

Assessing Students' Needs in a Tutorial Setting

Janice Heerspink
Tutor Coordinator
Academic Support Program
Calvin College
Grand Rapids, Mich. 49506

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Learning: A Problem Solving Approach

Metacognition

1. Awareness of phases of studying and of strategies in each phase
2. Planning
3. Choosing alternative courses of action
4. Monitoring effectiveness



Motivation

1. Beliefs → Desires
2. Goal Setting
3. Priorities
4. Concentration
5. Time Management



Acquisition

- Selective Attention—
Pattern Recognition
1. Selecting
 2. Understanding
 3. Encoding



Retention

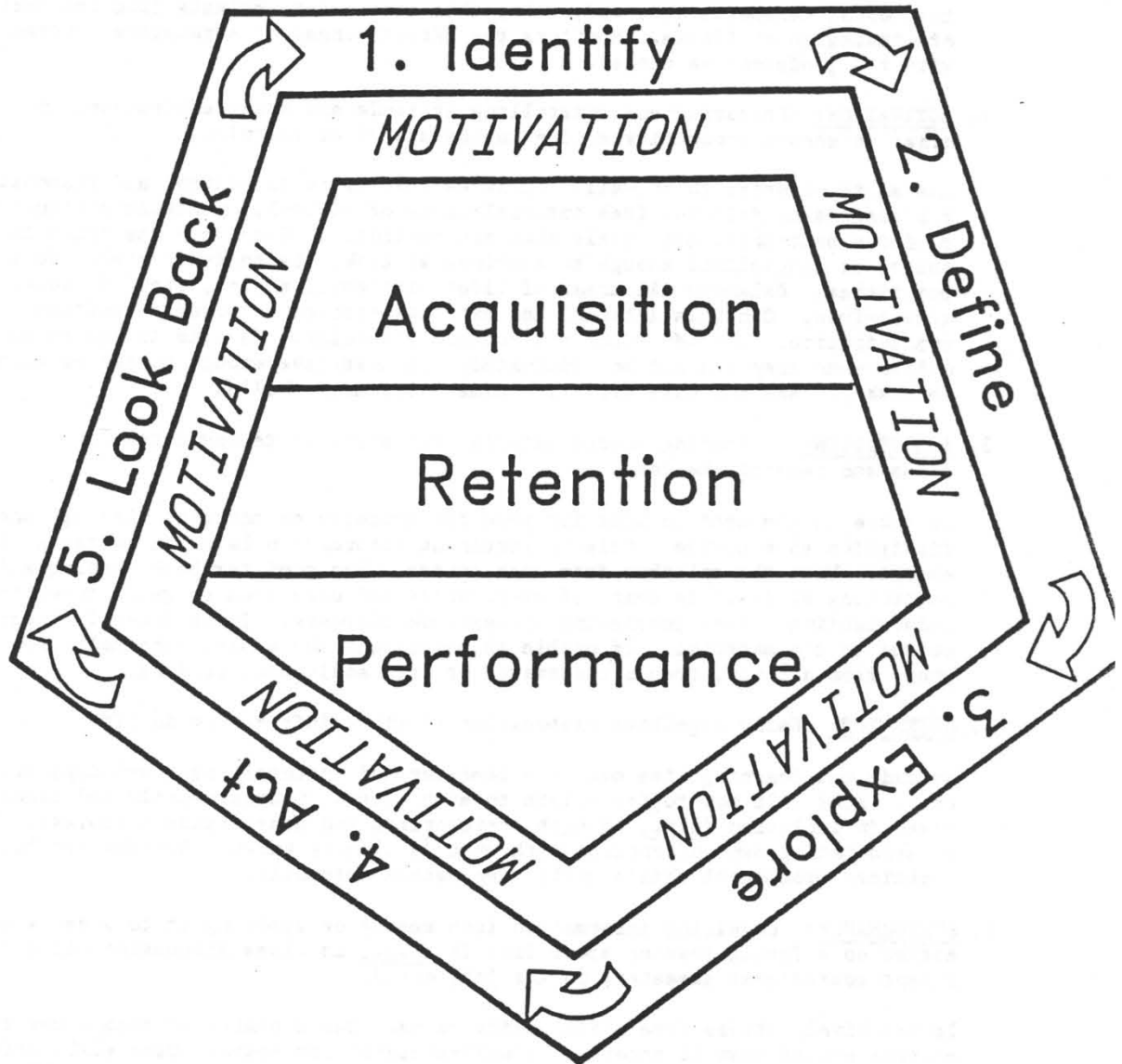
- Cognitive Elaboration
1. Organization for memory
 2. Memory strategies (Declarative knowledge)
 3. Practice strategies (Procedural knowledge)



