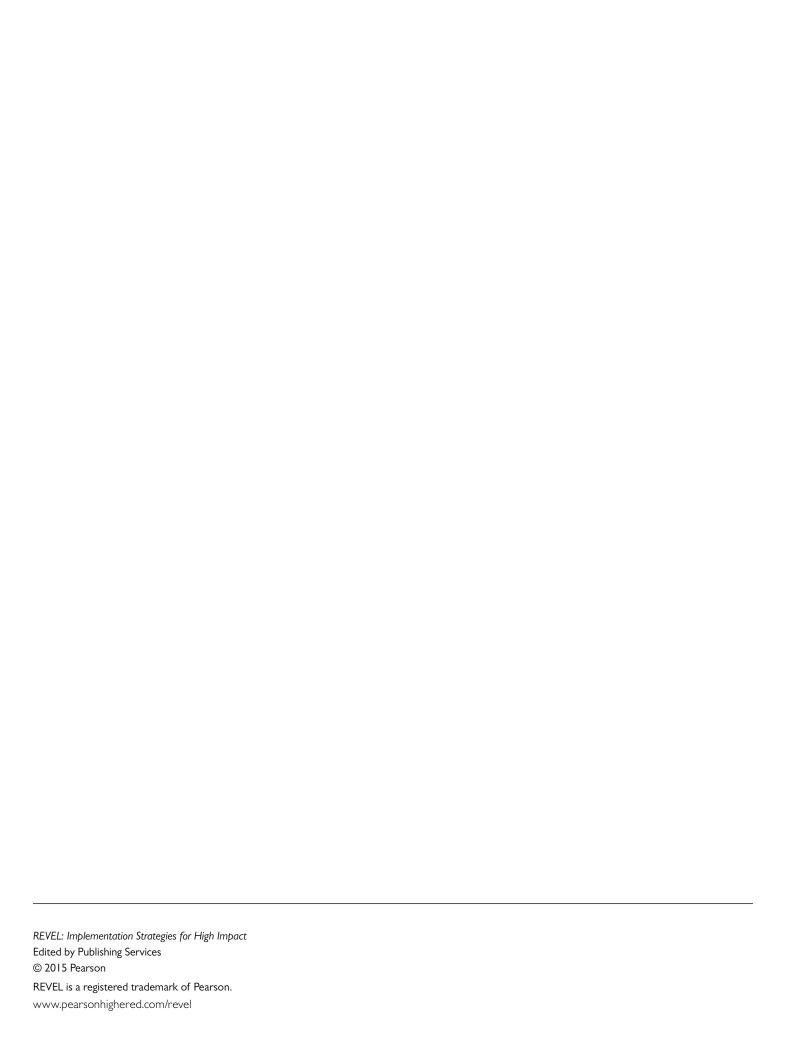


# REVEL™

Implementation Strategies for High Impact

Efficacy Report 2015



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### Welcome Letter

#### Dear Educator,

At Pearson, we define efficacy as a measurable impact on improving someone's life through learning. We are embarking on a global education initiative and dedicating ourselves to the pursuit of efficacy and improved learner outcomes.

On the following pages are exemplar, data-driven case studies, as well as a list of best practices and tips for getting started with your own REVEL implementation.

We extend our deepest gratitude to the contributing instructors. Case studies are the result of a collaborative partnership between instructors using REVEL and Pearson's Efficacy and Quality team. Working with Pearson, instructors design their study and gather both quantitative and qualitative feedback to measure REVEL's impact on student learning. Case studies are intended to communicate the results of these instructors' REVEL implementations.

Looking for more case studies? Throughout the year, we will update this report with new case studies from a range of Humanities and Social Science disciplines. In addition, we encourage you to visit Pearson's Results Library, an online repository of more than 600 data-driven case studies quantifying the impact of Pearson's digital learning solutions on learning outcomes, retention, and subsequent success. The Results Library is a comprehensive database cross-referenced by institution type, course format, state/province, and more.

We invite you to contact us with any questions about this report and to share your ideas, your best practices, or your results in our next edition. Pearson is happy to provide both consultation and data collection tools to help you measure the impact of your REVEL implementation on learner outcomes in your course.

We look forward to hearing from you.

# Nicole Kunzmann Senior Efficacy Results Manager Pearson North America nicole.kunzmann@pearson.com

John Tweeddale Senior Vice President, Efficacy and Quality Pearson North America john.tweeddale@pearson.com

## **About REVEL**

By listening to instructors and students, by leveraging the best thinking in instructional research and design, and by applying new learning and assessment strategies, Pearson created REVEL.

REVEL is designed to make a measurable impact on defined learner outcomes related to access, completion, competence, and progression. It is the first product at Pearson to have an efficacy framework built in from the very beginning. Every step of product development has an embedded learner-focused, evidence-based process, ensuring that instructors and students are driving product decisions and that these decisions have a positive impact on results.

