related to how favorably students evaluated the course except in the case of use of discussion boards, Those who reported discussion board usage were more likely to give the course an "excellent/good" rating than were those who did not report such usage (85% vs. 70%) and less likely to evaluate the course as "poor/ very poor" (5% vs. 11%).

- Almost all of the evaluated courses were taught by a faculty or staff member (84%), with 7% taught by others such as graduate students, community members, or teaching assistants. In 9% of the cases, the student did not know the status of the instructor. The teacher's status was not significantly related to how the course was rated.

- Nearly half (47%) of the students were enrolled in a course that was required for their degree, and for an additional 42%, the course was selected from a list of alternative required offerings. Just 11% were taking the class as a free elective. However, amount of choice was significantly related to ratings were most likely to receive "excellent/good" ratings (85%), followed by those courses chosen from a list of required alternatives (80%), with specifically required courses the least likely (77%) to be so highly rated.

- 88% of the students reported the course was a three-credit offering; for 9% the course was given for more than 3 credits, and, for the remainder, fewer than 3 credits were given. Number of credits was not statistically related to how favorably the course was rated.

Student Characteristics and Rating

Do the personal characteristics of the students themselves explain differences in how they rated the quality of the evaluated course? The survey provided information on the following student characteristics:

- Student's gender (male vs. female)

- Age (18-25, 26-29, 30-39, 40-49, 50 years or older)

- Student status (working on a degree vs. taking the course as a non-degree student).

- All University grade point average (< 2.50, 2.50-2.99, 3.00-3.49, 3.50 or over).

- Place of residence (Pennsylvania vs. outside of Pennsylvania)

- Number of previous World Campus courses taken (2 or fewer, 3-5, 6-8, more than 8).

Respondents to the survey were disproportionately female (60%), and 30 years of age or older (71%). Almost all (88%) were degree candidates, and 77% had taken 6 or more previous credits through the World Campus. Nearly half (49%) were Pennsylvania residents.

As in the previous analysis, the relationships of course rating to these personal characteristics were explored and tested for statistical significance (Table 6). None of these relationships was statistically significant, suggesting that these factors had little or no effect on how favorably students evaluated their current World Campus learning experiences.

Grades, Work, Difficulty, Learning and Course Ratings

It seemed likely that students who received high grades would tend to view the course positively. Other outcome characteristics might also be expected to affect how positively students rated their experiences. Do "low work" or "easy" courses tend to be rated higher than those involving higher levels of work and/or greater difficulty? How important to their course evaluations are students' perceptions of how much they "learned" in the class? These questions were addressed by analyzing the relationships of the following factors to reported rating of course quality.

- Grade received in the course (A, A-; B+, B, B-; C+ or lower).

- Students were asked to rate the evaluated course relative to other courses they had taken on a scale of 1 to 5 where 1= much lower and 5=much higher in regard to:

  (1) amount of work,
  (2) degree of difficulty, and
  (3) perceived amount learned

For all three of these evaluations there were only a small number of "1" ratings, so codes 1 and 2 were combined in the analysis that follows.

Course ratings were positively and significantly related to the grade received in the class. Those receiving grades above a C+ were more likely than those who received a C+ or below to rate the course as "excellent/good" (Table 7).

- 83% of those receiving grades of A or A- or B+, B, or B- grades rated the course as "excellent/good." Just 5% of the former and 7% of the latter evaluated it as "poor/very poor."

- 61% of those who received grades of C+ or lower rated the course as "excellent/good;" 15% rated it as "poor/very poor."

It was expected that higher levels of work would be negatively related to course rating. However, in the sample, the reverse was true, with the percentage of "excellent/good" ratings increasing with increasing work load – from 62% to 77%, to 82%, to 85%. Although this relationship failed to reach statistical significance at the .05 level, it did approach significance (p=.061). Clearly there was no evidence here that higher workloads were associated with lower course evaluations.

The relative difficulty of a course was significantly related to rating of instructional quality, but the relationship was not simple and linear. Courses viewed as being less difficult or the same as other classes and those which were much more difficult had somewhat lower student ratings than did those which were rated only somewhat higher.

- 63% of those with lower or much lower difficulty had the lowest percentage of "excellent/good" ratings, and the highest percentage of "poor/very poor" evaluations (21%).

- 79% of those classes described as neither more nor less difficult (code 3 on the scale) and 78% of the courses described as much higher in difficulty were rated as "excellent/good."

- However, for courses rated as only somewhat higher in difficulty (code 4), 85% of the sample members gave "excellent/good" ratings.

When asked to indicate how much they felt they had learned in the class, there was a strong direct relationship between perceived learning and course evaluation.

- 99% of those students reporting they had learned much more (code 5) in the course relative to other courses they had taken rated the course as "excellent/good."

- Of those who gave their learning relative to other courses a code 4 on the scale, 93% rated the course quality as "excellent/good."

- However, only 21% of the students who reported they learned less relative to other courses gave "excellent/good" ratings to the evaluated course.

Relationship of Course Difficulty to Course Rating.
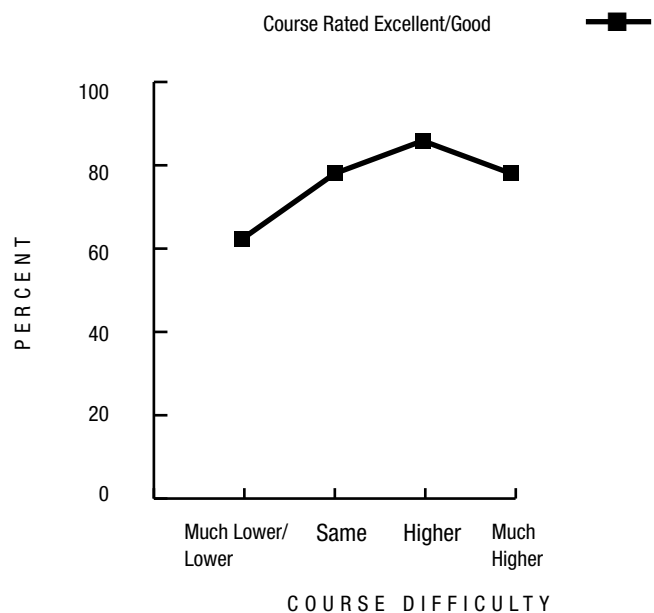
**Relationship of Amount Learned to Course Rating.**

Summary

This analysis explored the importance of: instructors' use of various pedagogical practices, selected structural course characteristics, student attributes, grade received and student perceptions of the amount of work required, degree of course difficulty and amount learned to how favorably students rated the quality of their courses.

