

Department head leadership and the use of faculty credit hours as a measure of faculty workload

Matt Stringer, *Evangel University*

Cynthia MacGregor and Robert Watson, *Missouri State University*

Abstract

Background: Over the last decade, several factors have placed faculty workloads in higher education under scrutiny. Improvements in technology and increases in the numbers of participants in higher education have led to increased costs, which have largely been absorbed by the taxpayer. The increase in the diversity among students attending college has brought to the forefront the need for change in instructional methods. Department leaders have made attempts to adapt to these changing conditions.

Aims: The purpose of this study was to determine if faculty credit load assignments were an accurate measurement of faculty work loads. The study also identified management techniques of department heads at a private university and determined if these techniques are reflective of leadership used in a learning organization.

Sample: The sample consisted of 95 full time faculty and 10 department heads.

Method: Faculty work logs were used to collect data on the number of hours full time faculty were working and faculty credit hour assignment cards were collected to determine the load assigned to the faculty member by the University. An interview for each department head was conducted to determine department leadership strategies.

Results: While no significant correlations were discovered between the number of faculty credit hours on faculty credit assignment cards and hours logged by faculty members in the area of total time, time spent in teaching related activities, time spent in administrative activities and time spent in advising activities, a weak positive correlation was shown with total time logged and time in teaching related activities.

Conclusion: The qualitative data provided insight on the leadership practices of department heads within the University. Department heads described circumstances in which flexibility and experimentation were practiced during the assignment of faculty work (Yukl, 2002). Moreover, department heads described leadership practices that allowed for bringing in outside knowledge (Yukl) and single and double loop learning Morgan (1997).

Keywords: Faculty, Workload, Administration

系領導學與教員使用課時作為評估其工作量的方式

M. Stringer, C. MacGregor, R. Watson [美國]

摘要

背景：在過去的一個世紀，有幾大因素將高等教育中教員的工作量作進一步考查。科技的進步以及其在高等教育中的應用增加，導致費用的增加，而此費用由納稅人所支付。進入大學的學生身份多樣化將教學方法變革的需求提上日程。系領導們已經作出努力去適應這些變化。

目標：該研究的目的是在於探討教員課時量化的任務可否作為教員工作量的正確評估方式。此研究亦闡明了一間私立大學系領導的管理技巧，並確認這些技巧是否是一個學習機構中領導方法的反映。

抽樣：樣品包括95位全職教員和10位系領導。

方式：教員的工作日志過去用於收集全職教員工作時間的資料，而教員的課時制工作卡是收集來幫助學校決定分配給教員的工作量。每個系領導的面談是用來判定系領導職位的策略。

結果：然而並未發現以下項目之間有任何重要關聯性：教員的課時任務卡上的課時數和教員在其部門的總錄入時間，與其教學相關活動所花費的時間，與其行政活動所花費的時間，以及與其輔導學生的活動所花費的時間有輕微關聯，而在其總錄入時間和在教學相關活動所花費的時間最為顯著。

結論：量性化的資料為大學系領導方法的實踐提供了亮光。根據瑜高 (YUKL, 2002)，系領導描述了在教員的分配任務上，其靈活性和實踐性得到操練的情況。而且根據瑜高和摩根 (MORGAN, 1997)，系領導亦描述了其領導方法的實踐融入了外部知識和單雙向學習。

關鍵詞：教員，工作量，行政

Background

Over the last decade, several factors have placed faculty workloads in higher education under scrutiny. Improvements in technology and increases in the numbers of participants in higher education have led to increased costs, which have largely been absorbed by the taxpayer. The increase in the diversity among students attending college has brought to the forefront the need for change in instructional methods. In addition, the transition to the technology era from the industrial era has altered both the content and the context of learning in higher education (Preskill & Torres, 1999). Technology improvements have increased the number of individuals seeking to further their education as well as providing increased opportunities for distance education (Meyer, 1998).

