Top Down & Bottom Up

Fully Integrating Learning and Assessment Practices

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Anticipation Guide

Directions: **Agree**, **Disagree,** or **Edit** each statement.

1. Active learning focuses on problem solving and is used mostly in advanced classes.
2. Assessment focuses on determining what students know and can do.
3. Program assessment helps to determine if the curriculum is sound and if the teaching is effective.

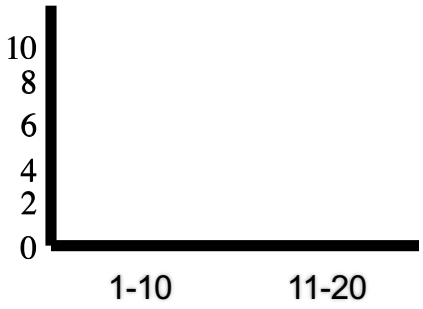
Overview

1. Introduction
2. Learning First
3. Program & Course Integration
4. Instructional Strategies
5. Conclusion

Learning First

processing

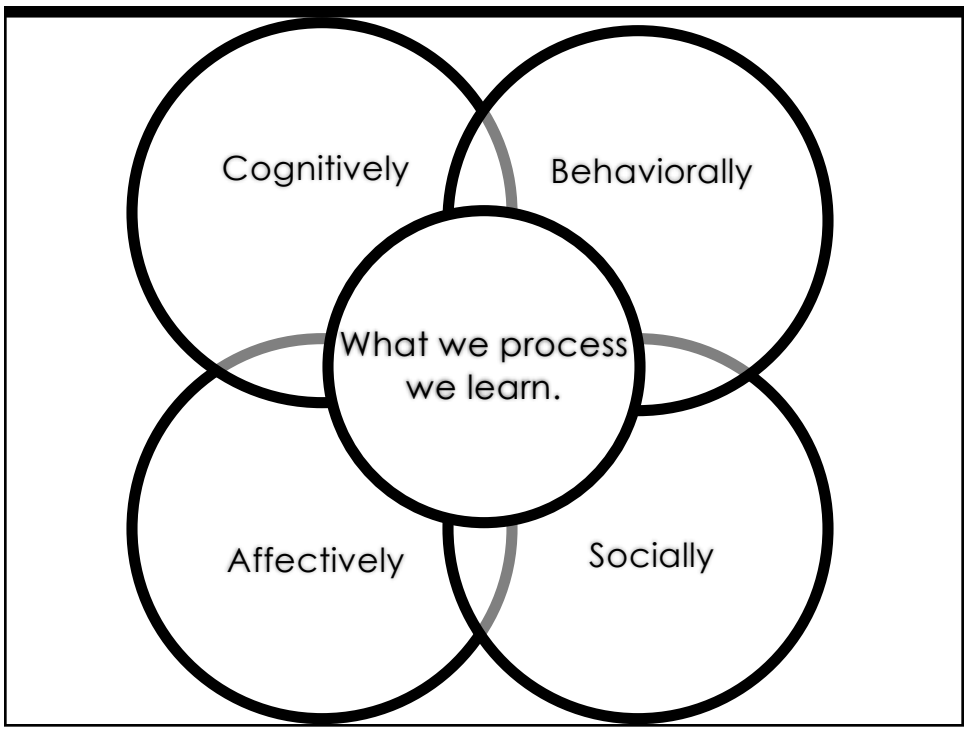
Activity #1



Activity #1

- Meaningful Learning
- Elaborative Learning
- Imagery
- Self-Generation
- Self-Reference Effect
- Encoding Specificity
  - State-dependent
  - Context-dependent
  - Transfer-Appropriate Processing

} Processing



6 Principles for Developing Deep and Flexible Knowledge

1. Learning through practice at retrieval
2. Learning through varied tasks and purposes
3. Learning at the principle level
4. Learning awareness and control (metacognition)
5. Learning in response to developmental feedback
6. Learning embedded in prior knowledge & experience

(Engle, 2006; Halpern & Hakel, 2003; Mariano, Doolittle, & Hicks, 2009; Wagner, 2006)

Active Learning Strategies

Design → Strategy → Processing → Learning

1. 25-Word Summaries
2. Oral Explanations
3. Poster Sessions

processing

cats ☞

25-Word Summaries

Fostering Deep & Flexible Knowledge

Learning Environment: Students create a 25-word statement addressing the essential ideas, focusing on explaining and integrating ideas, not listing topics.

