Students' Resistance to Change in Learning Strategies Courses

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Educational researchers have ignored motivation as an explanation of why students fail to change their learning and study strategies.

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ABSTRACT: Research findings indicate that many students fail to benefit from academic support services and courses. The paper discusses reasons why some students resist changing their academic behaviors and links the reasons to learning and motivation variables. The explanations for failure to change include: (a) students believe they can't change, (b) they don't want to change, (c) they don't know what to change , or (d) they don't know how to change. The authors describe an assignment in which students identify their own academic problems and conduct individual case studies based on a four-stage process for behavioral change: self-observation and evaluation, goal setting and strategic planning, strategy-implementation and monitoring, and strategic-outcome monitoring.

Colleges provide considerable support services to help students improve their learning. These programs include learning to learn courses, Supplemental Instruction, required programs for underprepared students, and integrated reading/writing courses (see Simpson, Hynd, Nist, & Burrell, 1997 for a comprehensive review of these programs.) In 2000-2001, more than three-quarters (75.1%) of institutions of higher learning offered at least one remedial reading, writing, or mathematics course. More specifically, 80.4% of 2-year, 81.7% of public, and 67.9% of private 4-year institutions provided remedial courses (National Center for Education Statistics, 2002).

In addition to remedial courses, Supplemental Instruction and learning to learn courses play an important role in providing academic assistance to undergraduate students. Supplemental Instruction uses collaborative learning strategies in high-risk courses in which students participate in regularly scheduled, out of class, peer-facilitated study sessions. These sessions allow students an opportunity to discuss and review course information (Martin, Lorton, Blanc, & Evans, 1977). Learning to learn courses (e.g., Dembo & Jakubowski, 1999; Hofer, Yu, & Pintrich, 1998) teach students a variety of learning strategies to help them become more self-regulated learners. More specifically, students learn strategies to improve their time management, acquire higher- level content knowledge, manage their environment, develop critical thinking skills, and pursue extra help outside of class when needed. These courses are different from the more traditional study skill courses because they are based on learning theory, whereas study skill courses often are atheoretical (Pintrich, McKeachie, & Lin, 1987).

Unfortunately, there is limited systematic research on the effectiveness of many academic assistance programs (see Simpson, Hynd, Nist, & Burrell, 1997). There appear to be three interrelated problems that need the attention of administrators, researchers, and instructors of academic support programs. The first problem is that many students fail to seek help. Students, particularly those at the lower academic achievement levels, do not readily participate in academic support services unless they are required (Friedlander, 1980; Karabenick & Knapp, 1988, Rosen, 1983). For example, Karanbenick and Knapp (1988) have found a curvilinear relationship between help seeking and academic need. Their findings show that the rate of help seeking increased from low to moderate need, maximizing in the B- to C+ grade range, and then decreased with high need levels. Karanbenich and Knapp (1988) ask: "Why is the rate of help seeking so low among students who are performing poorly, who have undoubtedly experienced repeated academic failure, and who could most benefit from assistance" (p. 408)?

A second problem is that students who enroll in academic support programs often fail to attend sessions or classes on a regular basis. For example, although research evidence indicates that Supplemental Instruction has been successful in helping students achieve higher grades than comparable groups of students who do not enroll in the program (Arendale, 1994), administrators report that attendance at weekly study groups is a problem (Rettinger & Palmer, 1996; Sydney Stansbury, personal communication, June 10, 2002).

A third problem is that students who do enroll in academic support programs often fail to benefit from such programs or courses because they do not change their academic behavior**.** In a review of the effects of study skills courses in higher education institutions, Hattie, Biggs, and Purdie (1996) have reported the following:

> It is very difficult to change the study skills that students have acquired, usually over many years of study...older students are more resistant to change...Although most programs in which the thrust is study skills use by university students, the effects on study skills are minimal. (p. 126)

Educational researchers have ignored motivation as an explanation of why students fail to change their learning and study strategies (Nist & Simpson, 1993).

