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## Technology's Impact on Student – Faculty Interaction: Issues for Collective Bargaining

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## **Technology's Impact on Student – Faculty Interaction: Issues for Collective Bargaining**

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### **Background and Context**

Today's faculty confront challenges that are reshaping their workload and creating new demands and expectations. A decline in the proportion of tenured faculty and an increased reliance on temporary faculty is problematic in a time of strong enrollment growth. The American Association of University Professors (Trends in Faculty Status, 2007) reports the proportion of full-time tenured and tenure-track faculty has declined from 56.8% in fall 1975 to 31.2% in fall 2007. Data from the National Center for Education Statistics (2005, 2008) show enrollments increased from 17.92 million in fall 2005 to 19.57 million in fall 2008. Schaffhauser (2010) reports that from fall 2008 to fall 2009 enrollment in traditional programs grew by 2% while distance education grew 10 times faster with a 21% increase in students taking one or more distance courses. At the same time, Thorsen (2010) points out, static budgets, increasing class sizes and workload, and decreasing control over the work environment characterize today's higher education, contributing to faculty stress and institutional retrenchment. Supporting data from Armenti (2008) show that over the last 25 years Pennsylvania saw state support in constant 2007 dollars drop by 16.5%, paralleling trends in other states. It is not an easy time to be a professor.

Technology is also creating its own demands. Faculty must address the infusion of technology into teaching, learning and the growth of distance education. A survey by the Higher Education Research Institute (Faculty Survey, 1998) found one of the most frequent causes of stress for faculty was keeping up with changing technology. Beam, Eunseong and Voakes (2003) found high levels of technology stress resulted in faculty being less satisfied with their work. Institutions must confront the costs of technology, which compete for the limited funds available (Barr, 2002; Goldstein 2005).

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In this study, researchers examine how technology has affected the channels through which students can interact with faculty, focusing on cell phones, email and traditional office hours. While this expanded contact can enrich the academic experience, it also creates added pressure on faculty time, reducing ability to maintain content currency, enhance curricula, and support scholarship and service. As Mason (2010) reports, some faculty members are placing restrictions on email allowed from students to control the demands on their time.

### **Focus of the Study**

How has technology changed student-faculty interactions, and what does this mean for faculty workload? To examine this question, data were taken from a survey of faculty conducted at Indiana University of Pennsylvania (IUP). IUP provides an interesting case for analysis. It is a mid-sized, public institution of approximately 14,600 students with programs ranging from the undergraduate through the doctoral level. About 80% of its students are undergraduates. The university is the largest of fourteen universities in the Pennsylvania State System of Higher Education (PASSHE) – a system enrolling some 105,000 students. Faculty in PASSHE are represented by the Association of Pennsylvania State College and University Faculty (APSCUF) and are governed as such by the state system Collective Bargaining Agreement (CBA). Over the past decade, the institution has invested heavily in technology, creating an environment conducive to technology adoption. IUP's recognition in 2003 as one of the "25 Most Wired Campuses" by *Forbes* and the *Princeton Review* and a study of classroom use of technology at IUP (Piwinsky, Ausel and Brzycki, 2008) demonstrate that the university and faculty are receptive to technology.

### **The Collective Bargaining Environment**

On July 23, 1970, the Public Employee Relations Act (Act 195) was passed by the Pennsylvania State Legislature giving public employees in the Commonwealth the right to collective bargaining and, with the exception of police and firefighters, the right to strike (L. Kurtz, 1989). In November, 1971, APSCUF signed the first contract with the Commonwealth as a recognized bargaining unit. In 1982, Act 188 established PASSHE, bringing the fourteen independent institutions into a single system. APSCUF represents about 5,000 full-time, part-time and temporary faculty and serves as the bargaining unit for about 250 PASSHE Athletic Coaches covered under a separate contract (J. Marsden, personal communication, April 1, 2010).

The outline and provisions of the PASSHE-APSCUF Collective Bargaining Agreement have been fundamentally consistent since its inception. Recent modifications address distance education and intellectual property rights as they apply to research and online courses. The basic document, however, maintains the same topic areas and tenets as those found in the original.

