Helping Students Make Connections: Assessing Learning Integration

A workshop for
Santa Monica College

September 8, 2017 – 1:40 PM

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Inspirational quote

"LaGuardia [Community College] seeks to transform the hurried, fragmented nature of our students' education by creating substantial, integrated connections between their courses and helping them link coursework to the rest of their lives."

(Arcacio, Eynon, and Clark, 2005, p. 15)

Session agenda

- Brief overview
- Three/four techniques for assessing learning integration in the classroom

Time estimate	One class meeting	One or more class meetings	One semester to an entire program
Technique	Sequence chains/ concept maps (+ sticky notes)	Case study	ePortfolios

- Wrap-up / Q & A

What is integrative learning?

- Integrative learning takes place "when students learn how to connect and relate various things together" (Fink, 2013, as cited by Barkley & Major, 2016).

Image: Wikipedia

Learning Domains

Barkley & Major (2016) aligned their Learning Assessment Techniques with Significant Learning Taxonomy by Dee Fink (2013). Fink's work outlines six domains of learning:

Cognitive Domains
- Foundational Knowledge
- Application
- Integration

Humanistic Domains
- Human Dimension
- Caring
- Learning How to Learn

Learning Domains

Based on interest during Santa Monica College's Faculty Summer Institute, today we'll explore assessing learning **integration**, or how students connect and relate concepts.

Cognitive Domains
- Foundational Knowledge
- Application
- Integration

Humanistic Domains
- Human Dimension
- Caring
- Learning How to Learn

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Integrative Learning/Learning Integration

BTW, others besides Fink think about integration, too.

National
- AAC&U Metarubric on Integrative & Applied Learning
- Carnegie Foundation: Integrative Learning Project

Institutional
- CSU Long Beach – GE goal – Integrative Learning
- Integrate a specific topic into curriculum across campus
  - Writing across the curriculum (College of San Mateo)
  - Sustainability across the curriculum (Kennesaw State University)
  - Civic engagement (Cal State LA)

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Disciplinary examples of integration

Integration - Connecting ideas, people, realms of life.
- *Students will be able to apply legal principles to the accounting field.*
- *Students will be able to assess the contributions of virology to advances in science and medicine.*

(Fink, 2012)

FSI 2017 Workshop - Assessment 9

Disciplinary examples of integration

What do you associate with learning integration in your discipline?

For the next 5 minutes:
1. 2 min: On your own, list 5 to 7 things that you associate with learning integration.
2. 3 min: Turn to a neighbor and compare your lists. Identify any items you have in common.

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Disciplinary examples of integration

**What do you associate with
learning integration in your discipline?**

Common:

SEQUENCE CHAINS (OR CONCEPT MAPS) + STICKY NOTES

Two techniques for the price of one

Sequence chains

- Purpose: Sequence chains graphically depict "a sequence of events, actions, roles or decisions" (Barkley & Major, 2016)
- Benefits: Forces students to apply & organize; creates a study resource.

Concept maps

- Purpose: Concept maps graphically show relationships between ideas.
- Benefits: Asks students to synthesize concepts, show connections, think holistically.

Sticky note process

- Determine which graphic activity—concept map or sequence chain—works best for the course topic(s) you will explore in class.
- Plan how small groups or the entire class can participate in creating several small or one big concept map or sequence chain (timeline).
- Clearly outline the activity instructions.
- Provide materials (Post-it notes; thick, dark Sharpies are easier to read from a distance).

Classroom Example
Business: Create a mission statement

- **3 min** - Individually, use the post-its to **generate as many responses as possible** to the following questions:
  - Purpose: What do we do?
  - Audience: Who do we serve?
  - Impact: What value do we bring?
- **Place your ideas on your group's wall / flipchart / whiteboard.**
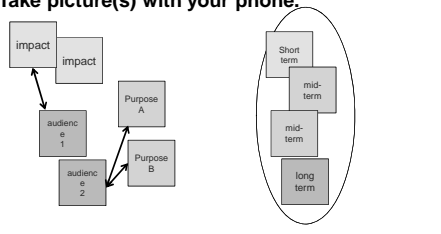
PURPOSE: What do we do?

