HELPING STUDENTS TO GET THE MOST OUT OF STUDYING

Adapted from: Chew (2014)

Truly effective teaching makes student learning almost inevitable. There is an important distinction between teaching that makes it easy for students to learn effectively and teaching that makes it easy for students to get good grades. Learning effectively means students must be able to get the optimal amount of learning from their time studying. They must be able to discern critical concepts from less important information; develop an understanding of concepts; develop a generative framework of connections between concepts; and retrieve and apply information appropriately.

Educational research shows that instructors can have a huge impact on the efficacy and effectiveness of student learning through the design of learning activities and assessment methods. Instructors have a role in helping students diagnose and correct any learning difficulties. At the same time, student beliefs about learning can have a positive or negative impact on their own learning.

WHAT CAN UNDERMINE EFFECTIVE STUDENT LEARNING?

INEFFECTIVE STUDYING STRATEGIES

➤ Students may think a single mass reading is sufficient for comprehension and thus "cram" before exams or complete assignments the night before a deadline. In reality, they learn more when they work though content material in spread out sessions or review material they have already read.

BELIEFS ABOUT KNOWLEDGE STRUCTURE

➤ Students may believe that knowledge is composed of isolated facts, which leads them to memorize key information disconnected from other concepts.

MINDSET

➤ Students' views on the nature of intelligence can be critical for learning. Those who believe that intelligence is fixed and inborn also believe that some people are naturally good or bad at a subject and little can be done to change that. Those who believe that intelligence is malleable and grows with practice and study are more likely to take up the challenge of learning new and increasingly complex concepts.

MULTI-TASKING

➤ Divided attention occurs when attention is split between tasks. This diminishes performance and can lead to "in-attentional blindness" (not knowing what has been missed) and "attentional blink" (using time and effort in off-topic matters).

COGNITIVE LOAD AND MENTAL EFFORT

➤ Tasks with a high cognitive load (amount of concentration needed) require all available mental effort (amount of concentration an individual can use). This is the case when trying to learn conceptually difficult material. If students are required to complete activities that exceed their mental effort, they will be overwhelmed and will not be able to learn as effectively.

LACK OF METACOGNITIVE AND SELF-REGULATED LEARNING STRATEGIES

➤ When students are not aware of their own level of understanding of concepts, they tend to operate with knowledge that is superficial and full of gaps. A student with poor self-regulation would lack the strategies that could be brought to bear at different stages of the learning process.

MISCONCEPTIONS

➤ Simplistic, incomplete or incorrect prior knowledge can cause confusion and students can be highly resistant to change through pedagogy.

FEAR AND MISTRUST

➤ Conflict, miscommunication, and mistrust can hinder learning. Students may fail to understand the goals of an assignment or perceive feedback as a personal critique or attack.

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HOW CAN INSTRUCTORS HELP STUDENTS BECOME MORE EFFECTIVE LEARNERS?

➤ Provide a desired timeline for certain steps of assignments to be completed or course material to be reviewed before exams. This way, students will be less likely to finish papers or study at the last minute.

➤ Instruct students explicitly in the use of effective studying techniques, such as those that support the understanding of knowledge interconnectedness (e.g., concept maps).

➤ Develop activities and assignments that promote deep level processing and thus enhance learning.

➤ Encourage a growth mindset among students through instruction and feedback.

➤ Encourage classroom policies that reduce multi-tasking opportunities (e.g., no cell phones allowed).

➤ Teach students how to become metacognitive and self-regulated learners.

➤ Be aware of the cognitive load of the different concepts and learning activities and plan for pedagogies and tasks conducive to learning.

➤ Avoid overwhelming students. Adjust the amount of information presented, the time allowed for certain activities, and provide scaffolding and constructive feedback. Minimize distraction by reducing irrelevant cognitive load.

➤ Use low-stakes formative assessments to obtain feedback about the level of student understanding. Share this feedback with students.

➤ Develop a relationship of trust and rapport with the students. They must believe the instructor wants them to learn and that course activities are designed with this end.

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