Checks for Learning during Instruction

Checks for Learning during the instructional process give you feedback on student learning while the teaching/learning is taking place. There are multiple ways to check on learning. The material below presents these activities, how they are done, and how they can be used. Most can be adapted for online use.

<table>
<thead>
<tr>
<th>What Am I Assessing?</th>
<th>What Is It?</th>
<th>How Is It Done?</th>
<th>How Do We Use the Results?</th>
</tr>
</thead>
</table>
| Course Knowledge and/or Skills | One-Minute Paper Or Muddiest Point: An assessment where learners are asked quick but deep questions on the material. These methods can be used in online, hybrid, or face-to-face classes. | During last few minutes of class period, ask students to write response to two questions such as:  
  - "Most important thing I learned today?"  
  - "What I understood least?"
| | Muddiest Point (aka: Muddy Cards) is similar to Minute Paper but asks students to describe what they didn't understand and what they think might help. This can be done on paper, index cards, or by online survey. | Review responses before next class meeting to understand what students learned and use to clarify, correct, or elaborate in the next class |
| | | For more information see https://www.youtube.com/watch?v=v_dt6VGjk7Y |
| | LMS Quizzes: A shortened check for learning after readings, videos, and other external work to provide information on how students understood key concepts or points | Create a series of multiple-choice questions using Canvas. Use software to calculate results and use results to open course activities. Share results and impact on course design with students. | Analyze results using software and build into course activities. |
### Application and Performance

**One-Sentence Summary:**
An assessment used to make student understandings visible by summarizing key points or areas.

Have students write a **one-sentence summary** after a portion of a lesson, lecture, or activity. Create a template based on your targeted area for students to construct a single sentence that summarizes targeted material/their understandings.

Possible One-Sentence Summary areas and stems are:
- **Description:** A ___ is a kind of ____ that ____.
- **Sequence:** ____ begins with, continues with ____ and ends with ____.
- **Compare/Contrast:** ____ and ____ are similar in that both ____ but ____ while ____.
- **Cause/Effect:** ____ causes ____.
- **Problem/Solution:** ____ wanted ____ but ____ so ____.

Evaluate the quality of each summary quickly and holistically. Note whether students have identified the essential components of the idea and the interrelationships.

### Analysis and Evaluation

**Memory Matrix:**
An assessment that asks students to create a structure for organizing learning around key concepts.

Prepare a **memory matrix**, based on course lecture or reading that requires students to recall and/or classify key concepts and information. Students fill in the matrix to demonstrate their ability to remember key concepts. For example,

<table>
<thead>
<tr>
<th>Structure</th>
<th>Function</th>
<th>Enzymes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mouth</td>
<td></td>
<td></td>
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<tr>
<td>Esophagus</td>
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<tr>
<td>Stomach</td>
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<tr>
<td>Small Intestine</td>
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<tr>
<td>Etc.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Add up correct and incorrect responses in each cell. Analyze differences and look for patterns among the incorrect responses. Decide what might be the cause and address as you continue teaching.

For example, see [https://www.youtube.com/watch?v=RHpluz3s0MM](https://www.youtube.com/watch?v=RHpluz3s0MM)
### Poll to Understand Misconceptions:

**A check for learning that explores and makes student misconceptions visible so they can be clarified**

Ask a question with answer choices that students with a particular common misconception are likely to select, along with the correct answer. Students can hold up responses on colored cards with selection (a,b,c,d) in small classes or use iClickers in larger ones. Discuss why the incorrect choice was chosen and therefore dispel the misconception.

Tally results to determine where students’ knowledge and skills are and do some in-the-moment teaching. You can also reinforce the correct answer to this concept in your class.

### Directed Paraphrasing:

**A check for learning that requires students to restate what they have learned or think is important**

Ask students to write a layman’s "translation" of something they have just learned -- geared to a specified individual or audience -- to assess their ability to comprehend and transfer concepts. For more, see [http://university-teaching.blogspot.com/2012/05/directed-paraphrasing.html](http://university-teaching.blogspot.com/2012/05/directed-paraphrasing.html)

Categorize student responses according to characteristics you feel are important. Analyze the responses both within and across categories, noting ways you could address student needs.

Share results next day with the students how many responses were "on target" and read a few examples.

If only a third of your students provided "on target" responses, consider spending extra time either reviewing or having them apply the concept.

### Pro and Con Grid:

**A check for learning that makes student thinking visible by requires students to analyze content in terms of pros and cons, costs and benefits, advantages and disadvantages**

Complete a pro-con grid based on your outcomes. Ask students to create a grid of the pros and cons for a given decision/problem presented in class.

List the points that students have put forth as pros and as cons and do a frequency count. Which points are most often mentioned?

Compare the students' grid with yours: Have they omitted some points? How balanced are the two "sides" of the grid? Report back to class and use in next discussion.

Use this technique in any course where questions of value are an implicit part of the syllabus.

### Documented Problems:

**A check for learning that**

Choose 1-3 problems and ask students to write down all of the steps they take in solving them with

Identify where patterns of difficulty occur, conceptual difficulties, or lingering
| **Attitudes, Motivation, Values, Self-Awareness as Learner** | **Journals:** A check for learning that provides instructors and students a running record of their thinking or progress | Ask students to keep journals that detail their thoughts about the class. May ask them to be specific, recording only attitudes, values, or self-awareness. | Have students turn in the journals several times during the semester so you (and the students) can see how/what they are learning and chart development. |
| **Course specific self-confidence surveys:** A check for learning that allows students to assess their needs and their progress in learning | Students indicate in a survey form how confident they feel about their grasp of each of a list of concepts that have been addressed or how confident they feel about their ability to learn upcoming concepts. Can use a 5 point scale anchored at the ends by very confident and not at all confident. | Review results and identify areas that may need to readdress or give more attention. |