AUDIENCE: Who do we serve?

IMPACT: What value do we bring?

Classroom Example
Business: Create a mission statement

- **3 min - Organize ideas in clusters or themes.**
- **3 min - Use dry erase markers to show connections.**
- **1 min - Take picture(s) with your phone.**

impact

impact

Purpose A

audience 1

Purpose B

audience 2

Short term

mid-term

mid-term

long term

Now it's your turn – Part 1 (3 min)

- For today, we'll all use one key #concept: equity.
- Individually, use the post-its to **generate as many responses as possible** to the following questions:

  - How could students demonstrate connections between course knowledge / skills / attitudes and equity?
    #assess, #in-class, #exam, …
  - What activities could you facilitate to prepare students to connect course concepts to equity?
    #activity, #in-class, #homework, #project …
  - What materials could you provide to prepare students to connect course concepts to equity?
    #content

- **Place your ideas on your group's wall / flipchart / whiteboard.**

#concept

#assess

#activity

#content

Now it's your turn – Part 2 (3 min)

- **3 min - Organize ideas in clusters or themes.**

- **3 min - Use dry erase markers to show connections. (Use paper if you're working on a table.)**

- **1 min - Take a picture with your phone.**

Discussion

About the activity
- Is this something you could use in your class?

- What would you need to use this technique in your class?

CASE STUDY

Case studies

Purpose
- Students develop skills in solving real-world problems by applying and drawing connections to course concepts.

Benefits
- Determine how well students a) have gained knowledge of course concepts, b) can apply them to new situations, and c) can make important connections.

Case study process

- Create a case that will allow students to draw connections between course concepts and real-world (or imagined) scenarios
- Define the end product students will create and a timeline
- Create questions to support students as they analyze the case
- Create a rubric for evaluating student work
- Decide whether or not to use peer review as part of the process

Example Case Studies

Collections of free case studies
- Stanford Business School: www.laaf.org/case-library/
- NSF National Center for Case Study Teaching in Science: http://sciencecases.lib.buffalo.edu/cs/collection/
- USC Levan Institute for Humanities & Ethics: http://dornsife.usc.edu/levan-institute/dilemmas-and-case-studies/

Now it's your turn

- Small group **subjects**:
  - Front of room: Imagine you are teaching introductory biology
  - Middle of room: Imagine you are teaching ESL
  - Back of room: Imagine you are teaching a design technology class
- The **situation** – 5 min
  - You want to assess your students' ability to make connections between a course concept and a real-world concept.
    - Is a case study appropriate for this class? If so, what are some elements of a possible case? If not, what assessment strategy will you use instead?
    - What connections do you want students to make? In other words, identify a course concept and a real-world concept for the scenario.
    - What should students produce?

Discussion

About the activity
- Is this something you could use in your class?

- What would you need to use this technique in your class?

EPORTFOLIOS

ePortfolios

Purpose
- Students showcase their successes and track progress over time.
- Students use written/audio/video reflections to make connections between their work products (artifacts) and course outcomes, academic goals, career goals, and life goals.

Benefits
- The use of ePorfolios is considered a High-Impact Practice on its own.