This constancy has led to emerging issues as the technology explosion creates new methods of student-faculty interaction outside of traditional classroom and office settings.

## Findings

Though studies indicate there are significant benefits to the expanded communication between faculty and students, it does create new demands on faculty while traditional obligations and expectations remain. To examine the extent of this increased interaction, a survey of the 775 faculty at IUP was done in September 2009 using *Qualtrics*, a web-based tool. There were 278 responses, a response rate of 36%. Various elements of this research have been presented elsewhere (Leidman & Piwinsky, 2009; Leidman, Piwinsky & McKeague, 2010; and Piwinsky, Leidman & McKeague, 2010). For this study, researchers focused on three issues that affect faculty workload and raise questions for the collective bargaining process – (1) the technology of interaction, (2) interaction patterns and (3) faculty office hours (see Appendix for a copy of the questionnaire).

## The Technology of Interactions

Cell phones and emails are channels that can reshape student-faculty interactions. Due to differences in schedules and lifestyles, communication outside of the classroom is greater than ever (Kohorst & Cox, 2007; Biesenbach-Lucas & Weasenforth, 1999). In some cases, faculty are resorting to limits on email to protect time needed for other academic activities (Mason, 2010). What impact does this have on today's professor?

**Cell Phones:** Over the past decade, cell phone use among college students has skyrocketed. In particular, text messaging has become a common form of communication with today's

Table 1  
*Faculty Sharing of Cell Phone Numbers with Students*

Sharing Cell Phone Number with Students	% Regular & Limited Users
Do not share number	52
Special cases	30
Advisees	7
Students in their classes	11
Any student who requests	6
Posted on syllabus	10
Posted on website	2
# Respondents	253

students sending thousands of messages a month (Gomez & Dudt, 2009). But have cell phones had an appreciable impact on faculty-student interactions?

The survey of IUP faculty suggests it has not. In the survey, 63% of faculty said they used a cell

phone regularly and only 9% said they do not use a cell phone (see Appendix – Question 7). While there was a tendency for fewer non-users among younger faculty, the patterns were not significant.

Although 91% of faculty were regular or limited users of cell phones, there was limited sharing of cell phone numbers with students (see Appendix – Question 8). Over half of the respondents (52%) said they did not give their cell numbers to students and another 30% limited sharing to special cases such as student workers or graduate students. Only 10% provided their cell number in their syllabus and 2% on their website (Leidman, Piwinsky & McKeague, 2010).

**Email:** In contrast to cell phones, email serves as a major channel of communication between students and faculty. Supplied by the university and providing secure, quick but still asynchronous communication, email overcomes many of the difficulties that limit cell phone use in student-faculty interaction. In addition, IUP's University Senate established a policy in 2005 recognizing email as an official form of communication for academic and administrative matters (IUP Senate, 2005).

Table 2

*Response Times to Student Emails*

Response Time	% Total
4 hrs or next business day	57
6 hrs or next business day	14
8 hrs or next business day	10
24 hrs	15
48 hrs	4
Over 48 hrs	1
# Responses	274

Our studies showed that 56% of respondents included an email policy in their syllabi (see Appendix – Question 9). Regardless of whether or not an email policy was in the syllabus, 57% of respondents said they tried to respond to emails within four hours or first thing the next business day (see Appendix – Question 10). Some 95% said they did regularly try to respond within 24 hours

or next business day. (Leidman & Piwinsky, 2009; Leidman, Piwinsky & McKeague, 2010)

### Interaction Patterns

A key portion of the study focused on channels of student-faculty interaction and how these have changed in the past decade. The study focused on five methods of student-faculty interaction outside the classroom – office visits, email, phone calls, text messages and written (non-electronic) notes.

**Current Interactions.** The responses show that email is the predominant form of interaction with 29% of respondents reporting 21 or more email contacts per week and 72% reporting 11 or more such contacts per week (see Appendix – Questions 11-15). Office visits were next with 30% reporting 11 or more such contacts per week. Traditional office hours, however, do seem to be important as 66% of faculty reported six or more student visits per week.

Despite widespread ownership of cell phones, phone calls were a distant third. Written notes and text messages were minor items. (Leidman, Piwinsky & McKeague, 2010).