Questions regarding productivity and the use of funds have brought about numerous studies from both inside and outside the higher educational setting, with an emphasis on the efficient use of funds and not necessarily the improvement in the quality of education (Meyer, 1998). Recent studies indicate, over the last ten years, that most faculty members work around fifty hours per week regardless of the type of institution, but more recently, the amount of time spent on research activities has accounted for a larger part of the fifty hours, even in settings where research is not a central part of the university mission (Milem, Berger, & Dey 2004; Meyer, 1998). In addition, longitudinal studies indicate the amount of time spent on teaching and related activities has decreased (Meyer).

In 1999 the Higher Learning Commission (HLC) began a program in which an institution currently accredited with the HLC can maintain accreditation through participation in a program called the

academic quality improvement program (The Higher Learning Commission, 2002). Currently, 160 institutions of higher education are participating in the program which uses a series of ongoing processes to demonstrate an institution is striving to improve performance with the ultimate goal of helping students learn.

Academic departments at liberal arts colleges and universities can be drastically different from one another in relation to how classes are taught and the emphasis placed on research. For example, music departments may have lower teacher to student ratios and much of the instruction that occurs in higher level courses is one-on-one (Diamond & Bronwyn, 2000). Other types of academic departments can make better use of larger classes or courses offered online (Groccia & Miller, 1998). Academic departments vary to such a degree in daily activities that a faculty workload policy can become too specific and therefore not accomplish fair and balanced work division among faculty members. Most studies of faculty workload include no measure of the quality of instruction, but only include the number of hours spent teaching.

Recent increases in the overall number of students and variations in the types of programs that are offered have forced changes in how faculty spends time at work. In addition, technology has brought about change by the increasing number of online opportunities for students. Much of the changes in the measurement of faculty workload have been reactive rather than proactive. Difficulties arise when programs from the world of business are adopted by higher educational institutions without taking into account the uniqueness of higher education. Concrete data for faculty workload is difficult to obtain and, while numbers can be determined to report

to stakeholders, the value of this data is debatable. Higher education could benefit from a system of measuring faculty workload that involves a larger variety of variables and is not only based on time spent lecturing in the classroom.

Conceptual Underpinnings for the Study

Studies have shown several methods to classify and measure the daily activities of university faculty members. For the purpose of this study, all faculty work was classified using the traditional three categories that encompass all faculty activities which are scholarship, instruction and service (Mancing, 1994). The following section begins with a description of the traditional methods of classifying faculty work. The section ends with a brief assessment of current data on faculty work to illustrate the need for further exploration of alternative methods of assessing faculty work loads in higher education.

Instruction

Instruction is usually the first item that comes to mind when faculty workload is considered, and instruction generally comprises from 30 to 70 percent of total workload. The method of determining faculty workloads by measuring faculty credit load hours has been in use for many years by a large number of institutions with little regard to the mission of the institution. While being accepted by many institutions as the method for assigning faculty workloads, little research has connected credit load hours to the daily activities of university faculty. Most instructional time is determined through consideration of classes taught and self reporting of time involved in instruction while the quality of instruction is generally not

considered when measuring this category of faculty work (Meyer, 1998).

Scholarship

Faculty scholarship refers most often to research that is conducted by faculty with the intent to publish. Scholarship is more highly regarded by research institutions, but is considered a component of faculty work in other institutions where research is emphasized to a lesser extent. When school funding is considered, scholarship is often highly important to faculty because of promotion and tenure consideration while least important to lawmakers and outside constituencies evaluating faculty work.

Service

“Faculty service falls into two categories: institutional and professional. Institutional service includes administrative duties, committee work, and student advising, while professional service refers to work completed in support of one’s academic discipline” (Mancing, 1994 p. 3). Faculty members usually spend between 15 and 25 percent of their time in service activities.

Assessing Faculty Work

Many studies note that the majority of faculty members within a university work 50 or more hours per week (Braskamp & Ory, 1994; Glazer & Henry, 1994; Meyer, 1998) but, the wide variety of work that goes on, and the assortment of variables that measure workload, make any study of workload complex. Requests for numerical data on faculty workload have led to many studies that measure workload based on instructional activities like credit hours

taught and the total number of courses and students participating in those courses. This data is a starting point for measuring faculty workload but the unique requirements placed on instructors in each discipline and different courses within each discipline call for more detailed studies in faculty workloads. In order to improve student learning in higher education, and for higher education to be able to adjust to changing demands, what faculty members are spending their time doing, and how to more effectively measure what they are doing, needs to be determined.

