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**CORE GOALS AND THEIR RELATIONSHIP
TO SEMESTER SUBGOALS AND ACADEMIC
PERFORMANCE**

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ABSTRACT

This study was designed to examine the nature of core goals and to investigate how core goals are related to semester subgoals, time spent on subgoals, and academic performance. The study provides evidence for a set of core goals that tend to become the central focus of behavior. The importance of these goals was demonstrated by participants who set and accomplished more core semester subgoals than secondary semester subgoals and who spent more time on those goals. In addition, participants who spent more time on their core subgoals and accomplished more core subgoals tended to perform better academically. Thus results indicate that courses designed to increase student retention rates such as University 101 or learning and study strategies courses may profit from activities designed to help students think about their goals and to examine the alignment of their most important goals with their subgoals and how they spend their time.

The attainment of the goal to get a college degree is a complex, relatively long-term, and difficult process. It requires the prioritization of one's goals and the self-regulation of one's thoughts and behavior toward the attainment of the degree. The difficulty involved in this process is demonstrated in the U.S. Department of Education's estimation that about only 50 percent of those who attempt to get a college degree ever attain one. Thus, it is clear that if we are

interested in facilitating students in the accomplishment of the goal to get a college degree, we need to know more about the goals and subgoals that are used while self-regulating one's learning during college.

In recent years, goals have been studied by researchers interested in facilitating the development of lifelong self-regulated learners (e.g., Ames, 1992; Bandura, 1986, 1997; Corno & Kanfer, 1993; Csikszentmihalyi, 1985; Pervin, 1989; Schutz, 1991, 1994; Zimmerman & Schunk, 1989, 1994). For these researchers, self-regulation is a multidimensional skill exemplified by students who are metacognitively, motivationally, and behaviorally active participants in their own learning (Zimmerman, 1994). This theory and research indicate that as students develop their self-regulatory skills they become active controlling participants who direct what they learn and how they go about learning.

Although there are different approaches and theories regarding the nature of self-regulation, one common thread is the importance of goals (e.g., Ames, 1992; Bandura, 1986, 1997; Corno & Kanfer, 1993; Csikszentmihalyi, 1985; Pervin, 1989; Schunk & Zimmerman, 1994; Schutz, 1991, 1994; Zimmerman & Schunk, 1989). In fact, the term "self-regulation" implies that something is being used as a reference point to guide behavior (Schutz, 1991, 1994, in press). Simply put, one cannot regulate without something to compare where one is with where one wants to be. Goals are those points of comparison (Schutz, 1994, 1997; Schutz & Lanehart, 1994). In other words, goals provide the direction for the thoughts, feelings, and behavior used during self-regulation and, therefore, goals are a key dimension to understanding the nature of self-regulation. The present study attempts to further explicate the role of goals in self-regulated learning by investigating the nature of core goals (i.e., one's most valued goals) and their relationship to subgoals (i.e., a goal for a subtask for the larger goal) and academic performance.

At least three lines of research have investigated goals and their relationship to self-regulated learning (Ford, 1992; Schutz, 1991, 1994). One line of research has demonstrated how subgoal characteristics, such as specificity and difficulty, affect performance (Locke & Latham, 1990). A second line has focused on goal orientation which looks at the distinction between intrinsically oriented goals, such as mastery, challenge, learning, or curiosity, and extrinsically oriented goals, such as grades, rewards, or approval from others (Ames, 1992; Dweck & Leggett, 1988; Nicholls, 1984; Pintrich & Schrauben, 1992). These first two lines of research have shown that subgoals and the orientation of goals can influence the direction of thoughts and behavior, the use of effective learning strategies, and the level of performance on academic tasks (Ames, 1992; Ames & Archer, 1988; Dweck & Leggett, 1988; Locke & Latham, 1990; Nicholls, 1984; Pintrich & De Groot, 1990; Pintrich & Schrauben, 1992; Schunk, 1985, 1991; Schutz, 1993, 1997; Wentzel, 1991).

