

We have designed each “White Paper” to explore a fundamental educational principle and key issues engaging the education community we serve. It is our goal to partner with our readers as they meet the challenges they face.



Student Review, Testing & Assessment
CastleLearning.com



626 Layport Drive, Suite 100
Sebastian, FL 32958
800-345-7606
Fax: 772-581-1066

Prepared by Bill Ingui
President and Retired Educator

Scaffolding, Meta-cognition & Castle Learning Online

It is a teacher’s dream to observe students taking on the responsibility of learning, with the jump-start basic knowledge that has been delivered in the classroom. When a student views their future in terms of current knowledge and can redirect the learning based on self-evaluation of their weaknesses and strengths, the teacher has a partner in the course content, a “youth educator” who gets it that learning is not a “fill me with knowledge” experience. Teachers who promote the goal of the self-learner are most likely engaged in **scaffolding** and **meta-cognition**.

Educational **scaffolding** can be viewed as a student’s ability to build on prior knowledge, where teachers provide instruction that is at a challenge level just beyond what the learner can do alone. It is temporary and slowly withdrawn at each level, until the student can complete assignments / tasks independently. The student self-regulates their learning and the teacher reduces their support. The concept of **meta-cognition** describes the resulting independence brought about by **scaffolding**, defined as the process of considering and regulating one's own learning. **Meta-cognition** activities include assessing or reviewing one's current and previous knowledge, identifying gaps in that knowledge, planning gap-filling strategies, determining the relevance of new information, and potentially revising beliefs on the subject. The student has become an ally to the teacher when they can diagnose their strengths and weaknesses and then chart a plan to learn new concepts, skills and ideas. They have dramatically increased the probability that they will excel when faced with standard’s-based expectations.

Castle Learning Online gives students control over how they learn. They can create their own assignments and evaluate the results, select a **unit** and **sub-unit** of study in subjects from grades 3-12, answer questions, receive **hints** for incorrect choices and **defined vocabulary**, and work at their own pace with an opportunity to retry the question. Instant feedback includes a full sentence **reason** for correct choices. **Assessment reports** evaluate strengths and weaknesses, and even supply definition / vocabulary study sheets to hone their knowledge on terms giving them trouble.

The formula for **meta-cognition** brings into play a student’s ability to regulate one's own learning. Teachers have told us exactly how they see student involvement become a meaningful self-learning tool –

- Students can self-pace their work, planning their gap-filling strategies, where “my high end achievers can move at a pace that doesn’t bore them, while struggling students don’t feel rushed or overwhelmed by getting ‘left behind’ because the pace of the rest of the students is too quick for them.”
- With *Castle Learning Online*, “my students tell me they learn from the program because on the second attempt to answer a question, the ‘hint’ helps them learn.”
- Tech-savvy students see *Castle Learning Online* as a “great way to review content before exams because they enjoy working on the computer” and teachers remark that “remediation students who take the time to look at the solution and self-correct will benefit.”

Students are driven by success and plow into *Castle Learning Online* in a way that assures they learn because they want to learn. A teacher, who understands **scaffolding** in how they approach their learners, can give students the opportunity to frame their education by using a **meta-cognition** learning style, discerning their weaknesses and strengths and then redirecting their learning.