At liberal arts universities, and other non-researched based institutions, the majority of faculty time should be spent on teaching as indicated by institutional mission. The Carnegie Foundation (2005) identified more than 250 private not-for-profit institutions that are primarily residential in nature, with enrollments of less than 2000 full time students. Many of these institutions have a large number of undergraduate programs and offer limited, or recently started graduate programs. In addition, a large number of these institutions are located in the Midwest. Percentages of time spent by faculty in this category of educational institution should approximate between 65 and 75 percent instructional activities, 8 to 12 percent in research activities, and 12 to 18 percent in service activities (Mancing, 1994; Rees & Smith, 1991). The importance of tying the evaluation of faculty workload to the mission of the university should not be lost in determining if faculty members are spending enough time working, as well as working on desirable activities.

Statement of the Problem

While evidence has suggested that university faculty members generally work long hours (Meyer, 1998; Seaburg, 1998) additional research is

needed to determine what activities make up these long hours and how these activities have changed in the past few years. More research is needed to determine the ways in which economic and technological changes have effected faculty work and how higher educational institutions are responding as learning organizations. Moreover, the body of research on faculty workloads has been conducted in larger research based institutions rather than smaller private universities with instructional based missions. While recent studies suggest that faculty members are spending more time in all activities (Milem, Berger, & Dey, 2000), public research based universities accounted for a large portion of the data. More information is needed on the methods small private universities use to adapt faculty workloads according to economic and technologic changes.

Purpose of the Study

The purpose of this study was to determine if faculty credit load assignments are an accurate measurement of faculty work loads. Credit hour assignments have long been used to measure faculty work in many types of institutions but little research has been conducted to determine the accuracy of this method. An additional purpose of the study was to add to the knowledge base on the determination or calculation of workloads, as well as identify management techniques of department heads at a private university are reflective of leadership techniques used in a learning organization.

Research Questions

Within the context of this study, the following research questions were addressed:

1. Are faculty credit hours a valid measure of

faculty work as indicated by the relationship between faculty credit hours and total time engaged in work related activities?

2. Are faculty credit hours a valid measure of faculty teaching activities as indicated by the relationship between faculty credit hour loads and the amount of time spent in teaching related activities?
3. Are faculty credit hours a valid measure of faculty administrative activities as indicated by the relationship between faculty credit hour loads and the amount of time spent in administrative service activities?
4. Are faculty credit hours a valid measure of faculty advising activities as indicated by the relationship between faculty credit hour loads and the amount of time spent in advising service activities?
5. Are the leadership strategies of department heads, in determining faculty workloads of the University, consistent with the strategies within a learning organization that encourage flexibility, experimentation, acquiring knowledge from sources outside the organization, and the diffusion of knowledge Yukl (2002)?
6. Are the leadership strategies of department heads, in determining faculty workloads of the University, consistent with the strategies within a learning organization that allow for both single and double loop learning as defined by Morgan (1997)?

Population and Sample

The population for this study was composed of 95 faculty members of a private Midwestern liberal arts university. The 95 faculty members represented

the complete number of full time faculty employed at the institution. The University has an enrollment of nearly 2000 students and offers 80 degree programs. The University has ten academic departments and each department has a single faculty member that serves as the department head. The number of full time faculty members in each department ranges from a low of 6 to a high of 12. The university has very little turnover in faculty with many professors having been with the university for more than 20 years. The University has been described as an excellent Christian place to work by the faculty in independent surveys. The University leadership above the department head level has also been very stable. The faculty members were chosen through stratified random sampling (Fraenkel & Wallen, 2003) to equally represent each academic department during each of the four two week periods faculty work logs were completed. Faculty members were selected in this manner in an effort to represent the ten academic departments, regardless of size, at various times throughout the semester. In other words, 25 percent of the faculty of each department participated in the study for each of the four two week segments. The chairs of each of the ten academic departments were also chosen for interviews in order to determine discipline specific methods of assigning faculty work.

