

# WHY ARE YOU WORKING ON THAT? MOTIVATIONAL INFLUENCES ON TIME MANAGEMENT DECISIONS IN DYNAMIC MULTIPLE PRIORITY WORK ENVIRONMENTS

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## Abstract

Time management is a special and particularly troublesome example of a difficult resource allocation decision. In this paper we report on work in progress where we are applying current motivational models to the conditions present in engineering educational environments. We are investigating the development of habits and attitudes that students carry with them to the workplace after graduation. To illustrate important facets of this general topic, we examine the antecedents and consequences of student preferences for participation in organized, institution-sanctioned extra-curricular activities over attention to course work. Implications for engineering educators, engineering students, working engineers, and employers are provided.

## Introduction

This paper presents an attempt to develop a model of the influence on engineering that student's decisions about the relative amounts of time they spend participating in institutionally sanctioned extra-curricular activities and on their coursework. Parallel issues identified in the literature on work behaviors and the problems of work-life balance are related to recent work in the educational literature that attempts to integrate various perspectives on motivation and achievement.

In many college environments, students in general, and engineering students in particular, increasingly are encouraged by school officials and others to avail themselves of opportunities to participate in activities outside their course work. Often these opportunities are presented as ways to demonstrate leadership and teamwork skills that are valued by employers. Frequently the career advantages of developing professional and social contacts through such activities are also emphasized. This leads to increased pressure on students to divide their time among ever increasing numbers of tasks. Marsh and Kleitman (2002) and Liam (2001) are among the researchers who have examined some of these issues. The questions that we want to raise include whether this trend improves or detracts from the quality of preparation for work life that engineering students receive. On the face of it, one could argue that

engineering students are already seriously challenged to master the academic knowledge and skill sets required of them in as short a time as the four to five years typically associated with earning a baccalaureate. Systematically encouraging additional extra-curricular demands on their time could be viewed as a serious impediment to adequate preparation for their career. On the other hand, some would argue that not only are these other activities as valuable or perhaps more valuable than their classroom experiences, the habits they acquire as they learn to cope with being overloaded will help to prepare them for the hypercompetitive, frantic work environment they will face upon graduation. We are interested in exploring some of the causes and effects of this trend and achieving a better understanding of its significance.

## Multiple Priority Work Environments

The hectic pace of daily life and the increasing demands of work are at the heart of what we commonly call pressure. Whether it is in a school setting or at work, one often subjectively experiences pressure from varying influences. Pressure from different sources requires setting priorities among the tasks required. Often students and workers are asked to complete multiple projects or tasks at once, with no clear linkage, but with all tasks still needing to be completed correctly. Multiple priority work environments are usually defined based upon the simultaneous activities required by several projects. (Fricke and Shenhar, 2000).

In addition to the academic pressures from coursework, students often feel pressured to participate in extracurricular activities. They often believe that these activities provide opportunities to demonstrate characteristics valued by employers that are not assessed in their courses. A wide variety of these activities are available to students during their college years, including athletics, professional societies, social clubs, Greek organizations, religious organizations, etc. The one thing that all of these activities have in common is that they introduce more time constraints which must be balanced, therefore leaving less time available for any other activity (school, work, etc.).

In an actual work environment, many parallels can be drawn with the college setting. Almost every

worker has various tasks that must be completed by certain deadlines and with certain expectations, much like projects at college. Workers may be involved with various projects at once, with different bosses or teams for each, much like the situation of having a different professor for each class while in college and balancing extracurricular activities at the same time. When setting priorities, numerous factors such as the task size, importance, required skills for the task, and task urgency must be considered. And, like college students, workers will be involved in varying levels of activities outside of the actual scope of work, called organizational citizenship behaviors. These activities are not specifically required by the job description or explicitly recognized by a formal compensation and reward system, but they nonetheless contribute to organizational functioning (Bolino, Turnley, and Bloodgood, 2002).

Another parallel between college and many work settings is the additional demands from responsibilities at home and with family. While students typically have somewhat fewer demands of this nature than do more mature workers, they are nonetheless still subject to them. The tensions resulting from the conflicting demands of work and home often lead to the neglect of one set of responsibilities in favor of the other. Awareness of this neglect can lead subsequently to higher levels of stress, resentment, frustration, and dissatisfaction. Paradoxically, when the balance is shifted too far in favor of work, productivity is not necessarily enhanced. Evidence suggests that an appropriate balance between work life and personal (e.g., family) life is best for sustainable productivity for most people (Berman, 2002).

