

# **Learning How to Learn: An Essential Skill for the 21st Century**

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**F**or years, students were thought of as empty vessels waiting for instructors and professors to pour knowledge into them. The roles involved in this process were quite clear: Instructors presented knowledge and students absorbed this information so that it became part of their knowledge base. It was further assumed that once this new information became a part of a student's knowledge base, it could then be used in higher order thinking and reasoning tasks, such as problem solving. Transferring the application of this knowledge to new contexts and demands also was assumed to be relatively automatic.

Today, educational psychologists and others interested in learning in higher education contexts have shown that these assumptions are wrong. Students must take an active role in converting new information into meaningful knowledge. They need to learn how to acquire, integrate, and use new knowledge for higher order reasoning tasks and how to transfer it to new task demands and

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contexts. In short, they must become "strategic learners."<sup>1</sup>

## **Characteristics of a strategic learner**

What does it mean to be a strategic learner? Strategic learners need to have a variety of different types of knowledge, which can be loosely classified into five basic categories:

- First, students need to have knowledge about themselves as learners. They need to know about their learning strengths and weaknesses, their preferences, their academic goals, and how college fits into their future goals. This type of knowledge is important for helping students manage their time effectively and identify appropriate learning resources, such as tutors or study groups.
- The second category is knowledge about different types of academic tasks. Students need to know about the types of academic tasks they might be expected to perform as part of their college experience, such as reading for understanding, taking different types of tests, taking and using notes, and observing a demonstration. This type of



## **Effective learning**

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knowledge helps students plan, control, and monitor their attainment of learning goals.

- Knowledge about strategies and methods for acquiring, integrating, thinking about, and using new knowledge is the third category. Students need to know about different learning strategies, such as paraphrasing, elaborating, generating outlines, comparing/contrasting, practicing, working in groups, and trying to teach something to a “study buddy.” These learning strategies help make new information meaningful and accurate and increase the probability that it will be integrated with existing knowledge and stored in a manner that will facilitate future recall and use.
- The fourth category is prior content knowledge. Students need to know how their existing knowledge can be used to help make sense of new information. This also increases the probability that the new information will be integrated with related existing knowledge, an important consideration for future recall and use.
- The final category is knowledge of present and future contexts

in which the new information could be useful. Students need to know about the importance or usefulness of new information. This type of knowledge is important because it helps students see the relevance of the new information to present or future goals in various realms of their life: academic, personal, social, and occupational.

Possessing these different types of knowledge is useful for successfully meeting learning goals, but it is not sufficient by itself for strategic learning. Students also must *want* to learn—effective learning requires the will to set and accomplish reasonable learning goals. Motivation and positive feelings and beliefs about learning derive from and interact with many factors, including: the setting of goals, the analysis of goals, the use of goals, efficacy (success) expectations, outcome attributions (what students think causes their success or failure in school), interest, perceptions of self as a learner, and utility value of the new information for reaching desired goals. Motivation generation and maintenance strategies are an important second component of strategic learning.

In addition to possessing the knowledge and will needed to be strategic learners, students also must know how to manage their studying and learning so that they can be both effective and efficient in meeting their goals.

Strategic learners have “self-regulation” strategies to plan, orchestrate, and manage their studying and learning. At the

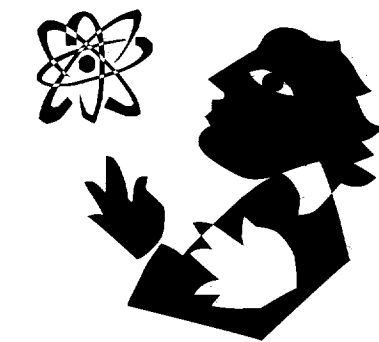
macro level, students use a systematic approach to setting and meeting their learning goals. This approach includes setting a study or learning goal; creating a plan to reach the goal; selecting the specific methods to be used in reaching the goal; implementing the methods; monitoring progress; modifying the plan, the methods, or even the goal, if necessary; and evaluating the process to decide if this would be a good way to try to meet similar goals in the future. This final evaluation is crucial to helping students build a repertoire of methods that can be implemented somewhat automatically for similar learning situations in the future. Developing systematic approaches to different academic tasks can be time consuming initially, but also can have tremendous payoffs over a lifetime of learning.