Data Collection and Instrumentation

In this study faculty work logs were used to collect data on the number of hours full time faculty members were working and faculty credit hour assignment cards were used to determine the load assigned to the faculty member by the University. An interview for each department head was conducted to determine department headship strategies. The three instruments are described in detail in the next sections.

Faculty Work Log

The data in the study for the first four research questions was obtained through the use of faculty work logs completed by individual faculty members for a two week period. The log was an electronic spreadsheet that automatically totaled hours for each type of faculty activity and supplied a letter code for each type of faculty work. The faculty work log accounted for each hour for the standard work day and allowed participants to log additional hours outside the standard work day. The types of faculty activity were summarized on the spreadsheet and assigned letter codes, these activities were described in greater detail in another attachment to avoid confusion in how to categorize faculty activities. The log separated faculty work into 15 categories in an effort to better isolate the components of scholarship, instruction, and service. Individual categories of administrative and academic activities were considered for the study as well as the total time reported. Faculty members were allowed to leave blanks in the log for non-work related activities. The work logs were electronically delivered to faculty members and each faculty member received a code to ensure that any data reported would remain anonymous. Faculty surveys have often been used in research as a method of gathering data on how faculty members allocate time for daily activities (Milem et al., 2000; Meyer, 1998; Harter et al., 2004).

Faculty Credit Hour Assignment Cards

Faculty members were required to fill out faculty credit hour assignment cards. These cards describe the classes taught and the activities of the faculty member to which credit hours are assigned. These

cards were approved by each academic department head as well as the academic dean. A credit hour load of 12 is considered full but loads can range from 12 to 15 before overloads are reached.

Interview Protocol

The data for research questions 5 and 6 was obtained using person-to-person interview techniques (Merriam, 1998). Interviews were conducted in order to gain additional information on the management techniques of department heads in assigning faculty workloads. According to H. B. Altman (personal communication, 2006), the differences among departments within the university promote the concept that department heads were best suited to determine faculty work loads because of an understanding of the uniqueness of the discipline and the ability to adapt workloads according to individual skills of department members. Department heads at the University were asked questions as to the methods that employ to efficiently assign faculty work within the department and how individual skills and equality of assignments were combined to improve both efficiency and quality. Department heads were asked questions regarding the use of management techniques congruent with that of a learning organization as outlined by Yukl (2002) and Morgan (1997).

Data Analysis

The data collected from the faculty work log and credit hour assignment cards was analyzed using the statistical package for the Social Sciences (SPSS) version 13.0. Tests were performed to determine if relationships exist. In addition, qualitative research

methods (Merriam, 1998) were employed to determine the leadership techniques of department heads and to determine if these techniques were consistent with learning organizations as outlined by Yukl (2002) and Morgan (1997).

Results

Forty-three faculty members participated in completing faculty work logs for the assigned two week period. Of the ten academic departments eight of the department heads participated in the interview process. Of the 43 faculty members who participated in filling out work logs for the two week period, 35 were returned electronically using email and eight were delivered via campus mail. The highest weekly total reported was 76 hours while the lowest was 29. Five faculty members returned only one week of the work log and were not included in the study.

Faculty Credit Hour Assignment Cards

The assignment cards were provided by the academic dean. The lowest credit assignment was 6 hours and the highest credit assignment was 24 hours.

Interview Protocol

Eight of the ten department heads were interviewed. The interviews took place at various times throughout the day and each interview was conducted in the office of the department head. The department heads were willing to be recorded and the interviews lasted slightly less than 30 minutes. Each department head was provided with a copy of the interview questions before the interview and each had gone over the questions to some extent.

Data Analysis

Research question 1. Are faculty credit hours a valid measure of faculty work as indicated by the relationship between faculty credit hours and total time engaged in work related activities?

To address the research question above a Pearson test for correlation (Fraenkel & Wallen, 2003) was performed to determine if the number of assigned faculty credit hours was a predictor of total time logged by faculty in total work activities. An alpha level of .05 was used to determine significance.

