The transition from high school to college is difficult for many students. In 1999, the dropout rate for the freshman to sophomore year in public four year colleges and universities was 33.3% (ACT: Newsroom: News Release: National College Dropout and Graduation Rates, 1999, http://www.act.org/news/releases/2000/02). Many of the variables contributing to students’ rocky transitions from high school to college are beyond the control of the college teacher. But some of the difficulties arise because students may not have good study strategies. They may not know how to analyze themselves as learners or how to read and analyze course material. This paper will describe some methods for identifying college students who may be at risk for academic failure, and it will suggest some simple cognitive strategies which can be modeled and explicitly taught by college instructors.

Identifying Students At Risk of Failure

Students who are at risk of academic failure are not often easy to identify at the
beginning of the school year. Freshmen are excited about the new environment and may at first find it easy to adjust to a typical academic load. By midterm, however, students may become overwhelmed, and professors should be especially sensitive to early signs of trouble, such as absenteeism, moodiness, and poor personal hygiene. It is sometimes hard for professors who interface with a large number of students to notice warning signs, but some steps can be taken to heighten awareness of these signs so that early interventions can take place.

Absenteeism is a somewhat obvious first sign of trouble, and taking roll is important, if time consuming. Simple sign-in sheets or powerbook spread sheets are some options instructors may use in lieu of calling roll. Professors may also have several assignments come due before midterm, and absences may be noted when these are turned in and handed back.

Absenteeism is only one indicator of potential academic problems. Others include changes in affect and neglect of personal hygiene. Instructors in freshman and sophomore courses should learn to read their students. Non verbal cues are important, and it is important for instructors to establish a “baseline” sense of their students during the first weeks of the term. Gestures, stance and posture, facial expressions, eye contact, vocal intonation, and use of physical space contain messages. Changes in demeanor and hygiene may indicate stress. This is common information; the difficulty for instructors lies in finding ways to get to know students well enough to note body language and changes in demeanor.

During the first weeks of the term, instructors should try to learn students’ names. Students may use an index card to give the instructor some mnemonic pegs, such as a rebus made of their names or a significant fact about themselves. This practice, at the very least, focuses the instructor’s attention on individual students. It also sends a message that the instructor is interested in individual students, thus making it easier for a student to make an initial contact with an instructor when trouble is on the horizon.

Group study sessions are another way for instructors to observe students more closely, and may serve the additional purpose of teaching domain specific cognitive strategies and study skills. Regularly scheduled “lunch with the professor” in the student center or another informal setting offers another way for students and instructors to know one another. And often, simply asking, “How are things going?” will cause a student to open up and share any personal difficulties or worries which might impact their academic performance.

It is extremely important to establish routine lines of communication at the beginning of the term, and to remind students to use these channels whenever questions and concerns arise. Email and class bulletin boards are effective tools for communicating among class members as well as between instructor and students. The class bulletin board also helps the instructor maintain a sense of commonly shared difficulties. Most colleges and universities will have some campus-wide software, such as Intrakal or Anlon, which allows an instructor to set up a class bulletin board with ease.
Typically, there is little contact between a student's academic advisor and her or his instructors, and academic advisors can certainly be a second line of defense against academic failure. Some colleges, such as the Community College of Denver, have completely overhauled their advising systems to identify students at the point of entry who may be at academic risk. These students are then monitored and assisted in a number of ways designed to address their individual risk factors. (O'Banion, pp.213-214)

**Interventions**

While instructors may not be able to address the many risk factors in their students' lives, they certainly can incorporate and model explicit metacognitive strategies and skills in their classes. They can also assist students in becoming self-conscious learners. One approach is to ask students to develop a written study strategy for the first exam. They should describe their particular study conditions and strategies as well as ways they have found ineffective. They should include a reasonable target grade and a schedule of days and times they will reserve for study. These plans may change, and students' initial estimations of themselves may prove to be false. But the exercise helps raise awareness of the planful nature of academic success. Once students have feedback from their first exam, they can be walked through the exam, noting the kinds of information or question format which proved to be most difficult. They can then develop a new study strategy, incorporating any changes.

The explicit teaching of study skills is important for students at risk. These study skills can be broken into two broad categories - verbal and quantitative. College students typically have to read voluminous amounts of difficult material, and they have to master technical and mathematical information. Both the degree of difficulty and the quantity of material to be mastered are significantly greater than at the high school level. Instructors may find it well worth their time to explain how to read effectively. For example, teaching how to skim the first sentence in each paragraph as well as chapter subheadings sets up a general framework of meaning before the student plunges into reading the whole chapter. Another approach to reading long assignments is to read the conclusions at the end of each chapter before reading the chapter in depth. If students can be walked through this process at least once, they may see how an overview of a chapter makes the reading more intelligible as they go along. For many students, a long chapter to be read is an onerous task: they simply plunge in and try to slog through it.

