Next-Gen LMS:
Enhancing Tools for Ungrading, Self-Regulation and Social Learning Dynamics

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In the evolving landscape of education, there is a growing recognition of the need to shift away from traditional grading systems that emphasize outcome over process towards a more holistic approach that prioritizes learning, feedback, and growth.

Key takeaways:

- Self-awareness, self-regulation and self-motivation strategies enable students to plan, monitor, and evaluate their learning processes for more effective and purpose-driven education.
- We can help students to grow these skills by embedding them into our activities and assignments.
- Our traditional grading methods and Learning Management Systems make focusing on these skills challenging.

Contents

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Resources: Self-Regulation Activity Examples

Forethought Phase

Learning to Learn

Few students have ever read anything about the nature of learning or thinking, one assignment you might consider during the first week of a course is a short, student-oriented reading or video on what learning entails. Examples include Learning (Your First Job), by Robert Leamnson (2002) and Learning to Learn by Karl R. Wirth and Dexter Perkins (2008b).

Consider follow-up or discussion questions such as:

- What was the most important insight you gained from the reading?
- What surprised you most in the reading?
- What did you already know?
- What will you do differently during a lecture, if anything, given what you read?
- How will you prepare differently for exams, given what you read?
- Can you think of other good learning practices that the reading didn't mention?

"How I Earned an A"

Have your students write a brief paper titled "How I Earned an A in This Course," dated the last day of the semester (after final exams). Alternatively, you can replace this paper with an in-class exercise in which student groups brainstorm ways to earn an A in your course and share these ideas with the class to evaluate. This exercise in optimism and commitment helps students to set a high goal for themselves, but it also induces them to develop plans for attaining that goal.

It also possible follow-up activities such as a class or small group discussion on what it takes to get an A or an end-of-course follow-up paper titled either "How I Actually Earned an A in This Course" or "Why I Didn't Earn an A in This Course" to

help students consider why and where their performance has been coming up short and how to correct and improve their strategies.

Self-Assessment

This type of student self-assessment incorporates the knowledge and the skills that you plan for your students to acquire. The self-assessment is intended to be done twice: once at the beginning of the course and again at the end. It serves instructional purposes such as activating students' prior knowledge of the content, revealing student misconceptions about the subject matter, and previewing the learning that is to come.

- Prior Knowledge Self-Assessments
- Performance-Based Prior Knowledge Assessments

If you intend to include self-regulation among your learning outcomes you could instead include questions to help students assess their self-regulated learning skills. Validated instruments for assessing self-regulation include: Metacognitive Activities Inventory (MCAI), which measures problem-solving skills in STEM. Metacognitive Awareness Inventory, which assesses general self-regulated learning skills across the disciplines.

Knowledge Survey

Knowledge surveys are questionnaires that ask students to rate their confidence in their ability to answer questions and perform tasks that a course will address or has already addressed. You may want to pull questions or topics from your learning outcomes, homework assignments, in-class exercises, and old quizzes or exams.

Survey directions should instruct students to rate their confidence level in their ability to answer the questions or perform the tasks and explicitly tell them not to answer the questions or perform the tasks. You can simply list levels of confidence as (a) Very confident, (b) Somewhat confident, (c) Not sure, and (d) Not at all confident. Alternatively, you can design more elaborate answers such as the " I do not understand the question or task," or "I do not understand the technical terms," or "I think I can answer at least half of it correctly", etc.

More information and examples of knowledge surveys

Performance Phase

Quick Thinks

Lecture-break activities that individuals, pairs, or small groups can do quickly to help students monitor their understanding while still allowing them to ask questions, correct their thinking, and learn from each other. For example:

- **Correct the error.** Display a statement, short argument, prediction, equation, or visual that contains a logical, factual, procedural, computational, or relational error to identify and correct.
- **Complete a sentence starter.** Display the first part of a sentence, such as a definition, an example, a cause-and-effect relationship, an implication, a category, or a rationale, and students try to complete it accurately while activating higher-order thinking or reflection.
- **Compare and contrast.** You ask students to identify similarities and differences between parallel elements in your last lecture, such as events, models, theories, problems or solutions.