#### Listening to instructors and students

Over the course of several years, we have worked with more than 23,000 educators and students to develop REVEL. All of REVEL's key aspects—from features to content to performance dashboard reporting—were guided by interactions with customers. The result was a new approach to digital learning that gives educators and students precisely what they need, and nothing more. And, it's a living, breathing learning solution that we continue to develop based on customer feedback.

By partnering with educators on efficacy studies to measure REVEL's impact on student learning and engagement, we have collected valuable feedback. Both qualitative and quantitative data will inform future product enhancements. For example, many instructors using REVEL like to see how frequently students access their reading assignments and how well they understand what they read before they come to class. They also observe that students who spend time completing their REVEL reading assignments come to class better prepared to ask questions and participate in discussions.

Some instructors have asked to be able to assign both reading and writing assignments within REVEL. Based on this feedback, instructors will have access to three types of writing assignments within REVEL beginning in the fall of 2015—journaling, shared writing, and essay assignments. Writing and critical thinking are often key course learning outcomes and REVEL writing assignments will make it easier for instructors to teach and assess these essential skills.

## Leveraging the best thinking in instructional research and design

REVEL leverages the best in instructional research and design. Every aspect of REVEL was created to reduce extraneous cognitive load and increase long-term memory for students so that they come to class better prepared and perform better on exams and in the course overall. In cognitive psychology, cognitive load refers to the total amount of mental effort being used in the working memory. This includes intrinsic cognitive load (mental effort used for learning), and extraneous cognitive load (mental effort spent on distracting elements that are not relevant to the learning). Research shows that if you can reduce the extraneous cognitive load for students when they are reading or studying, you can improve the effectiveness of the learner's ability to process the important information and move it from the working memory to the long-term memory. Put simply, if you reduce extraneous cognitive load, you increase long-term memory.

#### REVEL reflects several learning design principles:

- Effective learning experiences clearly communicate goals to learners. They feature content that directly aligns with the stated objectives and exclude content that is extraneous.
- Spacing interactivity between subsets of content improves learning. Studies show that within instructional content that includes interactive content, spacing the interaction with active pauses benefits learners (Cheon, Crooks, & Chung, 2014). Interactive content can often more clearly provide information that is difficult to convey in static text. The value of active pauses lies in the opportunity for learners to stop and process information using encoding and retrieval processes in the brain (Cheon, Crooks, & Chung, 2014).
- Embedded formative assessment has a positive impact on both learning and instruction. Assessments allow instructors to gauge student comprehension frequently, provide timely feedback, and address learning gaps along the way.

In cognitive psychology, retrieval is often used synonymously for testing, or assessment. Research shows that taking a test on presented material promotes subsequent learning and retention of that material on a final test. When assessments are implemented appropriately and with specific, timely feedback, they engage students in the retrieval process, and this act of retrieving solidifies the original learning (McDaniel, Anderson, Derbish, & Morrisette, 2007; Wiliam 2007).

• Stakes associated with assessment instruments can impact motivation, which can affect student participation and performance. There are various socio-cognitive variables that influence what type of value drives a person. For some, learning the material for the sake of learning could be fulfilling in itself. For others, scoring and stakes can communicate that there is a value to completing the task as accurately as possible to achieve a variety of end states, including receiving full credit for an assignment, a high course grade, and even broader, a degree (Schecter, Durik, Miyamoto, & Harackiewicz, 2011).

Writing can be used as a tool to foster critical thinking.
Research suggests that there are certain habits of mind and dispositions associated with critical thinking skills. To get students to move toward adopting these habits and dispositions, instruction and assessment should be appropriately complex, and focused on supporting, eliciting, and assessing skills such as evaluation, analysis, synthesis, collaboration, and critical reflection (Cope, Kalantzis, McCarthey, Vojak, & Kline, 2011; Liu, Frankel, & Roohr, 2014). Open-ended questions, essays, and interactive learning environments can all be developed to foster these higher order skills (Wang and Woo, 2010).

Applying new learning and assessment strategies With REVEL, Pearson authors have been able to reimagine the way students learn content, applying new learning and assessment strategies that were not possible in the past with a printed

textbook.

## Pearson's Efficacy Program and Standards for Efficacy Research

At Pearson, we believe that learning is a life-changing opportunity and that education should have a measurable, proven impact on learners' lives. It's what Pearson's efficacy program and tools are all about. They're how we measure and improve our likelihood of impact on learners and ensure we're doing all we can do to equip learners for success.

#### What Pearson Means by Efficacy and Effectiveness

- Efficacy describes whether a product or intervention has a positive effect on learning, such as reducing wrong answers, increasing retention rates, or raising final exam scores.
- Effectiveness measures the size of the educational improvement from a product or educational intervention.

#### Why Pearson Is Interested in Efficacy Studies

To deliver the best educational experience for students, we need to understand how Pearson's content is performing and verify learning gains associated with the use of our products. Toward that goal, we actively seek out educators who wish to explore educational research questions and investigate the efficacy of Pearson's digital learning solutions.

