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Self-Directed Learning
How Do Students Become Self-Directed Learners?

Teaching Professor
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By the time we're finished, you should be able to do 3 things:

- Examine your own metacognitive strategies in the context of a course or discipline.

- Determine the effects and benefits of modeling self-directed learning for your students.

- Consider case studies and determine what strategies would help the students become better self-directed learners.

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Who are self-directed learners?

- Interested in the subject matter

- Well prepared

- Ready with comments, ideas, questions, and insights

- Problem-finders and problem-solvers

- Unafraid to fail or to admit they do not understand

- Driven to rectify failure and to construct understanding

(Zimmerman and Paulson, 1995)

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What is Metacognition?

- Awareness or analysis of one's own learning or thinking processes

  - Being aware of what you know and don't know.
  - Understanding what you will need to know for a certain task.
  - Having an idea of how to use your current skills to learn what you don't know.

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Figure 4.2. Stages in the Development of Mastery
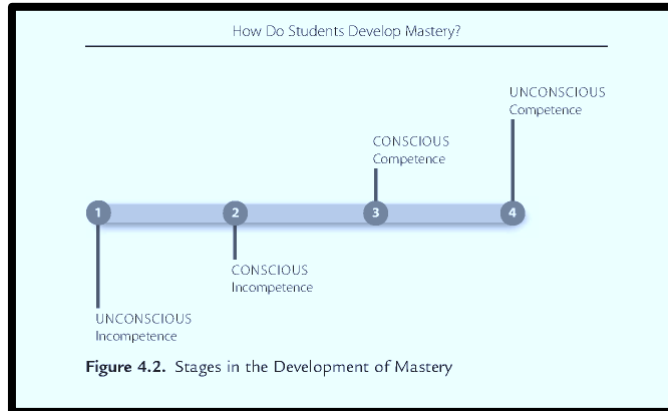
How Learning Works, Ambrose, et.al., 2010

Link   Link

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Metacognitive Inventory

- *Think about your own metacognitive processes. What kinds of strategies do you use to monitor and access your own learning and practice?*

- *Of the declarative, procedural, or conditional knowledge which are you more proficient? more inefficient?*

- *Of planning, information management, monitoring, debugging, or evaluation strategies which are you more proficient? more inefficient?*
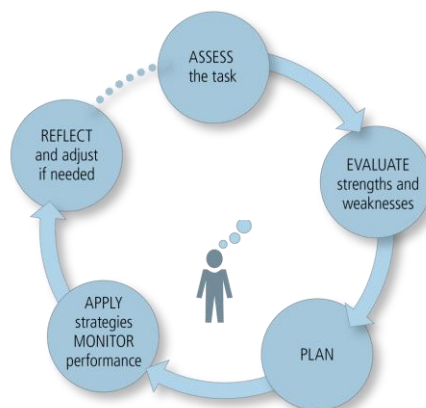
6

How can we help students follow through on each of the elements of metacognition?

To become a self-directed learner one must:

1. *Assess the demands of the task;*
2. *Evaluate one's own knowledge and skills;*
3. *Plan an approach;*
4. *Monitor progress;*
5. *Adjust strategically.*

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Self Directed Learning Cycle

How Learning Works, Ambrose, et. al., 2010

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Assessing the task [to be done] at hand:

– Examples of good AND bad work.
  • Clarity of the differences between excellent and poor work leads to more excellence.
– Check understanding.
  • Ask for an explanation of the perceived task.
– Be explicit about the task and what is required – do not assume
  • Explicit criteria – rubrics
  • The more explicit the criteria the better they will be achieved.

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Supply chain report

The report should describe the complete supply chain for the product or service that was researched.

Also, use section headings to describe:

- Transportation modes in place: air, rail, road, water
- Inventory practices
- Warehouse management
- Procurement strategies
- Manufacturing strategies
- Customer purchasing patterns
- Supply chain relationships, e.g. suppliers and distributors, outsourced
- Global network

The report should answer the following questions among other questions, (check Chapter 14 of textbook for more questions)

- Are we doing what we should be doing?
- Are we doing these things as well as we can?

Answer these questions to justify necessary changes and the potential value of improvements that your team is proposing.

Grading

The grade will be based on

- Depth and detailed coverage of material presented.
- Organization of the report
- The use of graphs and charts to illustrate points
- The research that went into developing the report

	50	40	30	10
Depth and detailed coverage of material presented. _____ points	Report has sufficient detail, and each point is supported by evidence.	Report has some detail, but some details are not supported by evidence.	Details are fuzzy and there is no evidence stated that can provide depth.	Report is written from a personal opinion point of view
Organization of the report _____ points	Report follows the standards outlined in the assignment	Report is missing one of the sections outlined in the assignment.	More than one of the sections are missing or out of place.	Sections are completely missing and there is no organization evident.
Graphical Illustration _____ points	Report and presentation has easily understood and labeled graphics.	Graphics are clear, but are not used in the most advantageous way.	Graphics do not support the contentions in the report.	No graphics were included to support the point of the paper.
Research Methodology _____ points	Report has correctly cited sources. Report uses a variety of both juried journals and mass media.	Relied too heavily on non-juried materials. Citations when used are correctly formatted.	Citations are incorrectly formatted, and there are too few to support the research.	There is no clear research methodology evident.