The third line of goal research has looked at how life-task goals (i.e., more long-term and far-reaching goals) influence self-regulated thoughts and behavior (Astin, 1993; Astin & Nichols, 1964; Austin & Vancouver, 1996; Cantor &

Fleeson, 1991; Cantor & Langston, 1989; Ford, 1992; Klingler, 1977; Little, 1983; Markus & Nurius, 1986; Schutz, 1997; Schutz, & Lanehart, 1994; Wadsworth & Ford, 1983; Winell, 1987). In other words, along with subgoals (e.g., "I will finish my English assignment Friday at 10:00 A.M.") and goal orientation (e.g., "I like expressing my ideas when I write"), students also discuss a variety of goals that are larger in scope (Ford, 1987; Ford, 1992; Schutz, 1994, 1997, in press; Schutz & Lanehart, 1994). These life-task goals may include getting a degree, finding an intimate companion, or becoming a teacher. Research on the nature of life-task goals has shown several links between these goals and the direction of thoughts and behavior. For example, these goals have been found to be related to the choice of a college major (Astin, 1993; Astin & Nicholas, 1964); decisions about education, occupation and family (Hoeflin & Bolsen, 1986); choices concerning student housing (Niedenthal, Cantor, & Kihlstrom, 1985); behavior directed towards personal projects (Little, 1983; Palys & Little, 1983); and learning and motivational strategies use (Schutz, 1997; Schutz & Lanehart, 1994).

In addition, other research and theory indicate that out of all the life-task goals we develop, there are some that become the main focus of our self-directed attempts (Ford, 1987; Ford, 1992; Schutz, 1994; Wadsworth & Ford, 1983; Winell, 1987). These goals are what Winell (1987) refers to as ultimate goals and what Ford (1992) refers to as core goals. Theory and research indicate that most of our self-directed attempts at the attainment of goals are related to such core goals. In other words, we tend to develop a small set of core goals that organize our lives and help us direct our transactions within an environment. Ford (1992) stated that it is from these core goals and our pursuit of them that we derive most of our strong feelings of satisfaction and frustration.

From the perspective being developed and investigated here, these core goals, or one's most important life-task goals, tend to provide a personal context from which subgoals emerge, are defined, and are pursued. Thus, a core goal to get a degree involves the development and use of a variety of subgoals that require day-to-day activities directed toward the core goal of getting a degree. These core goals and subgoals provide direction for self-regulated classroom learning activities. An example of this would be a student reading notes after class to grasp all the information before it is forgotten. This strategy has meaning to this student, in part because the student sees reading the notes as a strategy to help learn the material, which will help the student do well in the class and, therefore, moving closer to the core goal of getting a college degree. Thus, the self-regulated strategies involved in monitoring and reading notes acquire meaning from the personal goal context of wanting to get a degree.

Although there is a substantial and growing amount of theory and research on goals and self-regulation, there is considerably less research investigating the relationship between life-task goals and subgoals (Austin & Vancouver, 1996; Schutz, in press) and, more specifically, the relationship between one's most important, or core, goals and subgoals. Because of the importance of goals for

self-direction, it follows that if we are interested in understanding self-regulated learning, we must develop an understanding of the life-task goals and subgoals one develops and attempts to attain and maintain. From the perspective being investigated here, the subgoals used on a daily basis to self-regulate learning most likely emerge from our core goals. This implies that to understand day-to-day self-regulated learning attempts, we must understand the transactions between core goals and their subgoals. Thus, being able to identify core goals and how they influence subgoals becomes an important dimension for understanding self-regulation. To contribute to this theory and research, we investigated the following research questions: 1) Can we identify students' core goals? 2) Are semester subgoals and time spent on subgoals related to core goals? and 3) Do core goals, subgoals, and time spent on subgoals relate to academic performance?

METHOD

Sample

The participants in this study were thirty-nine volunteer students enrolled in two sections of an undergraduate educational psychology course at a large midwestern university. These students came from a variety of disciplines and were predominately sophomores and juniors in their first teacher training course. Thirty-nine percent of the participants were male and 61 percent were female. Ten percent of the participants were African American and 90 percent were European American. The participants ranged in age from nineteen to forty-five with a mean age of 23.79.