A Pearson *r* value of .246 indicated a weak direct relationship between the number of faculty credit hours ($M = 12.76$, $SD = 2.67$) and the total time engaged in work related activities ($M = 47.44$, $SD = 12.03$). While the *r* value indicated a direct relationship the relationship was not deemed significant. Furthermore, faculty credit hours accounted for six percent of the variance in total time logged by faculty ($R\text{ Squared} = .06$).

Table 1
Correlation of Faculty Credit Hours and Total Hours Logged by Faculty (N=43)

<u>Variable</u>	<u>Mean</u>	<u>Std. Deviation</u>	<u>(r)</u>	<u>Sig. (2-tailed)</u>
Credit Hours	12.76	2.67		
Total Time	47.44	12.03		
			.246	.112

Research question 2. Are faculty credit hours a valid measure of faculty teaching activities as indicated by the relationship between faculty credit hour loads and the amount of time spent in teaching related activities?

To address the research question above a Pearson test for correlation (Fraenkel & Wallen, 2003) was performed to determine if the number of assigned faculty credit hours was a predictor of time logged by faculty in teaching related activities. An alpha level of .05 was used to determine significance.

Table 2
Correlation of Faculty Credit Hours and Time in Teaching Related Activities (N=43)

<u>Variable</u>	<u>Mean</u>	<u>Std. Deviation</u>	<u>(r)</u>	<u>Sig. (2-tailed)</u>
Credit Hours	12.76	2.67		
Teaching Time	25.52	8.82	.234	.131

A Pearson *r* value of .234 indicated a weak direct relationship between the number of faculty credit hours ($M = 12.76, SD = 2.67$) and the total time involved academic activities ($M = 25.52, SD = 8.82$). While the *r* value indicated a direct relationship the relationship was not deemed significant. Furthermore, faculty credit hours accounted for 5.5 percent of the variance in total time logged by faculty (R Squared = .055).

Research question 3. Are faculty credit hours a valid measure of faculty administrative activities as indicated by the relationship between faculty credit hour loads and the amount of time spent in administrative activities?

To address the research question above a Pearson test for correlation (Fraenkel & Wallen, 2003) was performed to determine if the number of assigned faculty credit hours was a predictor of time logged by faculty in administrative activities. An alpha level of .05 was used to determine significance.

Table 3
Correlation of Faculty Credit Hours and Time in Administrative Activities (N=43)

<u>Variable</u>	<u>Mean</u>	<u>Std. Deviation</u>	<u>(r)</u>	<u>Sig. (2-tailed)</u>
Credit Hours	12.76	2.67		
Ad. Time	6.26	7.15	.173	.266

A Pearson *r* value of .173 indicated a weak direct relationship between the number of faculty credit hours ($M = 12.76, SD = 2.67$) and the total time in administrative activities ($M = 6.26, SD = 7.15$). While the *r* value indicated a direct relationship the relationship was not deemed significant. Furthermore, faculty credit hours accounted for 3 percent of the variance in total time logged by faculty (R Squared = .03).

Research question 4. Are faculty credit hours a valid measure of faculty advising activities as indicated by the relationship between faculty credit hour loads and the amount of time spent in advising activities?

To address the research question above a Pearson test for correlation (Fraenkel & Wallen, 2003) was performed to determine if the number of assigned faculty credit hours was a predictor of time logged by faculty in advising activities. An alpha level of .05 was used to determine significance.

Table 4
Correlation of Faculty Credit Hours and Time in Advising Activities (N=43)

<u>Variable</u>	<u>Mean</u>	<u>Std. Deviation</u>	<u>(r)</u>	<u>Sig. (2-tailed)</u>
Credit Hours	12.76	2.67		
Advising Time	1.98	3.01	.082	.599

A Pearson r value of .082 indicated no relationship between the number of faculty credit hours ($M = 12.76$, $SD = 2.67$) and the total time in advising activities ($M = 1.98$, $SD = 3.01$). *Research Question 5. Are the leadership strategies of department heads, in determining faculty workloads of the University, consistent with the strategies within a learning organization that encourage flexibility, experimentation, acquiring knowledge from sources outside the organization, and the diffusion of knowledge Yukl (2002)?*

In order to determine if leadership techniques of department heads were consistent with the strategies within a learning organization that encourage flexibility, experimentation, acquiring knowledge from sources outside the organization, and the diffusion of knowledge Yukl (2002) interviews were conducted. Person-to-person interview questions (Merriam, 1998) were developed with consideration of learning organization characteristics. Responses to these questions were transcribed and coded (Merriam) to determine if responses indicated a learning organization as defined by Yukl.

