SUFFOLK UNIVERSITY BOSTON

Symposium on Innovation in Teaching and Learning

Leveraging Technology to Increase Learning Through Student-Feedback Tools

Facilitated by Mitchell Wolf and Linda Bruenjes

Description: Instructor feedback, through varied and frequent assessments of learning, can enable a diverse group of learners to know how well they are doing and, at the same time, understand where they need to improve. Recognizing that the integration of continuous feedback mechanisms suggests more work for an already very busy faculty member, the facilitators of this interactive workshop will provide a framework for using technology tools for formative, summative, and authentic assessments designed to meet learning objectives.

Goal: Upon successful completion of this session, participants will understand that frequent opportunities for feedback not only fosters student learning but can be offered through tools that can potentially mitigate the increased workload associated with additional learning activities and assessments.

Learning Objectives: During this session, participants will:

1. Link assessment strategies with research on how learning works
2. Identify ways to foster learning through performance feedback
3. Link teaching/learning strategies with feedback tools
4. Match learning objectives with teaching strategies and technology tools
5. Develop a plan to learn how to use chosen feedback tools

Warmup Exercise:

1. Take a moment to write down an example of something that you or someone you know or look up to has learned to master. What was that task or skill and what did you or they have to do to master that skill?

2. So, with this in mind, what is your definition for learning?

Principle 1 of 7 – How Learning Works
Student's prior knowledge can help or hinder learning

Activity 1: Using polleverywhere, answer the following questions (need specific directions here) **LO#1**

1. To what extent do you use Blackboard (Moodle, D2L, Canvas, etc)?
    a. Not at all;
    b. Only for uploading resources such as a syllabus and/or other handouts
    c. For occasional outside of class assignments
    d. It is the backbone of my course(s)

2. I understand the difference between formative and summative assessments
    a. True
    b. False

3. I use rubrics for course assignments
    a. True
    b. False

4. I feel comfortable experimenting with academic technologies such as polling software, etc.
    a. True
    b. False
    c. Somewhat

5. I know where to get assistance for using academic technologies
    a. True
    b. False

Technology used: Polling Software (polleverywhere.com)
Additional Technology Recommendations: LMS Assessment Tools (Tests, quizzes, surveys)

To develop mastery, students must:

- Acquire component skills
- Practice the skills
- Know when to apply the skills they have just learned

Students who do not have the appropriate amount of practice will have a hard time meeting challenges.

Activity 1 Feedback:

What are some of the ways that one could address the wide variety of practice (or preparedness) while moving ahead with the subject matter?

	Teaching/Learning Strategy	**Technology Tool**
Scaffold Learning	Group work	Online discussions
Individualized Learning	Build necessary vocabulary	Glossary
Short Tutorials	Review previously learned materials	Panopto to create a tutorial; YouTube to link to a prepared tutorial; KahnAcademy to practice a skill
Other?		

Activity 2: Grouping students

Using the poll as a guideline, self-identify as one who is an expert user of your learning management system, a comfortable user who would like to learn more, or a beginner.

(1) ◆ **black diamond users**;

(2) ■ blue square users;

(3) ● green circle users.

Remember we all started on the beginning edge of this learning paradigm. LO#1

Students who are not practiced enough to meet a challenge on their own may benefit from working with other students in pairs or small groups (Vygotsky's Zone of Proximal Development – scaffolding) Ambrose et al, 2010, page 132.

Activity 3: What do we know about practice? How does it foster learning? LO#2

Practice is what students do to learn. Research cited in *How Learning Works* suggests that 3 ingredients, when added together, foster learning and performance. (Ambrose, p. 127)

Practice that is:

- P1 Targeted towards an appropriate challenge level
- P2 Focused on a specific goal or criterion for performance
- P3 Sufficient enough to meet performance criteria

Technology Tools: Survey, Quiz, Documents, Assignment, Rubric, Discussion Forum, Journals, Videos, Podcasts, Announcements, Poll

Ingredient(s)	Strategy	Tool(s)	How it Fosters Learning
P1	Assess prior knowledge		
P2	Be explicit about learning goals		
P2	Communicate performance criteria		
P1, P3	Build in multiple opportunities for practice		
P1, P3	Build scaffolding into a larger assignment		
P2	Look for patterns of errors in student work		
P2	Respond to class as a whole		

What do we know about feedback?

