



University of Maryland University College

DE Oracle Live – An Overview of Robert Gagné’s Nine Events of Instruction *...and how they might be useful in the classroom*

Presenter:

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Center for Support of Instruction

2012.10.17

Resources:

***[An Overview of Robert Gagne’s
Nine Events of Instruction,](#)
DE Oracle, March-April 2012***

Agenda

- ❖ Introduction to Robert Gagne's Conditions of Learning Theory & His Nine Instructional Events
- ❖ Brief Review of Each Event with Possible Application
- ❖ Questions & Comments



Disclaimer

There are many educational theories. Each theory's principles impact decisions about curriculum design, instruction techniques and educator roles, and assessment criteria and methods. This presentation encourages consideration and evaluation of ideas through a brief, general overview of one educational theory and offers some suggestions for possible application within UMUC courses as faculty may deem appropriate. **This is not a formal critique, scholarly commentary, or endorsement.**

...and IANAEPDID



Introduction

The Conditions of Learning theory is familiar to those who study and work in the fields of educational psychology and instructional design. Gagné developed and first described the theory in his book *Conditions of Learning*, originally published in 1965.



Robert M. Gagné
(1916-2002)



Gagné's Conditions of Learning Theory *by the Numbers*

1 Assumption



Different types of learning exist; each requires a different type of instruction or instructional condition to promote various desired learning outcomes.



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5 Types of Learning



**Verbal Information
Intellectual Skills
Cognitive Strategies
Motor Skills
Attitude**



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8 Conditions of Learning



Signal
Stimulus-Response
Chaining
Verbal Association
Discrimination
Concept
Rule
Problem Solving

(a hierarchy of learning tasks for intellectual skills)



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(a hierarchy of learning tasks for intellectual skills)

9 Instructional Events

(with Internal Cognitive Processes):



Preview: Nine Instructional Events & Internal Cognitive Processes

Phase 1: Preparing for Learning

- **Gaining Attention** (*stimuli activate receptors*)
- **Stating the Objective** (*create level of expectation for learning*)
- **Stimulating Recall of Prior Learning** (*retrieval & activation of short-term memory*)

Phase 2: Acquisition & Performance

- **Presenting the Content / Stimulus** (*selective perception of content*)
- **Providing Learning Guidance** (*semantic encoding for storage in long-term memory*)
- **Eliciting Performance** (*respond to questions to enhance encoding & verification*)
- **Providing Feedback** (*reinforcement & assessment of correct performance*)

Phase 3: Transfer of Learning

- **Assessing Performance** (*retrieval & reinforcement of content as final evaluation*)
- **Enhancing Retention & Transfer to Other Contexts** (*review & generalization of learned skill to new situation*)



1. GAINING ATTENTION

(stimuli activate receptors)



Ladies & Gentlemen!



1. GAINING ATTENTION

(stimuli activate receptors)



Ladies & Gentlemen!

- Audio & Video
- Storytelling & Animation
 - Demonstration
 - Problem solving
- Examples to highlight relevance, importance, timeliness of topic
- Questions or thoughts to arouse curiosity, stimulate thinking, heighten motivation to learn



2. STATING THE OBJECTIVE

(creates level of expectation for learning)

What are your desired outcomes for students?

What personal learning outcomes do students have?



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➤ **Describe the Itinerary** (*show & tell*):

- **where** we are going
- **how** we'll get there
- **what** we'll see, hear, learn, do, accomplish
- **who** we'll meet along the way
- **when** we'll reach waypoints and destinations
- **why** we're on this journey

- **Visual Representation** (*show*) – map, image, etc.
- **Activities & Exercises** (*discover*)
- **Narrative** (*show & tell*) – audio, video, text, etc.
- **Bullet Points** (*tell*)



3. STIMULATING RECALL OF PRIOR LEARNING

(retrieval and activation of short-term memory)



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Tools or methods that might help students connect previous learning or experience with materials in the current course:

- exercises
- short assignments
(written, creative, etc.)
- discussion questions
- concept or mind maps
- surveys/polls, etc.
- media that spark
thought (audio/video/
learning object)
- other ideas?



4. PRESENTING THE CONTENT / STIMULUS

(selective perception of content)