**Changes in Interactions:** How have these interaction patterns changed over time?

Looking at faculty with ten or more years of teaching, we see from Table 4 that 65% of faculty reported an increase in the overall level of interaction with students and only 10% saw a decline.

Table 3  
*Current Faculty-Student Interactions*

Contacts/Week	% Visits	% Email	% Phone Calls	% Text Messages	% Written Notes
Little 0-5	34	8	73	92	90
Some 6-10	36	21	20	4	7
Moderate 11-15	18	22	4	2	2
Frequent 16-20	8	21	3	1	0
Very Frequent 21+	4	29	0	0	1
# Responses	277	276	274	273	273

Email has shown major growth with 72% of respondents reporting an increase of 30% or more. While 46% of faculty reported a decline in office visits, 53% saw the amount of visits remain constant or increase, demonstrating this still remains an important form of interaction (see Appendix – Questions 16-21).

Table 4  
*Ten-Year Changes in Frequency of Interaction*

Level of Change	% Visits	% Email	% Phone Calls	% Text Messages	% Written Notes	% Total Contact
Considerable Decline 30%+	23	0	15	9	23	1
Decline 5-30%	23	0	27	0	27	9
No Chg - +/- 5%	42	5	44	78	49	25
Increase 5-30%	9	23	10	6	1	46
Considerable Increase 30%+	2	72	3	6	1	19
# Respondents	189	188	185	172	184	186

### Faculty Office Hours

The third element to consider is faculty office hours. Under the provisions of Article 23.A.1.c of the CBA, full-time faculty members are required to have five scheduled office hours per week distributed across three different days.

To address this question, faculty were asked how many hours per week they were in their offices and available to students (see Appendix – Question 6). Respondents indicated they spent far more than the contractually required time with an average of 13.5 hours per week or two and a half times that required by the contract. Looking in detail, we see 45% spend eleven or more hours per week and 81% are available more than the required five hours per week.

### **Implications for Collective Bargaining**

From this analysis, several key issues emerge related to student-faculty interactions and collective bargaining. While cell phone use is pervasive among students, student-faculty interaction via cell phone remains limited. Cell phones and texting do provide a potentially viable channel of communication. Despite the convenience and accessibility of cell phones, however, it is not surprising that faculty limit access. Cell phones, even when text messaging, have a sense of immediacy that impinges on time for academic work and personal privacy. FERPA privacy issues can also arise unless measures are taken to verify the identity of the caller/texter. An economic element is also present with call and text fees. While university provided phones could address the cost issue for faculty, they would not alleviate concerns of time and responsiveness. In addition, changes in tax methods for professional versus personal use of cell phones create significant record keeping challenges and make them less attractive options (IRS, 2009).

**Email**, however, has emerged as a major form of student-faculty interaction outside of the classroom. With its asynchronous nature, email makes it easier for faculty to maintain some degree of control of the demands on their time. At the same time, faculty members do try to be responsive to student emails and this creates added time pressure and workload. While some emails are short questions, others often involve more complex responses and may take considerable faculty time to address (Warschauer, 1997, Biesenbach-Lucas & Weasenforth, 1999, Biesenbach-Lucas & Weasenforth, 2002). Several emails asking the same question are common (Davis & Brewer 1997). While FAQs, blogs, boilerplate text, online forums or emails to a class can address an issue, they do not always receive the same attention from students as a personal email. In addition, such methods may miss the subtle nuances of a particular student's circumstances and/or do not provide the same sense of personal contact. In online courses, email becomes a critical link for the student.

With the growth of email into the major medium for student-faculty interaction, workload and bargaining issues emerge. A study by Hickerson and Gigolo (2009) found 68% of students preferred email and Colachico (2007) found traditional students preferred email over both regular and virtual office hours. The role of email, however, is not addressed in the APSCUF-PASSHE CBA (Heilman & Hampel, 2007).