The purpose of this paper is to provide insights into why students have difficulty changing their academic behavior despite being enrolled in a course of study to prepare them for the demands of college. We shall use the term "learning strategies courses" to refer to all programs and courses that intend to change students' learning and study strategies. Our intent is not to identify every possible reason for failure to change but to identify some of the major factors that can account for why students have difficulty changing their academic behavior. We conclude the paper with some suggestions for assisting instructors in the change process.

Conceptual Framework

In this paper, we draw upon the work of Zimmerman and his colleagues (Zimmerman, 1998, 2000; Zimmerman, Bonner, & Kovach, 1996; Zimmerman & Risemberg, 1997) and Prochaska and Prochaska (1999). Zimmerman focuses on self-regulation as a process in becoming a more successful learner, whereas Prochaska and Prochaska provide insight into the difficulties related to changing one's behavior.

Self-Regulation

As students transition from high school to college, they need to learn how to take greater personal control of their learning, which often includes changing aspects of their academic behavior. Researchers have found that the more successful the students are in implementing strategies that lead to personal control of their learning, the more likely they are to be successful learners (Zimmerman & Martinez-Pons, 1990; Zimmerman & Risemberg, 1997).

Zimmerman refers to the ability to take control of one's learning, including changing aspects of one's behavior, as self-regulation or self-regulatory learning. Self-regulatory learners establish optimum conditions for learning and remove obstacles that interfere with their learning. For example, self-regulatory learners establish goals and an action plan for how they will prepare for exams, carefully monitor their understanding of the material when studying, use a variety of learning strategies and ask for help when needed, take breaks to renew their concentration, and change their learning environment if it is distracting. An important consequence of self-regulatory behavior is that students who self-regulate find a way to learn. It does not matter if the instructor is a poor lecturer, the textbook is confusing, the test is difficult, the room is noisy, or if multiple exams are scheduled for the same week; self-regulatory learners find a way to excel. Researchers have demonstrated that self-regulation can be taught and that it can enhance academic achievement and a sense of self-confidence or efficacy (Zimmerman, 1998, 2000; Zimmerman & Risemberg, 1997).

Problems in the Change Process

Zimmerman (1998) makes the distinction between skillful self-regulators and naïve self-regulators. Unlike skillful self-regulators, naïve self-regulators often have no goals or plans on how to succeed, possess little self-confidence or efficacy, don't want to master the material in class but just get by, demonstrate disinterest in class, avoid self-evaluation, and in general, are nonadaptive in identifying problems and changing their academic behaviors. These are the types of students that frustrate instructors in courses and programs that provide academic support services to help learners succeed in college.

Prochaska and Prochaska (1999) suggest four reasons why individuals have difficulty changing their behaviors: (a) they believe they can't change, (b) they don't want to change, (c) they don't know what to change, or (d) they don't know how to change. Previously, this framework has been used to understand why people do not change health-related behaviors, such as alcohol abuse, obesity, and smoking (Prochaska & DiClemente, 1983; Prochaska, DiClemente, & Norcross, 1992). We will apply this framework to the academic setting.

Efficacy beliefs are important predictors of student motivation and self-regulated behaviors.

I Can't Change

> Ralph has been getting Cs in his college courses. Though the learning strategies course has taught him several effective strategies, Ralph believes that he lacks the strength and will power to change the inadequate study habits he has acquired over the 12 years of previous schooling. In addition, he believes that the instructor dislikes him and will not grade him fairly. When he reluctantly attempts to apply a new set of skills to prepare for exams, he gives up easily when he cannot predict exam questions and returns to his old, ineffective study habits from high school. He seems anxious, demoralized and having lost hope about ever doing well on exams.