The teaching practices most likely to be associated with "excellent/good" ratings were the frequency with which the instructor made the subject matter understandable, maintained an atmosphere conducive to learning, was fair in evaluating student work, and was enthusiastic in their teaching. Also important were that he/she was well prepared, stimulated students to think, and used appropriate technology. The use of group work, and opportunities for student-student and student-faculty interaction were less important conditions related to course ratings.

Structural characteristics of the course such as where the student accessed the course materials (at home or elsewhere), total enrollment in the class, the number of credits, status of the major instructor, and the use of various modes of presentation (text, video, audio, PowerPoint, video conferencing, etc.) did not significantly relate to how students rated the course. However, courses using discussion boards were significantly more likely to receive "excellent/good" course ratings than were those where discussion boards were not used. Elective courses were evaluated most favorable, followed by those where the student had some choice in selecting from a list of required offerings, with required courses receiving the lowest ratings.

There was no evidence that student characteristics (gender, age, degree status, all-University GPA, or number of previous World Campus courses taken) were related to how students rated a course.

The relationship of students' perceptions of the workload relative to other classes they had taken was not statistically significant, but the sample data suggested that increasing workload was positively (not negatively) related to how favorably students rated the course. Ratings were lowest when the degree of difficulty was low. As perceived degree of difficulty increased, course rating increased until the difficulty rating was much higher than other courses, where the percentage of students evaluating the course as "excellent/good" declined somewhat. The grade a student received in the course was positively associated with how
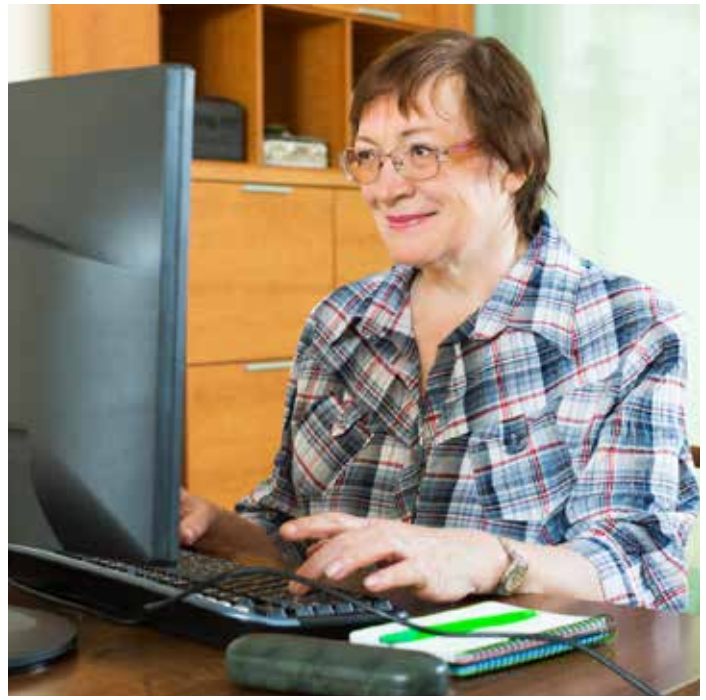
a student rated the quality of instruction in the course. However, the strength of these relationships were much lower than the positive relationship between how much a student felt he/she had learned relative to other classes. The amount of perceived learning was by far the most important of these characteristics in affecting the ratings students gave to a course.

Comparing the World Campus Findings with those from University Park and the Commonwealth Campuses

In the World Campus setting, the absence of a physical classroom in which face-to-face contact between teachers and students and among students occurs may affect both the means for content delivery and the nature and type of interaction among participants. To what extent do World Campus students and instructors differ from their counterparts in more traditional settings in regard to their perceptions of the instruction they value and receive. The availability of data from recent surveys of students and instructors at University Park and at the 19 Commonwealth Campuses provided information for assessing the nature and extent of some of these possible differences. Specifically, this analysis addressed the following questions:

• How, if at all, do the views of World Campus students and instructors differ from those of students and instructors at Penn State's University Park campus and those at the University's 19 Com-

monwealth Campuses in regard to the importance they place on various pedagogical practices?

- How, if at all, do students at these three types of campuses differ in their perceptions of their instructors' use of various pedagogical practices?

- How, if at all, do the perceptions of World Campus students differ from those at University Park and at the Commonwealth Campuses in regard to the quality of the instruction they receive?

During spring semester 2011, 1,837 students and 1,537 instructors at University Park responded to an online survey similar to that described in the current report.[2] Then, in spring semester 2012, 1,566 students and 921 instructors at the 19 Commonwealth Campuses responded to a similar survey.[3] The reader is encouraged to compare the specific findings of those studies with the present report.

Not all of the questions on surveys at the three types of campuses were identical. Thus, for example, neither the University Park nor the Commonwealth Campus studies included items dealing with Relevance and Participant Interaction. However, many of the items were comparable, allowing for some general comparisons and conclusions across the three types of study sites. Given the large number of cases involved in these comparisons, even very small differences in responses were "statistically significant." As a result, this presentation focuses on the larger (and more interpretable) differences among the three types of study sites.