Core Goal Identification

Three items of information were triangulated in an attempt to identify the participants' core goal domains. On the first day of class, we asked the participants to answer the following question: "Think about all you would like to achieve, obtain, and/or experience during your life. List as many as you can." Later the researchers categorized these goals into the ten goal domains developed from the responses of similar participants in previous studies investigating the aforementioned question (Schutz, 1994) (see Table 1). In that previous research (i.e., Schutz, 1994), with interrater agreement of .85 or above, the researchers categorized 98 percent of the goals stated by 348 participants in one study and 95 percent of the goals of 120 participants in a second study. In the study reported here, the interrater agreement was .88. Column one in Table 2, which shows the percentage of participants who did not list at least one goal in a domain, represents this information.

The second activity for the participants on the first day of class was to rank order their responses to the aforementioned question from the most important goal to the

Table 1. Ten Goal Domains with Example Goals

1) Family (e.g., “to develop or continue to develop a fulfilling intimate relationship” or “to get or stay married”);
2) Occupational (e.g., “to improve my occupational skills throughout my career” or “to have a job that I truly enjoy”);
3) Educational (e.g., “to earn a bachelor’s degree” or “to earn a high grade point average”);
4) Travel and adventure (e.g., “to travel to foreign countries” or “to sky dive or climb a mountain”);
5) Personal well-being (e.g., “to acquire self-knowledge” or “to have a happy outlook on life”);
6) Physical comfort (e.g., “to have financial stability” or “to own a home”);
7) Social helping (e.g., “to be a community leader” or “to work helping others”);
8) Friendship (e.g., “to continue my friendships” or “to make new friends”);
9) Power and wealth (e.g., “to be rich” or “to be seen as being powerful and important”); and
10) Religious (e.g., “to be active in religious affairs” or “to help others develop religiously”).

Table 2. Rank Ordering of the Goal Domains

Goal Domains	Percent who did not list at least one goal in a domain	Means for rank ordering the goals listed	Means for rank ordering the goal domains	Average of the goal domain rankings
Family goals	10% (1)	3.01 (1)	1.41 (1)	1.51 (1)
Educational goals	21% (3)	3.26 (3)	2.79 (2)	2.08 (2)
Occupational goals	10% (1)	3.22 (2)	3.07 (3)	2.13 (3)
Personal well-being goals	49% (5)	5.21 (4)	4.08 (6)	3.26 (4)
Physical comfort goals	49% (5)	5.81 (5)	4.05 (4)	3.45 (5)
Friendship goals	82% (8)	7.21 (8)	4.05 (4)	4.03 (6)
Social helping goals	64% (7)	6.67 (7)	5.15 (7)	4.15 (7)
Travel and adventure goals	36% (4)	5.99 (6)	7.74 (10)	4.70 (8)
Religious goals	90% (10)	7.67 (10)	5.64 (8)	4.74 (9)
Power and wealth goals	85% (9)	7.36 (9)	7.00 (9)	5.07 (10)

least important goal. The researchers used each participant’s rank-ordered goals to develop a rank ordering of goal domains. To accomplish this, we took the top-ranked goal and gave the goal domain it represented a 1; the next highest-ranked goal from a second goal domain received a 2; the next highest-ranked goal

in a third goal domain received a 3; and so on until we ranked all the goal domains represented in each participant's list. Column two in Table 2, which shows the mean rank ordering of the goal domains as rated by the participants, represents this information.

The third item of information used to identify the participants' core goals was their rankings of the actual goal domains. The participants performed this activity on the first day of class. For this activity, we asked the participants to read a description of the ten goal domains and then rank order them in terms of how important it would be for them to accomplish their goals in those domains during their lives. The participants completed this activity by listing and rank ordering their goals on the open-ended question noted earlier. The purpose of this activity was to provide an additional measure of how the participants valued the various goal domains. We were attempting to create a way of looking at the goal value consistency of the participants over different measures since goals that are truly the most important or most highly valued should be highly rated on more than one measure. Column three in Table 2, which shows the mean rank ordering of the goal domains, represents this information.

