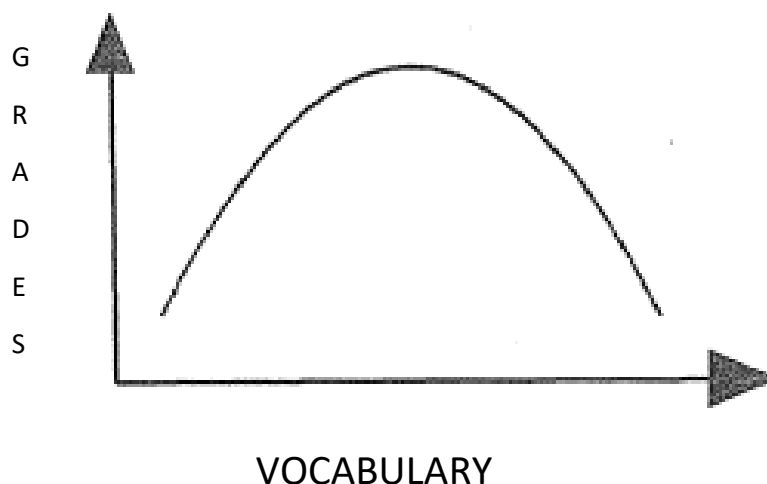


## David Vs. Goliath: AIMS vs. Popular Psychology

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Over 40 years ago, two of AIMS founders, John W. Gaston and I, did research on the relationship between general vocabulary and college grades. The nature of this relationship is what is called an inverted-U curve. Those who scored well below the average student in their classes had lower grades as a group than those close to the class average. While this is intuitive, it also was found that those who scored well above the class average had grades that were similar to those of the students weak in vocabulary. This second result is generally not known or used by families in making college choices. (See diagram below.)



Move ahead 30 years. In 2003, AIMS published an article entitled "New Research Validates AIMS Approach to College Selection." This was a review of a new study by Marsh and Hau in the *American Psychologist* journal about the Big-Fish-Little-Pond effect. Marsh and Hau<sup>1</sup> in a study of 100,000 students attending over 4000 colleges in 26 different countries found a negative relationship between self-concept and the academic selectivity of a college. This confirmed AIMS' policy of matching each student to the colleges that provide the optimum environment for academic success and maintaining a positive self-concept.

In October, 2013, Malcolm Gladwell, an author who specializes in explaining and integrating psychological concepts for the layman, published his latest book, *David and Goliath*<sup>2</sup>. In Chapter 3, he gives examples and statistics supporting the inverted-U curve effect in education and citing among others the work of Marsh and his colleagues.

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1 - Marsh, H. W. and Hau, K-T. (2003). Big-Fish-Little-Pond Effect on Academic Self-Concept: A Cross-Cultural (26-country) Test of the Negative Effects of Academically Selective Schools. *American Psychologist*, 58, 364-376.

2 - Gladwell, Malcolm (2013). *David and Goliath: Underdogs, Misfits, and the Art of Battling Giants*. New York: Little, Brown and Company.

Gladwell's discussion expands this effect to Math SAT scores, law school, and graduate work in economics. In each case, the negative effects of going to a school that is not a good match with your academic abilities are demonstrated.

Thus, a small, independent foundation dedicated to research and education (David) was decades ahead of both mainstream psychology and popular psychology (Goliaths).

However, neither Marsh nor Gladwell discuss the other end of the inverted-U curve with relation to college selection - the finding by Gaston and Shambaugh that students who are far above the average student also tend to underachieve. Perhaps in another decade or two the Goliaths will catch up with AIMS in this area as well!

### **A Review of The AIMS Approach to College Selection**

As pointed out by Gladwell<sup>3</sup>, most students and parents assume that the goal of applying to college should be to gain admission to the most prestigious school possible. If the student is not a good match as far as his/her verbal and math background or his/her temperament, this "best" school may not lead to the best results. Below is the outline of the policies that govern the AIMS approach to finding a college that will provide a student with the strongest chances for achieving his/her academic goals and enhancing his/her self-image and self-confidence.