Importance of Various Elements for Teaching Quality

In general, the responses of World Campus students and instructors differed very little from those at University Park and the Commonwealth Campuses in how they rated the importance of various pedagogical practices for instructional quality. World Campus students were somewhat more likely than those in resident instruction settings to emphasize the importance of course organization, fairness, access to the instructor, and appropriate use of technology. They were less likely than their counterparts at University

Park and the Commonwealth Campuses to report that discussion and student-to-student contact and cooperation were important course characteristics. The largest differences in student views were in regard to the following:

- 95% of the World Campus students, compared to 88% of the University Park and 89% of the Commonwealth Campus students indicated it was important for the course content to be well developed.

- 90% of the World Campus students felt it was important for the instructor to be impartial in assigning grades; 83% of the University Park and 82% of the Commonwealth Campus students answered in this way.

- 94% of the World Campus but just 87% of the University Park and 88% of the Commonwealth Campus students deemed it to be important that grades were based on students' understanding of the materials stressed in the course.

- 95% of the World Campus compared to 88% of the University Park and 91% of the Commonwealth Campus students reported that valuable feedback on graded materials and exams was important.

- World Campus students were less likely to feel it was important for the instructor to have a genuine interest in students as individuals (73%) than did either University Park (74%) or Commonwealth Campus students (78%).

- 91% of the World Campus students felt that instructor accessibility was important; 75% of the University Park and 80% of the Commonwealth Campus students rated out of class accessibility as important.

- World Campus students were less likely (41%) to report it was important for class discussion to be an integral part of the class than were University Park (57%) or Commonwealth Campus (70%) students.

- World Campus students were less likely than University Park or Commonwealth Campus students to feel it was important for the instructor to encourage on-line student-to-student interaction (34% for the World Campus students; 59% of the University Park students and 63% of the Commonwealth Campus students).

2   Willits, F. K., J. G. Beierlein , B.K. Wade, M.A. Brennan, J.M. Dillon, L.C. Ragan, 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 .

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

- World Campus students (27%) were less likely than their University Park and Commonwealth Campus counterparts to endorse the importance of using group projects to promote learning (40% and 49% for the University Park and Commonwealth Campus students, respectively).

- World Campus students were also less likely than University Park or Commonwealth Campus students to rate as important encouraging students to work together (30% vs. 48% and 52%), having the class define course goals (34% vs. 57% and 62%) , and having the results of group efforts impact on individual grades (22% vs. 30% and 39%).

- World Campus students were more likely than their University Park or Commonwealth Campus counterparts to report it was important for the instructor to use appropriate technology to enhance learning (90% vs. 63% and 67%, respectively).

There were also some differences between World Campus instructors and instructors at University Park in the percentages rating various pedagogical practices as important. World Campus teachers were somewhat less likely than their resident education counterparts to feel it was important to emphasize critical thinking skills and to encourage class discussions and group projects.. They were more likely to underscore the importance of the use of technology for content presentation and communication.

- Just 62% of the World Campus instructors compared with 72% of the University Park and 73% of the Commonwealth Campus instructors felt it was important to encourage students to challenge conventional wisdom.

- 71% of the World Campus, 78% and 83% of the University Park and Commonwealth Campus teachers, respectively reported it was important for the instructor to provide various points of view.

- 93% of the World Campus instructors, compared with 98% of the instructors at University Park and 99% of those at the Commonwealth Campuses reported it was important for the instructor to stimulate students to think.

- 61% of the World Campus compared to 72% of the University Park and 77% of the Commonwealth Campus faculty said it was important to include class discussions as an integral part of the course.

- World Campus instructors were less likely than University Park or Commonwealth Campus peers to endorse the importance of encouraging students to work together (39% vs. 46% and 57%).

- World Campus instructors were more likely than their counterparts at University Park or the Commonwealth Campuses to report it was important to encourage online student-to-student interaction (57% vs. 32% and 47%) and to communicate with students electronically (72% vs. 54% and 69%).

Instructors' Use of Teaching Quality Elements

When asked about how often these various pedagogical practices actually occurred in the course chosen for evaluation World Campus students were slightly more likely than their University Park or Commonwealth Campus peers to report the course content was clear, well organized, and interesting. In most cases, these practices were most likely to be reported by World Campus students, followed closely by those at the Commonwealth Campuses, with University Park students somewhat less likely to indicate these occurred. The greatest differences here were:

- For 80% of the World Campus instructors the presentation of materials was seen as usually or always well-organized, compared to 78% of those on the Commonwealth Campuses, and 74% of those at University Park.

- 78% of the World Campus instructors compared with 75% of those at the Commonwealth Campuses and 70% at University Park usually or always made the subject matter understandable.

- 75% of students in the World Campus, 73% of those at the Commonwealth Campuses and 68% at University Park reported the instructor at least usually presented various ideas with clarity.

- 72% of the World Campus instructors, compared to 66% of those at the Commonwealth Campuses and 60% at University Park were seen as at least usually making the material interesting.

World Campus students were also more likely than those at the Commonwealth Campuses or at University Park to report the instructor was usually or always fair. Again, the differences were small, with University Park students generally the least likely to report fairness.

- 84% of the World Campus students, compared with

81% of those at the Commonwealth Campuses and 78% of those at University Park reported that methods of evaluating student work were fair.

- 84% of the World Campus students, but just 76% of those at the Commonwealth Campuses and 78% of those at University Park reported the instructor was impartial in assigning grades.

- World Campus students (78%) were more likely than those at the Commonwealth Campuses (76%) or University Park (62%) to report that feedback on exams and other graded material was valuable.

- 86% of the World Campus, compared to 82% of students at the Commonwealth Campuses and 77% of those at University Park reported grades were based on students' understanding of the materials stressed in the course.

- 87% of the World Campus, 83% of Commonwealth Campus, and 80% of University Park students reported the instructor usually or always clearly defined student responsibilities in the course.