Performance

1. Controlling anxiety
2. Test-taking
3. Transfer
4. Error analysis

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Ruth Stegeman and Janice Heerspir
Academic Support Program
Calvin College
Grand Rapids, Michigan

CHARACTERISTICS OF SUCCESSFUL STUDENTS

-note the active mind set

1. METACOGNITION: Knowledge of learning processes and strategies and ability to use strategies appropriately.

Solves problems with a problem-solving approach rather than hit-or-miss. Has a repertoire of strategies available for approaching and mastering new material. Is flexible in the use of these strategies, including knowing when to leave a problem and return to it later. Recognizes the different nature of different courses, textbooks, teachers, etc. and, using this assessment, selects from the variety of strategies available. Monitors the effectiveness of strategies. Communicates with the professor as needed.

2. MOTIVATION: Preparing and controlling attitude and study environment in order to ensure productive action in the stages of learning.

Has an inner drive to do well. Believes that he is in control and responsible for success or failure. (Has internal locus of control.) Controls attitude with positive self-talk. Sets goals that are realistic. Even when the drive is not there, is disciplined enough to continue at task. Is self-directed. Sets priorities. Balances all areas of life: academic, social, etc. Is relatively stress-free. Controls internal and external factors in order to sustain concentration. Chooses study environment carefully. Is able to ignore external noises when they can not be eliminated. Is assertive enough to say no when necessary. Has and uses effective time management skills.

3. ACQUISITION: Preparing course material for study by taking notes in class and reading the text.

Is aware of the need to look for repeated concepts or patterns when approaching a discipline as a novice. Selects pertinent information based on patterns that emerge. Uses the syllabus from each course. Has good textbook reading and notetaking skills. Is aware of alert words and uses them to guide selection and understanding. Uses previewing of textbook chapters. Takes notes in forms best suited to the material. If unable to understand the whole, gets help from the prof, from a tutor, from a classmate, or from additional reading.

4. RETENTION: Using cognitive elaboration to store information in LTM.

Spreads out learning time over the semester and intensely over 4-5 days before a test. Asks self how topics relate to each other. Learns details and facts, but never in isolation (e.g., in math, categorizes and understands formulas). Learns by associating new information with what is already known. Reviews regularly. Practices procedural skills until they become automatic.

5. PERFORMANCE: Recalling information from memory or applying it to a new situation, either on a formal test or apart from it (e.g., in class discussion, in a different course next semester, on the job, etc.).

Is relatively stress free while taking exams. Has a number of techniques to control stress when it occurs. Is well-prepared for tests. Uses elaborative strategies to facilitate recall. Has and uses effective test-taking skills for both objective and essay tests. Is aware of transfer of knowledge from one course to another. Analyzes errors based on test results and modifies approach to subsequent tests accordingly.

METACOGNITION, MOTIVATION, ACQUISITION, RETENTION, PERFORMANCE

Evaluation of my progress in developing the characteristics of a successful student.

In the blank before each statement, place the letter that best describes you at this time:

- A = I have and use this skill/ability.
B = I am consciously continuing to develop my skill/ability in this area.
C = I have just begun to think about and/or work on this skill/ability.
D = I have not yet begun to think about or work on this skill/ability.
E = I stubbornly cling to my old habits and refuse to change.

