Penn State Online Coordinating Council Report:

Online Learning Trends at the Course, Student and Instructor Level

Report by Bart Pursel (pursel@psu.edu), Susan Repine (skr16@psu.edu), Angela Linse (arl15@psu.edu) and the Assessment Subcommittee of the Penn State Online Coordinating Council.

Introduction

This document is a high-level snapshot of data we are exploring. We collected data across four semesters: fall 2008, spring 2009, fall 2009 and spring 2010. A great deal of data has been collected regarding:

- Online courses (type of course, average enrollments, frequency of offerings, etc.)
- Student enrollments (by location, delivery unit, student level, etc.)
- Instructors (appointment type, rank, number of online courses taught compared to face-to-face courses, etc.)

We are currently working with members of both the Coordinating Council and the Steering Committee to generate 2-3 research questions to drive further exploration of the data. Below you will find a high-level snapshot of our findings.

Executive Summary

Overall, 3,469 online courses were offered across fall 2008, spring 2009, fall 2009 and spring 2010 (see Table 1). In terms of course classification, 64% of these were online, 8% were blended, 18% were elearning cooperative courses* and the remaining 11% were non-credit courses**.   The number of blended courses offered across the four semesters under review grew rapidly, while online course offerings also grew. Elearning cooperative offerings actually saw a slight decline from the 2008-09 academic year to the 09-10 academic year.

The World Campus represents the largest delivery unity, representing over 50% of online course offerings. Over the semesters under review, 96,830 students enrolled in an online course, 46% enrolling in a World Campus course, 42% in a University Park-offered online course, and the remaining 12% through Commonwealth Campus locations.

When examining online courses offered by various colleges and campuses, Liberal Arts has, by far, the most course sections, offering over 300 sections in spring 2010. Most Colleges saw an increase in course offerings across the four semesters, or remained relatively stable. The College of Communications did see a slight decline from spring 2009 through spring 2010 in the number of sections offered. Liberal Arts also enrolled the most students, reaching just over 7,000 students in spring 2010. The College of Arts and Architecture also enrolled a large number of students, nearly 6,500, in spring 2010.

In terms of online course instructors, the majority (just over 50%) are fixed term and non-tenure track. Also, nearly 1 in 5 of our online instructors had no record of teaching a face-to-face Penn State Course from 2005 to the present.

Table 1. Types of online course sections offered through all delivery units during combined fall 2008, spring 2009, fall 2009 and spring 2010.

Course Type	FA2008	SP2009	FA2009	SP2010	Totals
Online	438	502	572	652	2,164
Blended	4	57	103	127	291
eLearning Cooperative*	164	162	151	154	631
NCRR Credit**	74	110	79	120	383
Totals	**680**	**831**	**905**	**1,053**	**3,469**

* Elearning cooperative courses were difficult to count accurately and it has come to our attention that this number could be significantly inflated. For instance, one course identified was listed six times, across six different campuses. It was the same course, but was counted six times in the dataset. A better method for portraying this data is currently being explored.

**The Non-Credit Registration and Records (NCRR) system includes some courses for which credit is offered. All of the NCRR credit bearing courses above are offered via the World Campus. These courses are stored in the non-credit database as a historical practice that precedes World Campus use of ISIS. Most World Campus courses are currently processed through ISIS and appear in the credit database, a small number of courses remain in the NCRR system because the Bursar does not collect tuition for them; the World Campus bills tuition separately for these courses. Course types from the NCRR Total Course Master include: AUD, BTV, CAI, CCF, CCP, CDR, EFT, EML, ILC, INV, ITV, PWB, STE, TCF, VDC, VDN, VDP, WBC, WBE, WBP, WBR, or WEB.

Delivery Units

When examining delivery units, the World Campus delivered just over half of all online course sections across fall 2008, spring 2009, fall 2009 and spring 2010. As a delivery unit, University Park represents 14% of courses offered but accounts for 42% of online course enrollments with just over 40,000 enrollments. World campus enrollments are slightly higher, just over 44,500 enrollments for the four semesters under review.

When examining enrollments by student level, 83% (n=80,092) of enrollments over the four semesters under review are undergraduate students. The other 17% (n=16,738) represent graduate students (including law students).