Ralph demonstrates many behaviors that cause students to believe that they can't change. First, he studies in the same way as he did in high school without having to think about his study strategies. Prochaska and Prochaska (1999) point out that people can't change aspects of themselves that are not conscious. Studies in psychology (e.g., Bargh & Chartrand, 1999; Wegner & Wheatley, 1999) indicate that certain behaviors have become automated (i.e., nonconscious, unintentional) from years of repeated and consistent practice. When it comes to automated behaviors, individuals have difficulty being aware when engaging in them and explaining how and why they do certain things. For example, it would be difficult for most people to explain how they bowl or hit a baseball or even how they learn certain material for an exam (e.g., how far in advance of an exam they study, whether they play music in the background while studying or not, whether or not they highlight while they read material, etc.). Without realizing it, many students have probably automated their study habits through their repeated use during the 12 years of schooling prior to college. Changing such automated behaviors requires considerable commitment, effort, and time, leading some students to conclude that they lack the willpower and inner strength and therefore cannot change. It is not uncommon for students enrolled in a learning strategies course to report that they can't learn the new system since their old methods, though ineffective, are automated to the point whereby they function in a nonconscious, effortless way. What makes matters worse is that when students are under pressure, such as preparing for an important mid-term exam, they often resort back to their existing automated skills even when they know that these skills are not as useful or effective as the new skills they have learned or practiced. The combination of the ease with which automated skills function, the effort that it takes to change this type of skill, and their tendency to reassert themselves when students most need to shift to new skills causes some students to believe that they simply cannot change their existing inefficient academic habits.

Second, when Ralph does identify an automated study habit, such as how he prepares for exams, he gives up easily in the face of difficulty as he attempts to change. Researchers have identified a motivational variable called self-efficacy that helps to explain his behavior. Self-efficacy refers to the evaluation students have about their abilities or skills to successfully complete a task (Bandura, 1982). The key question that determines self-efficacy is: "Am I capable of succeeding at this task?" Educational researchers have found that efficacy beliefs are important predictors of student motivation and self-regulated behaviors (see Pajares, 1996, Schunk, 1989; Zimmerman, 1995, 2000 for a comprehensive discussion of self-efficacy and academic motivation and achievement). Specifically, students with low self-efficacy are less likely than their high-efficacy counterparts to choose difficult tasks, they expend less effort, persist for shorter periods of time, use less deep processing skills, do not ask for help when they need it, and experience fear and anxiety regarding aca-

demic tasks. Educational researchers have found that when students have low self-efficacy, they are not likely to learn new, more effective skills, and they are more likely to give up easily when they encounter difficulties practicing the new skills. Since effective study strategies, such as those taught in learning strategies courses, require the use of deeper processing skills such as planning, checking, and monitoring one's work, students with low sense of self-efficacy may not engage in them. They are likely to experience self-doubts, show resignation and apathy, and believe that they cannot change.

Ralph also believes that the instructor doesn't like him and will not grade him fairly. Researchers (e.g., Weiner 1986) have demonstrated that the attributions students make about events influence their beliefs that they can't change. An attribution is an individual's perception of the causes of his or her success or failure. When an event occurs, especially with a negative or unexpected outcome, individuals can interpret it in different ways. Consider three college students of equal ability or aptitude in the same class who just received a "C" on an exam. The first student, like Ralph, is very upset because he believes that the instructor is biased against him and does not grade fairly. He decides that there is not much he can do to obtain a high grade in the course. The second student determines that the grade reflects the amount of time he spent on the task and decides that he needs to work harder in the future. The third student believes that she doesn't have the aptitude to succeed in the class and plans to reduce future effort on exams.