To identify the most important goal domains for each participant, we compared the top five rank-ordered goal domains from the open-ended question to the top five rank-ordered goal domains from the goal domain rankings. We chose five because it represented the top half of the potential goal domains. Thus, we were comparing the rank-ordered goal domains from the open-ended question to the participants' rank ordering of the goal domains. We were looking for the goal domains the participants ranked in the top five of the two separate rankings as an indication of their consistency in ranking their most important goal domains. If the participants ranked the goal domain in the top five on both rankings we considered this to be an indication of how important the participants saw those goal domains and, therefore, we labeled and operationalized them as core goal domains. We combined the remaining goal domains for each person and operationalized them as Secondary Goal Domains. In other words, these were the goal domains the participants did not rate as being their most valued goals.

Semester Subgoals

During the second day of class, we asked the participants if they had semester subgoals in any of the goal domains and, if so, to indicate what those subgoals were. To collect this information, we gave the participants a description of each of the ten goal domains and asked them to list any semester subgoals they had in those domains.

The participants provided a variety of subgoals during this activity such as: 1) educational subgoal: "I would like to learn something in class, despite my grades. The last couple of years I worked for grades in my classes and I didn't seem to learn much. This semester I really want to learn (a good grade would be

nice, too!); or 2) occupational subgoal: "I am applying for a co-op job in the field of education so that I can have more real-life, hands-on experience."

We matched the participant's semester subgoals to either the participant's core goal domains or their secondary goal domains (i.e., less valued goal domains). For instance, we matched the above educational subgoal with the participant's core educational goal "to earn a college degree" as stated in their response to the open-ended goal question mentioned earlier. In addition, we matched the aforementioned occupational semester subgoal with the participant's secondary occupational goal "to be successful = good career." This participant did not rank the occupational goal domain in the top five on either measure we used (i.e., the open-ended question and the goal-domain ranking). Therefore, we categorized it as a secondary goal. We used these data to examine the relationship between core goals and subgoals.

During the second to the last week of the semester, we returned the participant's listing of semester subgoals and asked them to indicate which of the semester subgoals they stated at the beginning of the semester they had accomplished. We developed a record indicating how many semester subgoals were stated by the participants and how many subgoals the participants said they accomplished. The interrater agreement was .88 for the total number of goals and the goals that were accomplished.

Time Spent on Semester Subgoals

We also asked the participants to keep track of their time during the fourth week of the semester. We gave each of them a twenty-four-hour day, seven-day week time schedule and asked them to record what they did during each day until 12 noon and then between 12 noon and before they went to bed. During each class that week as a reminder to keep track of their time, we asked the participants to fill in the time schedule by recording what had already occurred that day. After that week, we asked them to use their completed time schedule to categorize how much time they had spent on activities related to each of the ten goal domains. We used this data to determine the percentage of time spent on core goal domain activities and the amount of time spent on secondary goal domain activities.

Academic Performance

For academic performance we combined each participant's scores on the four exams during the semester. Tests one and two were forty-item multiple choice exams that included both knowledge- and application-level questions. Test three was similar to tests one and two but had thirty-seven items. Test four was a 40-point case study that required participants to integrate information from the first three units and apply that knowledge to a problem-solving situation. Hence, there were 157 total possible test points.

RESULTS

The first research question dealt with the potential identification of the participants' core goals. Only 10 percent of the participants did not list at least one family and occupational goal and 21 percent did not list at least one educational goal (see Table 2, Column 1). The next lowest percentage was travel and adventure goals with 36 percent—a difference of 15 percent. Column two in Table 2 shows the means of the rank-ordered self-reported goals that fell into the ten goal domains. The highest-ranked goal domains were family (3.01), occupational (3.22), and educational (3.26) goals. The fourth highest-ranked goal domain was personal well-being goals (5.21) with a drop of 1.95 on a 10-point scale. The third column shows the means of the ten rank-ordered goal domains. Again the pattern emerged with family, occupational, and educational goals ranked the highest.