_____ Total

10

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How to help students evaluate their own strengths and weaknesses.

- – Practice
  - • Timely feedback with explicit performance based assessments.
- – Formative Assessments
  - • Identify particular skills that are targeted in a particular task.
  - • Allow the individual to correct and enhance their weaknesses.
- – Complete feedback.
  - • Be as explicit as possible in giving feedback
- – Opportunities for Self-Assessment [in context]
  - • Self-reflection in a low stakes setting is an important skill for any professional to cultivate.

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Planning

- – Model appropriate planning.
  - • Let the students see how you operate in your discipline.
  - • Focus on how to plan as well as how to make changes if necessary.
- – Allow students to create their own plan
  - • Give extensive feedback
  - • Require self-reflection.
- – Planning should always be a central element of the activity.

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Applying Strategies and Monitoring Performance

- Provide simple heuristics for self - correction.
- Require self-assessments
- Reflection and annotation of work
- Peer Review

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Reflect and Adjust

- Require formal analysis for every project and activity.
- Use prompts for analysis of learning.
  - What type of error occurred
  - How did they come to their conclusion (e.g., what research did they use; what inventory did they apply etc.)
  - What will they do differently
- Demonstrate multiple approaches to conceptualize a problem or task.
- Focus on strategizing rather than just outcome.

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Self-management relates to the ways we control the external factors that affect our learning, such as goal setting and management of relevant resources (Garrison, 1997).

Self-monitoring is a commonly utilized self-management approach in which one systematically observes and records one's own behavior (Reid, Trout, & Schartz, 2005). It is a tool for self-improvement.

Self- Management Self-Monitoring

Motivation

The word **motivation** comes from the Latin verb "movere," to move. In education research, motivation is defined as "the process whereby goal-directed activity is instigated and sustained" (Pintrich & Shunk, 2002, p. 5).

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- **For each of the following cases, consider the following questions:**

  – To better understand this situation, is there further information you need?
  – How does the student's behavior reflect his/her:
    - self-monitoring;
    - self-management;
    - expectancy for success and value of their learning?
  – Are there steps you would take next?
  – What instructional techniques can you use to influence their self-direction?

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The "A" Student

I was exhausted from reading and grading twenty-five papers over the weekend, but was glad to be able to hand the papers back so quickly. The paper was supposed to evaluate emergent research for application in a professional setting. After I turned back the assignment, one of the students approached me and insisted she needed to talk with me "immediately" about her grade. Her work was a typical first paper of this kind. Rather than evaluating the evidence she presented in the paper, she simply summarized several research articles in her topic area. Her paper lacked a clearly articulated argument, and there was only weak evidence to support what I could infer was her main point. She explained that she was a "gifted" writer who received "A"s on most of her collegiate writing, and that her mother, a high school English teacher, had read the paper and thought it was excellent. The student admitted that she had started this assignment the night before it was due, but insisted that she worked best under pressure, "That's just how my creative juices flow".

Adapted from How Learning Works, Ambrose, et.al., 2010

- To better understand this situation, is there further information you need?

- How does the student's behavior reflect her:
  - self-monitoring;
  - self-management;
  - expectancy for success and value of their learning?

- Are there steps you would take next?

- What instructional techniques can you use to influence her self-direction?

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The Hamster Wheel

On his second case-study project, John only scored a 70%. It was mystifying because he attended every class and meeting, sitting attentively, and taking copious notes. He pored over the materials, documentation and the guidelines he needed to apply in a professional setting. His description and diagnosis of the problem and symptom statements were poorly justified and constructed. His first case study was not very good either, though he wasn't alone in that regard. By this time however, he should have learned what to expect and how to present his case in writing. When I asked John what happened he, too, seemed perplexed. He said he had studied for weeks, showing me the glowing yellow pages where he highlighted relevant content. He used notecards for prompts as he wrote his case summary. He even memorized various terms by using flashcards. When I asked where he learned this approach, he said it had been working for him for years, as he was preparing for traditional tests.

Adapted from *How Learning Works*, Ambrose, et.al., 2010

- To better understand this situation, is there further information you need?

- How does John's behavior reflect his:
  - self-monitoring;
  - self-management;
  - expectancy for success and value of their learning?

- Are there steps you would take next?

- What instructional techniques can you use to influence John's self-direction?

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Promoting Self-Directed Learning in your students:

- Address beliefs about continuous learning directly.
  - Practice and discipline always helps with learning
- Broaden their understanding about learning.
  - Learning operates on multiple levels.
- Set realistic expectations
  - Skills take time to develop.
  - Mistakes are learning opportunities if handled appropriately.
- Model your metacognitive processes
- Scaffold metacognitive processes.

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All material may be found at:

http://sites.psu.edu/Teaching Professor/

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