#### Pearson's Efficacy Research Team

Our research team includes PhD-level statisticians who provide practical advice about tracking and analyzing student data when redesigning a course to incorporate technology. Our research team also includes experts in psychometrics, educational statistics, and journal publications. These individuals support educators who want to run an efficacy study, provide our editorial staff with detailed reports on the quality of our online content, and advise our software engineers of new methodologies for collecting and processing student learning data within Pearson's digital learning solutions.

#### How Pearson and Instructors Work Together

Every research project is unique. The process takes time—generally a semester or longer. Educators interested in conducting a study should expect an interactive and rewarding partnership.

#### How Pearson Can Help Instructors Get Started

Pearson can provide templates, guidelines, checklists, and samples on course redesign, efficacy studies, data collection, and more. In order to maintain objectivity, Pearson does not offer compensation for data or participation in efficacy studies.

#### Research Standards

Pearson adheres to the Software & Information Industry Association (SIIA) guidelines for evaluating educational technology products. The key guidelines are:

- Ask the right question.
- Support the implementation of the product or service.
- Plan a study of sufficient size and duration to demonstrate an effect.
- Plan for plausible causal claims.
- Avoid (the appearance of) conflicts of interest.
- Provide a comprehensive and detailed research report.
- Make the research findings widely available.
- Accurately translate research for customers.

Correlational studies are not meant to imply causality. Rather, they demonstrate interesting associations that may be used for further theory building or theory testing in future experimental studies.

Contact nicole.kunzmann@pearson.com for more information.

REVEL CASE STUDY

School Name University of Dallas, Irving, TX

Course Name General Psychology

Course Format Face-to-face

**Key Results** 

Using REVEL, I was able see that all students had access to their assigned course material. REVEL's assignment calendar successfully encouraged students to read the material before coming to class, and the performance dashboard helped me decide which topics to emphasize during lecture. After the implementation of REVEL, students scored significantly higher on exams than students in the same course the previous year. Both cohorts were academically equivalent.

#### Submitted by

Brittany Landrum, Instructor

#### Course materials

REVEL for Psychology by Ciccarelli and White

#### Setting

The University of Dallas is a small, private, four-year university accredited by the Southern Association of Colleges and Schools, located 15 minutes from downtown Dallas, TX. Approximately 95 percent of the 1,360 undergraduate students have demonstrated financial need and are awarded financial aid and/or scholarships. Most students are traditional in age and registered as full-time students. The General Psychology course serves as an introduction to various topics in psychology including learning, memory, sensation, perception, intelligence, and consciousness. Additionally, various fields in psychology are looked at including social, abnormal, physiological, and developmental. The students taking General Psychology are a mix of freshman, sophomores, and juniors and are reflective of the university demographics stated above.

#### Challenges and Goals

Before REVEL, I used a printed textbook by a different author, along with the publisher-provided open access website that included online quizzes. The challenge with these quizzes was that there was no way to know if students were using them or how they were performing. It is very important that all students in my class have access to and read the textbook. I decided to implement REVEL because it is affordable, I can see if all of my students have access to it, and because it is easily accessible and available anytime. REVEL serves as a way to encourage students to read their assigned course material before coming to class. I believed this would better prepare them to engage

in higher, more conceptual levels of thinking, with the goal of seeing improved performance on exams. My exams consist of mostly applied and conceptual questions, and students need to understand the material to do well. Simply memorizing definitions from the book is not enough.

#### Implementation

Following the course syllabus, students are asked to complete 16 chapter assignments in REVEL throughout the semester. Quizzes embedded within the assigned REVEL reading material are due before 9 A.M. on the day I plan to cover the material in class. All quizzes are available two weeks prior to the due date, giving students plenty of time to complete their assignments while also keeping them on pace with the rest of the class. REVEL's performance dashboard provides me with an overall class score for each chapter assigned, as well as individual student scores. This feature allows me to see how well the class understands the material and helps me prepare my lecture accordingly. Students can also track their progress from the REVEL performance dashboard throughout the semester. If they do not complete a REVEL assignment on time, it will be reflected in their overall REVEL score. At the end of the semester, I simply export all students' overall REVEL scores at once. This export includes an overall REVEL score for each student that counts as 35 percent of their final course grade.

#### Assessments

45 percent Exams (five)

35 percent REVEL (16 chapter assignments)

15 percent Participation5 percent Attendance

# "Connecting my REVEL assignments with my course syllabus makes it easier for students to keep up with the work and allows me to use the information from the REVEL performance dashboard to structure my lecture."

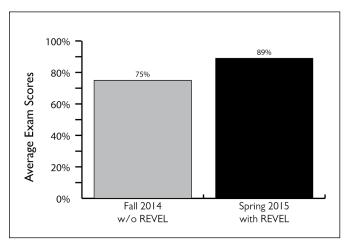


Figure I. Average Exam Scores without REVEL (Fall 2014, n = 33) vs. with REVEL (Spring 2015, n = 31)

#### Benefits observed

- REVEL is an affordable option for students.
- Thirty out of 31 students (97 percent) in my spring 2015 class had access to their assigned course material before the first assignment was due.
- REVEL is easy to use.
- Students complete chapter assignments in REVEL before class and come to class better prepared. Twenty-one out of 31 students (68 percent) in my spring 2015 class completed all assignments before coming to class, and only two out of 31 students missed more than two assignments.
- Seeing student performance prior to the lecture allows me to emphasize or expand on topics in class.

