

FOREWORD

Students tend to take one of three basic approaches to their learning. Some will simply try to survive the academic experience. These surface learners will often focus only on memorizing correct answers. Others will put all of their heart into making the highest grade possible, and these strategic learners will often do anything to achieve their goal. But neither the surface nor strategic approach tends to have much sustained and substantial influence on the way students will subsequently think, act, or feel.

Strategic learners strive almost exclusively for good grades, and because that is what they seek, they often appear on the Dean's list and we celebrate their achievements. But we also know that such learners have some major limitations. They tend not to be risk-takers who pursue their own curiosity. They tend to learn procedurally, but not conceptually. As a result, they seldom develop into adaptive experts who are good at solving new kinds of problems.

Only those who intend to understand deeply, to connect new learning to old, and to think about implications and applications are likely to achieve meaningful results from their education. Only these deep learners are likely to become productive and creative individuals, adaptive experts able to tackle unusual problems and invent new solutions and insights.

Intentions play a powerful role in determining the outcome of learning. But how can educators influence those intentions. Over the last 20 years, within the Best Teachers Institute that I lead, we have looked at the practices of educators who have had enormous success in fostering deep learning, and we have found that they create a special kind of learning environment for their students. We call this environment a Natural Critical Learning Environment. It has 15 elements:

1. They are trying to answer questions or solve problems they find intriguing, important or beautiful.
2. They can try, fail, receive feedback, and try again before anyone makes a judgment of (grades) their work.
3. They can collaborate with other learners struggling with the same problems.

4. They can speculate even before they know anything.
5. They face repeated challenges to their existing fundamental paradigms.
6. They can get support (emotional, physical, and intellectual assistance) why they need it.
7. They care that their existing paradigms do not work.
8. They feel in control of their own learning, not manipulated.
9. They believe that their work will be considered fairly and honestly.
10. They believe that their work will matter.
11. They believe that intelligence and abilities are expandable, that if they work hard, they will get better at it.
12. They believe other people have faith in their ability to learn.
13. They believe that they can learn.
14. They have a chance to do the discipline before they fully know the discipline, learning the basic information while they engage in problem-solving, analyzing, synthesizing, evaluating, and theory-making.
15. They can learn inductively rather than deductively, moving from the specific to the general rather than the general to the specific.

Powerful educational experiences have created this kind of environment in a variety of ways. One of the most successful has come in the form of inquiry-based learning. The book you hold in your hand explores inquiry-based learning and the ways in which they create powerful Natural Critical Learning Environments.

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