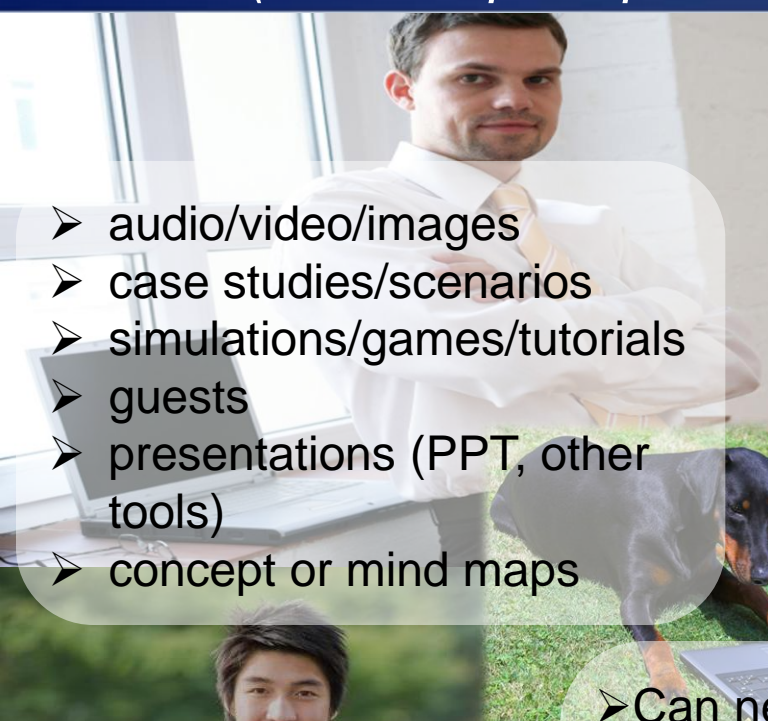
- How interactive--interpersonally and technologically--is it (or should it be)?
- Can other “voices” or perspectives assist in relaying content... how might they be included?


- Can new technologies and media display text in fresh ways or push beyond the text medium to appeal to different learning styles or modes of instruction?
- Is material in appropriate, meaningful “chunks” to facilitate learning and retention and avoid overload?




4. PRESENTING THE CONTENT / STIMULUS

(selective perception of content)

- 
- audio/video/images
 - case studies/scenarios
 - simulations/games/tutorials
 - guests
 - presentations (PPT, other tools)
 - concept or mind maps

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- How interactive--interpersonally and technologically--is it (or should it be)?
 - Can other “voices” or perspectives assist in relaying content... how might they be included?

- 
- discussions
 - lectures
 - field trips
 - hands on experiences
 - other formats?

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5. PROVIDING LEARNING GUIDANCE

(semantic encoding for storage in long-term memory)

Opportunities for Application of Knowledge or Skill by Students

- simulations
- examples
- case studies
- visual aids,
- mnemonics
- analogies
- exercises
- written assignments
- discussion questions



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Guidance & Feedback by Instructor or Mechanism

- timely, regular
- specific, detailed, adequate
- personal
- constructive
- for correct & incorrect responses
- suggest areas for improvement, growth
- reinforce learning, goals, outcomes



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Intended Outcomes

- clarified questions
- strengthened grasp of content
- improved abilities
- increased confidence



6. ELICITING PERFORMANCE

(responds to questions to enhance encoding and verification)



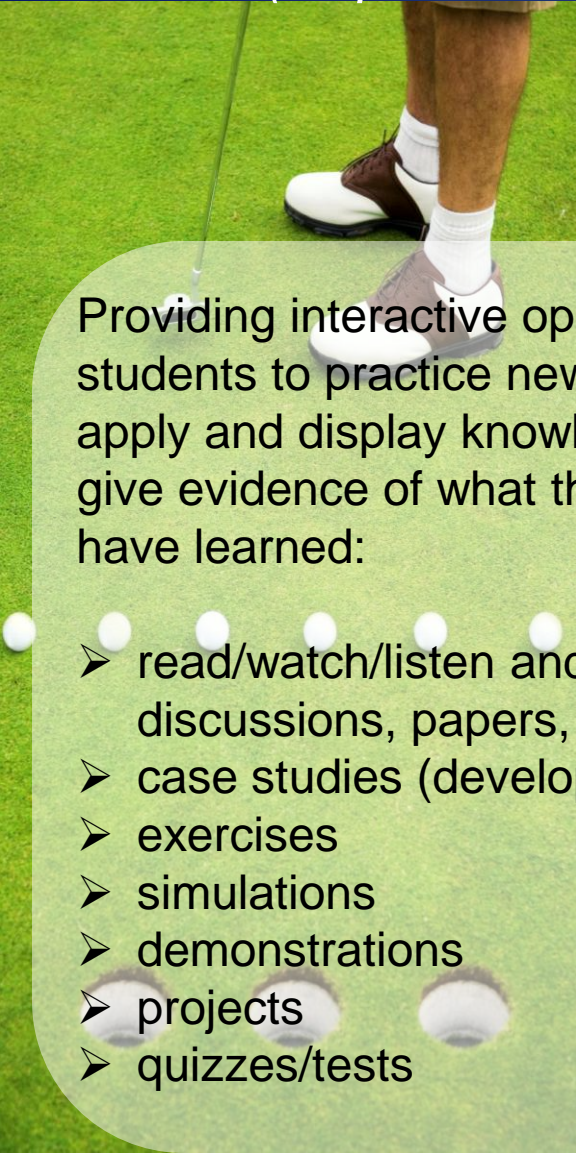
This requires less guidance and little or no instruction. Feedback, if provided, comes most likely at the end of the performance.

Can students demonstrate comprehension (“getting it”) and retention (“holding on to it”) of content...that they are further along an educational path?