Flexibility

Flexibility in a learning organization refers to the organization's acceptance of a variety of methods to accomplish a task. Flexibility allows organizational members to accomplish organizational tasks in a variety of ways and not always repeat methods implemented in the past (Yukl, 2002). During the interview process, the researcher noticed some examples of flexibility in the techniques used by department heads in two categories. The first category involved flexibility in the manner credit hours were assigned and the second category involved flexibility

in the delivery of specific courses.

The 12 credit hour load per faculty member seems to lack flexibility but department heads have flexibility in both the amount of credit that is given for a specific task, as well as allowing two faculty members to receive at least partial credit for a single class.

Experimentation

Experimentation in a learning organization refers to how an organization allows members to try new ideas and test methods to increase organizational knowledge (Yukl, 2002). Department heads at the University allowed for experimentation within their department by allowing faculty members to try new ideas on faculty credit assignments as well as allowing experimentation on the delivery of certain courses. Experimentation was demonstrated in some manner by the leaders of the eight departments that participated in the interviews.

Knowledge from Outside Sources

In a learning organization, knowledge from outside sources refers to knowledge that is brought into the organization from individuals or groups outside the organization or knowledge that is acquired from the study of other organizations (Yukl, 2002). Six of the department heads interviewed mentioned the discussion of faculty work with other department heads in formal and informal settings.

Interviews of department heads revealed a variety of methods in which knowledge was brought into the department. Some of this knowledge came from within the University from other department heads and the academic dean. Other knowledge came from outside the University from conversations with

colleagues at other universities or during professional conferences.

Diffusion of Knowledge

Diffusion of knowledge in a learning organization refers to the sharing of relevant information among all members of an organization as new ideas and innovations are discovered (Yukl, 2002). Six of the department heads that were interviewed noted the lack of a formal mechanism of disseminating information.

The traits of a learning organization include flexibility, experimentation, bringing in knowledge and the diffusion of knowledge (Yukl, 2000). The department head interviews revealed numerous instances of incorporation of flexibility, experimentation, and bringing in outside knowledge in leadership practices. Flexibility was revealed in discussion of the various ways department heads divide work and the different methods of assigning credit hours. Experimentation was revealed in the descriptions given by department heads of circumstances where faculty members were allowed to try something new or the academic dean allowed the department head to experiment. Department heads brought knowledge into the organization both from other university departments and sources outside the University.

The department head interviews did not reveal a large amount of information on the diffusion of knowledge from one department to another. Many department heads described how their department was unique and did not share a large amount of information with other departments. Formal methods of sharing information were notably absent but a few informal instances were noted. In spite of the limited

description of department heads sharing knowledge, the overall description of leadership techniques would indicate University departments were functioning as a learning organization.

Research Question 6. Are the leadership strategies of department heads, in determining faculty workloads of the University, consistent with the strategies within a learning organization that allow for both single and double loop learning as defined by Morgan (1997)?

In order to determine if leadership techniques of department heads were consistent with the strategies within a learning organization that allow for both single and double loop learning as defined by Morgan (1997) person-to-person interviews were conducted (Merriam, 1998). Interview questions were developed with consideration of learning organization characteristics. Responses to these questions were transcribed and coded (Merriam) to determine if responses indicated a learning organization as defined by Morgan.

Single Loop Learning

Single loop learning refers to the ability to discover and correct mistakes in relation to current operating standards for an organization (Morgan, 1997). Each department head described at least one leadership technique that allowed for the promotion of single loop learning. The department head interviews would indicate that University departments are evaluating programs to determine if they are meeting established goals, which is an indicator of a learning organization.