Column four in Table 2 shows the average for the first three columns of information. The top three goals were family, educational, and occupational. We used paired comparison *t*-tests to determine if there were significant differences among the goal domain categories. This was done to see if we could identify a small set of core goal domains that rated as being more valued by the participants in this study. Thus we examined nine comparisons (e.g., family vs. educational, educational vs. occupational, occupational vs. personal well-being, etc.). In order to reduce the potential for making family-wise Type 1 errors with repeated *t*-tests, we set alpha at .006 (i.e., .05 divided by 9 = .006). For these analyses, the difference between occupational goals and personal well-being goals was the only comparison significant at the .006 level ($t = 3.56, p < .001, \eta^2 = .26$). This indicates there was a small set of core goals that were rated as most valuable. In addition, when we identified the core goal domains for each participant, the results showed that thirty participants (77%) had the family goal domain as one of their core goal domains; twenty-six participants (67%) had the occupational goal domain as one of their core goals; and twenty-two participants (56%) had the educational goal domain identified as one of their core goals. The next highest number of participants for a particular goal domain was personal well-being goals with eight (21%). Thus, generally speaking, for this group of participants, family, occupational, and educational goals were rated most important.

On the basis of the triangulation of this information, there is some evidence for a set of goals that students, when asked, consistently rate higher than other goal domains over different measures. In general, for this group of participants, three seems to be the average number for those core goal domains. In addition, for this group of participants, the most important goals tended to be related to family, occupation, and education. This finding is consistent with other studies we have done with college students (see Schutz, 1994).

The second research question asked: Are core goals and secondary goals related to semester subgoals and time spent on goals? Table 3 shows the mean number of semester subgoals per goal domain was 1.15 and the mean number of

Table 3. Means and Standard Deviations for Variables Used in the Analyses

	Mean	SD
Semester subgoals per goal domain	1.15	.41
Semester subgoals accomplished per goal domain	.74	.34
Percent of semester subgoals accomplished per goal domain	63.22	18.94
Semester core subgoals per core goal domain	1.47	.74
Semester core subgoals accomplished per core goal domain	1.09	.62
Percent of semester core subgoals accomplished per core goal domain	72.44	31.31
Secondary semester subgoals per secondary goal domain	1.01	.39
Secondary semester subgoals accomplished per goal domain	.57	.32
Percent of secondary semester subgoals accomplished per domain	55.43	23.58
Percent of time spent on core goal domains	12.12	6.27
Percent of time spent on secondary goal domains	7.97	2.04
Total for test scores	117.33	12.12

semester subgoals accomplished per goal domain was .74. This indicates that 63.22 percent of the semester subgoals stated at the beginning were said to be accomplished by the end of the semester.

As indicated, the semester subgoals were sorted into two categories: Those that were subgoals for one of the participant's core goals¹ (i.e., core subgoals) and those that were subgoals for one of the participant's secondary goal domains (i.e., secondary subgoals). In terms of core subgoals, Table 3 indicates that 1.47 subgoals were set for each core goal domain. This compares to 1.01 for each secondary goal domain. We used a paired comparison *t*-test to determine if more core subgoals were set per domain than secondary goals per domain. The *t*-test showed a mean difference of .43 ($t = 4.18, p < .002, \eta^2 = .32$). This indicates a significant difference between the number of core subgoals set and the number of secondary subgoals set.

For subgoals accomplished, 72.44 percent of the semester core subgoals were said to be accomplished compared to 55.43 percent of the secondary subgoals. Again, we used a *t*-test for paired comparisons to see if there was a significant difference in the percentage of subgoals accomplished. The *t*-test showed a mean difference of 17 percent ($t = 3.00, p < .005, \eta^2 = .20$). This indicated a significant difference between the percentage of core subgoals accomplished and the percentage of secondary subgoals accomplished.

¹For this analysis, we based the number of core goal domains for each participant on the aforementioned analysis to determine the most important goals for each participant. For example, if a person had two core goal domains, then we used those two core goal domains for the rest of the analysis. The number of core goals ranged from one to four goal domains.

Table 3 also shows the participants spent 12.12 percent of their time spent per core goal domain for the designated week and 7.97 percent of their time per secondary goal domain. A *t*-test for paired comparisons showed a mean difference of .04 ($t = 3.15, p < .003, \eta^2 = .21$). This indicated that participants spent significantly more time on activities related to their core goal domains during that week than on activities related to secondary goal domains.