Figure 1.   Online Course Sections by Delivery Unit
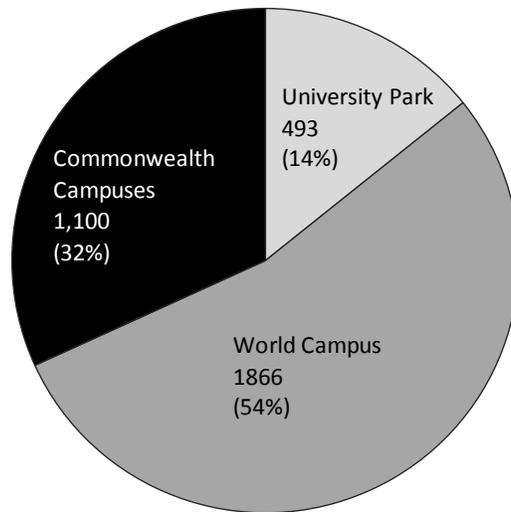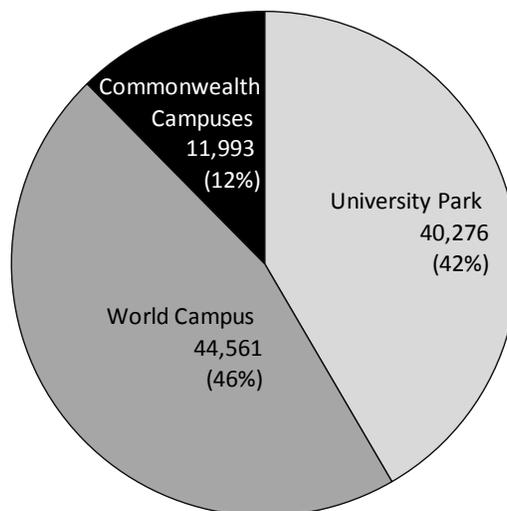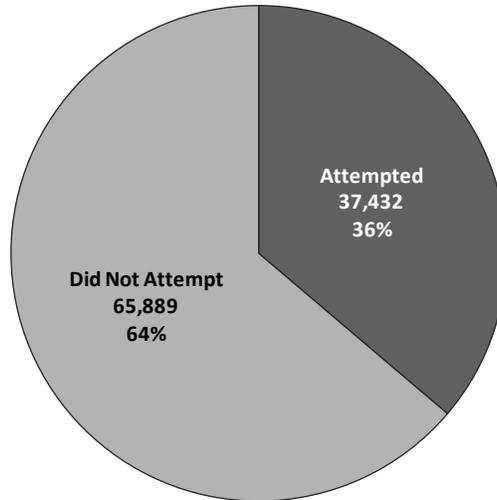(Fa08, Sp09, Fa09, Sp10)

University Park
493
(14%)

Commonwealth
Campuses
1,100
(32%)

World Campus
1866
(54%)

Figure 2. Total Course Section Enrollments by
Delivery Unit (Fa08, Sp09, Fa09, Sp10)

Commonwealth
Campuses
11,993
(12%)

University Park
40,276
(42%)

World Campus
44,561
(46%)

Students Attempting Online Courses

As illustrated in figures 3 and 4, about a third of both the undergraduate population and the graduate population at Penn State have attempted at least one online course. From fall 2008 to spring 2010, the number of courses offered in residence has fluctuated between 76,084 and 80,754 courses offered per semester. Over this same period, the number of online courses offered per semester has consistently grown, from 680 offerings in fall 2008 to 1,053 offerings in spring 2010 (representing 55% growth).

Figure 3. Percent of undergraduate students who attempted at least one online course (Fa08, Sp09, Fa09, Sp10)

Attempted
37,432
36%

Did Not Attempt
65,889
64%

* Includes students that may have withdrawn or not completed the online course

Figure 4. Percent of graduate students who attempted at least one online course (Fa08, Sp09, Fa09, Sp10)

Attempted
6,427
34%

Did Not Attempt
12,624
66%
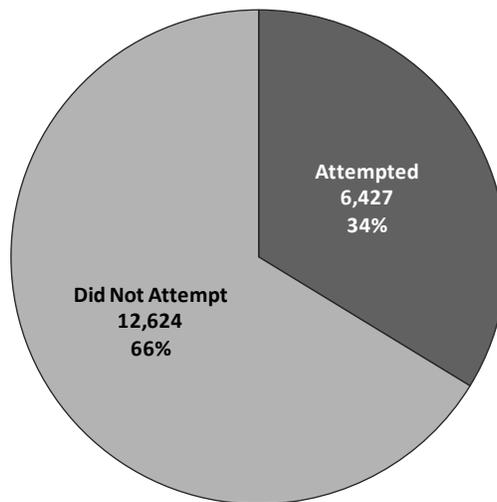
* Includes students that may have withdrawn or not completed the online course