Double loop Learning

Double loop learning refers to an organization's ability to evaluate current operating norms to

determine if a better system exists to carry out organizational tasks (Morgan, 1997). Two indicators of a learning organization are single and double loop learning. Each of the department heads interviewed described situations in which their leadership allowed for each type of learning to take place. Department heads at the University displayed leadership characteristics that would indicate a learning organization.

Implications for Practice

The pursuit of this study was to determine if assigned faculty credit hours are a reasonable measure of faculty work. In addition, the study attempted to determine if the leadership techniques of department heads were consistent with leadership strategies of a learning organization. The study revealed no significant correlation between faculty credit hours and the time faculty spent at work, in teaching activities, in administrative activities and advising activities. The study, while not significant, did reveal a weak positive correlation between assigned credit hours and three of the four activity categories. When this quantitative data is interwoven with the information revealed in the qualitative portion of the study, useful information is revealed about the methods department heads use to make the faculty credit hour system function effectively within the organization.

The variables of assigned faculty credit hours and total time spent in work related activities, while not statistically significant, were weakly correlated and may suggest that assigned faculty credit hours could be a measure of faculty work, especially if the formula for determining faculty credit hours involved other activities that encompass faculty

work. Faculty work is extremely diverse depending on the discipline, therefore, a universal definition that only considers faculty credit hours is not adequate (Diamond & Adams, 2002; Hinrichsen et al. 2002). When the specific work activities of teaching, administration, and advising were isolated, the correlations were weaker in addition to not being considered statistically significant. This further indicates that faculty work is too diverse to effectively measure with the single variable of assigned faculty credit hours. It should also be noted that formulas for calculating faculty work can become too detailed and the end result may be a lack of flexibility or collaboration as work is assigned (H. B. Altman, personal communication, February 24, 2006). The information provided by department heads during the interview process revealed how individual departments are managing faculty work by functioning as a learning organization and adapting as the environment changes.

The characteristics of learning organizations outlined by Yukl (2002) of flexibility, experimentation and bringing in knowledge from outside the organization were clearly present in the individual departments at the University as indicated by the department heads. The implication being that each department is functioning as a learning organization as faculty work in the department is managed. Faculty workloads should be established at the department level as department heads have the best sense in determining if faculty are overworked (H. B. Altman, personal communication, February 24, 2006). The lack of dissemination of information between the departments at the University suggests that each department is indeed functioning as an individual organization and faculty workload management could be improved with the sharing of information and

management strategies among the departments at the University. This sharing of knowledge is limited by the uniqueness of each department.

The individual departments at the University demonstrated the ability to acquire knowledge via both single loop learning and double loop learning which are defined as characteristics of a learning organization (Morgan, 1997). The data collected from department head interviews revealed that departments at the University had evaluation mechanisms in place that allowed for the monitoring of the departments ability to achieve current operating goals as well as the evaluation of the effectiveness of these goals in accomplishing the mission of the department. The wide variance in the descriptions of faculty work within individual departments can cloud the issue as well and is best dealt with at the department level (Massey & Wilger, 1998). In other words faculty work can appear to be unequal within academic departments as well as from one academic department to another. The best faculty workload formulas contribute to an overall sense of fairness in an organization rather than limiting departments in how faculty work is assigned (H. B. Altman, personal communication, February 24, 2006). The implication may be that the individual departments at the University are operating as learning organizations and therefore need to continue to develop new ways of measuring and assigning faculty work within the department. In other words, it may be difficult to apply a universal method of assigning faculty work to each academic department at the University unless the universal method is flexible enough to account for department differences.

The results of the study have implications for similar liberal arts universities in respect to the overall function of the institution. Universities should

have characteristics of learning organizations in order to adapt to economic and social changes in the environment. Change in higher education is normally slow to take place but institutions with systems in place to encourage organizational learning can better adapt to changes in economic, social, and technologic environments (Birnbaum, 2001).

