DITA 2015

PRACTICE AND FEEDBACK

Angie Calton
Gagne’s Nine Instructional Events

- Gain Attention
- Inform learners of objectives
- Activate prior knowledge
- Present the point
- Provide learner guidance
- Elicit Performance
- Provide Feedback
- Assess Performance
- Enhance transfer
What is Learning?

Learning is a *process* that leads to *change*, which occurs as a result of *experience* and increases the potential for improved performance and future learning.
The Ingredients of Learning

Intended goals

- Knowledge
- Skills
- Behaviors
- Beliefs
- Attitudes

Practice

Feedback

Refined practice
Assessment: Evidence of Learning
Gagne’s Nine Instructional Events

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Goal-directed practice coupled with targeted feedback are critical to learning.
Meet Isabella

[Images of Isabella in her home and performing gymnastics]
The Cycle of Practice & Feedback

- Goal-oriented
- Appropriate level of challenge
- Intensity and frequency
- Distributed over time

Practice

Goals

LEADS TO

DIRECT

GUIDES FURTHER

TARGET

SHAPE

HELP US EVALUATE

ALLOWS FOR
Practice, Feedback, Improvement
Effective feedback tells students...

...**what** they are or are not understanding or doing

...**where** there performance is going well or poorly

...**how** they should direct their subsequent efforts

...**when** they can make the most use of it

**THERE IS NO MAGIC FORMULA!**

Think about:

- Learning goals
- Students incoming levels of knowledge or proficiency
- Practical constraints of the course (time, size, setting, etc)
Two Types of Feedback

**FORMATIVE**
- Informs students’ subsequent learning
- Identifies which aspects of performance did or did not meet the criteria

**SUMMATIVE**
- Gives a final judgment or evaluation of proficiency
- Identifies the degree to which performance criteria have been met
Timing Feedback

- *How soon* should you give feedback?
- *How often* should you give feedback?

- Usually the earlier the better
- Usually more frequently is better

Note:
Immediate vs. Delayed Feedback
Strategies for Goal-directed Practice

• Make the course goals explicit
• Give examples or models of target performance
• Use a rubric to breakdown and communicate performance criteria
• Show students what you do NOT want
• Provide multiple opportunities for practice
• Set expectations about practice (amount, type and level)
<table>
<thead>
<tr>
<th>Criteria</th>
<th>Excellent - 4</th>
<th>Good - 3</th>
<th>Acceptable - 2</th>
<th>Poor - 1</th>
<th>Final Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Understanding</td>
<td>Shows a deep/robust understanding of the topic(s) and issues related to the assigned role.</td>
<td>Shows a reasonable understanding of the topic(s) and issues related to the assigned role.</td>
<td>Shows a superficial understanding of the topic(s) related to the assigned role.</td>
<td>Shows no understanding, or a misguided understanding, of the topic(s) related to the assigned role.</td>
<td></td>
</tr>
<tr>
<td>Argument and Implications</td>
<td>Clearly articulates a position or argument. Full discussion of the major implications of the argument or position.</td>
<td>Articulates a position or argument that is incomplete or limited in scope. Adequately discusses some of the major implications of the position.</td>
<td>Articulates a position or argument that is unfocused or ambiguous. Discusses minor implications (missing the major ones) or does not discuss major implications adequately.</td>
<td>Does not articulate a position or argument. Does not discuss the implications of the argument or position.</td>
<td></td>
</tr>
<tr>
<td>Evidence</td>
<td>Presents evidence that is <strong>relevant and accurate.</strong> Presents sufficient amount of evidence to support argument. Research taken from well-regarded and trustworthy sources.</td>
<td>Presents evidence that is mostly relevant and/or mostly accurate. Presents limited evidence to support argument. Research comes from trustworthy sources.</td>
<td>Presents evidence that is somewhat inaccurate and/or irrelevant, but corrects when prompted. Does not present enough evidence to support argument, but augments when prompted.</td>
<td>Presents a lot of inaccurate and/or irrelevant evidence. Does not present enough evidence to support argument, even when prompted. Research comes from dubious sources.</td>
<td></td>
</tr>
<tr>
<td>Participation in preparation groups</td>
<td>Makes 3 or more unique, insightful and/or persuasive arguments in support of the assigned position. Makes valuable contributions to the discussion and helps other students articulate or strengthen their arguments before the deadline.</td>
<td>Makes 2-3 arguments in support of the assigned position. Makes helpful contributions to the group discussion and responds to 2 other people with helpful suggestions and/or questions before the deadline.</td>
<td>Makes 2 arguments in support of the assigned position. Makes superficial contributions to the discussion and responds to other students in an obvious way, or in a way that fails to further their claims before the deadline.</td>
<td>Makes fewer than 2 arguments in support of the assigned position. Fails to contribute to the discussion or respond to other students before the deadline.</td>
<td></td>
</tr>
<tr>
<td>Participation in Mock Town Hall Meeting Discussion</td>
<td>Actively engages in lively debate and encourages others to participate. Demonstrates civility and respect in interactions with others. Replied to all posts with incisive remarks and persuasive counterarguments. The position paper and responses were posted before the deadline.</td>
<td>Engages in debate with others. Is respectful in interactions with others. Replied to all posts from the perspective of the assigned role and made counter-arguments where possible. The position paper and responses were posted before the deadline.</td>
<td>Replied to all posts but it is unclear if responses represent the perspective of the assigned role. Counter-arguments are weak or unsubstantiated. The position paper and responses were posted before the deadline.</td>
<td>Did not reply to all posts or the attempted responses did not reflect the perspective of the assigned role. No counter-arguments were made. The position paper and/or responses were not posted before the deadline.</td>
<td></td>
</tr>
</tbody>
</table>
Strategies for Giving Targeted Feedback

