

## Where does the time go? A work sampling study of physical therapy faculty time use

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### 1. Introduction

Little information exists about how faculty members in entry-level Doctor of Physical Therapy (DPT) education programs allocate their time among teaching, scholarship, service, and administration. Prior research in the area used survey methods to determine faculty perceptions on time usage, relying on memory and estimation of time spent in various tasks. We studied faculty in two types of entry-level DPT Programs offered at the same university. One program is a Traditional Program (Tr), delivered primarily through on-campus face-to-face (F2F) interaction with web enhancement. The other is a Hybrid Program (Hy) which blends 3 weeks of online (OL) instruction with 4 days of F2F instruction per month. The university is private, not-for-profit (NFP); and has a focus on teaching plus community engagement, outreach and partnership.

#### 1.1 Goals

The goals of this study were to: (1) use iPad technology to collect real-time data in order to estimate how faculty spend time in tasks and activities related to teaching, scholarship, service, and administration. and (2) compare how faculty time was spent in these two programs. The null hypothesis was that there would be no difference between faculty in the two types of programs in terms of the distributions of tasks, activities, locations, and tools used.

### 2. Methods

This was a descriptive study using an observational work sampling method to collect data. Work sampling methods have long been used in the field of ergonomics. A taxonomy of work as a faculty member in a DPT program was created for use as a framework for data collection. Major TASK categories were teaching, research, service, administration, and other. Distinct ACTIVITIES were identified for each task such as “deliver instruction” or “organize/plan course.” Codes were created for LOCATION of work (classroom, lab, home, other) and for TOOLS used (laptop, telephone, pen). Categories were modified with faculty input, and face validity established. Based on the taxonomy, a developer designed an application for the iPad that was used to collect observations from faculty members using a random signal program. Faculty “logged in” to the application while working, and would then receive alert signals at random. At each signal, the faculty would use the application to note the categories they were engaging in at the time of the signal. All subjects were trained on the iPad application by the PIs. Four Hy and 4 Tr full-time faculty with no administrative duties were recruited to participate in the study. Researchers attempted to match faculty by course load and years teaching.

### 3. Results

#### 3.1 Data and Analysis

Once submitted, data were transmitted over internet connection and stored in database server. The PI downloaded data to Excel and backed up. Data were collected over two semesters for a total of 5658 observations. SPSS was used for analysis. Frequencies of observation (proportions) were calculated for all

categories, along with 95% confidence intervals. Cross-tabulations and chi-square statistics were done to compare programs.

### **3.2 Findings**

Faculty in both programs participated in all tasks. Scholarship was more frequent in the Tr program; administration in the Hy program. For the task of teaching, faculty in the Hy program reported more time spent in activities of course organization and preparing course content. Scholarship activities varied; the Hy faculty reported more planning and background review while the Tr faculty reported more writing. Faculty in both programs spent a good deal of administrative time in meetings. There was no difference between programs with respect to time spent on administrative activities. Time spent in the office was similar for both programs, while Hy faculty worked more at home than the Tr faculty. For service, Tr faculty reported more time in PT practice.

## **4. Conclusions**

### **4.1 Discussion**

Despite distinctly different modes of delivery, faculty in both programs spent similar proportions of time in many of the observed categories with some differences. One explanation for the differences might be related to the maturity and primary delivery methods for the two programs. The Hy program is a new and developing program while the Tr program is a mature program. Initial course development and blended instruction requires a great amount of planning. This may explain why Hy faculty spent more time in preparing course content and course organization than in scholarship activities compared to the Tr program. The difference in faculty practice time can be explained by the on-site clinic for Tr faculty; Hy faculty must practice off-site.

### **4.2 Limitations**

Differences in the number of observations among categories may limit the accuracy of some of the estimates. Categories were not always mutually exclusive. Lack of access to WiFi was a problem in a number of locations and impacted data collection. Findings might not be generalizable to other universities. A confounding factor may be the relative maturity of the programs.

### **4.3 Conclusions and Future Research**

This was the first study to use iPad technology to collect work sampling data on DPT faculty tasks and activities. Accurate estimates of faculty time usage could assist in resource allocation, setting of faculty goals, and better understanding of the nature of hybrid vs. traditional instruction. It would be beneficial to replicate this study in other settings to better understand the nature of faculty work and to prepare faculty and administrators for realistic expectations in work activities

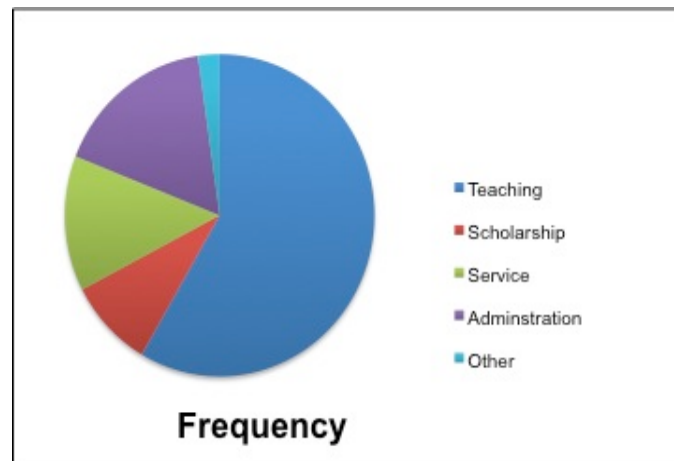


Figure 1. Total frequencies of major tasks

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