World Campus instructors were somewhat less likely to be seen as usually enjoying their teaching than were those from the other campus settings. However, they were no less enthusiastic in their presentations and no less likely to demonstrate the importance of their subject matter.

- 77% of the World Campus instructors compared with 81% of those at University Park and 83% of the Commonwealth Campus instructors were seen as at least usually enjoying teaching.

- Regardless of campus location, about 80% of the students reported the instructor seemed enthusiastic about teaching the course.

- 75% of World Campus and Commonwealth campus students reported the instructor demonstrated the importance of the subject matter, and nearly as many (73%) of those on the University Park Campus did so.

Although World Campus instructors were somewhat less likely than their counterparts at the Commonwealth Campuses and at University Park to report that it was important for instructors to encourage critical thinking by stimulating students to think, by providing various points of view, and by encouraging intellectu-

al curiosity, their students were somewhat *more* likely than those at the other campus locations to report the instructors usually did these things.

- 80% of the World Campus students indicated the instructor frequently stimulated students to think; 75% of the Commonwealth Campus students and 70% of those at University Park report the instructor did this.

- 68% of both World Campus and Commonwealth Campus students, but just 62% of those at University Park reported the instructor usually or always presented various points of view.

- 72% of the World Campus and 71% of those at the Commonwealth Campuses but just 62% of those at University Park were seen as usually stimulating students' intellectual curiosity.

Collaborative learning in which instructors encourage students to work together and to help define course goals was reported as usually or always occurring by fewer World Campus students than those at the Commonwealth Campuses or University Park. However, in regard to other collaborative learning practices, the percentages of World Campus students indicating these were used frequently by the instructor were greater than reported by University Park students, but somewhat less than reported by Commonwealth Campus students.
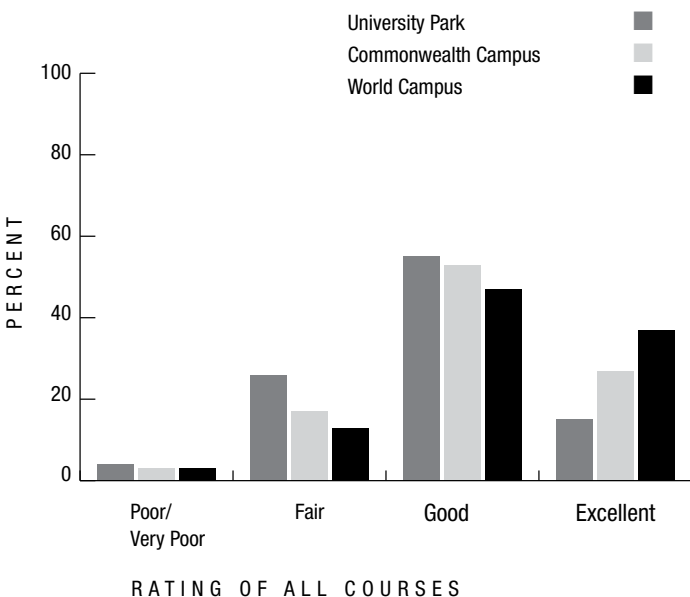
- World Campus instructors were the least likely to be seen as encouraging students to work together (40% vs. 47% for University Park, and 51% for the Commonwealth Campuses)

- Just 36% of the World Campus students reported the instructor had the class help define course goals. Corresponding figures for University Park and the Commonwealth Campuses were 48% and 57%, respectively.

- 43% of the World Campus students reported the instructor used group projects to promote learning; for University Park and Commonwealth Campus students, the figures were 38% and 51% respectively.

- 33% of the World Campus, 26% of University Park, and 37% of Commonwealth Campus instructors were viewed as using peer evaluation as a component of grades.

- Instructor's use of the results of group efforts to impact on individual grades was reported by 35% of the World Campus, 33% of the University Park, and 41% of the Commonwealth Campus students.

Student Ratings of Teaching Quality

Asked to indicate the overall quality of the instruction they had experienced the previous semester, most students, regardless of where they were enrolled, reported that instruction was "excellent" or "good". However, these teaching ratings varied by location. World Campus students were the most likely to rate the overall quality of instruction as "excellent" or "good,"

followed by those at the Commonwealth Campuses, with University Park students least likely to give such high ratings to the teaching quality they experienced.

- 37% of the World Campus students reported the overall instruction they received during the previous semester was "excellent" and an additional 47% rated it as "good." Just 13% reported it was "fair" and 3% said it was "poor or very poor."

- 27% of the Commonwealth Campus students rated their overall instruction as "excellent;" 53% reported it was "good," 17% gave it "fair" ratings, and 3% reported it was "poor/very poor."

- 15% of the University Park students gave an "excellent" rating to the quality of instruction they received during the previous semester; 55% reported it was "good;" 26% rated it as "fair;" and 4% reported it was "poor/very poor."

World Campus students were more likely than University Park students, and similar to those at the Commonwealth Campuses in their ratings of the single (randomly selected) course evaluated in the current studies.

- 40% of the World Campus students rated this course as "excellent" and an additional 39% gave it a" good" rating; 13% rated it as "fair" and 8% evaluated it as "poor/very poor."