#### Results and Data

Students using REVEL (M=89%, SD=5%, n=31) scored significantly higher on exams than students in the same course the previous semester who used a traditional print textbook with optional open-access quizzes (M=75%, SD=12%, n=33), t(62)=-5.71, p < .01 (Figure 1). Both Fall 2014 and Spring 2015 exams consisted of mostly applied and conceptual multiple-choice questions. The same topics were covered each semester with questions being pulled from publisher-provided test banks,

and both cohorts were equivalent academically and in terms of preparedness for the course.

#### The Student Experience

In spring 2015, an end of semester survey asked students for feedback on their experience using REVEL. Their feedback was positive, mostly focusing on the accessibility and ease of use of REVEL. Here is what a few students had to say about REVEL:

- "Easy access to materials."
- "Very accessible for those with disabilities."
- "It made the course easier."

Students were also asked what best practices they would share with students using REVEL for the first time. Best practices from students included:

- "Highlight or take notes on important information from REVEL assignments."
- "Play the audio while reading."
- "Spread it out; don't try to do everything in one sitting."

#### Conclusion

REVEL has had a positive impact on the way I teach my course, which I believe has led to improved performance on exams. Connecting my REVEL assignments with my course syllabus makes it easier for students to keep up with the work and allows me to use the information from the REVEL performance dashboard to structure my lecture. Next semester, I plan to explore implementing early intervention strategies using the REVEL performance dashboard.

#### References

http://www.udallas.edu/about/facts.html

http://www.udallas.edu/offices/ir/instprofile.html

http://www.udallas.edu/parents/faq/index.html#f3

M = Mean

SD = Standard Deviation

N = Number of learners

REVEL CASE STUDY

School Name Utah State University, Logan, UT

Course Name Social Problems
Course Format Face-to-face

**Key Results** 

REVEL assignments prepared students to engage in class discussions and writing assignments that required them to analyze their own beliefs and opinions. The correlation between overall REVEL scores and final course grades was very strong, with the caveat that 20 percent of the final course grade came from the REVEL score.

Submitted by Shawn K. Olson, Instructor

#### Course materials

REVEL for Social Problems by Macionis

#### Setting

Utah State University is a 4-year public, research university located 80 miles northeast of Salt Lake City. The majority of students attend full-time (60 percent), and 85 percent of the 25,000 undergraduate students receive some form of financial aid. The average undergraduate age is 22. The students taking the Social Problems course are a mix of sophomores and juniors and are reflective of the overall university. This course explores a variety of social issues using a sociological perspective. Students learn to critically analyze the root causes of these problems and to discuss possible solutions.

#### Challenges and Goals

In my course, it is essential that students complete their assigned reading so that they come to class prepared to ask questions and participate in discussions. I expect my students to spend an average of six hours per week outside of class reading, writing, and studying the course material. Although this was my first time teaching this course, I was well aware that most students typically do not spend the necessary amount of time preparing for class. Therefore, I decided to implement REVEL my first semester teaching the Social Problems course.

In REVEL, information is presented to students through a mix of text, video, maps, and other visuals. I thought that the interactive design would be useful for today's students. Additionally, I hoped that REVEL's lower cost (compared to traditional textbooks) would prompt more students to obtain the course materials and complete the reading assignments.

#### Implementation

I integrated REVEL with my course syllabus so students could clearly see the connection between what we were covering in class and their REVEL assignments. I like feeling organized and appreciated being able to schedule REVEL assignments in advance and then having those assignments graded automatically.

Students were required to read the REVEL chapters and complete the end of chapter quizzes before we covered a particular topic in class. Students were not required to complete the section quizzes included within the chapters, however. These were assigned as optional. After the lowest quiz grade had been dropped, the remaining 11 chapter quizzes were used to calculate each student's overall REVEL score, counting for 20 percent of their final grade.

I could see from the REVEL performance dashboard that most students were completing their reading assignments on time. The class averaged 78 percent on their REVEL assignments throughout the semester. The students' work in REVEL provided the baseline knowledge they needed to engage in discussions and writing assignments where they were encouraged to analyze their own opinions and reasons for believing what they believe. Because students completed the end of chapter quizzes before coming to class, I often used these questions as a starting point for discussions, which comprised approximately 30 percent of class time. This process helped connect what students were reading before class to our in-class discussions, something that is much harder to do when assigning reading from a traditional printed textbook.

#### Benefits observed

- REVEL is a more affordable option for students.
- With REVEL, students came to class better prepared.
- REVEL quizzes provided valuable feedback for students and saved time spent grading for the instructor.