METACOGNITION: Knowledge of learning processes and strategies and ability to use strategies appropriately.

- ___ 1. In problem-solving courses and in life, I approach problems with an organized method rather than hit or miss.
___ 2. I know of a variety of strategies that I can use to master new material.
___ 3. I use a variety of strategies in my learning.
___ 4. If a problem doesn't work out, I am able to leave it, reflect on it, and return to it later. I allow myself enough time to do so.
___ 5. I analyze each course, textbook, and professor to determine which strategies will work best for me in each situation.
___ 6. I monitor the use of my strategies in order to continue doing what works and discard what doesn't.
___ 7. I talk with my professors if I perceive a need for that.

MOTIVATION: Preparing and controlling attitude and study environment in order to ensure productive action in the stages of learning.

- ___ 1. I have an inner drive to do well.
___ 2. I believe that I am in control and responsible for my own success or failure.
___ 3. I use positive self-talk to control my attitude. I work on getting rid of negative self-talk.
___ 4. I set goals that are realistic.
___ 5. I am disciplined enough to stick with my work even when I don't feel an "inner drive."
___ 6. I am self-directed.
___ 7. I have set priorities and consciously work to meet them.
___ 8. I work for a balance in the various areas of my life: academic, social, spiritual, physical, etc.
___ 9. I am stress free enough to function effectively.
___ 10. I carefully choose where I will study to provide an optimal study environment.
___ 11. I am able to ignore external distractions when they can not be eliminated.
___ 12. I know when it is necessary to say "no" and am able to do so.
___ 13. I have and use effective time management skills.

ACQUISITION: Preparing course material for study by taking notes in class and reading the text.

1. I am aware that there are patterns in each discipline, and I look for them as I study.
2. I have learned to select what is important in each course based on the patterns of the discipline.
3. I keep the syllabus from each course in a particular place and refer to it regularly to observe how today's topic fits into the whole of the course. I know where we have been and where we are going.
4. When reading a textbook I use alert words to guide me in selection and in understanding relationships.
5. I preview each chapter before I read it.
6. I stop to ask myself questions about what I have read.
7. I stop to think about how one section of my reading relates to other sections.
8. I encode by either writing in my textbook or taking book notes to help me in study.
9. I take lecture notes that are complete yet selective.
10. I am able to keep up with my professors as they lecture.
11. I reorganize my notes as soon as possible after class to be sure they are complete, organized, and understandable. I make them useful for future study.
12. I know how to make and use charts, maps, and outlines to show relationships within material.
13. If I don't understand, I consult a different book and/or ask the prof, another student, a tutor, — someone who knows and can help me understand.

RETENTION: Using cognitive elaboration to store information in LTM.

1. I review my notes (and text) as soon after each class as possible (preferably the same day).
2. I review the notes of each week, seeing how they fit together with those of previous weeks.
3. I review intensely for 4-5 days before a test.
4. I learn details and facts, but also work to see how they fit in with other facts and ideas.
5. I practice procedural knowledge regularly and faithfully - until it becomes automatic.
6. I talk to others about what I am learning.
7. When I study, I think about how course material is related to what I already know.
8. I try to visualize or create a mental picture of what I want to learn.
9. I test my storage system by asking myself questions about what I am learning.
10. I look for cause and effect relationships (and show them on maps).
11. I make comparisons and contrasts when I study (and show them on charts).

(Evaluation checklist cont.)

PERFORMANCE: Recalling information from memory or applying it to a new situation, either on a formal test, in class discussion, or in another means of application.

1. I am relatively stress free when taking tests.
2. I have and use techniques to control stress if it does intrude on my performance.
3. I use elaborative strategies that are appropriate to facilitate recall.
4. I have and use effective test-taking skills for objective tests.
5. I have and use effective test-taking skills for essay tests.
6. I transfer my knowledge from one course to another.
7. I analyze the errors on my tests to help myself to do better on future tests.

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