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The Market Value of an Unfinished Assignment:

Enhancing Decoding of Disciplines with Learner-Sighted, and Self-Regulated Learning Practices

Critical thinking is thinking that assesses itself. To the extent that our students need us to tell them how well they are doing, they are not thinking critically. Didactic instruction can make students overly dependent on the teacher. In such instruction, students rarely develop any perceptible intellectual independence and typically have no standards to assess their thinking with. All students are inherently motivated to learn, but they quickly learn to be unmotivated if they fail repeatedly. All students have the basic need to belong, be competent and influence what happens to them; motivation to learn usually exists when these conditions are met. Students must perceive the classroom as a safe environment, both physically and psychologically; high self-esteem should not be a goal, but a consequence of mastering the material. Decoding of Disciplines (Decoding) is a process in seven steps designed to help instructors and educational consultants find new ways to increase student learning; its single most important contribution consists in the systematic and concerted effort of helping experts uncover their own tacit knowledge for the benefit of their students. Though clearly a learner-centered process, Decoding's emphasis is on transforming teaching for the benefit of learning. We present a very effective (in our experience) enhancement to Decoding, in four steps, to empower students with responsibility while effectively teaching them to become accountable to themselves and to others. To succeed, instructors must (a) ensure that any unfinished assignment can be reliably graded; (b) keep the process transparent, i.e., let students know the details and invite them for appeals; (c) introduce self-assessment in order to share responsibility with their students and (d) put in place a regulatory mechanism for grading

(we present one such device, called “thermometer game”). Originally as a part of a larger project aiming to identify threshold concepts and bottlenecks in Computer Science and Informatics, our goal was to improve student learning outcomes in separate courses, but also to develop and investigate assessment methods that could be used effectively across an entire curriculum. Decoding instructs us to reflect carefully as we teach students how to think in our discipline. But reliable communication between instructor and students calls for a common vocabulary. The use of self-assessment in Decoding (although not at all straightforward) gives students a measure of accountable responsibility while also allowing the instructors to track and examine their students’ thinking as it actually develops. Studies show that inaccurate self-assessment is associated with poor self-regulation, and poor performance. Conversely, students who assess their work accurately (that is, the same way as their instructor does) tend to be higher achieving and more motivated. Self-regulated learning is a series of practices that virtually every learner can understand and develop; however, these practices need to be taught, rehearsed and honed. Our data indicates that self-assessment effectively opens the door to self-regulated learning which in turn accelerates convergence towards the last desiderate in Fink’s taxonomy: when students learn to learn by themselves they become responsible, independent, and self-regulated epistemic agents in their new discipline.

Bibliography

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