Student Assignments and Testing

In-class and homework assignments, quizzes, and exams are important components of teaching. They, too, can help students learn when implemented according to these recommendations.

13) **Have students work on problems that vary in content and complexity**

- By working on problems that vary in content and complexity, students will establish multiple viewpoints about a topic. Such viewpoints about various topics will create multiple layers of knowledge including facts, rules, skills, procedures, and plans. Through this practice, students will also connect these layers.

- For example, arithmetic/mathematics consists of different topics including addition, subtraction, fraction, percentage, geometry, etc. Instructors can have students look at each topic from various perspectives and practice to connect the layers within a topic. A simple equation such as $5 + 2 = 7$, for instance, may be connected to other equations such as $2 + 5 = 7$ and $7 - 5 = 2$, and also to questions $7 - 2 = ____$ and $x + 5 = 7$.

**References:**


14) **Schedule studying over time and over several sessions (Spacing Effect)**

- Students learn better when they spread their studying over several shorter practice sessions, rather than concentrating their study into one longer session.

- Arrange to review key elements of a topic multiple times with a delay of several weeks to several months after initial presentation. Research indicates that this distributed learning, or spaced practice, results in better retention of materials than cramming.

**References:**


**15) Use assignments that are goal-directed**

- Learning is more enhanced when students engage in practice that focuses on a specific goal or criterion. Goals provide students with a focus for their learning, which leads to more time and energy going to that area of focus. In addition, a goal allows a student to monitor his/her progress toward that goal, and adjust strategies to achieve the goal along the way.

- Goal-directed practice, coordinated with targeted feedback, promotes greater learning gains.

**References:**


**16) Use assignments that are at the right level of difficulty for students' current knowledge**

- Assignments should not be too hard (students make many errors) or too easy (students complete the assignments without any effort), but at the “right” level of difficulty. The “right level of difficulty” means that students cannot complete the assignment effortlessly (indicating that it is not too easy), but can successfully do so with some cognitive effort and/or external support (indicating that it is not too difficult). This is also known as scaffolding assignments. Such assignments give students challenge, which increases motivation. If assignments are too hard or too easy, students may get frustrated or get bored.
References:


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