



Using PLAN to Identify Student Readiness for Advanced Courses in High School

Introduction

As part of recent calls for high school reform, the nation's secondary schools are being strongly encouraged to offer and promote more rigorous coursework that will better prepare students for success in college and work after graduation. One outcome of this effort is increased interest on the part of high schools in having more of their students participate in dual enrollment, International Baccalaureate (IB), Advanced Placement (AP), or other similarly rigorous programs in which students earn college placement or credit for college-level work done in high school.

Helping students know whether they are likely to succeed in such courses has become a major challenge for educators. As part of its Educational Planning and Assessment System (EPAS™), ACT offers the PLAN® program as a way for tenth-grade students to review their progress toward college readiness while there is still time to make necessary interventions. PLAN provides information helpful in identifying students who are ready for rigorous work such as IB, AP, or dual enrollment courses. Because students often take college-level courses during the latter half of their high school careers, PLAN administrations are well timed to provide students with the opportunity to judge their readiness for such coursework. ACT has found that students' PLAN scores are effective predictors of success in these courses.

The Study

We compared sets of student scores on PLAN to their scores on selected AP Exams. An AP Exam assesses students' mastery of the material covered in the corresponding AP course. In 1999 and 2004, a total of 2,589 student records were studied across seven AP Exams. All AP Exam scores had moderate or higher correlations with PLAN scores. Further, combined (averaged) PLAN English/Reading and Mathematics/Science scores were created for each student and correlated with the relevant AP Exam scores. Table 1 reports the PLAN score with the highest correlation to each AP Exam.

Table 1
Correlations between PLAN Scores and Selected AP Exam Scores

AP Exam	Correlation (PLAN score)
U.S. History	0.49 (Composite)
European History	0.36 (Composite)
U.S. Government	0.51 (Composite)
Biology	0.47 (Composite)
English Language	0.57 (Composite)
English Literature	0.54 (English/Reading)
Calculus AB	0.40 (Mathematics/Science)

An additional way of examining the relationships between PLAN and AP Exam scores is to examine how accurately PLAN scores predict students' chances of success on an AP Exam. Scores on AP Exams are reported on a scale of 1 to 5, with 1 representing "no recommendation" (i.e., the score cannot be used to determine a student's mastery of the material) and 5 representing "extremely well qualified" (i.e., the score shows that the student possesses extremely high qualifications in the subject being assessed). For research purposes, ACT defined success on an AP Exam as a score of 3 ("qualified"), 4, ("well qualified"), or 5.

The percentages of accuracy when PLAN is used to predict AP scores are reported in Table 2. Using the PLAN Composite score resulted in correct predictions for 69 percent (in European history) to 84 percent (in U.S. Government) of PLAN-tested students. For Calculus AB, using the combined PLAN Mathematics/Science score resulted in correct predictions for 75 percent of PLAN-tested students. For English Language and English Literature, both the PLAN Composite and the combined English/Reading score were the highest predictors, at 80 and 79 percent, respectively.

Table 2
Percentages of Accurate Predictions of Selected AP Exam Scores of 3 or Higher Using PLAN Scores

AP Exam	Percentage Accuracy (PLAN score)
U.S. History	79% (Composite)
European History	69% (Composite)
U.S. Government	84% (Composite)
Biology	78% (Composite)
English Language	80% (English/Reading; Composite)
English Literature	79% (English/Reading; Composite)
Calculus AB	75% (Mathematics/Science)

Conclusion

Administering PLAN to tenth-grade students not only provides them with the opportunity to assess their progress toward their education and career goals, but also allows schools and school districts to determine which of their students stand to benefit the most from taking IB, AP, dual enrollment, and other rigorous courses. For more information on how schools can take advantage of PLAN's predictive power with regard to college credit coursework, please contact your nearest ACT regional office.