The third research question asked: Do core goals, subgoals, and time on subgoals relate to academic performance? Correlations between the amount of time spent on core goals and academic performance showed that as the time on core goal activities increased so did academic performance in the course ($r = .38, p < .01, r^2 = .14$). This would indicate that students who were better able to focus their efforts on the goals that were most important to them did better in the course. A positive correlation between the percentage of semester core subgoals accomplished and academic performance ($r = .32, p < .05, r^2 = .10$) also indicates this. Hence, those who were more likely to accomplish their semester core goals also performed better in the course.

Another explanation may be that time spent on core goals and semester core subgoals accomplished are related to course performance since 56 percent of the students had educational goals as one of their core goals. Therefore, it was the time on educational subgoals and the accomplishment of educational subgoals that related to course performance—not just core goals or time spent on core goals. In order to investigate this issue, we examined the relationship between academic performance and time spent on core goals after removing time spent on educational goals. The question was: “Is the relationship between performance and time spent on core goals due to time spent on core goals or time on educational goals?” To investigate this issue, we used a multiple regression using time on educational goals and time on core goals (with time on educational goals removed) to predict academic performance. The overall test was significant ($F(2, 36) = 3.67, p = .04, r^2 = .17$). The partial correlations show that time on core goals was significant ($t = 2.36, p = .02, \eta^2 = .13$) but time on educational goals was not ($t = -.23, p = \text{NS}, \eta^2 = \text{NA}$). For time on core goals, the relationship held even when we removed time spent on educational goals from the analysis. Thus, the more time they spent on the goals that were most important to them—regardless of whether they were educationally focused or not—the more successful they were in the course.

We also examined the relationship between core goals accomplished and academic performance after removing the educational subgoals that were accomplished. The question here was: “Is the relationship between performance and core goals accomplished due to the accomplishment of core goals or to the accomplishment of educational goals?” To investigate this issue we used a multiple regression using educational subgoals accomplished and core subgoals accomplished (with the educational subgoals accomplished removed) to predict academic performance. The overall test was not significant ($F(2, 36) = 2.12, p = \text{NS}, r^2 = \text{NA}$) even though the correlations between educational subgoals

accomplished and academic performance were significant ($r = .32, p = .05, r^2 = .10$). However, there was a correlation between educational subgoals accomplished and core goals accomplished ($r = .41, p = .006, r^2 = .17$) indicating shared variance between core goals accomplished and educational goals accomplished. Thus, unlike with the time spent on core goals, when we removed the educational subgoals accomplished variable from the analysis the relationship between core goals accomplished and academic performance was not significant. Yet, there was a significant bivariate relationship between educational subgoals accomplished and academic performance.

DISCUSSION

The accomplishment of the goal to earn a college degree is an end as well as a beginning. As an end, it requires the prioritization of one's goals and the self-regulation of one's thoughts and behavior toward the attainment of the degree. As a beginning, the earned degree represents entry into a world that is rapidly changing. Currently, this rapid change is resulting in students preparing for jobs that in only a few years may not exist. Therefore, future success will be, in part, dependent on the skills students develop to regulate and continue their learning in the future. For this reason, self-regulated learning and the goals that are so important to self-regulation must be a concern of educational research and practice.

With that in mind, this study attempted to answer three questions: 1) Can we identify students' core goals? 2) Are semester subgoals and time spent on goals related to core goals? and 3) Do core goals, subgoals, and time spent on subgoals relate to academic performance? At a theoretical level, these questions are important because the nature of core goals and their relationship to self-regulated learning has not been adequately explicated. At an applied level, these questions are important because if we are interested in helping students develop their life-long self-regulated learning skills, we must develop a better understanding of the relationship between goals and subgoals.

In terms of identifying participants' core goals, the results of the study provide some preliminary evidence for a set of goals that, when asked, participants consistently rate higher than other goals. This was demonstrated by the identification of a small set of core goal domains that participants in this study consistently mentioned and rated as more important than other goal domains. The participants were consistent across different measures in indicating their most important goals.

