Self-Efficacy

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Self-Efficacy is grounded in Albert Bandura's Social Learning Theory (1977, 1986) and is the belief that motivation to learn as a student, or acquire new teaching strategies as a teacher, is based on two variables: (1) the belief that one can successfully learn and apply the subject and (2) the belief that there is a positive outcome from the learning. Self-efficacy theory is robust in that it applies to all disciplines and behaviors. To achieve maximum student learning, educators must be attuned to the self-efficacy levels of their students as well as their own levels. Research by Hickman (1993, 2019), DeMoulin (1993), and Ashton (1985) have drawn clear correlations between levels of self-efficacy and student achievement. For faculty, self-efficacy is related to openness in acquiring new strategies, adopting technological innovations, avoiding burnout, and remaining current in their fields (Hickman & Sherman, 2019).

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Self-efficacy theory posits that one is likely to attempt a new task, whether it be a challenging assignment, learning new technology, or adopting new teaching strategies, if one feels the task can be performed successfully and there is a positive outcome for doing so (Bandura, 1977, 1986; Pajares, 2005; Peiffer, 2015). Thus, being aware of the self-efficacy levels of students, and aware of your self-efficacy level as an educator is critical. Assessing self-efficacy levels is often quick and simple: Educators can give short, guided questions and/or pre-tests to students, and educators can reflect on their comfort and competence of the course's content. For example, Hickman and Sherman (2019) provide sample 10-question questionnaires that can be given to students, faculty, and even parents to help discern a students' levels of self-efficacy and create a shared strategy to help raise their students' levels of self-efficacy.

Faculty innovations, especially adopting new teaching strategies revolving around technology, have always been a challenge. Moving educators from chalkboards, filmstrips, and 16mm projectors to laptops, PowerPoint, real-time videos embedded in their presentations, and even entirely online courses has sometimes been slow and met with resistance. Resistance to change is usually expressed in ways that mask the true fear of the change. For faculty, resistance usually involves doubting the change is as good as the methods they are used to using and fearing that student learning will be adversely affected. For students, they openly resist increasingly difficult assignments by questioning the value of learning such things and questioning whether they should continue on the path of science, math, or technology. Usually, what is behind these doubts are a fear of failure and/or not seeing a connection between being successful and obtaining outcomes the educator or student values.

If self-efficacy levels of either educators and/or students are low, there are four primary ways to raise them. These four ways are not exclusive but are the primary ways and are discussed in order of strength:

Enactive Mastery

Successfully performing a task is the best reinforcement to continue doing it. If one masters a task, a foundation is laid on which to attempt additional skills. To achieve “mastery” can require failed attempts and different approaches to be successful. Thus, it is important that students be provided opportunities to experiment and fail without penalty. For faculty learning new teaching strategies, laboratories can be constructed to “try out” new approaches and be comfortable presenting in new ways (e.g., with new technologies) without failing or making embarrassing mistakes in front of a live class.

Vicarious Experiences

Students and educators alike consciously and unconsciously compare themselves to peers. Providing opportunities to observe these peers successfully complete the desired change or task enables the observer to internalize a belief that they, too, can successfully perform in the same way as their peers. Observing peers’ mistakes and failures is equally valuable, especially as they watch their peers eventually figure out what works for them. Allowing students and educators to learn from peers is a powerful way to instill beliefs that they, too, can achieve the goal.

Verbal Persuasion

Encouraging students or educators in their development is very important and is rarely done properly. Voicing well-meaning but hallow platitudes such as “You can do this,” “You got this,” “You’re smart,” or “I believe in you” do not often resonate with the learner because they have not yet internalized nor believe those messages. What the learner thinks is “I don’t know if I can do this and maybe I’m not as ‘smart’ as you think and I’m afraid I will disappoint you.” Instead, effective verbal persuasion are phrases like, “You

have changed before and I will help you with this change," or "Let's figure this out step by step. If you're not successful, we'll figure out exactly what went wrong so you get it" or "Let's start with what you know and build from there. Here is why it is important that you master this task."

Physiological States

Tackling a new or difficult assignment or being asked to adopt new teaching technologies can be stressful. The body can react to stress by increasing heartrate, shallow breathing, sweaty palms, or a generalized nervousness. These physiological cues heighten the anxiety level of a person, and the focus can become their own bodies instead of learning the task at hand. Creating a non-stressful learning environment is key to aborting these physiological cues that one is scared of. A relaxed atmosphere, freedom to experiment and fail, and an assurance that guided help is available in eventually achieving mastery is essential to drive the attention away from cues of nervousness to attention to detail.

Self-efficacy plays a crucial role in behavior, willingness to change, and motivation to attempt new skills. It can be applied to new curricular content, learning and employing technology, new sports, health management, and even phobias (Bandura, 1986; Hickman & Sherman, 2019). It is easy and accurate to assess, and, using the four strategies above, easy to raise. Doing so sets both learners and educators on a productive path for lifelong learning.

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I earned a doctorate in education psychology from the University of Missouri in 1993. I retired as Associate Dean and Associate Research Professor of the College of Education at the University of Missouri-St. Louis in 2015. My research interests are the role Social Learning Theory/Self-Efficacy theory play in motivation students to learn and for all people to acquire new behaviors. I am the author of "Learning Mathematics Successfully," a book for parents and teachers on how to instill mathematical self-efficacy in their student(s), published by Information Age Publishing in 2019.

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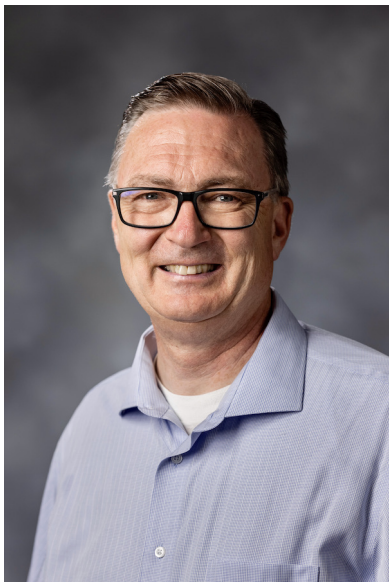

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