Student ratings of overall quality of ALL courses taken last semester: World Campus, Commonwealth Campuses, and University Park compared.
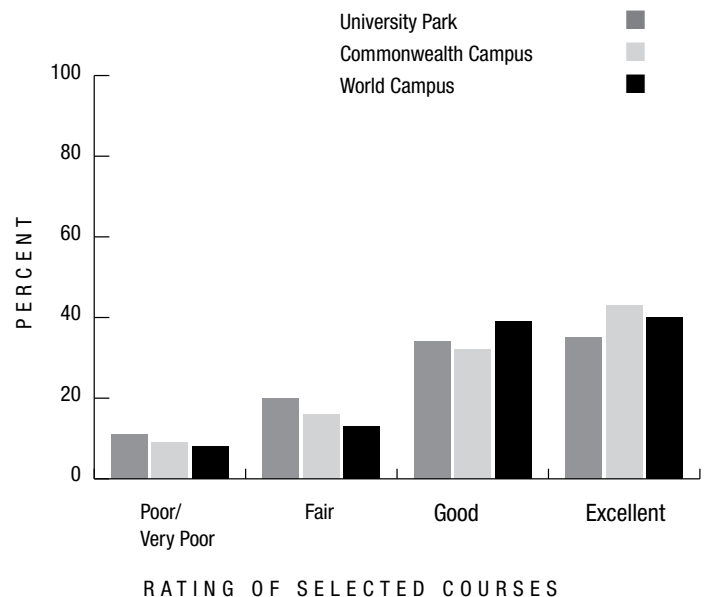

RATING OF ALL COURSES

Student ratings of the teaching quality in a single randomly selected course: World Campus, Commonwealth Campuses, and University Park compared.

RATING OF SELECTED COURSES

- 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 the course "poor/very poor" ratings.

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

Summary

World Campus instructors overwhelmingly rated as "important" the same elements of pedagogy as did instructors at University Park and the Commonwealth Campuses – clarity, organization, fairness, and enthusiasm. Perhaps reflecting the limited structured personal contacts with students, they were even more likely than their resident education peers to report that instructor accessibility was important. However, they were less likely to rate as important the challenging of conventional wisdom, encouraging students to express their own views, stimulating intellectual curiosity, providing various points of view, and encouraging discussion and collaboration among enrollees. World Campus students were less likely than their resident education counterparts to rate student-to-student interaction, student participation in discussion groups, and student collaboration on learning projects as important.

Perhaps the lower emphasis on peer interaction and the development of critical thinking skills reflect a perception that World Campus learners work alone, have little in common with one another, and feel such interactions with other students are generally unworkable. While these may be practical constraints, the increasing uses of social media by all segments of the population have shown that online interactions can and often do develop into virtual communities which share discovery, discourse, and learning. Perhaps rather than assuming that these interactions are unworkable or unwanted, and hence rationalizing they are of less importance, it may be desirable for instructors to take direct and positive steps to encourage the formation of such virtual communities among enrollees as part of the distance education experience. In doing so they may contribute to enhancing student learning, broadening horizons, and, perhaps serve to enhance critical thinking skills. Moreover, the use of virtual group work is a growing part of business and government decision-making. Despite student reluctance to embrace it, developing skills in this area, it is an important part of their educational experience. Research and practical experience in distance education may suggest viable means for accomplishing these goals.

It was also noteworthy that, despite widespread belief among educators that class discussions and student interactions increase student learning and foster critical thinking skills, these World Campus students, more than their University Park and Commonwealth Campus peers, reported the instructor did stimulate their intellectual curiosity and encouraged them to think broadly about issues. More generally, nearly 80% rated the overall quality of instruction they received as excellent or good – a percentage somewhat greater than the same rating by students at University Park and the Commonwealth Campuses.

Conclusions

Throughout its history, Penn State has sought means to provide educational opportunities to the public, not only through resident programs for students at University Park and its outlying Commonwealth Campuses, but also through correspondence courses, radio and television broadcasts, short courses, and outreach programming/consultation directed to special interest groups and the general public. During the last few decades, rapid technological advancements in communication and educational knowledge have led to the widespread development of various forms of online educational efforts. Included in these developments has been the offering of for-credit college/university-level courses and degree programs.

Nationwide, the growth in such offerings has been spectacular, as higher educational institutions have sought to make online instruction a strategic part of their programing efforts. Between 2002 and 2012, the percentage of administrators reporting that "Online education is critical to the long-term strategy of my institution" grew from less than half to nearly 70% and students taking at least one online course rose from 1.6 million to more than 6.7 million.[4] Since 2012, these figures have continued to increase. Certainly, there is an increasing need to augment citizens' skills in this area if the U.S. is to remain competitive in a rapidly changing global society.

This report focused on assessing the quality of instruction as reported by teachers and students in

4   Allen, Ellen L & Jeff Seaman 2013. *Changing Course: Ten years of Tracking Online Education in the United States*. http://www.onlinelearningsurvey.com/reports/changingcourse.pdf

one segment of Penn State's online education initiative — students registered via the World Campus in online bachelor's degree programs, and their instructors. As such, it does not consider the views of students enrolled in one or more online courses as part of their resident education programs. It also does not include participants in Massive Open Online Courses (MOOCS), some of which have recently been developed by Penn State. These latter offerings may enroll tens of thousands of participants and cannot generally be applied to meeting bachelor-degree requirements.

Penn State has been a national leader in the development of totally online baccalaureate and post-graduate degree programs, currently offering more than twenty such majors, and enrolling more than 16,000 students. In a recent national assessment of program quality by *US News and World Report*, Penn State's World Campus was tied for second place ranking nationwide of all such programs based on measures of student engagement, faculty credentials, peer reputation, and student services/technology.[5]

Despite the rush to engage in online educational programs at Penn State and elsewhere, many observers have questioned whether the quality of instruction offered is comparable to that obtained in the resident education environment. The totality of a "traditional college experience" that involves new relationships with other often like-minded people as friends, roommates, and study partners, extra-curricular opportunities to learn outside the classroom, face-to-face interaction with teachers, and a sense of belongingness to a campus community, are likely to be limited or absent in online instruction. Moreover, research has shown that the public, including employers, may tend to attach lesser value to online degrees than to traditional residence college/university degrees.[6]

However, at least in regard to student and instructor perceptions of teaching quality, the current study suggests that online courses equal or exceed the perceptions of teaching quality found in the resident instruction setting. Although clearly more research is needed to adequately evaluate the pros and cons of online instruction, it seems clear that such instruction is here to stay and that teachers and learners who engage in it report satisfaction with the experience. Online learning can contribute to serving the needs of today's generation of learners for "life-long learning" in order to keep pace with and meet the demands of today's workplace. Increasingly, higher education is no longer an isolated process of acquiring knowledge in preparation for life and work, but an ongoing process of first preparing and then maintaining knowledge throughout the lifespan.[7] Online instruction clearly can contribute to serving these needs.

