

Learning Strategies

Slide 1	One of the most important trends in education and schooling is the increased focus on developing learners' self-regulation. And there is no more important component of this effort than in helping learners develop strategies so that they can regulate their own learning. This presentation will provide an overview of one of the most important research studies on this topic. My name is Bill Huitt and I am Professor Emeritus at Valdosta State University and Adjunct Professor at Capella University.
Slide 2	Developing a strategy for implementing research findings related to improving student achievement has some major challenges.
Slide 3	First, there are thousands of studies that have focused on factors that can predict student achievement.
Slide 4	And as important as it is to consider a body of literature, in a previous presentation, we reviewed Hattie's 2009 meta-analysis of 800 meta-analyses on variables that significantly predict academic achievement.
Slide 5	In that work, Hattie identified 138 variables that had a significant effect size
Slide 6	and 66 variables that met an effect size cut-off of 0.40. A framework developed by myself and colleagues was used to organize those findings and provided recommendations on how to get started in using that research.
Slide 7	Hattie and Donoghue continued that work with a focus on learning strategies that students can use as they become self-regulated learners. They reviewed research that involved almost 19 thousand studies
Slide 8	and included over 400 terms that referred to various learning strategies.
Slide 9	They then selected 228 meta-analyses to be included in a new meta-analysis
Slide 10	that identified 73 learning strategies that met the cut-off criteria of 0.40 and developed a model of how those strategies are related.

Slide 11	That model included
Slide 12	three categories of input variables: skill, will, and thrill.
Slide 13	Skill refers to measures of student readiness for learning such as prior knowledge. In Lev Vygotsky's concept of Zone of Proximal development, this would refer to what the learner can do without assistance. In Benjamin Bloom's concept of Mastery Learning, this would refer to the knowledge required to learn the target content or skill.
Slide 14	Will refers to dispositions such as emotional strength or social awareness. In Carol Dweck's conceptualization this would refer to the learner's mindset.
Slide 15	Thrill refers to the interest a learner might have in the topic or task or the motivation to engage in the learning process. A number of researchers have discussed the differences among performance, mastery, and social goals as motivating factors in student learning.
Slide 16	This is a dynamic model that includes the three input factors as output factors for the next learning experience.
Slide 17	The model includes two additional pre-learning factors. The first is the environment or situation in which learning occurs. The factors discussed in the previous review of Hattie's meta-analysis related to the home environment as well as school processes and curricula would be included here.
Slide 18	The second pre-learning component would be the extent to which the learners are knowledgeable about the criteria that will be used to assess success. The work by Robert Mager (pronounce hard g) and Neal Gronlund on writing clear, specific objectives would relate to this component.
Slide 19	The Hattie and Donoghue model of learning strategies includes three phases of learning. The first level is surface and has two sub-phases: acquiring and consolidating. In the cognitive information processing models described by Lutz and Huitt, this would refer to initially processing information in working or short-term memory and placing information in long-term memory with little or no connections to previously stored knowledge. In Benjamin Bloom's Taxonomy of Cognitive Objectives this would refer to the levels of knowledge and comprehension (or Remembering and Understanding in Anderson and Krathwohl's revised taxonomy).

Slide 20	The second phase is deep and also includes two sub-phases: acquiring and consolidating. This would refer to the levels of application, analysis, synthesis, and evaluation in Bloom's original taxonomy and the corresponding levels in the revised taxonomy.
Slide 21	The third phase is transfer; this refers to using knowledge and skills in situations that are unlike the ones in which the knowledge or skill was developed. In essence, this is what parents and educators expect of the results of schooling. If the knowledge and skills are only useful in the restricted confines of the institution, then they are of little value. This is why those responsible for developing children and youth must pay attention to the fast rate of sociocultural changes that are currently underway.
Slide 22	The entire article is worthy of careful study. A few of the 73 learning strategies include
Slide 23	measures of prior achievement and the capacity of the learner's working memory in the skill category,
Slide 24	the learner's level of self-efficacy and that value of the task in the will category,
Slide 25	and the depth of the motivation and an mastery approach to the learning task in the thrill category. Please stop the video at this point and jot down some of the theories that you believe support some of these findings.
Slide 26	Hopefully, you thought of several learning or developmental theories that provide the foundation for the empirical research on learning strategies.
Slide 27	Perhaps you thought of several mentioned earlier in this presentation such as Bloom's work on mastery learning as an explanation for the importance of prior achievement
Slide 28	or the cognitive information processing theory as an explanation for the importance of working memory.
Slide 29	Or perhaps you thought of Bandura's social cognitive theory as the explanation for the importance of self-efficacy.

Slide 30	Whatever you might have thought of, you are beginning your work as an educational psychologist as
Slide 31	you connect theory to
Slide 32	research to
Slide 33	practice.
Slide 34	Then questions created during practice provide the incentive to engage in additional research. As more research findings become available, they require the modification of theories. This is the scientific method applied to the field of educational psychology.
Slide 35	To continue the review of effect sizes identified by Hattie and Donoghue, the structure of the environment and the learner's competence in time management are two important environmental factors.
Slide 36	And in the category of success criteria, it is important that learners know those criteria and can create a learning plan and predict the efficacy and efficiency of implementing that plan.
Slide 37	Remember that there are three phases to learning: surface, deep, and transfer. In the sub=phase of acquiring surface learning two strategies are especially relevant: working to integrate new knowledge into prior learning and outlining or otherwise transforming the information one is learning. Remember from the presentation on information processing that these are low-level forms of elaboration.
Slide 38	In the sub-phase of consolidating surface learning, it is important for learners to engage in deliberate practice and to expend effort in the learning process. This makes explicit the importance of considering the learner's level of motivation.
Slide 39	In the sub-phase of acquiring deep learning, the concept of elaboration, especially in the activity of working with other learners, is especially important. Also, the self-regulation skill of monitoring the implementation and success of the planned strategy is relevant.

Slide 40	In the sub-phase of consolidating deep learning, the competencies of seeking help from others, whether it be the teacher or another more knowledgeable learner is important as well as the self-regulation skills of the learner establishing personal consequences.
Slide 41	Finally, in the learning phase of transfer, learners who engage in analysis and identify the similarities and differences in what they have learned and who can see patterns in new situations perform better in the learning process. And, again, this is the ultimate goal of school learning and must be practiced over years and subjects in order to demonstrate mastery of these complex learning strategies.
Slide 42	In summary,
Slide 43	in the digital, information age where knowledge is growing at an exponential rate, it is absolutely critical that learners develop strategies that will allow them to
Slide 44	engage in the self-regulation of their learning.
Slide 45	Fortunately, these skills can be taught and can be practiced in all academic subjects and can be modified so that they are appropriate for learners at difference ages and aptitudes.
Slide 46	It is necessary, however, to develop a strategic plan for implementing these research findings.
Slide 47	Specifically, educators need to create a plan to introduce the learning strategies,
Slide 48	to develop them to a level of expected mastery,
Slide 49	and to provide extensive opportunities for learners to maintain the levels of mastery once developed. And, according to the model created by Hattie and Donoghue, these activities should be done within the academic program rather than having specific units or courses on developing these learning strategies.

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