Number of Online, Blended and e-Learning Cooperative (ELC) Course Sections

Figure 5 indicates that most Colleges have either grown or remained relatively stable in the number of online, blended, or ELC courses offered over the semesters under review. Liberal Arts has the largest number of course offerings, with 314 sections offered in spring 2010. Earth and Mineral Sciences and Arts and Architecture each offered over 100 sections in spring 2010. Education, Health and Human Development, and the College of Science form a cluster, each with course sections ranging from 50 to 75 offerings in spring 2010.

Figure 5 also reflects what appears to be a semester-based trend. The Colleges of Earth and Mineral Sciences and Health and Human Development, and to a lesser extent, the School of Nursing and Intercollege Graduate Programs have higher section counts during the spring semesters. The College of Communications appears to be the only unit showing a reduction in the number of course sections offered during the sample period although the decrease is slight with a maximum decrease of four sections from spring 2009 to fall 2009.

Total Enrollments in Online, Blended, and ELC Course Sections

Figure 6 illustrates trends in enrollments in online, blended, and ELC courses over the four semesters under review. Not surprisingly, the College of The Liberal Arts has the the largest number of enrollments, reaching just over 7122 enrollments in spring 2010, but also a steady growth of nearly 600-750 enrollments per semester. The College of Arts and Architecture showed the most dramatic increase in growth, from 4158 in Fall 2008 to 6362 enrollments in spring 2010. Earth and Mineral Sciences reached nearly 4000 enrollments in spring 2010, follow by the College of Science with just under 3000 enrollments in spring 2010. The considerable growth in the enrollments of all four colleges demonstrates a concerted effort toward and commitment to online learning within each college.
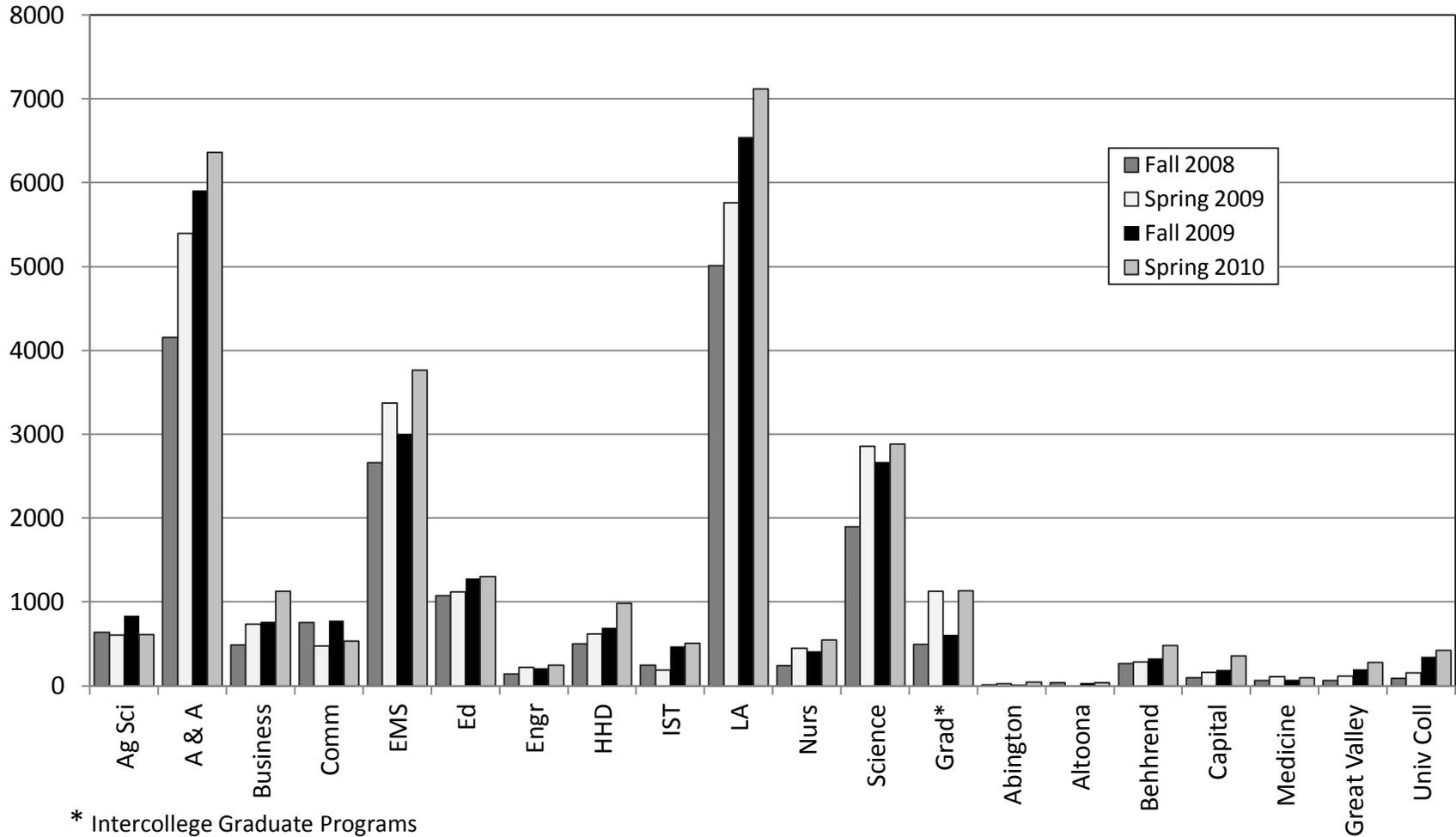
The enrollments in most of the other colleges range from 500-1000 per semester or below. The College of Education, Smeal College of Business, and Intercollege Graduate Programs all eclipsed 1000 enrollments in spring 2010. Other academic units have enrollments below the 1000 enrollment threshold per semester.