Multiple layers (SF State)
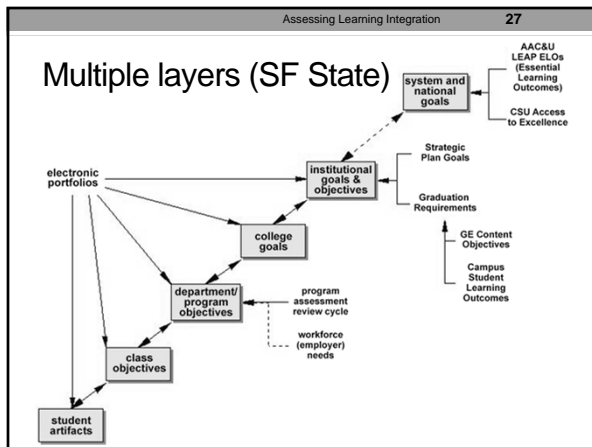
The ePortfolio Process

- □ Collect
- □ Select
- □ Reflect
- □ Build
- □ Publish
- □ **Connect, Link & Share Globally**

http://eportfolio.sfsu.edu

The ePortfolio Process: Collect

□ Students collect digital files, or artifacts, including:

- Assignments, Course Projects & Reflective Writing
- Presentations & Recordings
- Images/Visuals/Videos
- Internships, Community Service
- Co-Curricular Activities
- Professional Development

The ePortfolio Process: Select

- Students select examples of work that best meet the learning objectives outlined in portfolio or that show the strongest connections with a specific audience.
- Use different tags (keywords) to match artifacts with different objectives or audiences

The ePortfolio Process: Reflect

- For each artifact students also include a reflective statement or description--articulating a rationale for the choice
- How does each artifact demonstrate a proficiency, meet a particular objective, etc.

The ePortfolio Process: Build

Identify high quality, easy-to-use ePortfolio tools:

Pathbrite.com
- Individuals may create as many free ePortfolios as they want.
- Institutions can pay for site licenses that make it easy to create rosters, generate reports, etc.

Digication.com
- Individual students pay $20/year – unlimited storage, support and access
- Institutions can pay for site licenses that make it easy to create rosters, generate reports, etc.

The ePortfolio Process: Publish & Share

- Beyond academic requirement(s), students may choose how widely they want to share their ePortfolio(s).
- Many employers and graduate programs are now welcoming digital portfolios. Students often include a link to their ePortfolio on resumes, applications, or introductory emails.

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Meaning making & ePortfolios

- "Important to the act of meaning making is the **documentation of a student's learning path** and process and the **formation of rich, sustained relationships** created through reflection upon the documentation. In this sense, the documentation process does not create a definitive end product but **leads to a portfolio that is open to continual reflection and re-examination**." – Smits et al, 2005

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Example:
How we use ePortfolios in my class

- Students **collect** work throughout the semester
  - Students complete 3-week modules (called "Quests").
  - To complete these Quests students choose different activities and create artifacts.
  - At the end of each Quest, students upload relevant artifacts that show they meet one or more course-level objectives.
- At the end of the semester, students **select** the artifacts they want to represent their work.
- Using guiding "synthesis questions," students **reflect** on how each artifact shows they meet a learning objective.
- Using an ePortfolio (Pathbrite), students **build**, **share** & **publish** their work.

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Example artifacts

- Essays
- Videos (YouTube)
- Online presentations (VoiceThread, Prezi)
- Audio presentations (mp3)
- Infographics (Piktochart)
- Galleries (Pinterest)
- Flashcards (StudyBlue, Quizlet)
- Animations (Moovly)

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Now it's your turn - Lightning round

• 1 min - List 1 to 3 artifacts your students could put in an ePortfolio to demonstrate achievement of learning objectives in your class (or program).

Technology & Assessment **38**

Discussion

About the activity
• Is this something you could use in your class?

• What would you need to use this technique in your class?

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FINAL QUESTIONS?

References

- Arcario, P.; Eynon, B.; & Clark, J.E. (2005, Summer/Fall). Making Connections: Integrated Learning, Integrated Lives. *Peer Review, 7*(4), 15-17.
- Barkley, E. & Major, C.H. (2016). *Learning Assessment Techniques.* San Francisco: Jossey-Bass.
- Fink, L.D. (2013). *Creating significant learning experiences: An integrated approach to designing college courses.* San Francisco: Jossey-Bass.

THANK YOU!

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