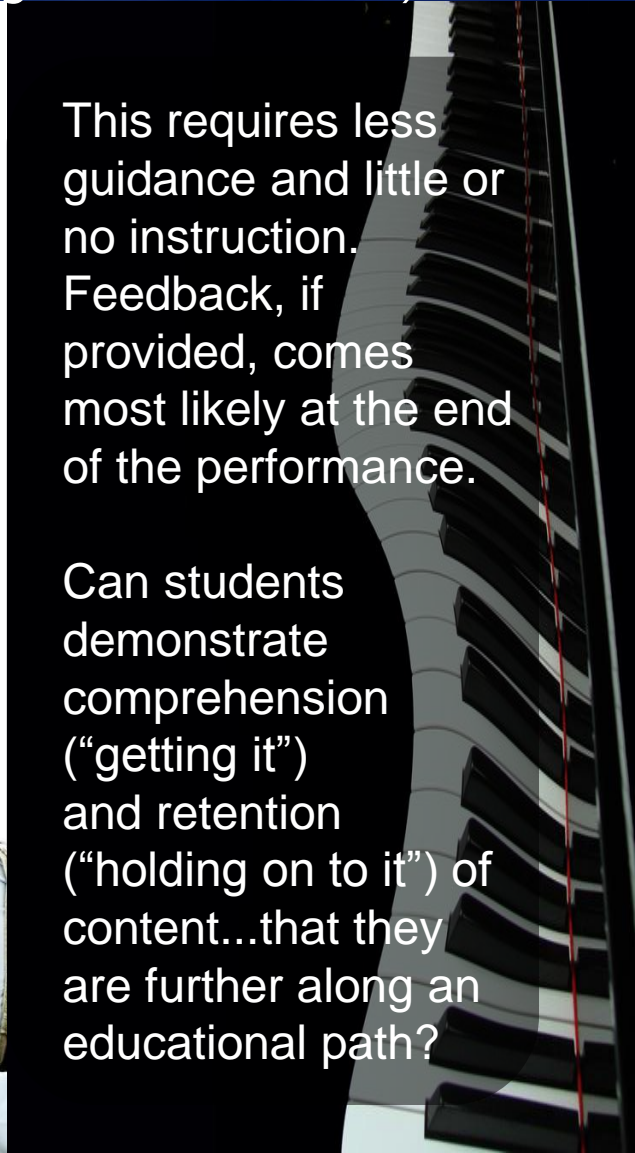
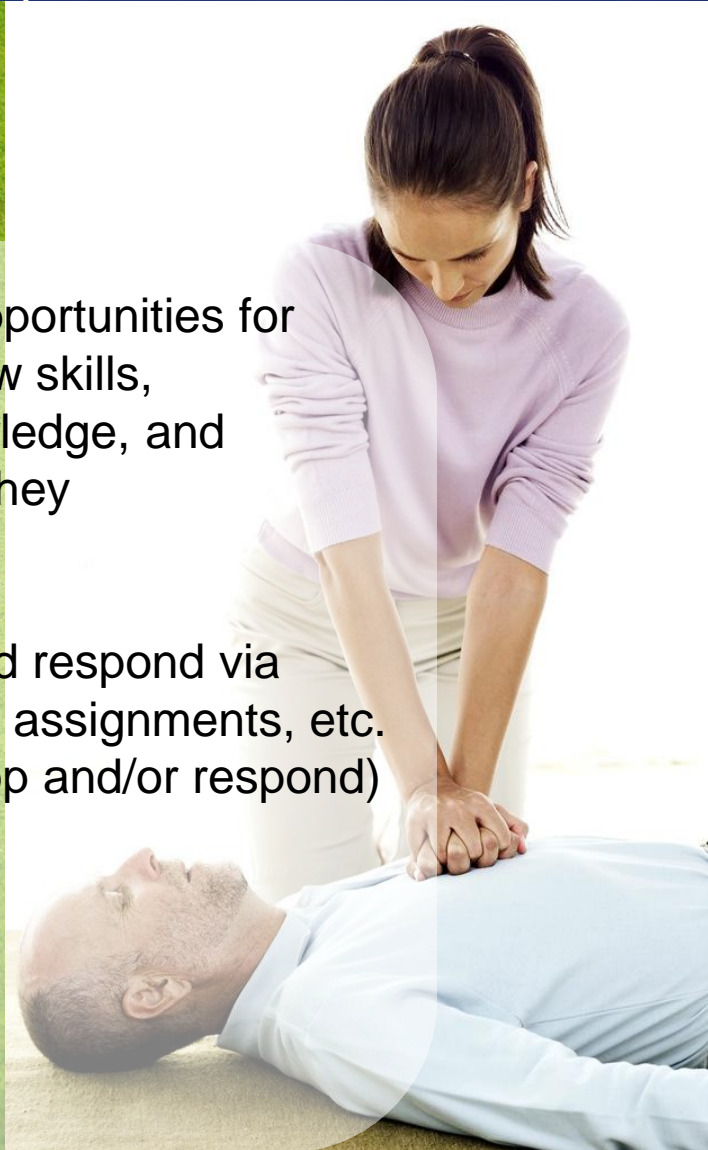
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Providing interactive opportunities for students to practice new skills, apply and display knowledge, and give evidence of what they have learned:

