

learned to identify “clue words” in test questions so that they would know which skill to apply. Success came up as a theme as well; when the students learned about Wilbur and Orville Wright in history class, the teacher asked the students to identify the character traits that made the brothers successful. But are character traits the deciding factor here? In *How We Reason*, Princeton psychology professor Philip N. Johnson-Laird demonstrates that it was in fact their exceptional reasoning, not their perseverance or other qualities, that set the Wright brothers apart from their rivals.¹³ That is, they made sense of a succession of failures; they not only persisted through failure, but learned how to interpret it correctly. To understand how they made their discovery, one must look closely at their work all along the way. This is much more interesting and complex than platitudes about their character traits; sadly, the standardized tests are more likely to have a question about character traits than a question about the Wright brothers’ actual work.

The quest for a success formula sometimes takes surprising turns. Malcolm Gladwell’s *Outliers* posits that success is a matter both of intensive practice (amounting to some 10,000 hours, regardless of the field) and circumstance; it actually matters, in many cases, where one was born and in what year. Ability is not enough; even hard work is not enough, he demonstrates. One must also be in the right place at the right time, and one must seize this advantage. His argument is appealing and hard to dismiss. Yet he misses one of his own crucial points. When describing the success of attorney Joe Flom, he notes, “Think of how similar this is to the stories of Bill Joy and Bill Gates. Both of them toiled away in a relatively obscure field without any great hopes for worldly success. But then—boom!—the personal computer revolution happened, and they had their ten thousand hours in. They were ready.”¹⁴ Gladwell observes that Joy and Gates were not thinking of worldly success, but he fails to acknowledge the importance of this. Their immersion in the work itself, without thoughts of great success, may have had a great deal to do

with their accomplishments. Moreover, such immersion is often inherently rewarding; a person need not end up like Gates to deem the hours of work worthwhile. Gladwell’s limited definition of success weakens his otherwise intriguing observations.

In this quest for a formula for success, we lose the gradation between the unseen and the seen, between the visible and the invisible. The armies of the visible and the invisible rage at each other, and the invisible loses. When we argue that some of the most important things in life cannot be seen or measured, we set ourselves up for defeat, because the invisible is just that: invisible. A stronger argument is that we need a mixture of the visible and the invisible, the measurable and the unmeasurable—and that the former sometimes gives us a glimpse of the latter. It is through contemplating imperfect geometric figures that we can imagine Plato’s ideal forms; it is through making sense of a sonnet that we glean something beyond its overt logic and rhyme. Some believe with fervor that the most important things are the tangible, measurable ones; others believe with equal fervor in the unseen. But the mixture is essential to the understanding of both the seen and the unseen.

This grasp of the mixture of the visible and the invisible, the measurable and the unmeasurable, was at one point a central aspect of liberal education, part of every field of study and part of the spirit of study. In mathematics, one wrestled with abstract concepts that did not translate immediately into practical examples; in literature, one tried to grasp what made a passage particularly beautiful. Such efforts varied, of course, from school to school, teacher to teacher, and student to student, but learning went far beyond the literal and immediately applicable. Teachers and professors delighted in the students who pursued subjects out of interest, not just for a grade. A lecturer could make artful use of a digression, and at least some students would listen for the connections and the meaning. Today, the teacher who digresses is frowned upon; everything in a lesson is supposed to move toward a