Learning Artifact: Students read a chapter or article, or watch a video, and extract, organize, summarize, and integrate the reading's essential ideas into a clear and concise statement.

Learning Assessment: Summaries are assessed using a scoring guide focused on structural format, clarity of thought and expression, and delineation of core messages.

25-Word Summaries

Fostering Deep & Flexible Knowledge

Radical constructivism views knowledge as constructed through repeated experiences reconfirmed or rejected through comparison over time; this structures our experiences, which we perceive as reality. [25 words]

25-Word Summaries

Grading: Each Chapter Summary Statement is worth 50 points and will be graded using the following criteria:

1. Structural Format — 10 pts
   a. Is the summary 25 words or less?
   b. Is the summary a coherent sentence, or sentences?
   c. Does the summary avoid a simple listing of concepts, terms, or themes?

2. Clarity of Thought and Expression — 15 pts
   a. Are the ideas expressed well, well thought out, and integrated?
   c. Does every word in the summary have a meaningful purpose?
   d. Are correct grammar and syntax used?

3. Delineation of Core Message — 25 pts
   a. Does the summary accurately reflect the reading's central or essential message?
   b. Are the reading's central or essential messages fully integrated?
   c. Does the summary reflect an understanding of the reading?

plus Feedback

with Dragon Dictate

25-Word Summaries

1. Learning through practice at retrieval
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Oral Explanations

Learning Environment: Students create clear and coherently organized 10-15 minute videos that reflect the student's understanding of the current topic under discussion, plus an application to their lives.

Learning Artifact Processing: Students analyze and interpret readings, notes, and discussions; organize concepts and ideas; apply to a life issue; create an oral explanation.

Learning Assessment: Video are assessed using a scoring guide focused on organization, clarity of thought and expression, essential content explanation and application.

Oral Explanations

Grading: Each Oral Explanation is worth 100 pts and will be graded using the following criteria:

1. Organization — 20 pts
   a. are introductions and conclusions used effectively?
   b. do the expressed ideas follow a logical progression?
   c. are explanations and applications provided?

2. Clarity of Thought and Expression — 20 pts
   a. are the ideas expressed well, well thought out, and integrated?
   b. are there clear and logical transitions between ideas?
   c. are correct grammar and syntax used?

3. Essential Content Explanation — 30 pts
   a. does the content of the explanation accurately reflect the addressed constructivism?
   b. does the explanation explain, rather than just list, the main concept components?
   c. is the content of the explanation free from personal interjections?

4. Essential Content Application — 30 pts
   a. is a problem, issue, or situation explained clearly?
   b. are concepts from the texts and class used to address the cited problem?
   c. is the application thorough, meaningful, and appropriate?

Oral Explanations

1. Learning through practice at retrieval
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Poster Sessions

Learning Environment: Student groups produce conference-style posters and present the posters in a poster session.

Learning Artifact Processing: Students select, research, organize, summarize, and communicate specific energy content in a poster format.

Learning Assessment: Group posters are assessed using rubrics by peers, faculty, administrators, and the course instructor.

Chemistry Resources and the Environment Poster Rubric (DRAFT)

Group Number, Energy source: _____ 20 points

Criteria	3	2	1	0
Organization (3)	Well Organized, followed instructions	Well organized, did not follow instructions	Poorly organized, did not follow instructions	Random
Readability, Neatness (2)		Easy to read and understand, Good curb appeal	Adequate	Did not use template provided
Cradle to Grave concept and content (9) Resources needed, Environmental impacts, Advantages/disadvantages	Covered all aspects, well thought out and described	Covered most aspects, fairly well thought out and described	Covered some aspects, poorly thought out and described	Start over
Net energy (2)		Concept and discussion included, relevant	Minimal discussion	No discussion
Figures and Tables (2)		Clear, incorporated in discussions, integrated	Adequate	Lacking
References (2)		Well used	Some used	None used