- read/watch/listen and respond via discussions, papers, assignments, etc.
- case studies (develop and/or respond)
- exercises
- simulations
- demonstrations
- projects
- quizzes/tests



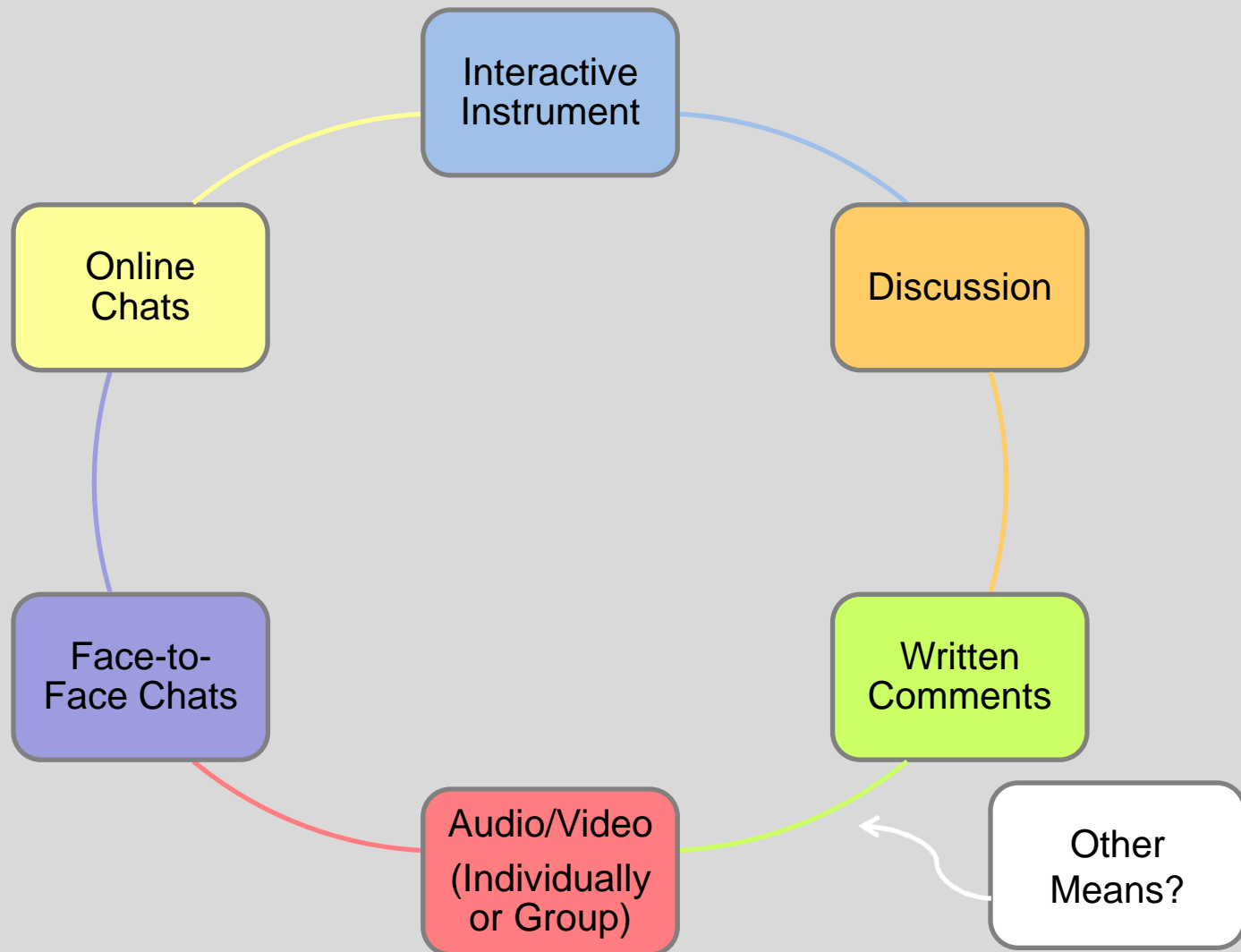
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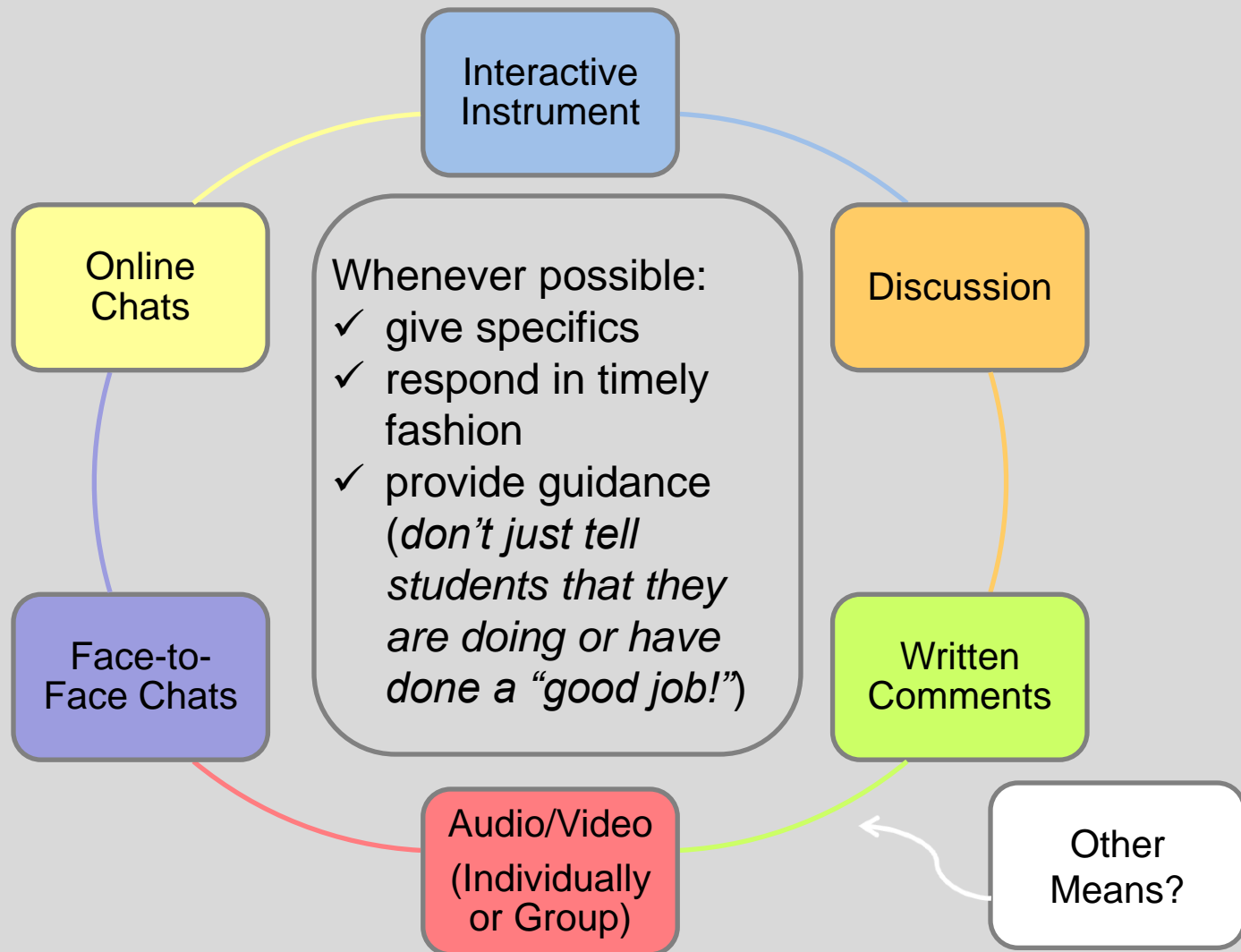
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(reinforcement and assessment of correct performance)