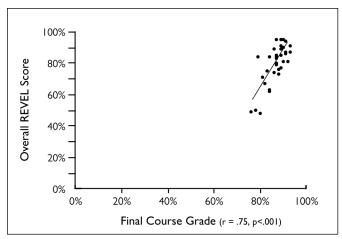


Figure 1. Correlation Between Overall REVEL Score and Final Course Grade (Spring 2015, n = 43)

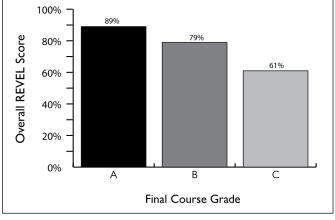


Figure 2. Students Receiving an A, B, or C in the Course and Their Corresponding Average REVEL Score (Spring 2015, n = 43)

#### Assessments

30 percent Reports (two applied sociology projects)

30 percent Final documentary video project

20 percent REVEL (12 chapter assignments)

10 percent Presentation on social problems in the news

10 percent Participation

#### Results and Data

The data indicate that the correlation between overall REVEL scores and final course grades is very strong (Figure 1), and it should be noted that REVEL scores made up 20 percent of the final course grade when calculated, influencing this correlation. A visual comparison of final course grades and overall REVEL scores (Figure 2) could be shared with students at the start of next semester to motivate them to spend more time on their REVEL assignments. Because a different end of chapter quiz score was dropped for each student, for the purposes of this analysis, the overall REVEL score included all 12 REVEL assignments. Four students were removed because their REVEL and/or final course grades were found to be outliers.

#### The Student Experience

It is important to let students know right from the start of the semester what will be expected of them, especially when it comes to the course material. As one student stated in a presemester survey (spring 2015), "I wanted to avoid purchasing something I didn't need, so I waited until I was sure I needed it." I took time during the first week of class to explain to my students what REVEL was and how it would be assigned throughout the semester.

In a post-semester survey (spring 2015), when asked for feedback on how REVEL impacted their learning, students commented mostly on the quizzes and visual design of REVEL. Here is what a few students had to say:

- "I feel like the quizzes helped me retain the information."
- "The maps demonstrated important correlations. Helped visually."
- "It's not a hard program to use."

#### Conclusion

Seeing the strong correlation between student success in the course and their performance on REVEL reading assignments is extremely helpful. While we'd need more information in order to determine whether REVEL causes students to perform better in the course, the information we gleaned is still useful, and more than I would have if I had assigned reading from a traditional printed textbook. I look forward to sharing the comparison of final course grades and overall REVEL scores with my students at the start of next semester. I hope this will result in students spending more time engaging with the REVEL content.

I currently assign two two-page written reports that I refer to as "Applied Sociology Projects". These reports ask students to apply sociological principles and concepts to specific social problems. To help students practice their writing skills before these higher-stakes reports are due, I may in the future consider assigning a few short essay assignments in REVEL.

#### References

http://www.usu.edu/about/at\_a\_glance/

http://www.usu.edu/aaa/about\_our\_data.cfm

http://www.forbes.com/colleges/utah-state-university/

REVEL CASE STUDY

School Name College of the Sequoias, Visalia, CA; Fresno City College, Fresno, CA

Course Name Introduction to Sociology

Course Format Face-to-face

#### **Key Results**

After the implementation of REVEL students came to class better prepared. Students lacking strong study skills benefited most and scored significantly higher on exams than students in the same course the previous year. The correlation between overall REVEL scores and final course grades was strong, with the caveat that 10 percent of the final course grade came from the REVEL score.

#### Submitted by

Catherine R. Medrano, Instructor

#### Course materials

REVEL for Essentials of Sociology by Henslin

#### Setting

With more than 2.1 million students on 112 campuses, the California Community Colleges is the largest system of higher education in the United States. College of the Sequoias and Fresno City College are two schools included in the system and are both centrally located within the state of California. Demographically similar, over 50 percent of students are of Hispanic background at both schools. Students attending College of the Sequoias are often right out of high school while students attending Fresno City College tend to be slightly older, nontraditional students. The Introduction to Sociology course at both schools focuses on the study of people in society—our behavior, interactions, customs, norms, values, cultures, and institutions. Students study topics stemming from everyday life and learn to view these topics through a critical sociological lens.

#### Challenges and Goals

I've been teaching the Introduction to Sociology course for many years. In general, I follow the same syllabus when teaching at College of the Sequoias and Fresno City College. While there are many similarities between the two groups, I find that students at College of the Sequoias perform well in this course while Fresno City College students, being more non-traditional in age, tend to lack strong study skills, often resulting in lower exam scores. I curve my exams to help students pass the class, more for Fresno City College (FCC) than at College of the Sequoias. Without the curve, too many students at FCC would fail. I knew students weren't reading their textbook, which is essential for passing exams and the course. I decided to implement REVEL as a way to require students to read and reflect on

their assigned reading. My goal was to see an increase in exam scores, allowing me to stop curving exams altogether.