This study brings to light the potential of online learning to serve the needs of students from a wide variety of backgrounds to pursue their educational goals with increased flexibility and convenience while maintaining excellence in quality. From the lens of the adult learner studying via the World Campus, the characteristics they desire in their learning experience reflect their status and life circumstances. These adult learners expect and value:

- Well designed, structurally organized, and efficiently delivered course instruction,

- Relevance of course content and instruction to their life and work,

- Appropriateness in the use of team/group course work and student-to-student interactions,

- Opportunity to contribute to course direction and content as well as recognition of the value of their life experiences,

These findings reinforce what is known and applied to the design and delivery of learning for adult learners. As the population of these learners increases, online learning becomes an increasing viable and valuable method of obtaining the credentials necessary of the improvement of the quality of life for many individuals. It is heartening to reveal the perceptions of quality of courses and instruction delivered via the World Campus. In the 14 years of operation, the World Campus has continued to learn from and contribute to the practice of excellence in online education. This research reveals there is more to learn and improvements to make in the quest for quality instruction in all delivery formats.

The importance of what is learned through the design, development and delivery of quality online education goes beyond extending access to learning

5   US News & World Report Best Online Bachelor's Programs. http://www.usnews.com/education/online-education/bachelors/rankings?int=a39209

6   Gallup Poll," In U.S, Online Education Rated Best for Value and Options," October 15, 2113. http://www.gallup.com/poll/165425/online-education-rated-best-value-options.aspx

7   Michael G. & Greg Kearsley. 2012. *Distance Education: A Systems View of Online Learning*. 3rd edition. Belmont, CA: Wadsworth Cengagee Learning.

to an expanded population. Online instruction, the related technologies and pedagogical advancements, also have the potential to significantly enrich teaching and learning in all educational settings. Continuing to explore and refine what is known about the teaching and learning process is at the heart of what education seeks to do: change the lives of the participants through knowledge, application, and a broadening of personal understanding. These results further validate the importance of Penn State's Land Grant Mission. Abraham Lincoln summarized the mission this way when he signed the Morrill act on July 2, 1862:

> *The land grant university system is being built on the behalf of the people, who have invested in these public universities their hopes, their support and their confidence.*

Appendix

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

Variables		World Campus (N=2,861) %	University Park Campus (N=36,724) %	Commonwealth Campus (N=29,278) %
Gender				
Male		46.1	54.3	54.1
Female		53.9	45.7	45.9
	Total	100.0	100.0	100.0
Class Standing				
Freshman (<30 credits)		44.6	10.5	28.5
Sophomore (30.5-60 credits)		29.5	20.1	31.6
Junior (60.5-90 credits)		14.5	22.7	21.2
Senior (more than 90 credits)		11.48	46.8	18.6
	Total	100.0	100.0	100.0
Age				
Less than 20 years		0.5	22.7	32.2
20-21		2.6	45.1	32.4
22 years and older		96.9	32.3	35.4
	Total	100.0	100.0	100.0

Table 2. Percentages of World Campus students and instructors rating as "Important" various pedagogical practices.

Items	Students (N=644)[a]	Instructors (N=125)
Knowledgeable/Prepared	---------------%----------------	
Instructor demonstrates a thorough knowledge of the subject matter.	96.1	95.2
Instructor is well prepared.	97.0	96.0
Presentation of materials is well-organized.	95.6	97.6
The course content is well developed.	95.3	96.0
Instructor uses class time wisely.	89.2	87.0
Clear/Understandable		
Instructor makes the subject matter understandable.	95.8	94.4
Instructor explains material clearly.	96.3	99.2
Instructor presents various ideas with clarity.	92.2	93.6
Fair		
Methods of evaluating student work are fair.	95.6	96.8
Instructor is impartial in assigning grades.*	89.5	96.8
Grades are based on students' understanding of the materials stressed in the course.	94.2	96.0
Instructor clearly defines student responsibilities in the course.	94.8	96.0
Feedback on exams and other graded material is valuable.	95.1	94.4
Enthusiastic/Interested		
Instructor seems to enjoy teaching.**	79.9	89.6
Instructor is enthusiastic about teaching the course.	89.6	92.8
Instructor is genuinely interested in the subject matter.	84.8	85.5
Instructor has a genuine interest in students as individuals.	72.8	82.4
Instructor makes material interesting.	89.5	84.7
Instructor demonstrates the importance of the subject matter.	82.1	87.2
Positive Social Atmosphere		
Instructor is accepting of students from different backgrounds.*	85.0	91.9
Instructor is sensitive to the diverse needs and interests of students.*	77.7	86.3
Instructor is accessible to students.	90.7	96.0
Instructor is easy to communicate with.	92.0	96.8
Instructor maintains a classroom conducive to learning.	90.1	96.0
Critical Thinking		
Instructor encourages students to challenge conventional wisdom.**	73.7	62.1
Instructor encourages students to express their ideas.	76.2	82.3
Instructor stimulates students to think.	92.1	92.8
Instructor stimulates intellectual curiosity.	86.1	88.0
Class discussion is an integral part of the course.***	40.7	61.3
Instructor provides various points of view.	83.5	71.0
Technology		
Instructor uses technology appropriately to enhance learning.	89.7	87.7
Instructor communicates individually with students.	73.6	71.6
Supplementary/support materials are available on-line for student use.	80.5	84.0
Instructor encourages student-to-student interaction.**	33.9	56.8
Assignments require students to access Internet resources.	47.4	56.5
Collaborative Learning		
The results of group effort impacts individual grades.*	22.0	25.4
Peer evaluation is a component of grades.	19.5	16.8
Instructor uses group projects to promote learning.***	27.3	41.1
Students are encouraged to work together.*	29.5	38.7
The class helps define course goals.***	34.3	11.3
Relevancy		
Instructor uses real world examples in teaching.	93.3	87.9
Instructor employs practical applications in teaching. ***	92.0	77.9
Instructor helps student apply knowledge to real world situations.	90.7	86.0
Instructor demonstrates how content is relevant to achieving life goals. ***	77.9	58.5
Participant Interactions		
Opportunities are provided for students to interact with other students about course content.***	41.5	70.2
Opportunities are provided for students to interact with faculty about course content.***	72.0	85.5
Opportunities are provided for students to interact socially with faculty.**	27.3	16.5
Opportunities are provided for students to interact socially with students.*	27.3	19.7