RSQC2

Recall, summarize, question, connect, and comment.

In this end-of-class activity students recall meaningful points, summarize the most important points in one sentence, formulate questions, connect these points with the course objectives or outcomes (or prior material, if you prefer), and comment on the value of their learning. This short written activity helps students become more aware of what they did and did not process, how the new content relates to the course, and what value it has for them. In addition, students have the opportunity to assess and practice their retrieval.

Instructions for student:

1. **Recall**: Make a list - in words or simple phrases - of what YOU recall as the most important, useful, or meaningful items you've learned this semester (lecture, section, etc.). Choose three to five main points from your list and rank them in order of importance.
2. **Summarize**: Summarize the ranked items in your list into one summary sentence that captures the essence of the course.
   Question: Write one or two questions that still remain unanswered.

3. **Connect**: Explain in one or two sentences the connection(s) between your summary and the major goals of the entire course. (You may want to look back at the course goals and the student learning outcomes as listed on the syllabus to complete this section.)
4. **Comment**: Write an evaluative comment or two about the course. Here are a few possible comments stems you can use as starting points: "What I enjoyed most/least was..." or "What I found most/least useful was..." or "During most of the course, I felt..."
5. Post your completed RSQC2 activity to the appropriate forum on the Discussion Board.
6. Respond to at least two of your classmates' posts.

Visual Study Tools

Learning benefits accrue whether you develop the visual representations for your students or they develop them on their own. The activity can be run for small groups and then individual homework where students recognize and categorize key concepts, rank order and identify linkages.
Instructions for student:

1. Pick out 12 to 15 interrelated concepts, topics, or categories (called “concepts” from now on) with which your students are already acquainted and display random order on the board or on a slide.
2. Ask each group to identify the main concept and to write it at the top and center of a large piece of paper or digital whiteboard.
3. Tell each group to rank-order or cluster the remaining concepts from the most broad, and inclusive to the most specific and exclusive, then to arrange them in a linkable hierarchy.
4. Then label the linking lines with short descriptors of the relationship, such as “one type of,” “for example,” “precedes,” “includes,” “manifests as,” or “leads to.”

Faculty Focus Article on Mind Maps

Fuzzy Problem Assignment

A “fuzzy” problem is embedded in a realistic, troublesome situation and complex enough to not have a clearly correct solution. While multiple solutions exist and

some may be better than others, they all exact trade-offs—maximizing some values while undermining others—and present risk and uncertainty.

High-quality cases and problem-based learning (PBL) activities present authentic fuzzy problems. They give students the opportunity to experience the complexity of real-world challenges and, with your guidance, to learn how experts would approach and find solutions to them.

Faculty Focus Articles:

- Problem-Based Learning: Six Steps to Design, Implement, and Assess
- Designing Problems for Problem-based Learning

Self-Reflection Phase

Online Metacognition Discussions

A discussion board provides an easy means to pose metacognitive prompts either after an in-class discussion, demonstration, video, or activity or at critical points during an online class. Questions can complement almost any regularly scheduled course element—for instance, "What did you learn by doing this laboratory work that you didn't learn from the textbook or lectures?" "How did your feelings about X change through the video?" etc.

Student-Created Review Sheet

When students create a review sheet, the task becomes a self-regulated learning activity, turning their attention to what they have learned in the period of time that the upcoming exam covers and encouraging them to self-test and evaluate their competency to work with the material in various ways. The activity can be homework that individual students complete, or tailored to group work.

Immediate Post-exam Self-Assessment

Add a few questions to the end of your exam that ask students about their test performance and preparation. Assure them that their responses will not affect their grade. Leave a few minutes at the end of an exam for students to answer the questions, and do not accept exams unless this final section is completed. When you return the graded exams, your students will see their answers to these

questions again, but they will reexamine their responses in view of their actual grade.

