- *Motivation* includes personal characteristics that help students to succeed academically by focusing and maintaining energies on goal-directed activities.

- ACT Engage Grades 6–9 assessment includes three measures of students' motivation: *Academic Discipline*, *Commitment to School*, and *Optimism*.[1]

- High school GPA is an important marker of success in high school and helps predict college success.[2]

- In addition to motivation, other predictors of high school GPA include standardized measures of academic achievement and grades earned in middle school.[3]

Importance of Student Motivation

A recent study examined the relationship of middle school students' motivation, high school grades, and high school graduation. Students took ACT Engage® Grades 6–9 in 8th grade, and high school outcome data were collected over time.

Results show that middle school students who had higher motivation scores earned higher grades during high school. Figure 1 shows that average high school GPA is related consistently to motivation. At the lowest levels of motivation, the average GPA was just 1.8 (less than a C average); at the highest level, the average GPA was 3.2 (nearly a B+ average).

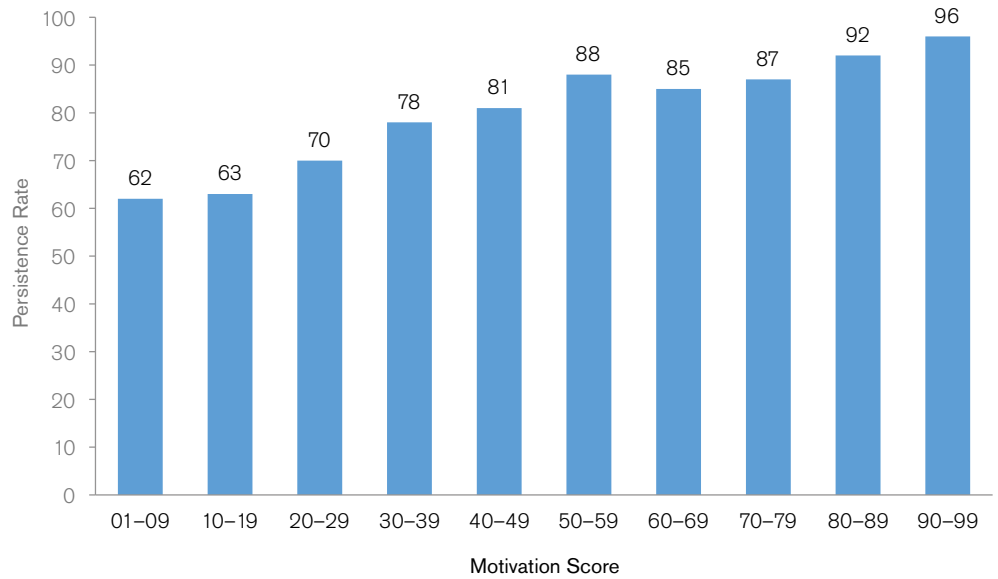### Figure 1. Mean High School GPA by Motivation Scores
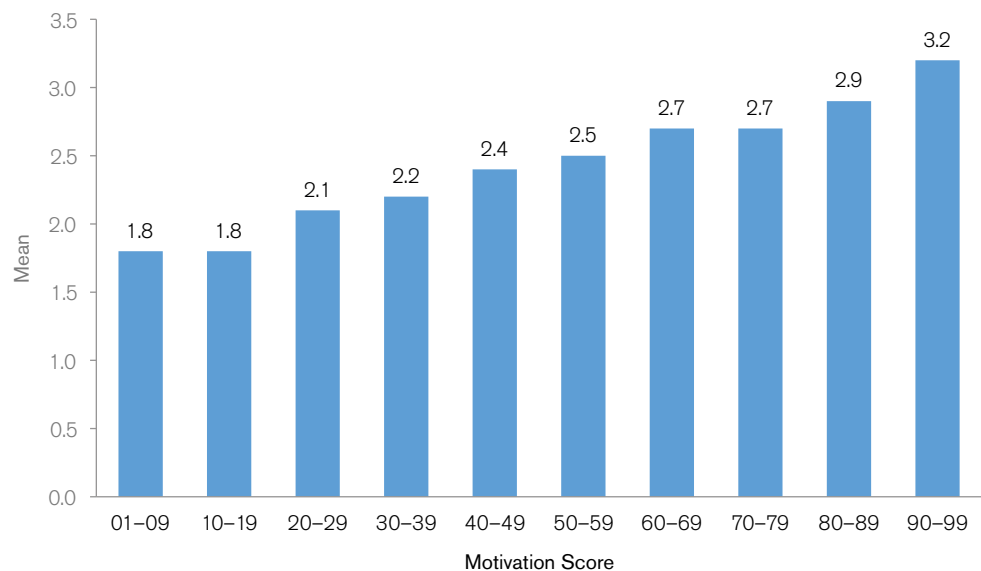
Graph reads: Students with a motivation score between 50 and 59 had a mean high school GPA of 2.5.

Notes: Based on *N* = 3,949 students. The motivation measure used in this analysis is the mean percentile score across 3 scales: Academic Discipline, Commitment to School, and Optimism. For most students in this sample, cumulative high school GPA data were collected during 12th grade.

Other results show that middle school students who had higher motivation scores had higher high school persistence rates. Figure 2 shows that the persistence rates increased steadily as the measure of motivation increased. At the lowest level of motivation, student persistence rates were 62%; at the highest level, 96% persisted.

Figure 2. High School Persistence Rates by Motivation Scores

- High school persistence was defined as graduating from high school or being on track to graduate within four years of starting 9th grade.

- ACT research confirms that measuring a combination of academic achievement and behavioral characteristics from middle school to college is the best predictor of academic success and persistence.

Graph reads: Among students with a motivation score between 40 and 49, 81% graduated from high school or were on track to graduate from high school within four years of starting 9th grade.

Notes: Based on N = 4,002 students. The motivation measure used in this analysis is the mean percentile score across 3 scales: Academic Discipline, Commitment to School, and Optimism.

These results reinforce the importance of early identification of students with motivation problems. Once identified, such students may benefit from interventions designed to assist them in developing skills related to motivation, such as goal setting, planning and organization, time management, and study skills. ■

[1] For more information on ACT Engage, please see www.act.org/engage.

[2] Justine Radunzel and Julie Noble, *Predicting Long-Term College Success through Degree Completion Using ACT® Composite Score, ACT Benchmarks, and High School Grade Point Average*, ACT Research Report 2012-5 (Iowa City, IA: ACT, 2012).

[3] ACT, *Enhancing College and Career Readiness and Success: The Role of Academic Behaviors* (Iowa City, IA: ACT, 2011).