The second question asked about the relationship among core goals, semester subgoals, and time spent on goals. The nature of this relationship was demonstrated by participants setting more core semester subgoals per domain than secondary semester subgoals per domain. In addition, during the week the participants kept

track of their time more time was spent on core goal domains than was spent on secondary goal domains. Therefore, not only did participants identify core goal domains as being more important to them, they also set, accomplished, and spent more time on semester core goals. These results provide some evidence for the notion that the participants' core goals may be providing direction for their daily activities. Specifically, in this case, the participants' behavior was directed at setting and accomplishing more subgoals and spending more time on those subgoals. In other words, the small set of goals the participants rated as most important may provide a context from which subgoals and activities for daily self-direction emerge.

The third question asked about the relationship among core goals, subgoals, time spent on subgoals, and academic performance. Taken together, the results for this question indicate that accomplishment of educational subgoals and the percent of time spent on core goals related to success in the course. In terms of educational subgoals, there was a significant bivariate relationship between educational subgoals accomplished and academic performance. This indicates that, as with previous research, specific subgoals tend to be related to performance (Locke & Latham, 1990). In addition, students who spent their time on the goals that were most important to them did better in the course. This relationship held even when we removed time spent on educational goals from the analysis.

The findings from this study are similar to previous research by Scott and Robbins (1985), which suggests that goal instability or a lack of goal directness is related to lower uses of study strategies, feelings of incompetency, and lower course grades. In addition, related findings on students' perceived control of time (Nonis, Hutson, Logan, & Ford, 1998) suggest that students who see themselves as being in control of their time tend to perform better academically and have better problem-solving ability, lower levels of stress, and better health. Together these findings suggest the importance of seeing oneself as being in control and feeling competent. In this study, a possible link between feelings of being competent (Scott & Robbins, 1985) and in control of one's time (Nonis, Hutson, Logan, & Ford, 1998) may have emerged as a coordination among the participants' core goals, subgoals, and time spent on those goals. Perhaps this suggests that being able to coordinate one's most important goals, subgoals, and how one spends one's time may also facilitate feelings of control and confidence that could result in the achievement of one's goal to earn a college degree. This would be consistent with research on self-efficacy (Bandura, 1986, 1997; Schunk, 1991) and suggests that more research is needed to explicate these relationships and their potential influence on retention.

At a minimum, the findings from this study indicate that discussions about retention need to involve an understanding that a students' desire to finish school is part of a larger goal context. For the participants in this study, family, occupational, and educational goals tend to dominate the categories of core goals. This is important

because it provides information about the context from which day-to-day self-regulated learning strategies emerge and, therefore, where theorists, researchers, and teachers need to look to understand self-regulated behavior that is so important to success in college. Therefore, courses such as University 101 or learning and study strategies courses may profit from activities designed to help students not only think about their goals but to also consider issues of alignment of their most important goals with their subgoals and how they spend their time. Activities such as these should help students to develop the personal goal context needed to reach the goal of getting a degree.

Even though this study may help us understand how goals influence behavior, there are several limitations. For example, the participants were from two intact classes. Thus, caution should be observed regarding any possible generalizations made about other students or people in general. On the other hand, this is how students experience college and, therefore, it may be a more realistic view of what occurs in a classroom than what you would find in a more experimental setting.

A second potential limitation is that we collected much of the information through open-end questions which asked the participants to tell about their goals, how important those goals were, and how they spent their time. The interpretation of responses to the open-ended questions was sometimes left to the researchers. However, we did compute interrater agreement on the areas we felt were subject to different interpretations and those agreements were .88 and .89. In any event, as with any research, particularly exploratory, replication and further theoretical and empirical research will need to continue.

In spite of these potential limitations, this research does provide some evidence that goal theory can and should be developed to provide a more comprehensive understanding of how goals influence self-regulated behavior. One way to accomplish this would be to include in the discussions of goal theory and theories regarding self-regulation not only subgoals and the orientation of those goals, but also a discussion of core goals and the transactions between those goals and the subgoals that emerge from them.

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