[a] Number of cases varies due to the failure of some respondents to answer individual questions.

*Significant .05,**Significant .01, ***Significant .001

Table 3. Frequency of occurrence of specific pedagogical practices reported by World Campus students. (N=644)[a].

Instructor…	Frequency of Occurrence (%)		
	Always/Usually	Sometimes	Seldom/Never
Knowledgeable/Prepared			
Demonstrated knowledge of subject.	88.5	7.8	3.7
Was well prepared.	84.4	9.5	6.1
Presentation was well organized.	80.3	12.9	6.8
Well-developed course content.	78.3	12.8	8.9
Used instruction time wisely.	77.6	16.3	6.1
Clear/Understandable			
Made subject matter understandable.	78.0	12.8	9.2
Course cntent was presented clearly.	81.3	13.7	5.0
Provided various ideas with clarity.	75.2	16.7	8.1
Fair			
Methods of evaluation were fair.	83.5	10.5	6.1
Impartial in assigning grades.	83.7	11.7	4.6
Based grades on materials stressed.	86.4	9.5	4.1
Clearly defined student responsibilities.	86.6	9.8	3.6
Gave valuable feedback on exams, etc.	78.3	10.9	10.8
Enthusiastic/Interested			
Seemed to enjoy teaching.	77.3	13.9	8.8
Was enthusiastic about teaching the course.	80.0	13.1	6.9
Was genuinely interested in subject matter	83.3	11.8	4.9
Had genuine interest in students as individuals.	66.4	20.2	13.4
Made material interesting.	71.5	18.5	10.0
Demonstrated importance of subject.	74.6	10.7	8.6
Positive Social Atmosphere			
Was accepting of students from different backgrounds.	78.3	17.7	3.9
Was sensitive to student needs/interests.	71.1	18.9	10.0
Was accessible to students.	80.4	11.5	8.1
Was easy to communicate with.	77.7	11.7	10.6
Instructor maintained an atmosphere conducive to learning.	80.3	12.4	7.3
Critical Thinking			
Challenged conventional wisdom.	57.4	24.1	18.5
Encouraged students to express ideas.	65.6	17.3	17.1
Stimulated students to think.	80.1	14.2	5.8
Stimulated intellectual curiosity.	72.0	18.2	9.8
Used class discussion as integral to course.	47.8	17.6	34.6
Provided various points of view.	67.7	22.8	9.5
Technology			
Used appropriate technology to enhance learning.	79.8	12.8	7.4
Communicated with students individually.	67.8	20.3	11.3
Supplemental and/or support materials were available.	73.4	18.0	8.6
Encouraged student-to-student interaction	50.9	22.3	26.9
Assignments required students to access Internet resources.	69.5	17.6	12.9
Collaborative Learning			
Group effort impacted grades.	35.1	13.7	51.2
Used peer evaluation as grade component	33.3	12.8	53.9
Used group projects to promote learning.	43.1	16.8	40.1
Encouraged students to work together.	40.4	20.0	39.6
Had class help to define goals.	35.6	16.6	47.8
Relevancy			
Instructor uses real world examples in teaching.	78.2	14.4	7.4
Instructor employs practical applications in teaching.	76.6	16.3	7.1
Instructor helps student apply knowledge to real world situations.	74.5	16.1	9.4
Instructor demonstrates how content is relevant to achieving life goals.	64.2	20.1	15.7
Participant Interactions			
Opportunities are provided for students to interact with other students about course content.	58.0	17.6	24.4
Opportunities are provided for students to interact with faculty about course content.	60.4	20.1	19.5
Opportunities are provided for students to interact socially with faculty.	27.2	16.2	56.5
Opportunities are provided for students to interact socially with students.	28.7	17.8	53.5

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

Table 4. Relationships of the frequency of occurrence of selected pedagogical elements to course rating by World 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					.401***
Always/Usually	565	86.4	9.6	4.1	
Sometimes	50	34.0	46.0	20.0	
Seldom/Never	23	4.3	30.4	65.2	
Well-prepared					.472***
Always/Usually	536	88.8	9.1	2.1	
Sometimes	60	35.0	43.3	21.7	
Seldom/Never	38	15.8	21.1	63.2	
Makes subject matter understandable					.506***
Always/Usually	497	91.3	7.2	1.4	
Sometimes	82	51.2	39.0	9.8	
Seldom/Never	57	15.8	26.3	57.9	
Enthusiastic			.		.499***
Always/Usually	508	91.3	6.5	2.2	
Sometimes	83	47.0	39.8	13.3	
Seldom/Never	43	2.3	37.2	60.5	
Fair in evaluating work					.516***
Always/Usually	531	89.3	9.2	1.5	
Sometimes	67	43.3	38.8	17.9	
Seldom/Never	38	7.9	18.4	73.7	
Stimulates students to think					.465***
Always/Usually	511	90.8	7.4	1.8	
Sometimes	91	44.0	36.3	19.8	
Seldom/Never	36	5.6	36.1	58.3	
Maintains learning environment					.550***
Always/Usually	504	91.7	7.7	0.6	
Sometimes	78	43.6	38.5	17.9	
Seldom/Never	44	4.5	25.0	70.5	
Uses appropriate technology					.456***
Always/Usually	50	90.6	7.2	2.2	
Sometimes	81	42.0	43.2	14.8	
Seldom/Never	46	23.9	23.9	52.2	
Uses group work					.174***
Always/Usually	273	89.0	7.3	3.7	
Sometimes	108	79.6	16.7	3.7	
Seldom/Never	255	68.6	18.0	13.3	
Helps students apply knowledge					.408***
Always/Usually	474	91.1	7.6	1.3	
Sometimes	103	52.4	31.1	16.5	
Seldom/Never	5.8	31.0	25.9	43.1	
Provides opportunity to interact with other students about course content.					.214***
Always/Usually	366	89.3	6.6	4.1	
Sometimes	111	72.1	17.1	10.8	
Seldom/Never	154	61.0	25.3	13.6	
Provides opportunity to interact with faculty about course content.					.340***
Always/Usually	382	93.5	6.0	.5	
Sometimes	127	66.1	22.8	11.0	
Seldom/Never	123	48.8	25.2	26.0	

