

Workbook and Planning Document for a Practical Guide for Implementing Learning-Centered Teaching

Pre-conference Workshop

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As you go through this workshop, think of ways you can implement learning-centered teaching. You might want to focus on one course.

Workbook activities or questions for you to answer are in italics

What course will you be revising today _____

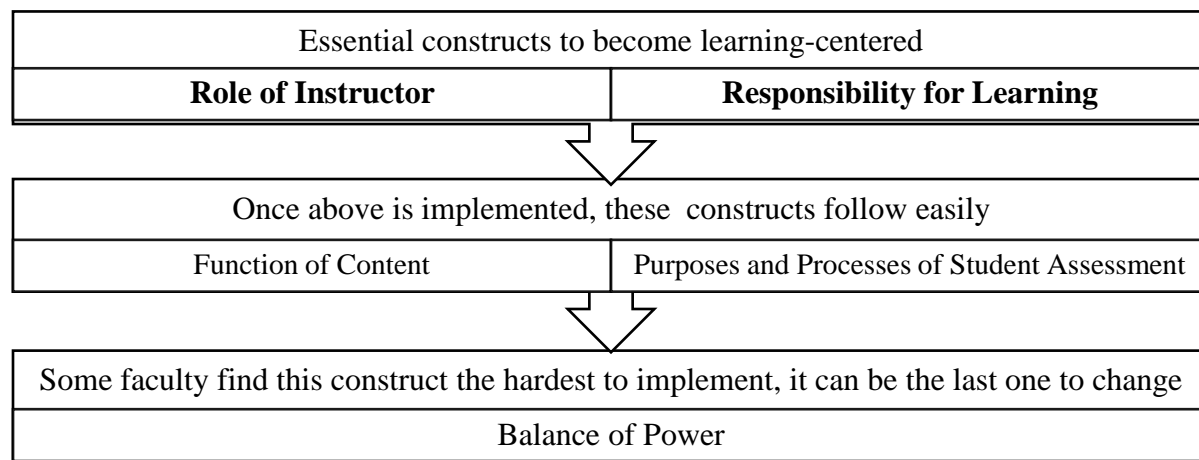
Make notes on Table 1 (pages 12-13 of this handout) of your implementation ideas as we progress through the workshop.

Learning-centered teaching has five key constructs:

- **Role of the Instructor**
- **Development of Student Responsibility for Learning**
- Function of Content
- Purposes and Processes of Student Assessment
- Balance of Power

You can become a learning-centered teacher by implementing these best educational practices. They can be done incrementally and iteratively.

Hierarchy of the Implementation of Learning-Centered Teaching Constructs



Summary of content presented on the slides

Material comes from upcoming book by Blumberg tentatively called *Using and Assessing Learning-Centered Teaching: New Practical Strategies*, to be published by Stylus in 2019

Role of Instructor

As a learning-centered instructor your role becomes a facilitator of student learning and less of a disseminator of information. You perform six core actions that facilitate student learning:

1. Use challenging, reasonable, and measurable learning outcomes that foster the acquisition of appropriate knowledge, skills or values. Courses should have <10 of them

- Learning outcomes are essential for course planning, should be used throughout all part of courses, and students should know them
- See Table 2 (page 14) The Taxonomy Table (Anderson, et al 2001) for suggestions for creating learning outcomes
- Implementation examples:
 - Backwards design: What do you want students to be able to do, use, or value ≥ 5 years after course has ended. This means that course planning does not begin with content to be covered. You may have to rethink your course
 - Discuss learning outcomes with students throughout, plan evaluations using them

Considering what you want your students to know, do or value five years after the course is over, complete the following table for 2-3 revised or new learning outcomes for your course, using information from the Taxonomy Table (Table 2)

<i>Learning outcomes</i>	<i>Cognitive Process Dimension (considers the verbs or cognitive demands placed on students)</i>	<i>The Knowledge Dimension (considers the type of learning)</i>
1.		
2.		
3.		

2. Use teaching/learning methods and educational technologies that promote the achievement of student learning outcomes

- Active learning is essential. Active learning requires that the students engage in meaningful activities.
- See Figure 1 (page 11) Goldman's heuristic for selection of teaching strategies that fit various learning objectives

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List good ideas about active learning strategies and educational technologies that you might want to implement.