Why did the three students of equal aptitude interpret their experiences so differently? One explanation is that the three students made different attributions about their performances on the term papers. Two of the students made stable attributions for the outcome. That is, they blamed factors that are fixed and over which they have no control, such as their aptitude and the grader's bias. The third student made an unstable attribution by believing that inadequate effort spent on the specific task caused the low grade. According to attribution theory (Weiner, 1986), many students believe that they are born with stable and uncontrollable innate ability or aptitude but that the effort they spend on specific situations can be controlled by the individual and is thus unstable. Attribution researchers believe that how students perceive the causes of their prior successes and failures is the most important factor determining how they will approach a particular task and how long they will persist at it. Therefore, when students see effort as the cause for failure (i.e., an unstable and controllable factor), they are likely to try harder in future situations, persist on difficult tasks, and seek assistance from their instructor. However, when students make stable and uncontrollable attributions for failure (e.g., aptitude or the instructor's bias), they expect the same negative consequences in the future. These students are less likely to seek the help they need, use effective learning strategies, and, ultimately, believe that they can't change.

I Don't Want to Change

Although Laura is enrolled in the mandatory learning strategies course based on her high school GPA, she believes that she does not need to change her study habits. After all, she got admitted to college! She believes that her study strategies are as good as the ones discussed in the course. In addition, she sees learning and using new study strategies as taking up time when all she wants to do is to get through the courses with good enough grades.

Some students, like Laura, are not convinced they need to change their academic behavior. These students often raise questions, publicly or privately: "Why do I need to change?" "I graduated from high school," or "I was accepted to this college." It is not until the first midterm exams that some students realize that many of the learning and study strategies used in high school are insufficient for academic success in college. Although many students realize they need to improve, they tend to stick with familiar strategies, even though they are not achieving the best results. Some students report to us that it takes too much effort and time to learn new methods of learning. They simply are not motivated to change.

Athletes are able to modify their performances from feedback they obtain by viewing their own physical movements.

In contrast to a low sense of self-efficacy, students who do not want to change often display an unrealistically high sense of self-efficacy or overconfidence (Clark, 1991) because of the relative success of their high school experience. In reality, many of these students have experienced a teacher-controlled academic environment (i.e., the instructor tells one what to learn, how to learn, and when to learn) with a focus on lower-level learning (i.e., studying factual material—who, what, when, and where). As a result, they lack the skills needed for the college level, such as critical thinking. Overconfident students lack the ability to judge the academic situation as different from high school and hold on to the faulty belief that they have the necessary study strategies when new ones in fact are needed. These students demonstrate displeasure when faced with a requirement to take a learning strategies course since it conflicts with their perception of the level of skills they possess for academic studies. It is common for overconfident students to not take responsibility for their failures and instead blame the tests and instructors, justifying their desire of not wanting to change.

Another reason for students not wanting to change their academic behavior may lie in their reason for achieving or goal orientation. In our description of Laura, her goal was just to get through her courses with good enough grades. Educational researchers have determined that students have different reasons for achieving in different courses (see Midgley, 2002; Pintrich, 2000). A student with a mastery goal is oriented toward learning as much as possible in a course for the purpose of self-improvement, irrespective of the performance of others. A student with a performance goal focuses on social comparison and competition, with the main purpose of outperforming others, or, on the other hand, just "getting through the course" and not mastering its content. Though a performance goal orientation has been related to higher grades than a mastery goal orientation, students who endorse performance goals demonstrate less interest and curiosity in the subject matter than those with a mastery orientation (Harackiewicz, Barron, Taur, Carter, & Elliot, 2000). Therefore, adopting a performance orientation may cause students to lower their value for a learning strategies course, resulting in disinterest and an unwillingness to acquire and practice self-regulated learning skills. A performance orientation, coupled with overconfidence may lead students to not want to change.

I Don't Know What to Change

Felicia has a difficult time identifying what is preventing her from attaining her academic goal of getting a B average in her courses. She is not sure whether it is her poor use of time, study methods, or test preparation that is causing her to get Cs. Her problem is that she does not know where to begin to bring about change.