For example;

- What do you think your score/grade will be on this exam?
- On a scale from 1 to 10, about how much effort did you put into studying for this exam?
- How did you study for this exam? That is, what study techniques did you use?
- Which parts of the exam did you find the most difficult? Which parts did you find the easiest? Why?

Postquiz or Postexam Corrections and Reflections

When you return a graded quiz or exam, leave class time for students to re-solve the problems they missed and to solve similar ones. In addition, ask them first to assess whether they had gone into the quiz or exam overconfident, and then how effectively they had studied for it. Had they put in enough study time? Had they worked enough practice problems? What else had they done to prepare? Then have them write out on a revision sheet the problem-solving strategy that led them astray as well as the correct one.

Personal Examples

1. Metacognition Modules
2. Learning & Development Plan
3. Assignment Change Logs
4. Lab Portfolios

Metacognition, Learning and Development

As noted at the beginning of the course, one of my goals is to help you be better students and employees.

As the world is changing and lifelong learning skills are becoming more on-demand, taking control of your learning is necessary for success. Yet, to engage in such a process, you'll need to learn how to use effective strategies to monitor, control your learning, learn more, and perform better.

This Week's Objectives

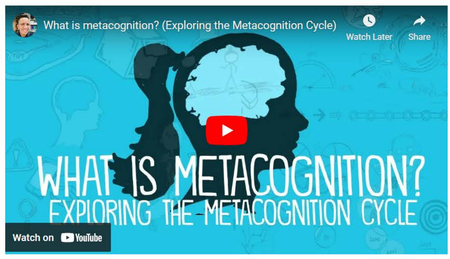
By the end of this week you should be able to:

1. Understand the concept of metacognition
2. Gain some strategies you can use to help you build good learning habits throughout the term.

What is Metacognition?

Metacognition is the process of intentionally thinking about how you think and learn.

It involves knowing when you know, knowing when you don't know, and knowing what to do when you don't know. In other words, it involves self-monitoring and correcting your own learning processes. For example, you engage in metacognition if you notice that you are having more trouble learning concept A than concept B, or if you realize that your approach to solving a problem is not working, and you decide to try a different approach.



Metacognition is a habit, and like any other habit, the initial phase is the most difficult. Don't be discouraged — it will get easier.

Assessing Your Habits

Here is a short activity to gain a better understanding of yourself as a learner, it is helpful to identify the study skills you now employ.

Directions: Read each of the 51 questions. Think carefully about each statement and respond as truthfully as you can. Using the scale below, circle the number that best describes your behaviour for that particular study skill.

Study Skills Inventory

Study Skills Inventory — Academic Success

To gain a better understanding of yourself as a learner, it is helpful to identify the study skills you now employ. When compared to learners who get A's, you can see where your study skills need refinement or are maximized just the way they are. The following diagnostic test is a short and quick device for assessing your study skills.

Directions: Read each of the 51 questions. Think carefully about each statement and respond as truthfully as you can. Using the scale below, circle the number that best describes your behavior for that particular study skill.

Almost always = 5
More than half of the time = 4
About half of the time = 3
Less than half of the time = 2
Almost never = 1

Textbook Reading

1.	I formulate questions from a chapter before I begin reading.	5	4	3	2	1
2.	Before reading an assignment, I survey headings, bold print, italics, questions, summaries, etc.	5	4	3	2	1
3.	I try to get the meaning of new terms as I encounter them the first time.	5	4	3	2	1
4.	I formulate questions to answer as I read an assignment.	5	4	3	2	1
5.	I look for main ideas as I read.	5	4	3	2	1
6.	I am able to readily identify clarifying details under each main idea.	5	4	3	2	1
7.	I read a textbook chapter more than once.	5	4	3	2	1
8.	I use a textbook study system such as SQ3R.	5	4	3	2	1

Note-Taking

9.	I take notes as I read my textbook assignments.	5	4	3	2	1
10.	I take notes in lectures.	5	4	3	2	1
11.	After taking notes, I review them before going on to something else.	5	4	3	2	1

BCIT

Note: This was developed as part of a research project by Dennis H. Cognos. Not all of these strategies may apply to this class or your program but are intended to help you start to think metacognitively and developed some strategies.