Poster Sessions

1. Learning through practice at retrieval
2. Learning through varied tasks & purposes
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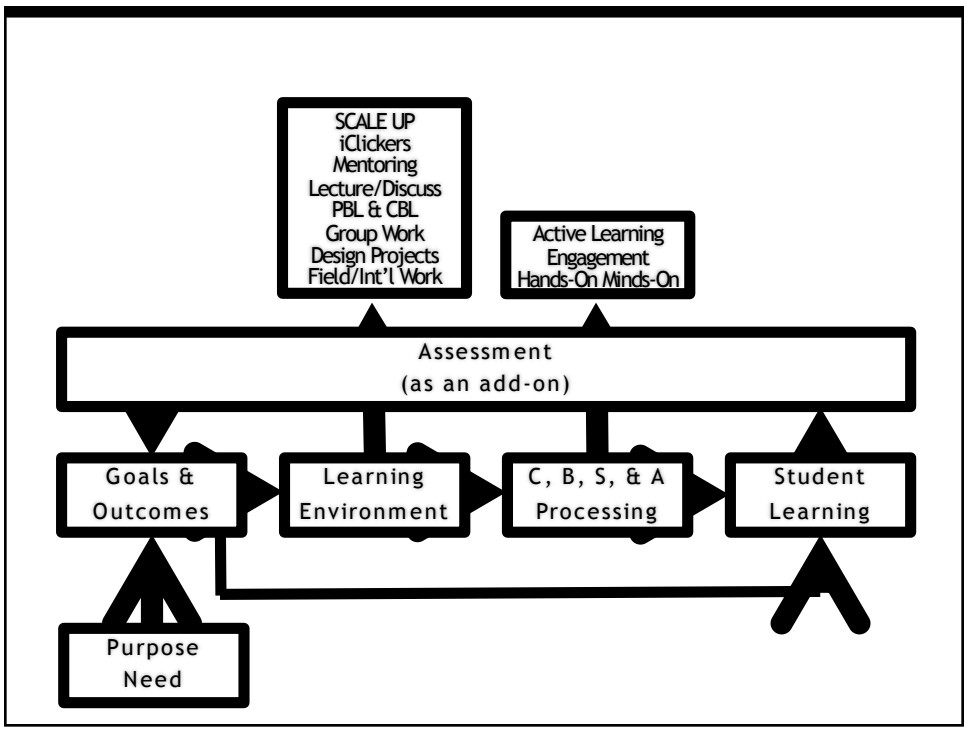
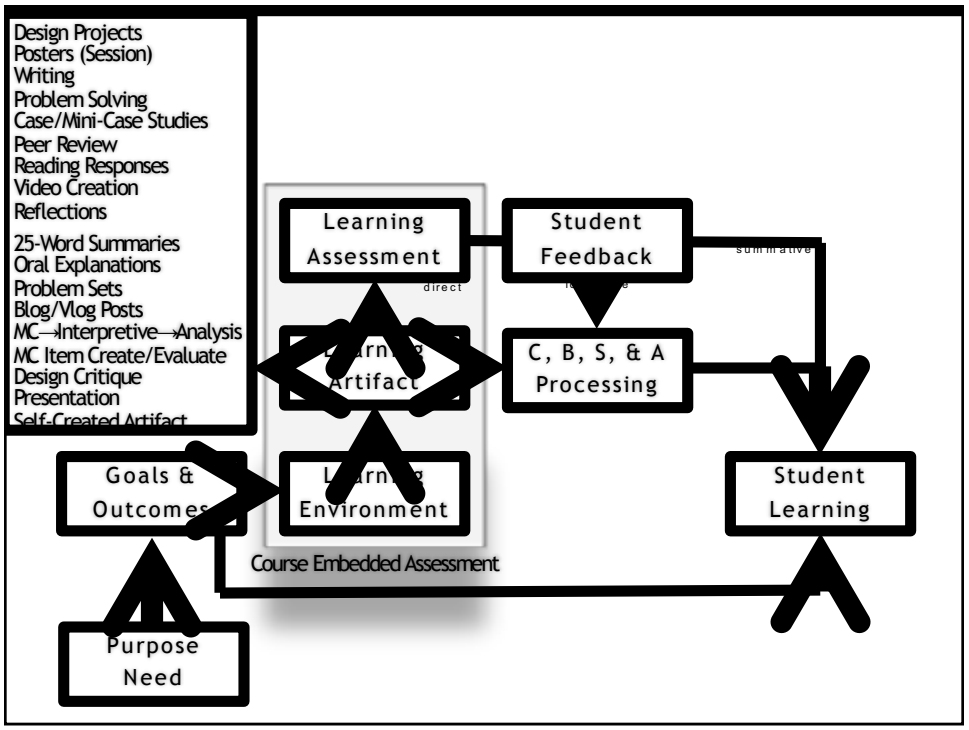
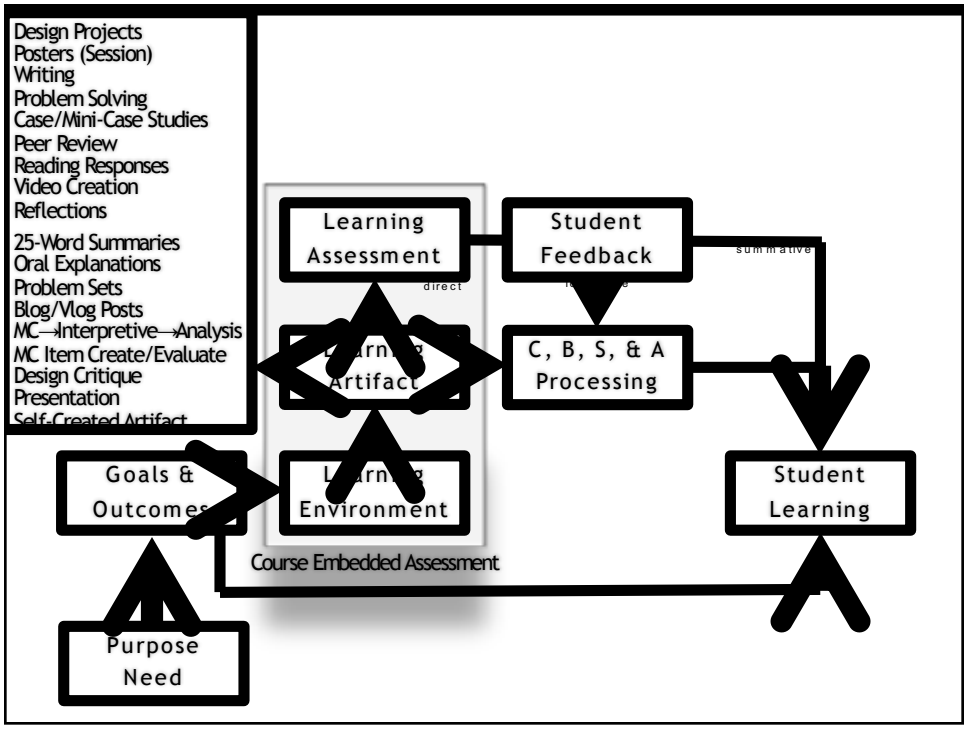
perspective ☞