### **Academic Engagement**

In an academic setting, all students face the tasks associated with their coursework. These tasks vary from semester to semester depending on a variety of factors including number of credit hours, the intrinsic difficulty of each class, and instructors' teaching styles just to name a few. Time management and prioritization comes in to play when there are periods of increased numbers of deliverables in one, or a number of classes. Typically this situation will involve multiple tests in a short period or multiple deadlines on various projects, thus limiting the absolute amount of time a student has to devote to each deliverable. The fundamental influences on student (and worker) performance in such situations are motivation and skills and these two influences are often closely related to one another and not as easily separated for study as one might at first assume.

First, consider several aspects of motivation that are particularly helpful in explaining student academic performance. Achievement motivation and the need to

belong can be considered in conjunction with the motivating effects of goals and expectancies, including related but somewhat more general constructs such as academic self-efficacy and general self-concept (Robbins, Lauver, Le, Davis, Langley, and Carlstrom, 2004). It is particularly important to note that academic goals often have two different forms: (1) meeting objectively defined standards of performance (e.g., grades) and (2) achieving somewhat more subjectively defined standards of mastery of particular skills. Students often express the opinion that their grades did not reflect their (subjective) sense of competence and mastery of course material. Sometimes this discrepancy is self-serving and perhaps useful to preserve self-esteem when the actual grade is lower than the goal. However, students sometimes also indicate that, although they earned an A (or B), they really do not feel confident that they know the course material as well as they should.

The second major influence on student performance is study skills. Robbins, et al. (2004) summarizes the components that researchers often include in this construct, which is essentially the procedural knowledge required to effectively complete assignments and to perform well on course examinations. These component sub skills include managing one's time, note-taking, finding and exploiting appropriate information resources, communicating with instructors as required, and preparing for and taking tests.

### **Social Involvement**

Aside from the academic engagement of a student's college career, there also is a process by which the student becomes integrated socially and acclimated to the university setting. Students will have an opportunity to develop a connection to their college through relationships with other students and faculty and though involvement in college activities including many activities that occur outside the classroom. Although social involvement does not directly impact academic performance, it can indirectly enhance or degrade academic outcomes, mainly by affecting the student's commitment to academic achievement generally as well as to the specific institution the student attends (Berger and Milem, 1999; Robbins, et al., 2004).

The selection of social involvement at college is usually driven by the student's intrinsic motives. Through this social involvement, social capital is built. Social capital can be thought of as a resource that is derived from the relationships among individuals, organizations, communities, or societies. Social capital is important because individual performance is usually greater when one is working with others one knows and trusts and with whom one shares common values

and goals (Bolino, et al., 2002). For example, a student or employee may be able to execute a task more easily because of informal aid offered by a friend who is knowledgeable about completing such a task.

Social capital can involve three forms: structural, relational, and cognitive. Bolino, et al. (2002) defines structural social capital in terms of network ties, network configurations, and network appropriability. Network ties are connections between members of an organization. Network configurations allow for movement of information, knowledge, and assistance within an organization beyond what is attributable to the simple individual linkages alone. Network appropriability is the ease with which different types of relationships can be transferred within a relationship. Structural social capital develops contacts between individuals in some settings that may ultimately prove useful in other contexts.

Relational social capital is characterized by high levels of trust, shared norms and perceived obligations, and a sense of mutual identification (Nahapiet and Ghoshal, 1998) and can be described as interpersonal connections that are inherently affective in nature.

Cognitive social capital concerns the degree to which members possess a common language and share narratives. Bolino et al., 2002 point out that as this form of social capital increases, the ease with which individuals within an organization can understand each other also increases. Where shared language and shared narratives exist, students or employees can more easily discuss problems, transfer ideas, share knowledge, and offer more effective assistance to each other. Lazega and Pattison (2001) note that as social capital develops, information flow and coordination of activities become easier and the costs (e.g., time, effort) of engaging in specific transactions with others decrease.