Figure 5. Total number of online, blended, and e-Learning Cooperative course sections by college (Fa08. Sp09, Fa09, Sp10).

* Intercollege Graduate Programs

Pursel, Repine, et al. (2011)
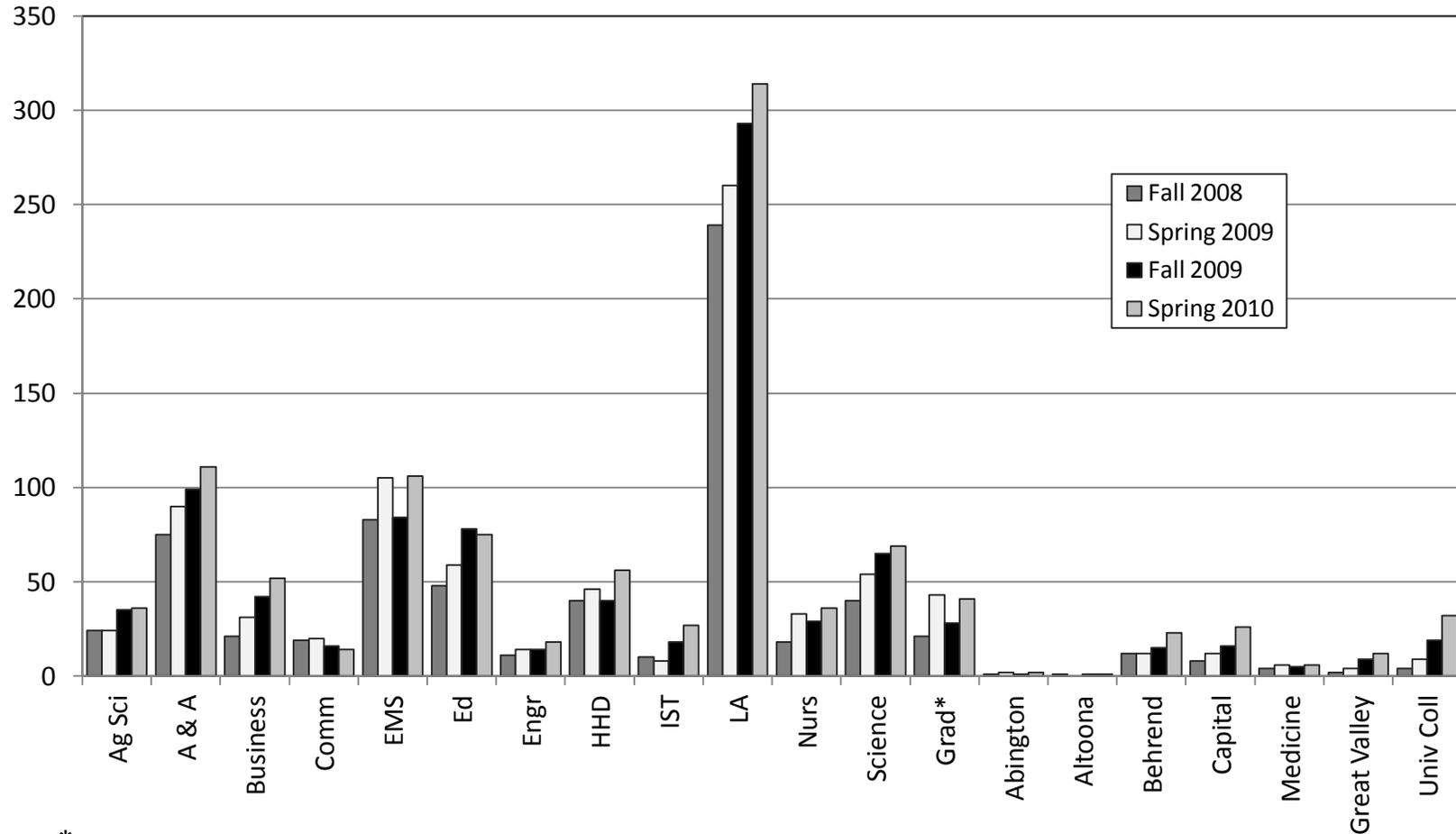
Figure 6. Total enrollments in online, blended and e-Learning Cooperative course sections by college (Fa08. Sp09, Fa09, Sp10).