At the micro level, self-regulation involves monitoring understanding on a continuous basis. Corrective strategies can be used only when a student is aware of a problem with understanding something. Awareness can come from constantly testing understanding by the use of some form of self-assessment, such as paraphrasing, asking and answering questions about the material, trying to apply it, and trying to teach it to someone else.

### **What institutions can do**

Two primary methods can be used to teach strategic learning: the adjunct approach and the metacurriculum approach.

The adjunct approach involves creating some adjunct, or addition, to a course or general



curriculum. These adjuncts can range from a seminar or workshop focusing on a specific topic or component of strategic learning to semester- or year-long courses focusing on a broad range of strategies and skills.

The metacurriculum approach involves integrating strategic learning strategies into regular content instruction. This method can focus on strategies that are specific to the content of the course, a broad range of strategies and skills, or a combination of the two. The metacurriculum can include instruction for all facets of strategic learning: skill, will, and self-regulation. For example, instructors can model learning strategies for remembering and understanding the content. They can help students develop motivational strategies for initiating, maintaining, and intensifying interest in the course content and also a belief that they can succeed in the course. They may teach abstract concepts by asking students to apply them to situations in their lives. Finally, instructors can help students set personal goals for the course, and they may require students to monitor those goals and reflect on their degree of success. All of these methods are designed to transfer the responsibility for

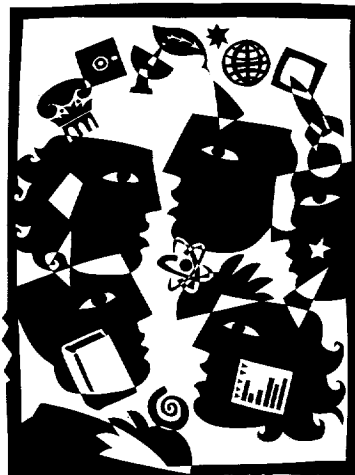
learning from the instructor to the student.

### **Assessment of strategic learning**

Assessments of strategic learning primarily use self-report methods as diagnostic screening devices to identify students' strengths and weaknesses in a variety of areas related to academic success. These assessments can then be used to help students become more aware of their current state of academic self-regulation, and they can contribute to the creation of interventions or programs designed to enhance students' strategic learning. An example of a widely used instrument of this type is the Learning and Study Strategies Inventory (LASSI).<sup>2</sup> The LASSI is a diagnostic assessment that is used to help students (and their instructors) identify their strengths and weaknesses in ten different areas related to the skill, will, and self-regulation components of strategic learning. The LASSI provides standardized scores (percentile score equivalents) and national norms for each of the following ten scales: Attitude, Motivation, Time Management, Anxiety, Concentration, Information Processing, Selecting Main Ideas, Study Aids, Self-Testing, and Test Strategies. It has been used in about 2,000 colleges and universities in the United States in a variety of ways, including as a pre-test or pre-test/post-test measure in learning strategies courses, for screening entering classes as part of advising, for providing composite profiles to individual instructors, and as part of Freshman Year Experience courses.

**Preparing students for 21st century learning**

In fiction and in reality, the beginning of a new century is linked to great changes—some feared and some eagerly anticipated. Higher education in America will change in the 21st century because of the changing demographics of student populations, the expanding diversity of reasons students have for seeking higher education, the demands of lifelong learning, the redefinitions and integrations of the disciplines, the changing contexts of learning brought about by technology and distance learning, and the increasing emphases on students' cognitive abilities and strategic learning strategies and skills. The roles of instructors also will



change as we move away from the model of the college instructor as a content transmitter to a model of the instructor as a teacher and facilitator who helps transfer the responsibility for learning to the student. ■

<sup>1</sup> Pintrich, P.R., D.R. Brown, and C.E. Weinstein, eds. *Student Motivation, Cognition, and Learning: Essays in Honor of Wilbert J. McKeachie*. Hillsdale: Lawrence Erlbaum, 1994. Schunk, D.H. and B.J. Zimmerman, eds. *Self-regulation of Learning and Instruction: Issues and Educational Applications*. Hillsdale: Lawrence Erlbaum, 1994. Weinstein, C.E. and D.K. Meyer. "Cognitive Learning Strategies and College Teaching." *New Directions for Teaching and Learning* 45. San Francisco: Jossey-Bass, Inc., 1991.

<sup>2</sup> Weinstein, C.E., A. Schulte, and D.R. Palmer. *The Learning and Study Strategies Inventory*. Clearwater: H & H Publishing, 1987.

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