Activity 4: How can we mitigate the time it takes for this increased feedback? LO#3 Link teaching/learning strategies with feedback tools.

Directions:

1. With your group, designate a recorder and, making sure that everyone gets a chance to contribute, begin brainstorming a list of ways in which students can receive formative feedback.

2. Next, categorize the list into Individual, Group, Whole Class and Self-Assessment Categories.

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Activity 5: Identify time-saving tools that facilitate feedback. As Mitchell goes through these tools, consider how you might use these tools for feedback purposes. Place a checkmark next to the tools that you would like to add to your course next semester

Tool(s)	Feedback (I, G, W)*	Notes	✓
Tutorials			
Glossary			
Announcement			
Journal			
Discussion Forum			
Assignment			
Rubric			
Collaborate			
Videos			

Activity 6: Create a course map that outlines feedback strategy, type and frequency. **LO#4 Match learning objectives with teaching strategies and technology tools. Example:**

Week	Teaching Strategies	Feedback	Reason	Teaching/ Learning Goal	Student response to feedback	Tool	Need to learn
1	Prior knowledge inventory	Whole group	To challenge students	Determine who needs more practice	Complete prework	Polleverywhere	
	1' paper	Whole group	To acknowledge what they have learned and what they do not know	Review	In class discussion	Announcement or video tutorial	How to use Panopto
2	Outline of paper	Individual	To develop ideas	Target feedback on writing process	Student rewrite	Rubric/Assignment	Rubric, assignment
3	Develop list of resources	Self-assessment; and Individual	To improve self-efficacy	Target feedback on information literacy	Student edits	Rubric/ asignments	
4							
5							
6	Midterm Feedback	Whole group	To take the temperature of the class	Give students a voice; gauge responsibility	Journal entry - metacogniton	Survey	Qualtrics
7							
8							
9							
10	Create rubric for presentation	Group	To establish guidelines	To scaffold learning	To come up with a common rubric	Discussion Forum	Discussion Forum for groups
11							
12							
13							
14	Final Presentation	Self, Peer, Group, Individual	To take and give constructive criticism	To gauge effectiveness of final project	Self and Peer	Rubric, Assignment, CATME	CATME

Week	Assessment/ Assignment	Feedback	Reason	Teaching/ Learning Goal	Student response to feedback	Tool	Need to learn
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							

Resources for Using Blackboard Tools LO#5 - Develop a plan to learn how to use chosen feedback tools

ITS Instructional Technology

Blackboard Tutorials

One-on-one Support: Email servicedesk@suffolk.edu

Teaching and Learning with Technology – CTSE@suffolk.edu

Glossary of terms

Formative Assessment is intended to generate feedback that improves and accelerates learning. By asking you these questions, I can gauge levels of experience with LMS tools. I want you to feel empowered to become a self-regulated learner - and some ways that I can help you do that is described in what Nicol and Macfarlane-Dick (2006) synthesize from research literature:

1. helps clarify what good performance is (goals, criteria, expected standards)
2. facilitates the development of self-assessment in learning
3. delivers high quality information to students about their learning
4. encourages teacher and peer dialogue around learning
5. encourages positive motivational beliefs and self-esteem
6. provides opportunities to close the gap between current and desired performance
7. provides information to teachers that can be used to help shape teaching (p. 205)

Formative Feedback "informs students subsequent learning" (Ambrose, p. 139).

Rubric "articulates in writing the various criteria and standards that a faculty member uses to evaluate student work" (Walvroord, 2004, p. 19)

Summative Feedback "is that which gives a final judgment or evaluation of proficiency, such as grades or scores" (Ambrose, p. 139)

Works Cited

Ambrose, S. A., Bridges, M., W., Lovett, M. C., DiPietro, M., & Norman, M. K. (2010). *How learning works.* San Francisco, CA: Jossey-Bass.

Nicol, D. J., & Macfarlane-Dick, D. (2006). Formative assessment and self-regulated learning: a model and seven principles of good feedback practice. *Studies in Higher Education , 31* (2), 199-218.

Roth, & Roth, W.-M. (1993). Construction Sites: Science Labs and Classrooms. In K. Tobin (Ed.), *The Practice of Constructivism in Science Education* (pp. 145-170). Hillsdale, NJ: Lawrence Ehrlbaum Associates.

Walvroord, B. E. (2004). *Assessment clear and simple: a practical guide for institutions, departments, and general education.* San Francisco: Wiley.