Legend:
- Fall 2008
- Spring 2009
- Fall 2009
- Spring 2010

X-axis categories: Ag Sci, A & A, Business, Comm, EMS, Ed, Engr, HHD, IST, LA, Nurs, Science, Grad*, Abington, Altoona, Behrend, Capital, Medicine, Great Valley, Univ Coll

* Intercollege Graduate Programs

Faculty and Appointment Type

Figures 7 and 8 represent trends in the types of appointments instructors hold who teach online, blended or ELC courses. The number of instructors teaching online courses grew across the four semesters, from 319 instructors in fall 2008 to 529 instructors in spring 2010. The majority of instructors are fixed-term. This percentage grew from fall of 2008 to spring 2010, from 50% to 58% of all instructors. The number of standing instructors also grew over the same period, from 25% in fall 2008 to 28% in spring 2010. The number of graduate students teaching fell during this time, from 9% in fall 2008 to 6% in spring 2010. The "Other" category also decreased from 9% in fall 2008 to 6% in spring 2010.

Fixed Term: Fixed Term I, Fixed Term II and Fixed Term Multi-Year
Standing: Tenured and pre-tenure faculty and a small number of untenured standing faculty
Graduate Student: Graduate Assistants and Postdoctoral Scholars
Other: Wage payroll, unknown, and adjunct faculty with no pay

Figure 7. Fall 2008 online, blended, and ELC instructors by appointment type.
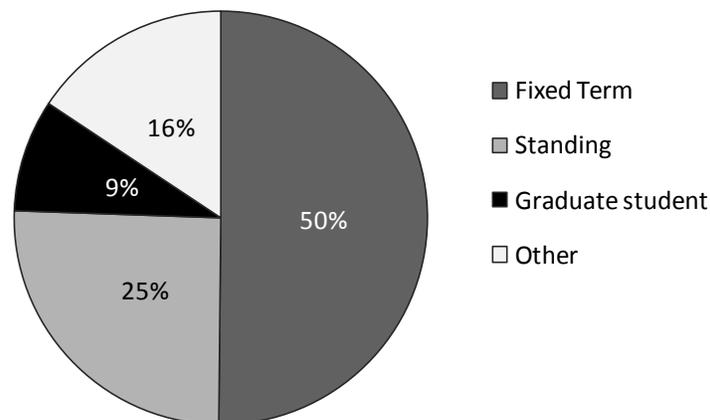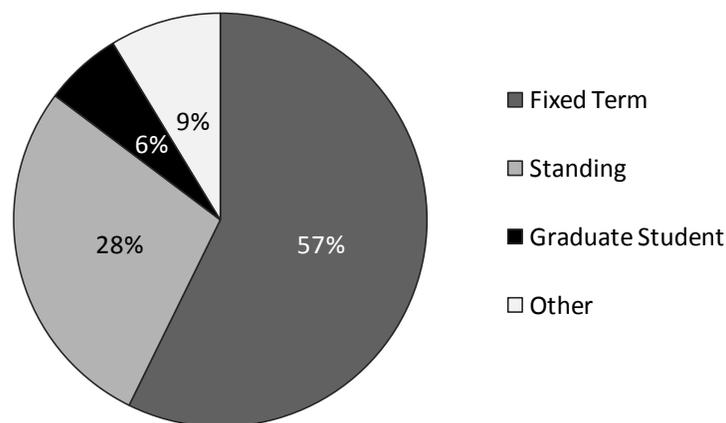