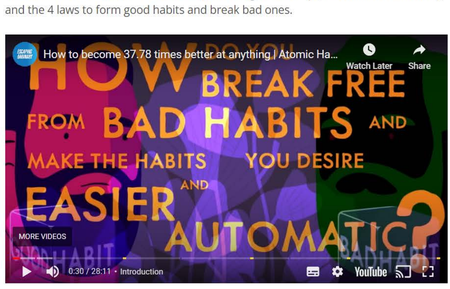
Consider what are some strategies are not included in this Study Skills Inventory that you use?

Building Good Habits

Atomic Habits can help you improve every day, no matter what your goals are.

In the book Atomic Habits, James Clear reveals practical strategies that can help you form good habits, break bad ones, and master tiny behaviors that lead to big changes. If you're having trouble changing your habits, the problem isn't you. Instead, the issue is with your system. There is a reason bad habits repeat themselves over and over again, it's not that you are not willing to change, but that you have the wrong system for changing.

The below video summarizes the book, including Habit Loop (how habits are formed), and the 4 laws to form good habits and break bad ones.



If you liked this summary and you want to go deeper into Atomic Habits, here is a link to the full book.

Learning and Development Plan

Assignment

Due April 17 at 11:59 PM

Learning and Development Plan - 5%

This course is structured into 8 self-guided modules with two to three sections within each module. There are activities embedded within the sections that make up your Design Case Portfolio and App Development assignments. Self-regulation in online courses can be difficult, and the 'Learning and Development Plan' assignment is intended to help you plan your workload and engage in metacognitive thinking.

Instructions: Due April 14

Write a brief ½ to 1-page write-up, indicating your intended study and activity schedule, goal grade in this course and how you intend to achieve it. Some questions you should consider addressing in these paragraphs are:

- How will you earn this grade?
- What steps will you take?
- Why did you plan your schedule as you did?
- Did you find completing the previous course stressful? Why or why not?
- What helpful habits will you engage in?
- What unhelpful habits will you try to break, avoid or improve on?
- What tools might you use to help (ex. calendars, todo lists, etc.)?
- Are there any specific days, times or locations you will use to study and do homework? How are they set up to help you succeed?

Be specific! You may want to reflect on your experience in XCMP1010 or XCMP 1020 and what worked or didn't work.

Your assignment should be a maximum of 1 page.

An excellent Learning and Development Plan should describe your plan and goals at the start of the course and how you worked towards achieving these goals. You should include a study schedule and outline the habits and skills you want to use, and the ones your want to avoid. Moreover, you should include specific examples that demonstrate your learning and growth through this course. Lastly, you may identify challenges you face and how you overcome them as well as how your experience influences your approach to learning in the future.

Lab Portfolio 1

Student Name	Student ID#

Part I: Checklist

Throughout the first 6 weeks of this course, you've completed a number of different lab activities and assignments. Go through the following list and check off the items you've completed. For each item, please self-assess your level for completing the activity or assignment from 0-5 where:

- 0= Did not hand in.
- 1= Handed in partially completed work or put in minimum effort.
- 2= Handed in completed work with normal effort but may have missed a piece or two.
- 3= Handed in completed work with normal effort.
- 4= Handed in completed work and felt it took above and beyond effort.

Remember: You can access each item under the relevant week's content. Notes and comments are optional as needed.