• Look for patterns of errors in student work
• Prioritize your feedback
• Balance strengths and weaknesses in your feedback
  – Aim to build self-efficacy
• Create frequent opportunities to give feedback
• Attribute success to ability + effort
• Attribute failure to lack of effort or task difficulty
• Provide feedback at the group level
• Incorporate peer feedback
• Require students to specify how they used feedback in subsequent work
1Physics Post-Exam Reflection

This activity is designed to give you a chance to reflect on your exam performance and, more important, on the effectiveness of your exam preparation. Please answer the questions sincerely. Your responses will be collected to inform the instructional team regarding students’ experience surrounding this exam and how we can best support your learning. We will hand back your completed sheet in advance of the next exam to inform and guide your preparation for that exam.

1. Approximately how much time did you spend preparing for this exam?
2. What percentage of your time was spent in each of these activities?
   a. Reading textbook sections for the first time ______
   b. Rereading textbook sections ______
   c. Reviewing homework solutions ______
   d. Solving problems for practice ______
   e. Reviewing your own notes ______
   f. Reviewing materials from the course website ______
      i. What materials?
   g. Other (please specify) ___________________________________________
3. Now that you have looked over your graded exam, estimate the percentage of points you lost due to each of the following (make sure the percentages add up to 100):
   a. Trouble with vector and vector notation ______
   b. Algebra or arithmetic errors ______
   c. Lack of understanding of the concept ______
   d. Not knowing how to approach the problem ______
   e. Careless mistakes ______
   f. Other (please specify): _________________________________________
4. Based on your response to the question above, name at least three things you plan to do differently in preparing for the next exam. For instance, will you just spend more time studying, change a specific study habit or try a new one (if so, name it), make math more automatic so that it doesn’t get in the way of physics, try to sharpen some other skill (if so, name it), solve more practice problems or something else?
5. What can we do to help support your learning and your preparation for the next exam?

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Why might relying on an end-of-course survey be problematic for TAs?