Figure 8. Spring 2010 online, blended, and ELC instructors by appointment type.

Faculty and Rank

Figures 9 and 10 represent trends in faculty by rank, specifically looking at fall 2008 compared to spring 2010. From fall 2008 to spring 2010, we see growth in the number of instructors that are non-tenure track teaching online courses (46% to 51%) as well as tenure-track (25% to 29%). The number of graduate students and the number of "Other" went down during this time.

Non-Tenure Track: Instructor, Lecturer, Professor of Practice, Research Associate, Senior Instructor, Senior Lecturer, Senior Research Associate
Tenure/Tenure Track: Associate Professor, Assistant Professor and Professor
Graduate/Posdoc: Graduate Assistants (25%, 50%, 75%), Predoctoral Lecturer, and Postdoctoral Scholar
Other includes: Unknown and Not Applicable

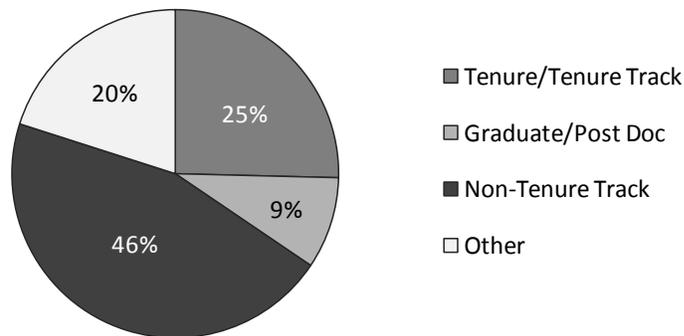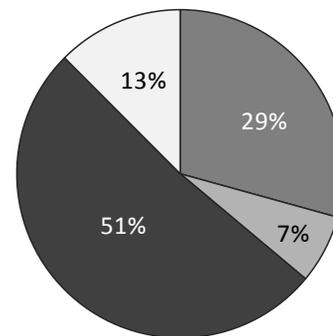**Figure 9. Fall 2008 online, blended, and ELC instructors by rank.**

Figure 10. Spring 2010 online, blended, and ELC instructors by rank.

- ■ Tenure/Tenure Track
- ■ Graduate/Post Doc
- ■ Non-Tenure Track
- ☐ Other

Other Faculty Trends

Nearly 1 in 5 online course instructors (18%) have no record of teaching a face-to-face course at Penn State from fall 2005 to spring 2010. A total of 784 unique instructors taught an online course between fall 2008 and spring 2010. Interestingly, most faculty either teach through World Campus or through other delivery units (such as specific colleges or campuses), but rarely a combination of the two. Table 2 shows the distribution of instructors that teach solely for World Campus (WD) or another unit, or that teach for both World Campus and another unit.

Table 2. Distribution of Instructors across delivery units.

Type of online instructors	N	%
Teach WD courses only	376	48.0%
Teach non-WD courses only	289	36.9%
Teach both WD and non-WD courses	119	15.2%
Total	784	100.0%

Methodology Notes

This project began by the selection of the four semesters under review: fall 2008, spring 2009, fall 2009 and spring 2010. Summers were omitted as it is much more difficult to compare summer semesters to fall/spring semesters as the summer semesters have their own sets of trends.

Once we identified the semesters, pulled a master course list for all online courses (WEB), blended courses (AND WEB) and e-learning cooperative (setting the elearning_course_indc field in the TCM table to "Y"). All this data was pulled from the data warehouse TCM table, located in the student database.

From the course list, we generated student data enrollment for each course as well as instructor information for each course.

Bart Pursel (pursel@psu.edu) and Sue Repine (skr16@psu.edu) have maintained the key queries to generate this data. Please contact Bart or Sue if you are interested in obtaining the queries for the data warehouse.