There is one more step in previewing a chapter that can be used with certain textbooks. Many texts put important words in bold print. Glancing at each word in bold print and either reading the accompanying text, or looking it up in the glossary can give the reader a notion of what the author felt was the most important terminology to be gained from the chapter. So when reading a large amount of material for class, a student can read the first sentence of each paragraph of a chapter, read the conclusion at the end of the chapter, study the words in bold in the chapter, then read the text in depth. With this previewing
employed as a strategy, the student will gain more from the reading, and may not have to go back and review it at a later date.

There are some additional strategies which are valuable when studying for technical subjects such as science or math. In a well-written text the author often refers to any graph, table, or figure before it appears on the page. A student can save time in reading if he/she first looks at each graph, figure, and table. The student can be taught how to learn a great deal of information from these sources in a short period of time. Using the example of a statistics table, the student should first look at the title in order to see what is being depicted. Then a short cut is to look for an asterisk next to any of the numbers. A statistically significant finding is usually accompanied by an asterisk, and that is the most important result in a statistics table. Combinations of the other numbers in the table can be used to recreate the study, but often just add confusion for those who are struggling in the subject. Many students are required to take an introductory probability and statistics class but will never major in those subjects. Simplifying the reading of the tables will facilitate learning what to some is a foreign language. The students can then read the accompanying text if further clarification is necessary.

Another simplification strategy for the study of technical subjects deals with looking at graphs and histograms before reading the text. The first step is the same as for reviewing statistics tables — simply read the title. The next step is to look for any peaks or low points. Graphs are usually used to depict trends from one extreme to another, so the student should look at each extreme before worrying about the other lines or bars in the figure. Once the student has read the title in order to learn what is being compared, and then has looked at the peaks and valleys, the material should become clear. If the material is still unclear, the student can then read the text to get a better understanding of the concept being presented.

Reading the text is preferred by many, as opposed to looking at tables and graphs. For these students, mathematical equations are often difficult to decipher even if explained in detail by the instructor. One method that can enable the students to better understand this abstract terminology is to make it concrete through the use of words. The student can write out the equation using the English language in place of symbols. An easy example is \( a^2 + b^2 = c^2 \). This can be translated into "The length of one side of a triangle times itself, plus the length of the other side of a triangle times itself, equals the length of the hypotenuse times itself." This translates what is to some a foreign language, into the English language. This same process can be used for every formula regardless of the complexity. Once a student is capable of translating a formula from symbols into words, that student can follow the words to complete the calculation.

Science and mathematics have subject specific languages which may seem unintelligible to the neophyte student. One strategy that students can use in order to decipher such material is to circle any words in the text that they do not understand. There is a good chance that the
instructor will be using the same terminology and the student can ask the definition during or after class. Students can also circle such words as they take notes in class. These practices call the students’ attention to what it is they need to find out about. If instructors are teaching subject matter with a unique or technical vocabulary, some time should be set aside during each class to answer questions of clarification.

**Conclusion**

The general term for what has been described in the previous section is Cognitive Behavior Modification. Many neophyte students simply do not know how to look at themselves as learners, to think about how they learn, to set goals, to actively apply strategies, and to monitor themselves as they advance toward a goal. The degree of self-regulation required at the college level is frequently not what students are used to. Instructors are in a position to notice when problems are brewing and they can model the kinds of skills which are necessary for academic success. Strategies can be as simple as having a student and teacher work a math problem on the board as each takes a turn verbalizing what the other is doing. And instructors can call explicit attention to themselves as they model strategies; for example, one can ask, “Did you notice what I did when I got stuck on this problem? What do you say to yourself when you get stuck?”

A valuable, succinct resource for instructors who wish to provide some metacognitive scaffolding for their students is Self-Talk for Teachers and Students by Brenda Manning and Beverly Payne (Allyn & Bacon, 1996). This work, while aimed at elementary and secondary teachers, contains many generalizable strategies as well as an excellent research base.

One third of all freshmen entering four year public colleges and universities will drop out before the sophomore year. This represents an enormous loss of resources, both human and economic. It seems that one rational response to this statistic is to suggest ways that college instructors might better prepare themselves to recognize students at risk and to foster students’ study skills and metacognitive abilities. The suggestions given in this paper imply that instructors must do more than organize and prepare lectures. They must also address students’ processing skills.

**References**