***Significant .001

Table 5. Relationships of structural course characteristics to course rating by World Campus students.

Course characteristics	Number of cases	Course Rating			Cramér's V
		Excellent/ Good	Fair	Poor/ Very poor	
		------------------------------% -------------------------			
Access to the course					.050
Private residence	596	79.2	13.1	7.7	
Other	41	82.9	14.6	2.4	
Total enrollment					.037
Fewer than 20	41	82.9	7.3	9.8	
20–49	309	79.0	13.9	7.1	
50 & over	42	81.0	11.9	7.1	
Don't know	236	79.2	13.1	7.6	
Text presentation					.041
No	44	77.3	11.4	11.4	
Yes	594	79.5	13.3	7.2	
Video presentation					.030
No	328	78.4	13.4	8.2	
Yes	310	80.3	12.9	6.8	
Audio presentation					.091
No	417	78.9	12.0	9.1	
Yes	221	80.1	15.4	4.5	
Powerpoint presentation					.013
No	451	79.4	13.3	7.3	
Yes	187	79.1	12.8	8.0	
Discussion Board					.179***
No	245	70.2	18.4	11.4	
Yes	393	85.0	9.9	5.1	
Synchronous video conferencing					.049
No	587	79.9	12.8	7.3	
Yes	51	72.5	17.6	9.8	
Blog					.070
No	611	78.7	13.6	7.7	
Yes	27	92.6	3.7	3.7	
Major instructor					.069
Faculty or staff	534	80.7	12.4	6.9	
Other	46	69.6	21.7	8.7	
Don't know	56	73.2	14.3	12.5	
Choice					.114**
None (required)	301	77.1	16.6	13.3	
Selected from required list	268	80.2	16.4	3.4	
Free elective	67	85.1	7.5	7.5	
Number of credits for course					
1–2					.067
3	17	64.7	17.6	17.6	
4 or more	557	80.4	12.9	6.6	
	58	77.6	10.3	12.1	

**Significant .01; ***Significant .001

Table 6. Relationships of student characteristics to course rating by World Campus students.

Grade Work, Difficulty, Learned	Number of cases	Excellent/ Good	Fair	Poor/ Very poor	Cramér's V
		Course Rating (%)			
		------------------------------ % ------------------------			
Gender					.034
Male	252	77.8	14.3	7.9	
Female	385	80.5	12.2	7.3	
Age					.067
18–25 years	84	77.4	14.3	8.3	
26–29 years	103	75.7	17.5	6.8	
30–39 years	253	82.6	10.3	7.1	
40–49 years	143	76.9	14.0	9.1	
50 years or older	53	81.1	15.1	3.8	
Status					.020
Degree	564	79.4	12.9	7.6	
Nondegree	74	78.4	14.9	6.8	
GPA					.052
<2.50	46	78.3	10.9	10.9	
2.50–2.99	108	79.6	12.0	8.3	
3.00–3.49	212	82.1	11.3	6.6	
3.50 & over	269	77.3	15.6	7.1	
Residence					.062
Pennsylvania	313	81.8	11.5	6.7	
Non PA	323	76.8	14.9	8.4	
World Campus courses taken					.093
2 or fewer	21	95.2	0.0	4.8	
3–5	126	76.2	19.0	4.8	
6–8	149	77.9	11.4	10.7	
More than 8	341	80.4	12.3	7.3	

Table 7. Relationships of grade, work, difficulty, and amount learned to course rating by World Campus students.

Grade Work, Difficulty, Learned	Number of cases	Course Rating (%)			Cramér's V
		Excellent/ Good	Fair	Poor/ Very poor	
		------------------------------ % -------------------------			
Grade in course					.145***
A, A-	345	83.2	11.9	4.9	
B+, B, B-,	188	83.0	10.1	6.9	
C+ or less	94	60.6	24.5	14.9	
Amount of Work relative to other courses					.097
1 & 2 Lower	32	62.5	18.8	18.8	
3 Same	315	77.1	14.3	8.6	
4 Higher	180	82.2	12.8	5.0	
5 Much higher	107	85.0	9.3	5.6	
Degree of Difficulty relative to other courses					.140***
1 & 2 Lower	48	62.5	16.7	20.8	
3 Same	295	79.0	15.3	5.8	
4 Higher	186	84.9	11.3	3.8	
5 Much higher	106	78.3	9.4	12.3	
Amount Learned relative to other courses					.445***
1 & 2 Lower	70	21.4	31.4	47.1	
3 Same	244	75.8	19.3	4.9	
4 Higher	214	92.5	6.1	1.4	
5 Much higher	105	99.1	0.9	0.0	

***Significant .001