**Vocabulary Level.** The safest option is to be within the middle 50% of the student body as far as vocabulary level (the best estimate of this for those who have not taken the AIMS program is the average of the Reading and Writing sections of the SAT test. Several of the college guides routinely offer this information). If you only can find the average score for a particular school, make certain that your score is within 50 points above or below that average. Thus, if the published average is 600, we recommend that you attend this school if your results are greater than 550 and less than 650.

You may want to modify this rule if you are planning to pursue a major that is either more competitive than most (examples: pre-med or engineering) or places a strong emphasis on verbal skills (such as English or philosophy). With these majors at the school described in the previous paragraph, the "safe" range would be 590-675.

**Math Knowledge.** Your math background can be important in college selection if your plan is to complete a degree in a field that requires many courses in higher mathematics. Success in majors such as engineering and computer science is strongly related to being at or above the average Math SAT score for the college you attend. Gladwell gives several pages of information on the success rates of science, engineering, and mathematics majors depending on their ranking on the Math SAT within their college peer group<sup>4</sup>. Most of those earning degrees in these fields are in the top half of their contemporaries.

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3- Ibid. p.70

4- Ibid. pp. 81 - 86.

**Size of the College.** AIMS measures three factors that are related to how fast a student can complete homework assignments and tests. These are Perceptual Speed, Rate of Reading, and Writing Speed. Those who are weak in these traits, especially Perceptual Speed, are at risk of having lower GPA's than classmates who were just as strong in vocabulary and math knowledge. In one AIMS study, 100% of the students who started college at a large university and later transferred to a smaller school immediately began to earn higher grades<sup>5</sup>.

The AIMS recommendations are:

1. If you are in the bottom 30 percent on Perceptual Speed, attend a college with less than 4000 undergraduate students.
2. If your ranking is between 30 and 70, attend a college with fewer than 10,000 students.
3. If you score above average in Perceptual Speed but below average in both Rate of Reading and Writing Speed, attend a college with fewer than 8,000 undergraduates.
4. If you score above 70 on Perceptual Speed and above 50 on the other two factors, you should be able to compete successfully at any college that matches your vocabulary regardless of its size.

**Strong Programs in Your Intended Major.** Every college does not offer every possible major. A college may offer a major but its program may not be as good as similar degrees at other schools. Therefore, it is important to investigate not just the over-all quality of the school but the strength of its program in your intended major.

There are various organizations that offer suggestions on the best programs for a wide variety of majors. The AIMS staff has access to many of these guides and can offer suggestions on which schools match the ideal size and vocabulary level and have an above average program in the major you prefer. We encourage our alumni to ask for these suggestions as they finalize their career plans.

**Choosing Graduate Degree Programs.** The criteria for choosing a graduate school, law school, medical school, or MBA program is similar but not identical to the factors for selecting an undergraduate college. The AIMS staff also can help its clients make sound decisions at this stage of their educations. When asking for this advice, provide your undergraduate GPA, scores on any entrance examinations such as the MCAT or LSAT, and an outline of your career plan.

**Make Your Decisions in the Right Order.** Most people make the decisions about college and careers in the wrong order. They choose a college. This immediately restricts their options regarding majors. They often choose their major without thinking about the careers that typically use this specialization. In one study of people who had graduated from college two years ago, over 50% found themselves in a job unrelated to their major. For an eye-opening discussion of the dangers of this approach, contact AIMS for a copy of an article on "The Quarterlife Crisis." <sup>6</sup>

5. Shambaugh, Irvin C. "Compensating for Low Perceptual Speed in College," AIMS Research Bulletin No. 35. P. 2

6. Gray, Keturah. "Quarterlife Crisis Hits Many in Late 20s." ABC News Original Report, 2005. Produced by permission in AIMS Research Bulletin No. 44

Process advocated by AIMS:

1. Find a career that matches your talents and provides the type of rewards you desire.
2. Choose a major that will prepare you for this type of career.
3. Select a college where you can thrive and that has a strong program in this major.