Educator Study with ACHIEVE Read & Practice 2018-01

CONTEXT:	Psychology course, delivered face-to-face, to 28 students
PRODUCT USED:	Scientific American: Psychology; Coco Ballantyne, Deborah Licht, and Misty Hull (eBook) with ACHIEVE Read & Practice
STUDY DESIGN:	Mixed methods with descriptive analyses

How ACHIEVE Read & Practice supports success of students with little previous experience using digital learning tools at Prince George's Community College

Institutional and course context

Prince George's Community College serves a diverse population of nearly 40,000 students. The college offers more than 200 academic and workforce development and continuing education programs of study, and transfer and scholarship opportunities to four-year colleges and universities. Students can earn associate degrees, certificates, letters of recognition, and licensures. This course was taught face-to-face to 28 students. Students in this class completed assignments independently and met twice weekly for lecture and review. This instructor has been teaching in this discipline for more than 15 years. They have used digital learning tools in the past and they report being extremely comfortable implementing them.

Instructor implementation

This instructor replaced the digital learning tool they had been using with ACHIEVE Read & Practice. The instructor assigned an average of two activities a week (32 over the course of the semester). Read & Practice activities were to be completed independently to reinforce lectures, help students comprehend

the text, and test their understanding. Performance on activities accounted for 10% of a student's overall grade in the course.

Course Goals and Challenges

In total, 37% of the students in this course had never used a digital learning tool in another course that they took. This instructor reported that other faculty are not likely to even use the campus learning management system in their courses and are highly unlikely to adopt additional technology in their courses which may contribute to students' lack of exposure. Similarly, when students were asked to rate how comfortable they were using digital technology (1 = "very uncomfortable" through 4 = "very comfortable"), the average rating was 2.84, suggesting that students were not comfortable using technology. Similarly, in the beginning of the semester less than half of the students (43%) indicated that they thought using Read & Practice would enhance their learning in their Psychology course this semester. Students who have little experience with, and low sentiment for digital technology are at risk of not engaging with the product and experiencing challenges using the tool.

"I'm very comfortable to perform the quizzes because of how it is digitally setup. It's very easy to use.", instructor

Study Design

This study examined whether the use of ACHIEVE Read & Practice influenced student preparedness for class, engagement and retention, and overall academic performance, particularly among students with little experience using, and

comfort with, digital technology. Surveys that were refined during pilot tests were deployed to instructors and students at the start and end of the course, instructors kept weekly logs of implementation and perceptions, a protocol for observing the classroom was used on site visits (adapted from Lane & Harris, 2005), an instructor interview protocol and student focus group protocol were implemented. Product usage data, self-reported prior academic performance data, and records of current academic performance data were collected. Data were matched across sources and descriptive and correlational analyses were conducted.

"My grades are better with Read & Practice especially when I write my exams/ quiz/ test in my comfort zone with no stress."- student
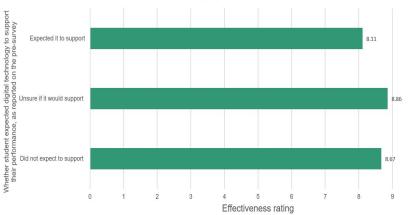
Results

ACHIEVE Read & Practice was easy to use to use for students without previous experience using digital learning tools, and students without experience reported even stronger behaviors than students who had. Students were asked to rate the extent to which they agreed that Read & Practice was easy to use (scale 1 = "strongly disagree" to 4 = "strongly agree"). The average rating was 3.53, suggesting that all students found the tool easy to use. When compared between students who had used digital learning tools before and those who hadn't, students with no experience had a higher rating of agreement (3.71) than students with experience (3.08), suggesting that as a first digital learning tool being used, it was intuitive.

ACHIEVE Read & Practice engaged students throughout the semester, even among students with varying levels of comfort using digital learning tools . In the beginning of the semester students were asked to rate how comfortable they felt using digital learning tools. The largest proportion of students 42% reported being "comfortable" while 36.8% reported only being "somewhat comfortable" and 21.1% reported being "very comfortable". Interestingly, the levels of engagement in the program did not vary significantly among groups of students. Students who were only "somewhat comfortable" had a completion rate of 74% and students who were "comfortable" had a completion rate of 73%.

Students found ACHIEVE Read & Practice to be effective, even among students who, at the beginning of the semester doubted the value of digital learning tools. Less than half of the students in the class (47.4%) thought, in the beginning of the semester, that digital learning tools would enhance their Psychology course this semester. 15.8% did not think they

would while 36.8% were not sure. At the end of the semester when students were asked to report how effective they thought Read & Practice was in supporting their performance in this Psychology course, students who were unsure, students who didn't think it would help, and students who expected it to help all rated the product similarly effective (8.85, 8.67, and 8.11, respectively - scale 1 through 10).

Effectiveness rating by student expectation

"It's simple and straight to the point. I also appreciate how it tells you where you need to read over again and what you didn't understand.", student

Insights for Instructors

In this course, many of the students did not have any previous experience with educational technology, and did not have a strong sentiment for digital learning tools. Nevertheless, all students in the course had strong outcomes and students who would be expected to rate the effectiveness of the tool low, did not rate it significantly differently than students who would be expected to rate it high. Therefore, instructors of other courses with students less experienced with technology can be confident that the ease of Read & Practice will not be overwhelming and will be intuitive, for all students.

Notes

These results are specific to this course and cannot be generalized nor do they infer causation.