#### Implementation

At both College of the Sequoias and Fresno City College, I cover nine chapters throughout the semester. Being able to break this down into 2I smaller REVEL reading assignments helps students, especially those lacking strong study skills, keep up with the reading throughout the course. Quizzes embedded within the REVEL readings are worth 10 percent of a student's overall course grade. The quizzes hold students accountable and provide valuable feedback about how well they understand the material. All REVEL assignments are due by 9 a.m. on the day we address the topic in class. Because students are now reading the material, they respond to my questions more readily and ask more in-depth questions during class. As a result of this increased participation and engagement, students develop a deeper understanding of the material, allowing us to apply sociological concepts to everyday life.

#### Benefits observed

- Students complete reading assignments and come to class better prepared.
- Student participation and engagement in class has increased.
- Students perform better on exams.

#### Assessments

25 percent Group Research Project

30 percent Exams (3 out of 4)

20 percent Essays (2)

15 percent Class Participation

10 percent REVEL (9 chapters; 21 assignments)

#### "Because students are now reading the material, they respond to my questions more readily and ask more in-depth questions during class."

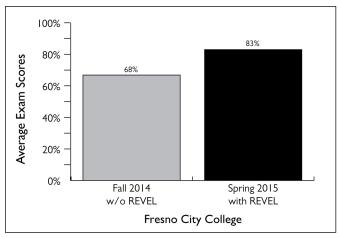


Figure 1. Average Exam Scores With vs. Without REVEL at Fresno City College (Fall 2014, n = 70; Spring 2015, n = 71)

#### Results and Data

I was very pleased to see that REVEL had the greatest impact on student exam scores at Fresno City College, as these students tend to lack strong study skills and need the additional support. At Fresno City College, students using REVEL (M = 83%, SD = 14%, n = 70) scored significantly higher on exams than students in the same course the previous semester who used a print version of the textbook (M = 68%, SD = 16%, n = 71),

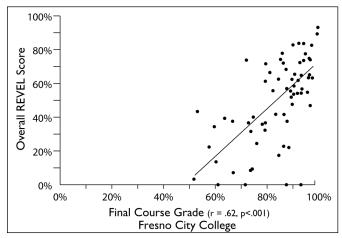


Figure 2. Correlation Between Overall REVEL Score and Final Course Grade at Fresno City College (Spring 2015, n = 66)

t(139)=-5.83, p< .01 (Figure 1). In addition, after outliers were removed overall REVEL scores strongly correlated with final course grades (Figure 2). It should be noted that REVEL scores made up 10 percent of the final course grades when calculated, influencing this correlation. Using a quartile analysis, outliers were identified as being greater than 1.5 interquartile ranges below the first quartile or above the third quartile.

At College of the Sequoias, students continued to perform relatively well, averaging 78 percent on their exams in spring 2015 compared to 75 percent in fall 2014. As was the case with Fresno City College, overall REVEL scores—10 percent of final course grades—strongly correlated with final course grades (Figure 3).

For both schools, students could skip one of the first three exams if they took the optional exam four. For the purposes of this study, the average of each students' highest three exam scores was calculated for each semester. The same topics were covered each semester with exam questions pulled from the publisher-provided test bank.

#### The Student Experience

Students were given the opportunity to provide feedback on REVEL at the end of the semester. One student indicated that REVEL made it easier to access the required reading and that

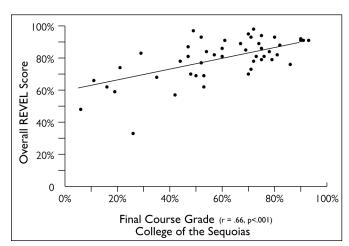


Figure 3. Correlation Between Overall REVEL Score and Final Course Grade at College of the Sequoias (Spring 2015, n = 49)

## "I could tell that REVEL was making a difference by the increased participation and engagement in class and am very pleased to see this backed up with data."

the greatest benefit was that REVEL provided "an easier way to remember things". I believe the student feedback I received—together with additional, initial data collected to date—suggests that my students' performance has improved from last semester to this semester. Further study will help isolate specific reasons for this increased performance, and I plan to continue to incorporate—and possibly expand—REVEL use in my course, given my students' promising experience to date.

Some students would have preferred not to use REVEL because of the time it takes to complete the required reading assignments. I believe that forcing students to think and reflect on their reading can only benefit them in the end. I encourage students to focus less on their individual REVEL assignment scores and more on their learning. Students can make the greatest impact on their scores by spending time completing assignments and re-reading particular sections if needed. If I see that a student is putting time and effort into their REVEL assignments, I am more than willing to adjust their REVEL score accordingly at the end of the semester.

#### Conclusion

I could tell that REVEL was making a difference by the increased participation and engagement in class and am very pleased to see this backed up with data. Students at Fresno City College who often lack strong study skills benefited most and scored significantly higher on exams than similar students the previous year. I want students to be able to pass their exams without a curve. With REVEL, I think they can.

I currently require two critical thinking essays that ask students to identify, define, apply, and evaluate key concepts presented in their reading and/or in lecture. To provide additional opportunities for students to practice writing and develop their critical thinking skills, I may consider incorporating short reaction papers in the form of REVEL essay assignments next semester.