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8. ASSESSING PERFORMANCE

(retrieval and reinforcement of content as final evaluation)

Forms of Assessment:

Quizzes / Exams (*written, oral*)

Papers / Reports / Projects

Presentations / Demonstrations / Hands-on Application

Journals / Portfolios

Observation / Review / Evaluation (*self, peer, professional*)

...any other appropriate means for determining
the breadth and depth of student learning



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Feedback



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For correct answers or
positive performance,
consider:
providing additional
resources/information to
help increase retention
and improve the learning
process. 

Feedback

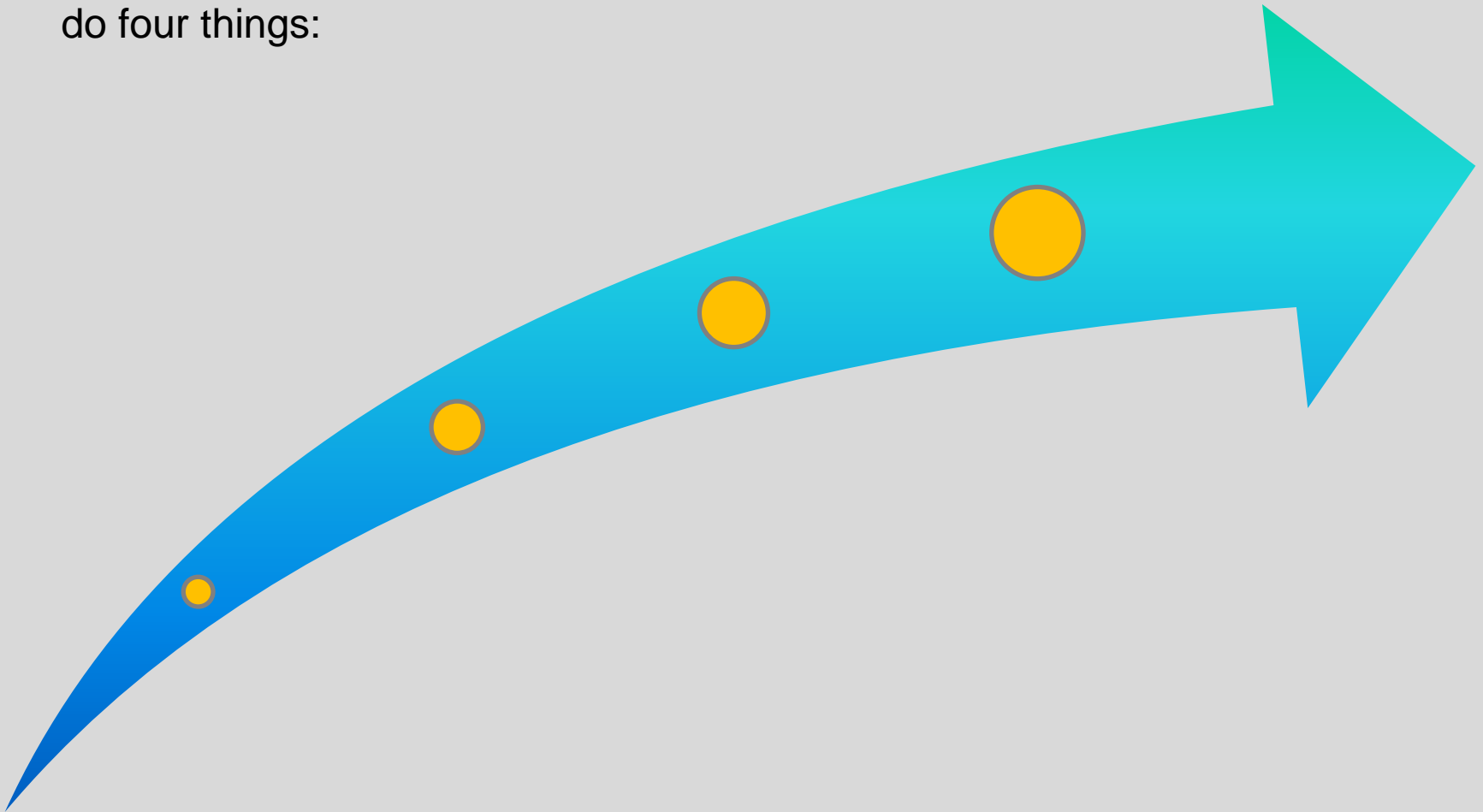
For incorrect answers or
where improvement is
needed, consider:
providing correct
answers/info, along with
appropriate explanations
and resources for
strengthening skills or
knowledge. 



9. ENHANCING RETENTION & TRANSFER TO OTHER CONTEXTS

(review and generalization of learned skill to new situation)

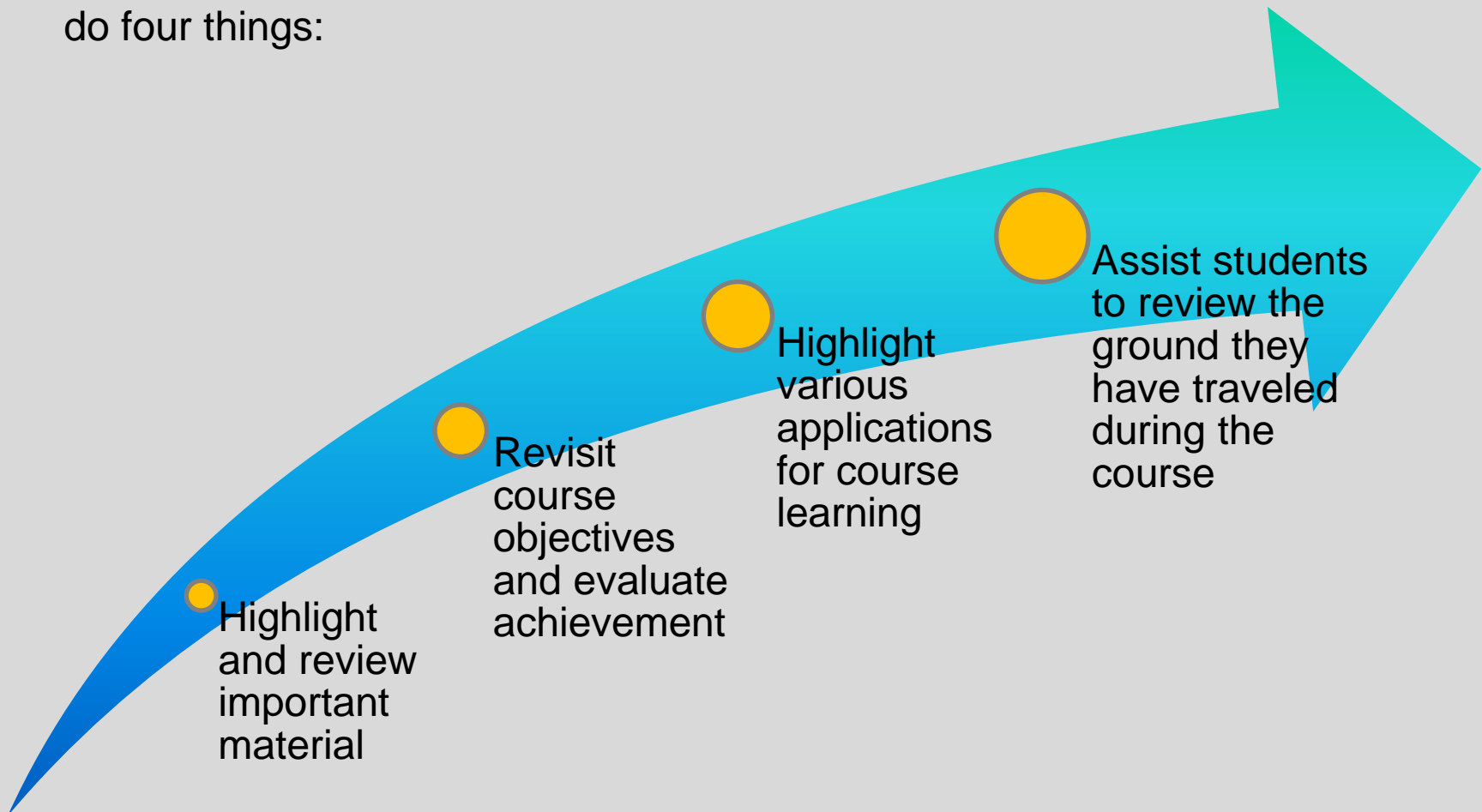
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Performance Assessment (event #8)—it is helpful to
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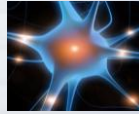
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Review: Nine Instructional Events