Felicia is having trouble with observing and evaluating her own performance which, according to research in self-regulation (Zimmerman, Bonner, & Kovich, 1996), is a key component in determining what to change. For example, elite athletes observe their performances by viewing videotapes. After a short period of time, they are able to modify their performances from the feedback they obtain by viewing their own physical movements. Dance studios place handrails next to mirrors to enable dancers to self-observe as they practice their routines, and musicians learn to listen to their playing in order to critique their own performances (Glaser, 1996). Since they are able to effectively monitor themselves both during and immediately after a task, experts are able to make very detailed changes that optimize their performance.

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Similarly, self-observation and evaluation are important contributors to the success of college students (Zimmerman & Paulsen, 1995). For example, students need to be able to monitor their learning strategy use and evaluate whether they correctly matched different learning strategies to the complexity of different tasks. Specifically, students need to learn that tasks that require simple recognition and recall can be learned by using rehearsal strategies, but tasks that require analysis and synthesis may require elaboration and organization strategies (Weinstein & Mayer, 1986). If students cannot self-observe and evaluate the effectiveness of their behavior, they are likely to not know what to change in order to become more successful.

I Don't Know How to Change

> Mark knows that he needs to change the way he takes lecture notes but is having trouble applying the learning strategies in his calculus class. The note taking strategy he learned from his learning strategies course seemed to work well for the history lectures, but calculus presents a different challenge.

Even though learning strategies courses teach skills that are intended to bring about change in one's academic behavior, students like Mark, in reality, may not know how to change. This may be due to two factors: The students may not have had adequate practice with the strategy in the learning to learn course to use it on their own, and the students may not know how to transfer the strategies from the learning to learn course to other courses. In order for learning strategies to become fully implemented across different courses, students need both numerous and diverse opportunities to practice them. Researchers estimate that it takes thousands of hours of practice to become an expert in any field (Ericsson & Charness, 1994). Even if one doesn't expect a given learner to attain the level of expertise identified in the literature, it is not difficult to understand the limitations of a single assignment or two to learn a given behavior. Our belief is that many learners are not benefiting from learning strategies courses because they are not given the level of practice that is necessary to produce change in academic behavior (Hofer, Yu, & Pintrich, 1998). Clearly, an introduction to a strategy with limited practice in only certain types of courses is not sufficient to adequately learn and apply the strategy. Though the students may be exposed to potentially effective strategies, they, in reality, may not know how to change.

Implications

There are likely many approaches to help students change their academic behavior. As instructors in a learning-to-learn course, we have been using a self-management study assignment, consisting of four interrelated processes, to help students develop self-regulatory skills and, at the same time, deal with the reasons why they often resist change as identified in this paper (see Zimmerman, Bonner, & Kovach, 1996 for a discussion of the model and Dembo, 2004 for a detailed explanation of how students complete self-studies using the model to change their behavior). Students conduct this study as the final paper for our learning strategies course.

The following is an outline for developing a strategic plan for students who identify anxiety as a major academic problem. Similar outlines are available for improving time management and exam preparation, managing motivation, as well as other academic problems (Dembo, 2004). Concrete examples of steps that can be accomplished at each stage follow the outline.

Four Processes Defined

1. Self-observation and evaluation. How does anxiety influence my academic and/or personal life? Do I need to change the way I deal with anxiety? If yes, what problem(s) do I encounter? What are the symptoms of my problem(s), that is, when, where, and how often does my problem occur? What factors (e.g., beliefs, perceptions, feelings, physiological responses, and/or behaviors) contribute to this problem? What do I need to change to reduce or eliminate my problem?

> *The information allows students to analyze the conditions affecting their behavior.*

2. Goal setting and strategic planning. What are my goals? What strategies will I implement to reduce my anxiety? When will I use these strategies? How will I record my progress?

3. Strategy-implementation and monitoring. What strategies did I use to reduce my anxiety? When did I use these strategies? What method(s) did I use to record my progress (e.g., documents, charts, logs, tally sheets, checklists, and/or recordings)? When did I use these methods? How and when did I monitor my progress to determine if my anxiety-reducing strategies were working? What changes, if any, did I make along the way?