Limitations, Assumptions, and Design Controls

Each department at the University employs one faculty member as a department head and the University employs just less than 100 full time faculty members. The university has very little turnover in faculty with many professors having been with the university for more than 20 years. The University has been described as an excellent Christian place to work by the faculty in independent surveys. The University leadership above the department head level has also been very stable. The unique characteristics of the leadership at the University make it an excellent place to conduct a case study.

The results from the study illustrated the complexity of faculty work and the difficulty in measuring that work at a specific University. The Carnegie Foundation (2005) classifies more than 250 institutions as being similar to the University in the study so knowledge revealed by the study could have application to other similar institutions. While the institution where the study was conducted was similar to many others, the generalizability of the findings is limited. The study did shed light on how the University department heads implemented leadership techniques that encouraged organizational learning which could be applied in other higher educational settings. The study was also limited by the number

of faculty participating. Nearly half of the possible 92 participants were involved in the work log aspects of the study and eighty percent of the department heads were interviewed in the study so a quality representation of the University was likely obtained both in the amount of work reported using the work log and leadership techniques discussed during the interview process.

Recommendations for Further Research

While the study revealed no significant correlations it was not likely due to the number of participants in the study or the fact that the study was carried out at a single institution. Several studies have used the self report or work log method to gather data on how faculty members are spending time during the work day (Glazer & Henry, 1994; Hinrichsen et al. 2000; Harter, Becker, & Watts, 2004). Additional studies where individual faculty members make use of faculty work logs various days throughout the semester rather than a two week period could reveal more of an average work day for the faculty member. Preskill and Torres (1999) offer that one of the best methods for organizations to learn is through reflection and dialogue on ways to improve for the future. Completing work logs is an effective way of stimulating discussion on faculty work without starting a discussion of how faculty members are overworked. Additional faculty work studies could assist in the development of a more comprehensive definition of faculty work (Diamond & Adams, 2002).

One of the aspects of faculty work that is not included in the completion of faculty work logs is faculty productivity. The number of hours logged by faculty members is not necessarily an indication of

the amount of work that is accomplished. Additional research on the productivity of faculty could be beneficial (Kezar, 1999) especially if the number of hours worked could be related to graduates of a program or student success rather than research productivity.

The study did reveal how the academic departments at the University were functioning as a learning organization. Similar studies at other universities might be useful to determine if individual departments were functioning in a similar manner or if the leadership at the University as a whole was consistent with that of a learning organization. Yukl (2002) described the need for competitive organizations to have mechanisms in place that allow for organizational learning. Some smaller private institutions have recently flourished because of the adaptability of the education programs they offer and the ability to change these programs in a timely manner. Any study that could assist higher education in adapting faculty work to changing economic and technologic conditions could be beneficial (Yuker, 1984). One area of faculty work in need of study is online and distance education and the work involved in the instruction of these courses (AAUP, 2000).

The University involved in the study was a small, private institution in the Midwest. Additional information could be revealed if the study were conducted at other universities of different sizes with different characteristics or public institutions rather than private. In addition, academic disciplines have characteristics that are unique. Rather than focusing on all of the departments at a single institution research carried out in similar departments at different universities could reveal additional, useful information. Diamond and Adam (2000) described the uniqueness of each academic discipline and

therefore the non uniform types of work that occur in a single institution. In other words, the management of faculty work may be unique for each academic discipline rather than unique for each institution.

A final recommendation for further research would involve the system the University uses to regulate faculty work assignments. Many universities no longer classify faculty work according to the number of classes taught but rather consider a variety of faculty activities the encompass faculty work. Several universities use complex work load formulas (H. B. Altman, personal communication, February 24, 2006) and useful information could be generated from studies of the effectiveness of these formulas.

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Authors:

Dr. Matt Stringer

Evangel University, Springfield, Missouri

e-mail stringerm@evangel.edu

Dr. Cynthia MacGregor

Missouri State University, Springfield, Missouri

e-mail cmacgregor@missouristate.edu

Dr. Robert Watson

Missouri State University, Springfield, Missouri

e-mail robertwatson@missouristate.edu

Translation: Sarah Zhang

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