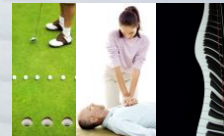
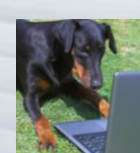
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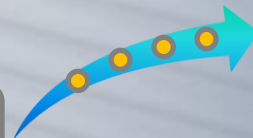
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A Few More Thoughts...

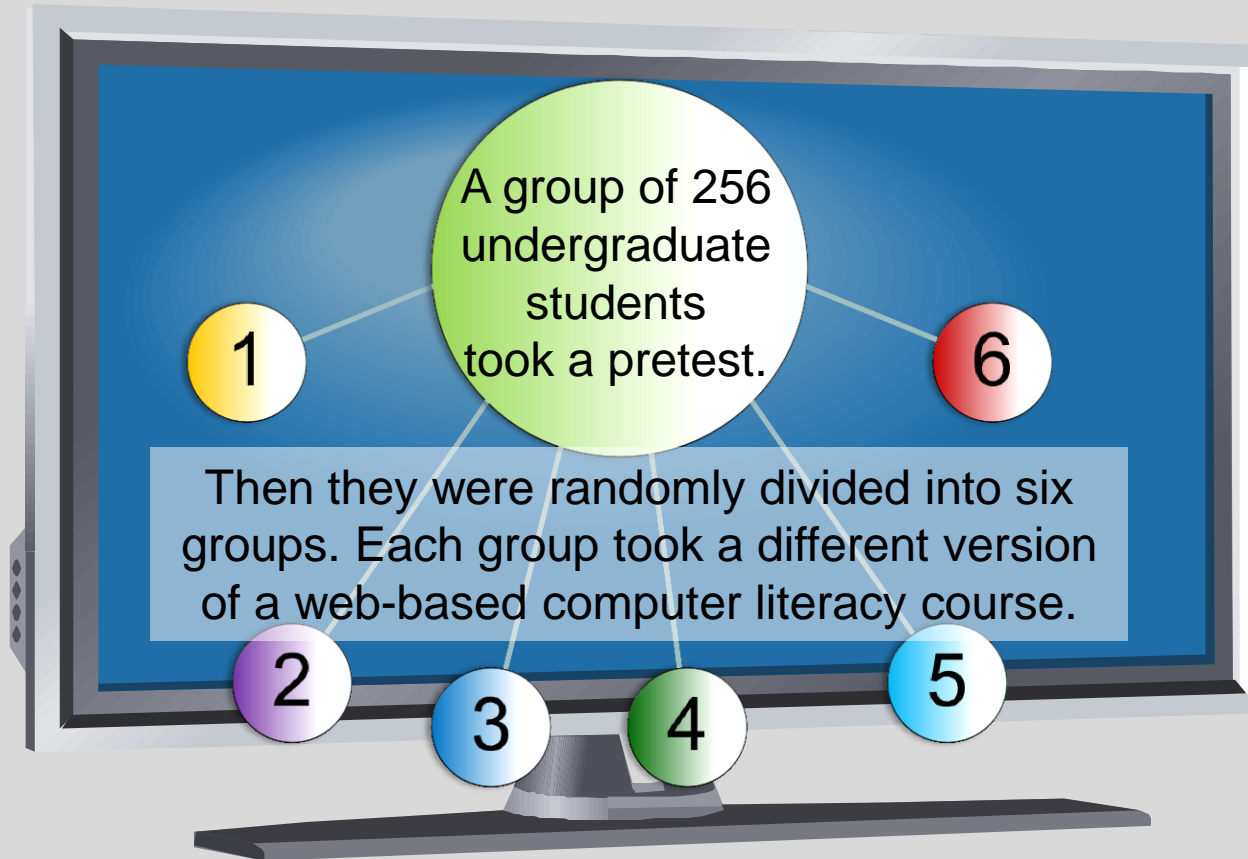
1. It is not necessary...
 - to use every single instructional event in all instances or
 - to use them in this exact order

(e.g. *some educators prefer to make assessment the final step*).
2. Some instructional events may be combined
(e.g. *presenting content may also incorporate providing learning guidance, eliciting performance, and providing feedback*).
3. Remember the fine print: *Implementation of the Nine Instructional Events is no guarantee of future results and may not necessarily produce the desired learning outcomes in all cases; the intention is to support the internal process of the student within the learning environment.*
4. Each instructor should determine what best suits the...
 - subject
 - course format
 - course goals
 - needs and capabilities of the students
 - his or her own personal style
 - technological capacities



What Difference Does it Make?