3. Align the three essential components of a course: learning outcomes, teaching/ learning methods, and assessment measures in terms intellectual skill placed on the students

- To align your course, choose appropriate teaching and learning activities and assessment measures on the same column on Table 3 (page 15) as the learning outcome or objective
- Non-alignment occurs when one component is at a higher or lower level than the other two. Non-aligned courses might have:
 - lofty goals, but the assessment requires only recall or lower level cognitive demand
 - higher level goals and higher level assessments, but where students do not have opportunities to practice these higher level skills. They only observe their teacher doing them
- Lower level outcomes (factual knowledge) can be assessed through (online) quizzes, or a few questions on exams
- *Check if your course is aligned using Table 3 (page 15)*
- *What cells would you place your current learning outcomes?*
- *What cells would you place your current student cognitive load?*
- *What cells would you place your current assessments?*
- *Draw a vertical line connecting the highest level of these 3 elements*
Aligned courses require the same cognitive load for all 3 elements
- To create alignment, you might need to make major revisions to your course
- Explaining alignment to students helps them understand rationale for course activities

4. Create a supportive and success-oriented environment for learning and for accomplishment for all students

- Discuss with your students specific success strategies and study and test taking techniques.

List success strategies for:

- *Getting students to read outside of class*
- *Note taking*
- *Study strategies*

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- *Test taking strategies*

5. Create an inclusive environment for learning by acknowledging and accepting diversity and differences in background

How can you create a more inclusive environment?

6. Be explicit about teaching/learning methods chosen

- Repeatedly explain why using learning-centered teaching and how students should act
- Because students in learning-centered teaching courses assume different roles than note taking, you should explain your expectations
- Setting expectations for engagement, staying focused on learning can reduce push back from students. Remember people resist change from their usual routines and being expected to do more work

How do you explain these to students?

- *How do you define class participation?*

- *How do you get students to work well in groups or teams?*

Questions about your roles as a learning-centered teacher?

Note what you want to implement on Table 1

Development of Student Responsibility for Learning

When students assume responsibility for their learning, they become empowered learners. As a learning-centered teacher, you perform six core actions that facilitate student development of responsibility for learning:

- 1. Set student expectations, which enable the responsibility for learning to be shared between you and the students**
 - Learning-centered teaching is new for many students. Many students do not understand that they need to take a more proactive role in their own learning. Students may even question why the instructor is not teaching. Therefore, you need to carefully explain your expectations to the students.

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- Greater transparency about responsibility for learning results in improved learning. Explain your expectations on your course materials, syllabus, course management system site, etc.

What consequences result when faculty take too much responsibility for student learning?

- *For student behaviors?*

- *Student attitudes or values?*

Where and how can you allow students to take more responsibility for learning?

2. Help students to develop responsibility for learning by scaffolding support

- Just as in building construction, scaffolds provide temporary and adjustable support
- May need to give more scaffolding support to some students than others. This can be done through providing extra resources, assistance during office hours, or recommending tutoring, etc.
- An essential feature of scaffolding is that the support is gradually removed to help students acquire independent mastery
- 3 types of scaffolding: procedural for process, conceptual for content organization, and metacognitive for goal setting, planning, organizing, self-monitoring and self-evaluation

Diagram or draw: What do you do to provide scaffolding support?

- *How do you provide the three types of scaffolding support?*
- *How do you gradually remove it?*

Explicitly teach the skills that you expect students to use in your courses. Choose skills that are appropriate for your content, expectations for the course and level of students (McGuire & McGuire, 2015).

3. Foster the development of learning to learn skills that are directed toward school success. Examples of these learning skills include:

- Study skills such as practice testing or distributed practice
- Time management
- Self-monitoring
- Goal setting
- How to read independently

What learning skills are necessary for your students to use to succeed in your course?

How do you foster the development of these learning skills?