Lab Details	Completion *(check the box)*	Self-Assessment
Week 1 - Lab Exercise • File Management exercise. • Learning and Development Plan (Located in Quiz format)	☐	Choose an item. Any comments or notes:
Week 2 – Lab Exercise • Small group presentations, topics varied by group.	☐	Choose an item. Any comments or notes:
Week 3: Lab Exercise • e-Waste, Disk Management, System Monitoring and Performance exercises.	☐	Choose an item. Any comments or notes:
Week 4: Lab Exercise • Utility Program presentation, Software Piracy and Content Infringement exercise	☐	Choose an item. Any comments or notes:
Week 5: Lab Exercise • Computers Network, Internet Settings and Security exercises	☐	Choose an item. Any comments or notes:
Week 6: Lab Exercise • Presentation Peer Assessment • 1-page review sheet for Midterm	☐	Choose an item. Any comments or notes:

Part II: Review and Revise

I know that some activities take more time and effort, while others do not. In addition, we all have 'off' or busy weeks when completing schoolwork to our full potential is not possible.

If you would like, take some time to resubmit any missing or incomplete activities and assignments. If you choose to resubmit any items, make a note of which ones below:

Resubmitted activities or assignments:

- *List here*

Part III: Reflection

Reflect on and answer the questions below.

1) In terms of participation in class, how engaged and mentally present were you in the class?

- Choose an item.

2) Consider your Learning and Development plan submitted in week 1, your goals, study habits and preparation for the midterm. Is there anything you would change about your approach for the second half of the class or other courses moving forward?

-

3) Are there any topics that you found interesting that you will take forward with you or plan to explore more?

-

4) Approximately how much of the online content did you use to complete the knowledge checks?

- Choose an item.

5) Please suggest a grade for yourself, with comments.

- Grade:
- Explain how you arrived at this grade.

6) Do you have any other comments?

[Assignment Name] Change Log

Student Name	Student ID#

As the world is changing and lifelong learning skills are becoming more on-demand, taking control of your learning journey is necessary for success.

To assist you in this process, I am introducing a valuable practice inspired by the technology development and project management industries: the change log. Similar to how software developers and project managers use change logs to track modifications and progress, you will maintain a change log for your assignments throughout the term.

This log will serve as a reflective tool, enabling you to document and reflect on the changes, improvements, and insights you encounter throughout your academic endeavors. By engaging in this activity, you will not only enhance your understanding and mastery of the subject matter, but also cultivate valuable self-reflection and self-motivation skills that will benefit you in various aspects of your life.

Let's embark on this transformative journey of learning, growth, and self-reflection together!

Part I: Change Log

Each time you submit a part of your [assignment name], you will receive feedback from myself or your peers. Please document how you update your assignment based on this feedback and include the change log with each submission.

Date	Change Type	Change	Rationale
Click or tap to enter a date.	Choose an item.	Click or tap here to enter what change you made.	Click or tap here to enter why you made that change.
Click or tap to enter a date.	Choose an item.	Click or tap here to enter what change you made.	Click or tap here to enter why you made that change.
Click or tap to enter a date.	Choose an item.	Click or tap here to enter what change you made.	Click or tap here to enter why you made that change.
Click or tap to enter a date.	Choose an item.	Click or tap here to enter what change you made.	Click or tap here to enter why you made that change.
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Click or tap to enter a date.	Choose an item.	Click or tap here to enter what change you made.	Click or tap here to enter why you made that change.
Click or tap to enter a date.	Choose an item.	Click or tap here to enter what change you made.	Click or tap here to enter why you made that change.

Part II: Reflection

Reflect on and answer the questions below when you had in your assignment for the final time at the end of the term.

1) In terms of participation in class, how engaged and mentally present were you in the class?

- Choose an item.

2) Consider your Learning and Development plan submitted in week 1, your goals, study habits and preparation for this assignment. What approach or strategy worked well or didn't work? Is there anything you would change about your approach to other courses moving forward?

3) What were the most important points you learned? What am you still having trouble understanding?

5) Please suggest a grade for yourself, with comments.

- Grade:
- Explain how you arrived at this grade.

6) Do you have any other comments?