A study by Martin, Klein, and Sullivan (2007) examining various instructional models, investigated the effects that different instructional elements have when they are combined systematically and when one or more elements is removed.



So, what did these six course versions look like?



What Difference Does it Make?

This table illustrates the elements in each of the six programs.

Program	Information	Objectives	Practice with Feedback	Examples	Review
1: Full	√	√	√	√	√
2	√	X	√	√	√
3	√	√	√	X	√
4	√	√	X	√	√
5	√	√	√	√	X
6: Lean	√	X	X	X	X

At the end of each version, the students completed a posttest.

(What do you think the results were? Which element(s) made a difference?)



And the Study Reveals...

- ❖ Students who had practice with feedback...
 - ***scored significantly higher*** AND
 - ***had more positive attitudes*** in response to a dozen questions about the course and their experiences...than the students who did not have that element in their course.



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*If a real estate mantra is “Location, Location, Location,”
then one idea gleaned from this study and
applied to education and learning (as in many other arenas) is*

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or “Practice makes a difference.”



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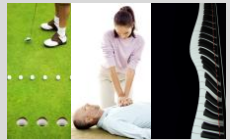
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- ❖ The study results indicate that within Gagné’s scheme of instructional events, events #5- #7—those allowing for students to apply their knowledge, test their skills, and receive guidance and feedback based upon their performance (i.e., incorporating **practice with feedback**)—may be pivotal for learners’ success.



Boring Behaviorism?

CRITICISMS of Gagné's theory include that the nine instructional events are:

- outdated
- overly general
- prone to lead to boring instruction
- too behaviorist in nature
- lacking in scientific support



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UMUC's Undergraduate Learning Model

Seven Principles (*derived from Chickering and Gamson*):

- 1. Faculty engagement**, including faculty's active and motivating presence, outreach to students, and facilitation of interaction with students.
- 2. Student collaboration**, including group activities and assignments guided by clear direction and evaluation criteria.
- 3. Active learning**, including application, summary and reflection, and connection to real-world experience.
- 4. Frequent and prompt feedback** on all assignments and activities, including comments on performance, criteria for success, encouragement and referrals for further support.
- 5. Time on task**, meaning focus on activities directly related to learning outcomes, adequate guidance, and clear connection of assignments to outcomes.
- 6. High expectations**, in keeping with UMUC's standards for academic rigor and the faculty member's responsibility to challenge and motivate students.
- 7. Respect for diversity**, including diversity of culture, ethnicity, academic backgrounds, and individual needs as well as learning styles.



UMUC's Best Online Instructional Practices Study (BOIPS)

Eight Principals:

1. Make learning goals and paths to them clear
2. Use deliberate practice until skill or concept is mastered
3. Provide prompt, constructive feedback
4. Provide balance of challenge and support tailored to individual readiness and potential
5. Broaden the learner's experience of the subject matter
6. Elicit active, critical reflection on student's growing experience base
7. Link inquiries to genuine problems or issues of high interest to the learner
8. Create an environment that supports and encourages inquiry



Conclusion

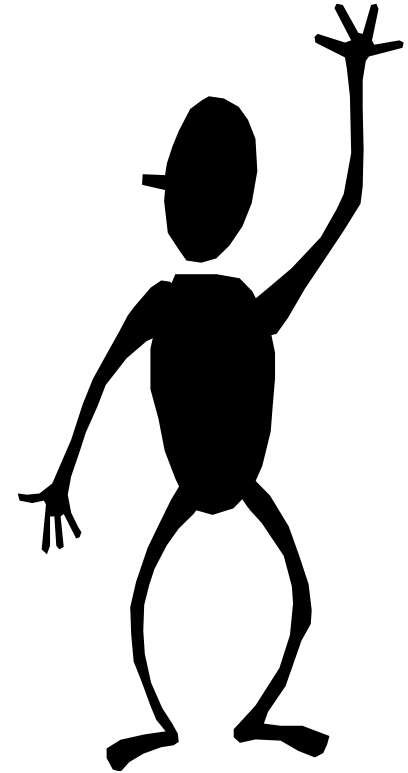
SO...

Many educators recognize some value in considering and thinking through Gagné's nine steps and incorporating—and adapting—they as appropriate to their circumstances.

You may, likewise, wish to consider them –or a variant of them (possibly by another name or from another educator's work)--and determine how you might apply them in your courses to enhance the educational environment and to support student growth and achievement.



Questions / Comments



THANK YOU!