4. Strategic-outcome monitoring. Did I attain the goal(s) I set for myself? Has the reduction in my anxiety improved my academic performance and/or personal life? What strategies were the most and least effective? What changes, if any, do I need to make in the future?

Four Processes Applied

The first of the four processes in self-regulation is *self-observation and evaluation* as students become aware and assess their previous and current academic behavior. Students identify, observe and evaluate an academic problem by using a variety of formal and informal diagnostic instruments such as the Learning and Study Strategies Inventory (LASSI; Weinstein, Schulte, & Palmer, 1987), writings from their weekly journals, and checklists from self-assessment exercises that are provided in the course literature. For example, in order to determine one's level of anxiety, the LASSI includes a subscale specifically for anxiety, indicating where students score in relation to other college students taking the assessment. In addition, students can assess the nature of their self-talk and identify where, why, and how they engage in negative self-talk by recording it in a thought journal. The journal includes such data as the date of occurrence, the settings, and the nature of the negative self-talk. The information allows students to analyze the conditions affecting their behavior. Also, students can assess their level of anxiety by examining whether they have panicky thoughts or worries that frustrate their efforts to concentrate, whether they rush through test questions so quickly that they misinterpret directions or fail to notice important information, and whether they experience physiological symptoms, such as muscle tightness and abdominal distress. In addition to identifying their problem, we ask students to reflect about its history (i.e., When did they start being anxious about school performance? Did it happen in middle school or high school?) and ask the students to diagnose the problem (i.e., What are the reasons for their perceived anxiety? Is it unrealistic parental expectations? Is it painful experience with failure in previous schooling?).

After students better understand their previous and current behavior in a given area, they are able to engage in *goal setting and strategic planning*. This step begins with the students determining their intermediate and long-term goals. An example goal for students who have identified anxiety as an academic problem could be reducing negative self-talk and feeling more confident, and as a result, obtaining a B average for the current semester and improving performance on exams in the long-term. Students should plan on using specific strategies, identified in course literature, to deal with their problem area. For example, students whose goal is to reduce their anxiety may plan to engage in positive self-talk by assuring themselves that they can successfully accomplish each task they face every day for 1 week. They may also plan to counter each instance of negative self-talk with a positive one to increase confidence. Additionally, they may use relaxation techniques, such as abdominal breathing and muscle relaxation (McKay, Davis, & Fanning, 1997) to reduce their anxiety and stress. It is important at this stage in the study that the students determine specific documentation methods to keep track of strategy use.

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For example, students can plan to record self-talk in a thought journal and relaxation techniques by marking each time they practice them onto a weekly calendar.

Following goal setting and strategic planning, the *strategy-implementation and monitoring* occurs as students try to execute the strategy and monitor its effectiveness. Students attempt to answer the question: Am I reaching my goals through the strategies I created? Most importantly, the students are required to use documentation to support the answer to this question. At this point in the process, students with high anxiety should be able to provide evidence of their attempted behavior change. According to the plan, they should record the nature of their negative self-talk as well as the content of the countering positive self-talk in a thought journal. Also, the students' weekly calendar should indicate each time they practiced a certain relaxation technique.

In the final stage, *strategic-outcome monitoring*, students must look at their performance and answer the following questions: Did I attain each of the goals I set for myself? How do I know? The students need to review every document, chart, journal, tally sheet, and/or checklist they used throughout the self-study and describe what each piece of evidence tells them about how successful they were at reducing their anxiety. The students should also assess their academic performance: Did they attain a B average for the current semester? Of specific importance at this stage is determining which strategies were the most and least effective in helping them reduce this problem. This information helps determine whether there are any changes they need to make to improve their academic performance in the future.

An important aspect of this project is that each student determines his or her own self-study, and, as a result, appears to be less defensive about changing his or her behavior. Most importantly, students are required to identify and practice the learning strategies most relevant to deal with their own academic problems.