Create a low stakes activity or assignment where your students will practice this learning skill

4. Foster the development of self-directed, lifelong learning skills. Examples of these lifelong learning skills include:

- Determining a personal need to know more on a regular basis, or possessing an inquiring mind
 - Information literacy skills of finding, evaluating, and using information ethically
 - Acquiring a range of strategies for learning in diverse contexts
 - Determining if met personal need to know
 - Fostering a growth mindset attitude (Dweck, 2008).
- Today's students will have to constantly learn to stay current or even employed
 - While individuals take the initiative in self-directed learning, it occurs in social context and with external assistance

Personal Reflection: What life-long learning skills would you like your students to acquire or master in your courses?

How do you foster the development of these life-long learning skills?

Design an assessment where students will demonstrate that they mastered this lifelong learning skill

5. Foster students' engagement in reflection and critical review of their learning

- Reflection and critical review help people to make their experiences meaningful
- Reflection plays a powerful role in learning because it leads to insights about oneself and self-efficacy
- Reflection and critical review should include:
 - Self-assessment of learning abilities
 - Ones' mastery of objectives
 - Self-assessment of strengths and weakness

How can you foster reflection and critical review in a meaningful way for students?

6. Foster the students' use of metacognitive (thinking about thinking) skills and habits of the mind.

Metacognitive skills or thinking about one's thinking include: strategies for learning and thinking, planning, monitoring oneself, evaluating oneself

What metacognitive skills you think are essential for success?

How do you insure students have these skills?

How you allow students to practice them?

How do you assess their mastery?

Examples of habits of the mind (Costa & Kallick, 2008) include:

- Ability to postpone judgment / managing impulsivity
- Creativity/ creating
- Imagining, innovating
- Curiosity/ questioning and posing problems
- Flexibility
- Interdependent learning and working
- Openness/ listening with understanding and empathy
- Persistence
- Responsible risk taking
- Striving for accuracy
- Clarity and precision
- Transfer of learning/ applying past knowledge to new situations

What habits of the mind you think are essential for success?

How do you insure students have these habits?

How you allow students to practice them?

How do you assess their mastery?

How can you teach students to have good metacognitive skills and habits of the mind?

Questions about how you can help students to assume responsibility for their learning?

Note what you want to implement on Table 1

Function of Content

Explicitly teach using organizing schemes to integrate material

- Organizing schemes are discipline-specific conceptual frameworks that help experts integrate already known content and to learn new material.
- The Periodic Table of Chemical Elements is probably the best-known organizing scheme
- Most disciplines have around 12 organizing schemes that can integrate majority of that discipline

List a few key organizing schemes in your discipline

Purposes and Processes of Student Assessment

Provide Opportunities for Students to Receive Frequent, Useful, and Timely Formative Feedback to Foster Learning Gains

How can you use formative assessment more?

Developing your action plan using Table 4 (page 16)