#### References

http://californiacommunitycolleges.cccco.edu/collegeDetails.aspx?collegeID=561&txt=College%20of%20the%20Sequoias

M = Mean SD = Standard Deviation N = Number of learner **REVEL CASE STUDY** 

School Name Fresno City College, Fresno, CA

Course Name Art History I and II

Course Format Face-to-face

**Key Results** 

After completing REVEL assignments, students came to class better prepared to engage in discussions. Students who earned an overall REVEL score of 70 percent or more scored significantly higher on exams than students who scored below 70 percent.

#### Submitted by

Susana L. Sosa, Instructor

#### Course materials

REVEL for Art History by Stokstad and Cothren

#### Setting

Fresno City College is a two-year community college fully accredited by the Western Association of Schools and Colleges, and part of the California Community College system. It enrolls over 24,000 students, and approximately half of the student population is of Hispanic or Latino background. Art History I and II are designed as introductory survey courses and assume no prior experience of art or art history. Art History I examines the cultures of the Western world from the prehistoric era to the late Gothic period through visual art and artifacts. Art History II examines the art and visual culture of Western Europe and the United States from the late Gothic period to the contemporary era.

#### Challenges and Goals

I have similar goals for my Art History I and Art History II courses. For both, I expect students to demonstrate knowledge of historical and cultural art styles; analyze contextual factors that influenced the creation of art during specific historical eras; identify and discuss specific visual characteristics that typify the historical era or culture of an artwork using art-specific terminology; and discuss and analyze the media and techniques used to create artworks and the effect they have on viewers.

With more than 75 percent of class time dedicated to lecture, it is very important that students ask questions and participate in class discussions. The textbook is the primary source for discussion and examination content. If students don't read their assigned textbook before coming to class, they aren't able to participate, don't benefit as much from lecture, and often perform

poorly on exams. Many of my students are on financial aid and in the past had found it difficult to purchase the current edition of the textbook. I decided to implement REVEL because it was a more affordable option, and I could hold students accountable for reading assignments. My main goal with REVEL was to get students to read the textbook material so they would come to class better prepared for discussions and exams.

#### Implementation

Students taking introductory courses at Fresno City College often struggle with basic study skills, especially those in regular/ non-honors sections. I like how REVEL teaches students how to manage their time, how to read, and how to study. To ensure students complete their reading assignments and come to class prepared, I assign REVEL reading and section quizzes to be due before lecture. After we cover the topic in lecture, REVEL end-of-chapter quizzes are then due to assess students' understanding of that particular topic or chapter. At the end of the semester, if a student earns an overall REVEL score of 80 percent, I award them full credit, equaling 5 percent of their overall course grade. My syllabus clearly communicates how the weekly reading assignments in REVEL tie into my lectures. Additionally, I use the REVEL performance dashboard to link my lecture with content students are learning about in REVEL.

#### Benefits observed

- REVEL is easy to use.
- REVEL is a more affordable option for students.
- REVEL has allowed me to see how much time students spend with the assigned reading.
- REVEL offers several advantages over a print textbook including high-quality images, the ability to highlight and add notes, videos related to artworks, an audio glossary, short chapter quizzes, and an assignment calendar.

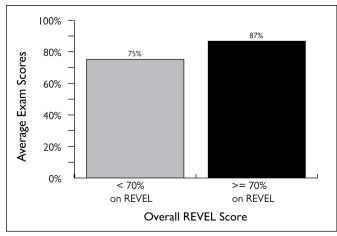


Figure I. Average Exam Scores (Exams I-3) for Students Who earned an Overall REVEL Score of 70 Percent or Above vs. 69 Percent or Below (Spring 2015, N=90)

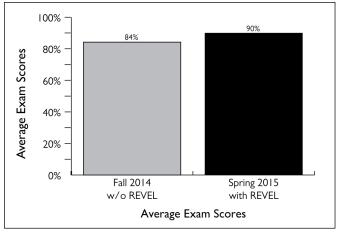


Figure 2. Average Honors Student Exam Scores without REVEL (Fall 2014, n = 28) vs. with REVEL (Spring 2015, n = 10)

#### Assessments

60 percent Exams (three)

13 percent In-class quizzes

12 percent Response assignments

10 percent Essay5 percent REVEL

#### Results and Data

Analyzing data across honors and non-honors sections provided valuable insight that can be used to inform how REVEL is implemented in future semesters to help even more students succeed.

Across all sections of Art History I and II, students who earned an overall REVEL score of 70 percent or more (M=87%, SD=15%, n=24) scored significantly higher on exams than students who scored below 70 percent (M=75%, SD=14%, n=66), t(88)=-3.33, p< .05 (Figure I). The overall REVEL score refers to the total REVEL points earned throughout the semester divided by the total REVEL points assigned. Exams for all cohorts included multiple choice, matching, term identification, and essay questions.