- It is too late to make changes
- The questionnaire or students might not provide specific enough feedback to indicate which changes you need to make
Inviting Feedback on Your Teaching Performance

- Use Exam Wrappers
- Start-Stop-Continue
- Critical learning statements (clearest & muddiest points)
- Small group instructional feedback
Continuous Professional Development

• Make notes on your outline or lesson plan
• Record the lesson, lab, tutoring session
• Ask if you can observe a fellow TA or professor
• Read and experiment
• Attend workshops and seminars: http://www.ou.edu/cte
• Learn about learning – apply to your own learning
Gagne’s Nine Instructional Events

Gain Attention
Inform learners of objectives
Activate prior knowledge
Present the point
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Transfer:
The application of skills (or knowledge, strategies, approaches, habits or behaviors) learned in one context to a new context
Elements of Mastery

- **ACQUIRE**
  - Component skills

- **PRACTICE**
  - Integrating skills

- **KNOW WHEN TO APPLY**
  - Skills

- **MASTERY**
Stages of Development of Mastery

- **UNCONSCIOUS**
  - Incompetence

- **CONSCIOUS**
  - Incompetence

- **CONSCIOUS**
  - Competence

- **UNCONSCIOUS**
  - Competence
Types of Transfer

Near
• Learning context and transfer context are similar

Far
• Learning context and transfer context are not similar
• Transfer does not occur often or automatically
• The more dissimilar the context, the more unlikely transfer will occur
Failure to Transfer

- Context dependency/overspecificity
- Lack understanding of deep structure
Enhancing transfer

• Teach abstract knowledge that crosscuts contexts
• Use analogical reasoning
• Give opportunities for students to apply in diverse contexts
• Use comparisons to help students identify deep structures
• Ask students to generalize from specifics to larger contexts
• Specify context and ask students to identify relevant skills or knowledge
• Specify skills or knowledge and ask students to identify contexts
References


Brookhart, S.M. (2008). *How to give effective feedback to your students*. ASCD.
## Practice and Feedback

Use this table to plan which strategies/approaches you will use to elicit performance, give feedback, and enhance transfer.

<table>
<thead>
<tr>
<th>Instructional Event</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gain Attention</td>
<td></td>
</tr>
<tr>
<td>(Reception)</td>
<td></td>
</tr>
<tr>
<td>Inform Learners of the Objective</td>
<td></td>
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<tr>
<td>(Expectancy)</td>
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<tr>
<td>Stimulate Recall of Prior Learning</td>
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<tr>
<td>(Retrieval)</td>
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</tr>
<tr>
<td>Present the Teaching Point</td>
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<tr>
<td>(Selective Perception)</td>
<td></td>
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<tr>
<td>Provide Learning Guidance</td>
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<tr>
<td>(Semantic Encoding)</td>
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<tr>
<td>Elicit Performance</td>
<td></td>
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<tr>
<td>(Responding)</td>
<td></td>
</tr>
<tr>
<td>Provide Feedback</td>
<td></td>
</tr>
<tr>
<td>(Reinforcement)</td>
<td></td>
</tr>
<tr>
<td>Assessing Performance</td>
<td></td>
</tr>
<tr>
<td>(Retrieval)</td>
<td></td>
</tr>
<tr>
<td>Enhance Retention and Transfer</td>
<td></td>
</tr>
<tr>
<td>(Generalization)</td>
<td></td>
</tr>
</tbody>
</table>
## Development Plan

<table>
<thead>
<tr>
<th>Development Goal</th>
<th>How I plan to learn more about my goal…</th>
<th>How to get practice…</th>
<th>How to get feedback…</th>
<th>How to know when I have met my goal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Learning</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Teaching</strong></td>
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# Stop/Start/Continue Worksheet

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<tr>
<th><strong>STOP</strong></th>
<th>List one or two things I’m currently doing that are not working. List things I should <strong>STOP</strong> doing.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>START</strong></td>
<td>List one or two things that would be beneficial for me to <strong>START</strong> doing.</td>
</tr>
<tr>
<td><strong>CONTINUE</strong></td>
<td>List one or two things I am currently doing well that I should <strong>CONTINUE</strong> doing.</td>
</tr>
</tbody>
</table>