**Office hours** are the third piece in this equation. Our study found that two-thirds of faculty respondents reported six or more student visits per week with 44% reporting 11 or more hours –

Table 5  
*Faculty Office Hours*

Office Hours/Week	% Respondents	Cumulative %
0-5	19	19
6-10	36	56
11-15	17	73
16-20	10	83
21-25	5	89
26-30	6	95
31+	5	100

N=278

more than double the hours required by the CBA. In addition, 53% said office visits have stayed the same or increased over the past ten years. Together, this indicates that office hours are still an important forum of student-faculty interaction. While traditional students favor the use of email, Oomen-Early, *et. el.* (2008) found non-traditional students favored regular 'in office' hours. Higher education has seen a growth in

non-traditional students as off-campus sites, weekend programs and distance education draw in more students. With the growth in non-traditional students, we can expect the need for more office hours at non-traditional times, including evenings and weekends, to serve these students. Thus, faculty face increased pressure for traditional office hour contacts even as email grows in use and consumes more faculty time.

## Conclusion

The impact of technology on student-faculty interaction is raising significant questions about costs and faculty time and workload. While cell phones are a common medium for communication among students and widely used by faculty, they remain a minimal factor in student-faculty interactions. Phone calls to faculty are declining and texting has yet to emerge as a real channel for interaction. Issues of costs, privacy and the synchronous/near-synchronous nature are items for consideration.

As stated above, the APSCUF-PASSHE agreement requires five office hours per week on at least three different days. This office hour arrangement does not address timely faculty response to emails. Instead email increasingly involves work that is not addressed in the CBA but is essential to meet the needs of students. In addition, to serve non-traditional and distance education students, there is a need to expand the work day into evening and weekend hours.

These are important issues for the bargaining process. The realities of changing technology combined with economic constraints, growing enrollments especially of non-traditional students, and the desire to be responsive to student needs are placing new and increasing strains on faculty



and institutions. Constructive dialogue in the collective bargaining process is essential to address these issues in a manner that does not disadvantage students, faculty or the institutions.

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## Survey Instrument

### The Perpetual Professor: The Impact of Communications Technology on the Timing and Frequency of Student Contact with Faculty

1. What is your College or area?

- Business
- Education
- Fine Arts
- Health and Human Services
- Humanities and Social Sciences
- Natural Sciences and Math
- Libraries
- Student Affairs
- Other

2. What is your faculty rank?

- Instructor
- Assistant Professor
- Associate Professor
- Professor

3. Gender:  Female  Male

4. How many years have you been teaching? \_\_\_\_\_

5. Of your 24 hour workload in a typical academic year (excluding Summer), how many credits are for each of the following:

- \_\_\_\_\_ teaching **undergraduate** courses
- \_\_\_\_\_ teaching **graduate** courses
- \_\_\_\_\_ non-teaching assignments

6. During a typical semester, how many hours, per week, are you in your office and available to students? \_\_\_\_\_

7. How often do you use a cell phone?

- Regular Use
- Limited Use
- Do not use

8. Do you provide students with your cell phone number?

- No  
 Only in special cases  
 For student advisees  
 For students in my classes  
 Any student who requests  
 Posted on syllabus  
 Posted on my website

9. Do you advise students in your syllabus or in class as to how rapidly you will respond to emails or texts?

- Yes  
 No

10. Excluding weekends, how quickly do you try to respond to texts or emails during the day?

- 4 hours or first thing the next day  
 6 hours or first thing the next day  
 8 hours or first thing the next day  
 24 hours  
 48 hours  
 Longer than 48 hours

**Using the rating scale provided, please indicate your average weekly level of contact with students outside of the classroom.**

		Little or None 0 – 5 per week	Some 6 - 10 per week	Moderate 11 - 15 per week	Frequent 16-20 per week	Very Frequent 21 or more per week
11	In person visits					
12	Emails					
13	Phone calls					
14	Texts					
15	Written Notes or Letters					

**Compared to 10 years ago, how has the amount of contact you have with students changed?**

		Considerable Decline Over 30%	Some Decline 5 – 30%	No Change +/- 5%	Some Increase 5 – 30%	Considerable Increase Over 30%
16	In person visits					
17	Emails					
18	Phone calls					
19	Texts					
20	Written Notes or Letters					
21	Overall level of contact with students - in person, phone, email, text, written					