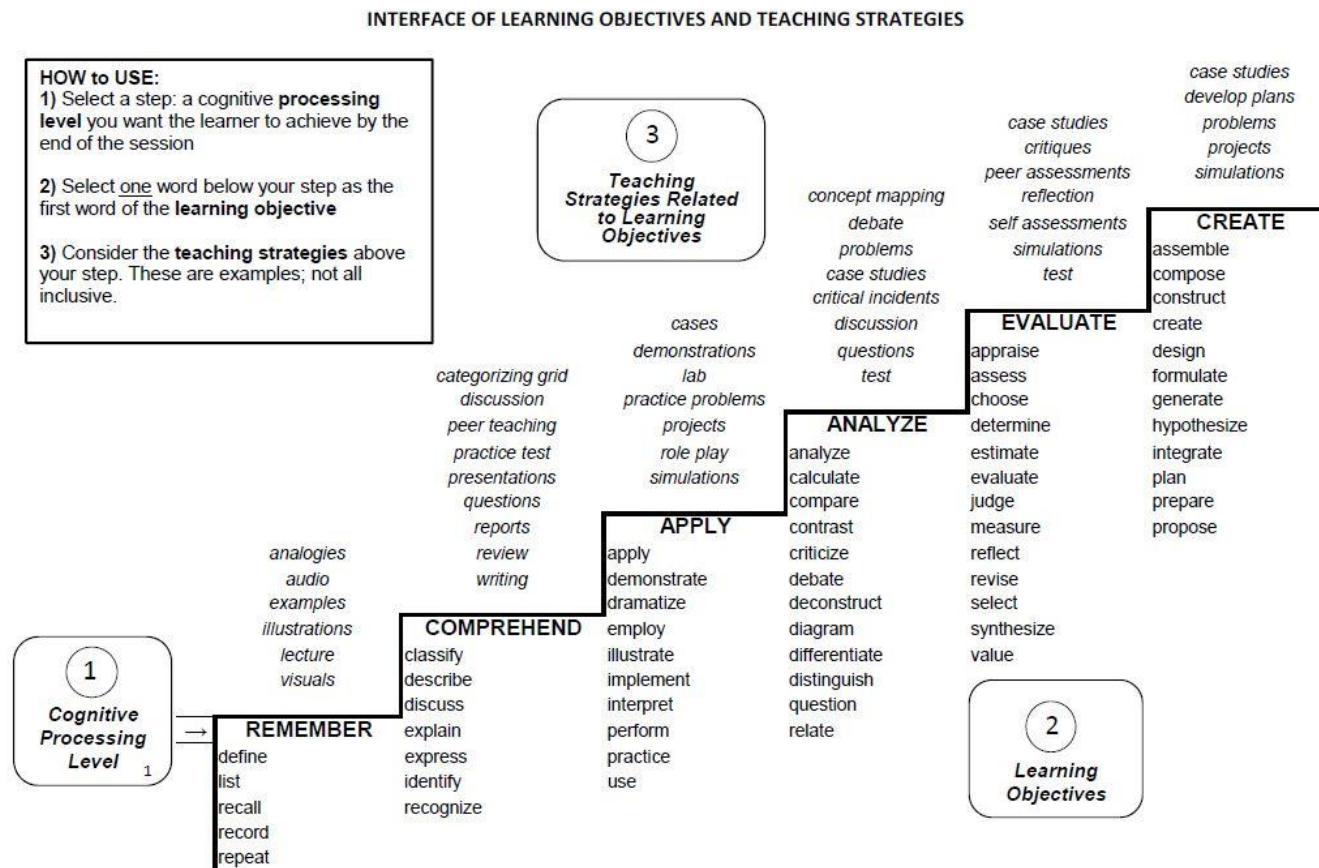
Review your notes from our discussions, reflections and what you designed

Plan next steps to implement more learning-centered practices. Be practical and realistic

References

- Altman, W., & Miller, R. (2017). What to do when students bomb the exam. In Obeid, R., Schwartz, A., Shane-Simpson, C., & Brooks, P. J. (Eds.). *How we teach now: The GSTA guide to student-centered teaching*. Retrieved from the Society for the Teaching of Psychology web site: [Http://Teachpsych.org/ebooks/](http://Teachpsych.org/ebooks/)- The Society for the Teaching of Psychology. doi://teachpsych.org/ebooks/
- Anderson, L. W., Krathwohl, D. R., Airasian, P. W., Cruiskshank, K. A., Mayer, R. E., Pintrich, P. R., . . . Wittrock, M. C. (2001). *A taxonomy for learning, teaching, and assessing*. NY: Longman.
- Blumberg, P. (2009). *Developing learner-centered teaching: A practical guide for faculty*. San Francisco: Jossey-Bass Publishers.
- Costa, A.L. & Kallick, B. (2008). Learning and leading with habits of mind: 16 essential characteristics for success. Retrieved from http://www.chsvt.org/wdp/Habits_of_Mind.pdf
- Doyle, T. (2008). *Helping students learn in a learner-centered environment*. Sterling, VA: Stylus Publishing, LLC.
- Dweck, C. S. (2008). *Mindset: The new psychology of success*. New York, NY: Random House Digital, Inc.
- Felder, R. M., & Brent, R. (2016). *Teaching and learning STEM*. San Francisco: Jossey-Bass Publishers.
- Fletcher, J., Najarro, A., & Yelland, H. (2015). *Fostering habits of mind in today's students: A new approach to developmental education*. Sterling, VA: Stylus Publishing.
- McGuire, S. Y., & McGuire, S. (2015). *Teach students how to learn: Strategies you can incorporate into any course to improve student metacognition, study skills, and motivation*. Sterling, VA: Stylus Publishing.
- Piskadlo, K. S. (2016). *A case study on the influence of organizational structures and policies on faculty implementation of learner-centered teaching* Available from ProQuest Dissertations & Theses Full Text: The Humanities and Social Sciences Collection. Retrieved from <https://search.proquest.com/docview/1803936469>
- Schunk, D. H. (2016). *Learning theories an educational perspective 7th edition*. Boston: Pearson.