Zimmerman, Bonner, and Kovach (1996) believe that one of the major advantages of using this self-regulatory process is that it can improve not only the students' learning, but it can enhance their perception of self-confidence and control over the learning process. By learning to self-observe one's current learning and study behavior and by determining for oneself what methods are effective and ineffective, students can begin replacing ineffective methods with better ones and can become more aware of the improved effectiveness of these new strategies.

Evaluative Data

In order to assess the effectiveness of the learning to learn course overall and the self-management study, specifically, we conducted two self-report surveys during the Fall 2003 semester. The first survey was administered after two-thirds of the course was completed. It asked the students to identify whether they had or had not changed their academic behavior at that point in the course. Additionally, we asked each student who did not change their behavior to identify one of the four reasons discussed in this paper as the reason for their lack of change. The following is the informal assessment we used:

> The purpose of this course is to help you make any necessary changes in your academic learning and motivation to become a more successful student. Check one of the following as it relates to you:
>
> ___1. I identified some behaviors that I needed to change and made attempts to change my behavior. Explain how you have changed.
>
> ___2. Basically, I didn't change my behavior very much. For the most part, I presently use the same strategies that I used in high school.
>
> Explain how you are able to change or why you can't seem to change. If you didn't change, identify which <u>one</u> of the following explanations most closely pertains to you and explain why.
>
> ___1. I can't change.
> ___2. I don't want to change.
> ___3. I don't know how to change.
> ___4. I don't know what to change.

The students' open-ended comments validated each of the four stages in the study as important in bringing about behavior change.

We found that of the 169 students enrolled in the course, 49 students (29%) indicated that they had not changed their behavior. Of the 49 students who had not changed, 33 (67%) indicated that they did not want to change, 3 (6%) stated that they could not change, 9 (18%) said that they did not know how to change, and 4 (8%) expressed that they did not know what to change.

The following demographic information may be helpful in understanding why 33 of the 169 students indicated that they did not want to change. The entering SAT scores for all freshmen at the university during Fall 2003 were 1341. Students who were required to take our learning to learn course had an average SAT score of 1050, with the student athletes averaging 1000. Our conversations with many of the 33 students indicated that they believed they could be successful in college without taking our course, and they were probably correct. However, the scores on some of the students' Learning and Study Skills Inventory, their high school grade-point averages, as well as their academic progress during their first semester indicated they needed help in improving their learning and study strategies. Thus, it appears that the students in our learning to learn course do not comprise a homogenous subgroup but rather fall under several categories when it comes to reasons for lack of change.

Two options are offered as a final paper for the course: One is to conduct the self-management study as described in this paper; the other is to conduct a career assessment study wherein the students are required to conduct interviews with a professional in their field of interest and an academic advisor, as well as to assess the appropriateness of their current coursework in relationship to their long-term career goals. Of the 49 students who, according to the first survey, had not changed, 19 students (39%) conducted the self-management study as opposed to the career assessment study. In order to assess the effectiveness of the four-process self-management study, we conducted a survey that included two questions specifically targeting the area of changing one's behavior. Those questions were: 1. Before doing the self-management study, to what degree did you believe you could change the specific aspect of your behavior? 2. To what degree did the self-management study help you change your behavior? The students responded on a 1 (very little) to 5 (very much) Likert scale. For the sample of 19 students, we found a significant difference between the means of the first ($M = 2.74$) and second question ($M = 3.42$), $t(18) = -2.387$, $p < .05$. This difference indicated that the self-management study contributed significantly to the students' ability to change their behavior. However, one must be cautious in interpreting this finding. It may be that the students in this subgroup who selected the self-management project were more amenable to changing their behavior as compared to the subgroup who selected the career assessment paper. Nevertheless, a group of students who stated that they had not changed their behavior during the course provided evidence that the project helped them change their behavior.