Course Embedded Assessment

artifacts


SCALE UP
iClickers
Mentoring
Lecture/Discuss
PBL & CBL
Group Work
Design Projects
Field/Int'l Work
Active Learning
Engagement
Hands-On Minds-On
Assessment
(as an add-on)
Goals & Outcomes
Learning Environment
C, B, S, & A Processing
Student Learning
Purpose Need


Design Projects
Posters (Session)
Writing
Problem Solving
Case/Mini-Case Studies
Peer Review
Reading Responses
Video Creation
Reflections
25-Word Summaries
Oral Explanations
Problem Sets
Blog/Vlog Posts
MC→Interpretive→Analysis
MC Item Create/Evaluate
Design Critique
Presentation
Self-Created Artifact
Learning Assessment
Student Feedback
direct
summative
C, B, S, & A Processing
Goals & Outcomes
Student Learning
Course Embedded Assessment
Purpose Need



Program Assessment (Education Major)

(Academic) Program Goals: Graduates have

1. Knowledge of educational concepts, student development, & teaching techniques; and,
2. Knowledge and skills sufficient to enter the K-12 education profession

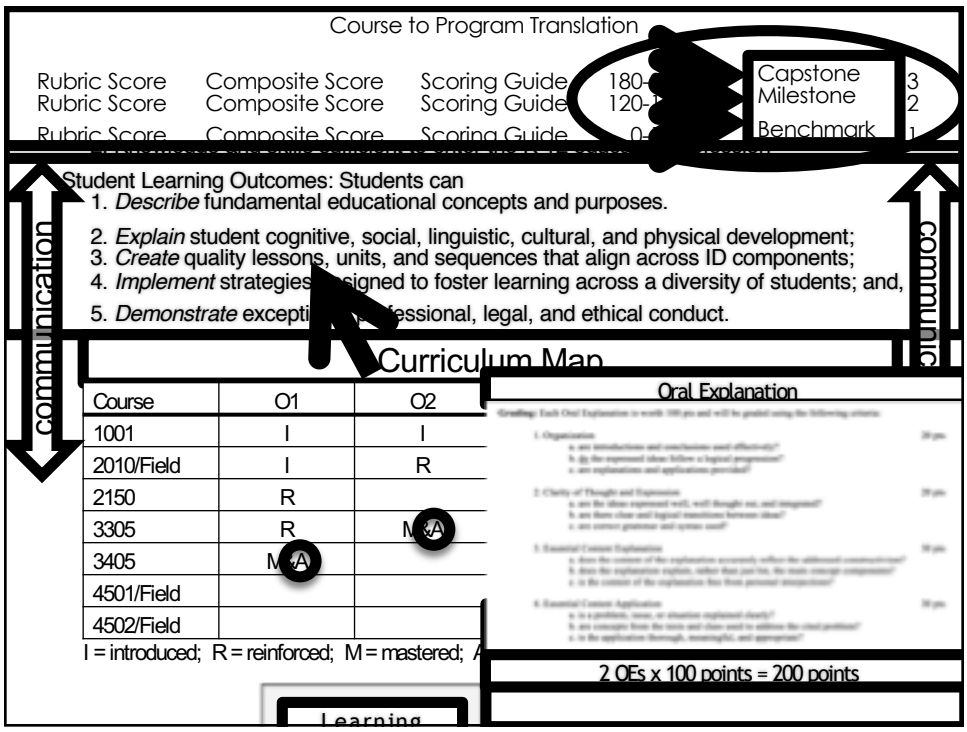
Student Learning Outcomes: Students can

1. *Describe* fundamental educational concepts and purposes.
2. *Explain* student cognitive, social, linguistic, cultural, and physical development;
3. *Create* quality lessons, units, and sequences that align across ID components;
4. *Implement* strategies designed to foster learning across a diversity of students; and,
5. *Demonstrate* exceptional professional, legal, and ethical conduct.

Curriculum Map

Course	O1	O2	O3	O4	O5
1001	I	I	I	I	
2010/Field	I	R		I	
2150	R		I		I
3305	R	M, A		I	I
3405	M, A		R	R	R
4501/Field			R	R	R
4502/Field			M, A	M, A	M, A

I = introduced; R = reinforced; M = mastered; A = assessed



Gen Ed Shuffle

Capstone
Milestone
Benchmark

Reasoning in the Social Sciences

Outcome 2: Analyze human behavior, social institutions, and/or
patterns of culture using theories and methods of the social scie s.

Satisfying Course	Course Content	Course Pedagogy	Course Assessment	Assessmnt Grading	Program Translation
History	Blah, Blah	Reading	Paper	100 pts	
Geography	Blah, Blah	Media	Project	50 pts	
Psychology	Blah, Blah	Lecture & Discussion	MC & Essay Test	100 pts	
Sociology	Blah, Blah	Coop Lrn	Presentation	200 pts	

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