### **Proposed Model**

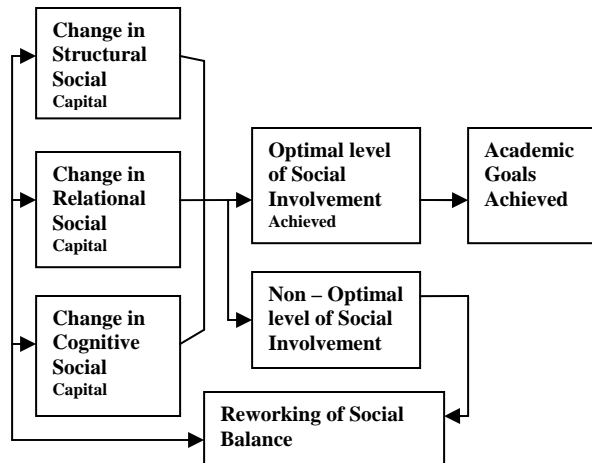
From the discussion presented in earlier sections, we propose the model presented in exhibit 1 as the basis for future empirical investigations of student academic performance. We are interested in determining how changes in social involvement lead to positive and negative effects on social capital and how the student's time management decisions influence the relative balance between social and academic task activities. Covington (2000) has claimed that the quality of student learning and the tendency of the student to persist toward the attainment of a degree depends to some extent on the nature of both social and academic goals that the student sets as well as the reward systems in place in the college environment. Wannus, Keon and Latack (1983) found that workers do not usually go through the process of information processing and

rational decision-making when they are deciding how hard to work. Rather they base their actions on habit, on expectations derived from previous experience, and on advice from respected co-workers.

White (1973) conducted a study of United Kingdom managers, which had a sample size of 2,246, which showed six distinctive patterns of motivation (material rewards, status and prestige, security and social issues, job interest, variety and challenge, and leadership). These kinds of studies certainly support the contingency theory approach, which are specifically tailored to suit the host organization and its employees. Therefore a large variety of variables can be studied in investigations of learning outcomes. We believe that there are several important antecedents and consequences of student preferences for participation in organized, institution-sanctioned extra-curricular activities over attention to course work. Variables like achievement motivation, academic self-efficacy, and general self-concept would all influence each student's decisions. In addition, social involvement, perceived social support, and specific academic goals should be measured to develop correlations with allotments of time and with specific performance outcomes.

For students, the correlation between fulfilling their academic goals and having a desired level of social involvement comes with time management tradeoffs. Through these tradeoffs, there theoretically should exist an optimization of social involvement that will maximize academic goals through the building of social support and social capital. But an increase of extrinsic activities beyond some point will most likely lead to a decrease in their academic goals.

### **Exhibit 1. Proposed Model of Social Involvement to the Enhancement of Academic Goals**



### Methodology

In this study, empirical data will be collected from selected social groups that encompass and overlap each sector of campus life through an online survey. At least two groups from each of the following classes of campus organizational breakdown will be surveyed: academic departmental, fraternities and sororities, governing and programming, honor and professional, intercultural, media and publication, recreation and intramurals, religious, residence hall, social and special interest, student design, service, athletics, and performing arts. Also, a select number of academic classes from different departments throughout campus will be asked to participate in order to have a control sample to compare other organizations.

A survey was chosen as the preferred data collection method for this study due to its relatively low cost and quick turnaround of data. The survey will consist of three sections; the first section will collect demographic data as well as information on grades and student work commitment. The second section will be questions that are school specific and measure the amount, type, and level of involvement of student participation. The third section will consist of a series of questions that will be answered on five point scale from "completely disagree" to "completely agree", these questions are adapted from other proven scales and we plan to measure three constructs of academic engagement including motivation, achievement, and self-efficacy as well as constructs of social involvement including support, interaction, connectedness, and assurance. Each group will be sent a e-mail from their president or advisor explaining the purpose of the survey and have a link to access the survey. To ensure integrity of the results, each unique student username will only be allowed to complete the survey once, therefore eliminating one person skewing

the data by taking the survey multiple times if they are asked in more than one organization.

### Conclusions

Since an appropriate balance of social activities, organizational citizenship behaviors, and family and work responsibilities tends to support sustainable levels of productivity and work satisfaction, the habits and attitudes that students often learn in college can be instrumental in determining how easily and to what extent such a balance can be achieved after graduation. As a better understanding is attained of how this balance can be successfully achieved and maintained under varying sets of conditions, many of the relevant findings in both the organizational and educational literatures can be integrated and put to better use to inform employers, workers, students, faculty, and college administrators of the practices that would best lead to desired outcomes in both school and the workplace. There is a growing body of research findings that show motivation varies between individuals, between groups, and between cultures, and that this can affect the operation of a remuneration system, but if more can be understood about this balance by the engineering manager, general productivity and efficiency should be able to increase in the workplace by being able to look for signs of more motivated workers during hiring.

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