Additionally, the students' open-ended comments validated each of the four stages in the study as important in bringing about behavior change. For example, self-monitoring and evaluation was reported as valuable since it helped the students to actually "see the amount of distractions in ... everyday life." Another student stated, "The most effective part of the study was identifying the root of my problem because once I knew where the problem stemmed from I was able to know what strategies to use to fix it." Goal setting and strategic planning were effective since setting a goal, for one student, "forced ... [her] to stick to it" and, for another student, "it [setting a goal] made me sit down and think about my problem rather than

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just accept it." Comments about strategic implementation and monitoring highlighted the importance of documenting one's progress. As one student indicated, "I am in a constant battle with my self-talk so keeping track of it with a thought journal helped me see how and when I think negatively." Another student mentioned that using specific strategies, such as planning one's use of time for two weeks in trying to combat procrastination, gave her a sense that she can actually do something about her problem. In addition, strategic monitoring highlighted "the consequences of ... procrastination" for one student. The overall impact of the assigned paper is summed up by a statement from a student who in the first survey indicated that he did not want to change his academic behavior. According to him, the most effective part of the self-management study was "just the fact that ... [he] was forced to initiate a plan and implement it for this paper—otherwise, little action would have been taken."

Future Research

Although the literature explaining the characteristics and processes of academic self-regulation has grown extensively in recent years, research still reveals little about why certain students are more likely or willing than others to change their learning and study skills and become more self-regulated learners. Hofer, Yu, and Pintrich (1998) point out this problem: "There is a clear need for more process-oriented studies, which will probably involve more qualitative and ethnographic observations and interviews of students as they are enrolled in a learning to learn course as well as when they leave it" (p. 81). More specifically, they point out that there is little research on how different entry beliefs and strategies constrain or facilitate the learning of self-regulatory strategies.

We concur with Hofer, Yu, and Pintrich (1998) and believe that we need to include qualitative assessments in our evaluation designs. Recently, Spradling and Dembo (2002) completed such an evaluation whereby they interviewed four students each week during a 14-week semester. The study provided interesting insights into the students' perceptions of their behavior. One of the emergent themes in the investigation was the dichotomy between knowing what to do and actually doing it. The students indicated that self-motivation was a determining factor in the amount of behavioral change in the course. It will be important to conduct further qualitative investigations to better understand what motivational factors inhibit students from changing ineffective behaviors.

Conclusions

This study has identified a number of reasons why students have difficulty changing their behavior and linked these reasons with major learning and motivational variables and processes: automaticity of behavior, level of self-efficacy (both too low and too high), nature of attributions, type of goal orientation, problems in self-observation and evaluation, negative self-talk, and problems in the transfer of learning. It is clear that these problems are related to what has been called the skill and the will: (the knowledge or strategies regarding how to learn (the skills) and the motivational processes that support or impede learning (the will). Problems related to automaticity of behavior and the transfer of strategies from one course to another are related to issues in learning, whereas the level of self-efficacy; nature of attributions; type of goal orientation; and problems of self-observation, evaluation, and negative self-talk relate to motivation. If educators only focus on one dimension—skill or will—it is unlikely that they will be able to help students change their academic behavior.

We also provided an outline and specific examples for what we believe to be an effective way of facilitating behavior change: the four-process self-management study assignment. Our data demonstrate that this approach has benefited even students who up to the last one-third of the course indicated that they had not changed their behavior despite their participation in the learning-to-learn course.

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In summary, educators must be prepared to teach students who are not eager to benefit from their instruction. When faced with resistance to change, developing strategies for teaching students how to change becomes imperative. This change strategy involves more than providing information about how to learn, such as note-taking and exam preparation strategies; it involves helping students use this information so they can learn to control their own behavior and actually benefit from the knowledge of the strategies. For this reason, instructors can best help students by teaching self-regulatory skills through projects such as the self-management assignment described in this paper in courses that provide academic support services to students. In addition, it is important to understand the reasons why students resist change to ensure that these issues can be appropriately addressed in learning strategy courses.

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