Figure 1 Goldman's heuristic for selection of teaching strategies that fit various learning objectives. (Goldman, 2017. Personal communication)



¹ Levels adapted from: Anderson, L. W., & Krathwohl, D. R. (2001). A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives. New York: Longman.

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Table 1. Your plans to implement learning-centered teaching

Learning-Centered Teaching Construct	Essential Actions Associated with Each Construct	<i>Notes</i>	<i>Ideas for implementation</i>
Role of Instructor	Use learning outcomes		
	Use appropriate, active teaching/learning methods		
	Align learning outcomes, teaching/learning methods, and outcomes		
	Create supportive and success-oriented environment		
	Create inclusive environment		
	State explicitly teaching/learning methods		

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Learning-Centered Teaching Construct	Essential Actions Associated with Each Construct	<i>Notes</i>	<i>Ideas for implementation</i>
Development of Student Responsibility for Learning	Set expectations for students to take responsibility for learning		
	Provide scaffolding support		
	Develop student learning skills		
	Develop student self-directed, lifelong learning skills		
	Foster student reflection and critical review		
	Foster students use of metacognitive skills, habits of mind		

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Table 2. The Taxonomy Table (Anderson, et.al. 2001)

Indicate your current learning outcomes using ^ Indicate your ideal learning outcomes that assure learning and learning transfer using *

The Knowledge Dimension (considers the type of learning, or the nouns)	The Cognitive Process Dimension (considers the verbs)					
	1 remember (recognize, recall)	2. understand (interpret, infer, exemplify, classify, explain, summarize, compare)	3 apply (execute, implement)	4 analyze (differentiate, organize, attribute)	5 evaluate (check, critique)	6 create (generate, plan, produce)
A. factual knowledge (knowledge of: 1) terminology, and 2) specific details, elements)						
B. Conceptual knowledge (knowledge of: 1) classifications and categories, 2) principles and generalizations, and 3) theories, models, structures)						
C. Procedural knowledge (knowledge of: 1) subject- specific skills, algorithms, 2) subject-specific techniques, methods, and 3) criteria for determining when to use appropriate procedures						
D. Meta-cognitive knowledge (knowledge: 1) of general strategies for learning and thinking (strategic knowledge), 2) about cognitive tasks, 3) of self-knowledge of strengths and weaknesses.						

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Table 3. Determine if your course is aligned in terms of consistent cognitive process or load required for your students across learning outcomes, teaching/ learning methods, and assessment methods

Complete a different table for each of your course learning outcomes.

Directions:

1. *Mark by briefly describing what is expected in terms of the students' cognitive process for each learning outcome. Teachers usually use more than one level for the teaching/learning methods and assessment methods*
2. *Draw a line connecting the highest level of each element. A straight line means the course is aligned for this learning outcome. A diagonal or zig zag line means the course is not aligned for this learning outcome.*

Learning outcome:

What cognitive process is required of the students in each of the following?	<i>Aspect is not included in the course</i>	<i>Low level (remember or understand)</i>	<i>Medium level (application or analysis)</i>	<i>High level (evaluate or create)</i>
Learning Outcome				
Teaching/learning methods Listening or note taking is low level				
Assessment methods				

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Table 4. Your Action Plan

	<i>Describe your implementation ideas</i>	<i>What course(s) will you implement this learning-centered practice?</i>	<i>What additional resources would make implementation easier?</i>	<i>Timeline for implementation</i>
Easy to implement practices				
More difficult to implement practices				