Honors students using REVEL (M = 90%, SD = 11%, n = 10) scored significantly higher on exams than honors students in the same course the previous semester who used a traditional print textbook (M = 84%, SD = 25%, n = 28), t(36) = -2.01, p < .05 (Figure 2). This was not the case with regular, non-honors students. In addition, honors students earned significantly higher REVEL scores compared to non-honors, t(88)=-2.01, p < .05. With REVEL worth only 5 percent of their course grade, many

students in non-honors sections treated REVEL as an optional assignment, which reflected in their scores. In contrast, honors students are highly motivated and tend to take advantage of all resources that can help them to do well in the course.

#### The Student Experience

Students love the audio and often listen as they read along. They have also commented on the images embedded within the REVEL content and like how you can zoom in on particular images right within the reading assignment.

#### Conclusion

I am pleased to see that students who spend time completing their REVEL assignments perform better on exams. It is extremely valuable to know which groups of students benefited most from REVEL this past semester so that I can adjust my implementation for future semesters. To communicate the importance of completing REVEL assignments to all students, I plan to make REVEL count for a greater portion of the grade and implement REVEL in a way that motivates all students to earn an overall REVEL score of at least 70 percent.

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 $\label{localiforniacommunity} $$ http://californiacommunitycolleges.ccco.edu/collegeDetails. aspx?collegeID=571&txt=Fresno%20City%20College$ 

M = Mean SD = Standard DeviationN = Number of learners REVEL CASE STUDY

School Name Florida State University, Tallahassee, FL

Course Name Art History II

Course Format Face-to-face

**Key Results** 

Using REVEL's performance dashboard I could see how frequently students accessed their course material and completed their assigned readings. Students who completed their REVEL assignments and earned an overall REVEL score of 70 percent or more scored significantly higher than their peers on the exams.

#### Submitted by

Brad Hostetler, Instructor

#### Course materials

REVEL for Art History by Stokstad and Cothren

#### Setting

Located within a mile of downtown Tallahassee, Florida State University is a competitive, public, four-year institution serving more than 32,000 undergraduate students. The average age of undergraduate students is 21. Most live on campus their freshman year, and 20 percent of all undergraduates live on campus. The Art History II course, History & Criticism of Art, introduces students to the history of Western art from the early Renaissance to the modern period. Through classroom lectures and discussions, readings, and written assignments, students learn to think about the meaning and function of art objects within the social, religious, political, and technological contexts surrounding them. Rigorous writing assignments develop students' critical and analytical skills. Students taking this course are mostly full-time freshman or sophomores, and a few in each class are first generation college students.

#### Challenges and Goals

Before using REVEL for *Art History* by Stokstad and Cothren, I used the printed version of the text. I assigned reading but had no way of knowing if students completed it other than by their performance on the exams. Because students weren't held accountable for the reading, I found that they were not completing the assignments and were coming to class unprepared to participate in discussions. I adopted REVEL because my department began to require it. Though I didn't set additional goals beyond what I usually expect from my classes, I did hope that REVEL would be easy to use and make the textbook more accessible. I wanted students to read more so that they would have better

context before coming to class. Also, I saw REVEL as a way to require students to read important content outside of class that I may not have time to cover during class.

#### **Implementation**

I have always assigned readings from the textbook. This semester I didn't change anything about the way I taught my course other than to make the REVEL reading quizzes worth extra credit points. Beginning the first week of the semester, I assigned readings in REVEL to be due by the start of each class. The REVEL reading assignments included short quizzes designed to help students retain the information they read. The number of points students could earn for each question depended on whether they answered it correctly on the first, second, or third attempt. I made it clear in my syllabus that there were no make-up opportunities for these assignments.

At the end of the semester, I exported my students' overall REVEL scores from the performance dashboard. If a student earned at least 600 out of a total of 852 assigned REVEL points, equaling an overall REVEL score of 70 percent or better, they received five bonus points toward their final course grade. Students with an overall REVEL score below 70 percent did not receive any additional points.

#### Assessments

50 percent Writing Assignments (three)

40 percent Exams (three)

10 percent Quizzes (three)

#### Extra credit points

5 percent REVEL (9 chapters; 21 assignments)

#### Benefits observed

 REVEL is easy to use. I did not have to change anything about the way I taught my course.

## "If you want REVEL to help students succeed, you need to make it an integral component of their course grade."

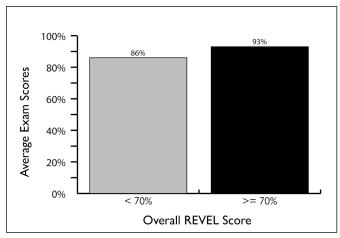


Figure 1. Average Exam Scores (Exams I-3) for Students Who Earned an Overall REVEL Score of 70 Percent or Above vs. 69 Percent or Below (Spring 2015, N=33)

- I could see how frequently students accessed their course material and completed their assigned readings. Thirty out of 33 students had access to their required course material in time to complete their first REVEL assignment, due one week into the semester.
- Students who earned at least 70 percent, 600 out of a total of 852 assigned REVEL points, performed better on exams.

#### Results and Data

Students who earned an overall REVEL score of 70 percent or more (M=93%, SD=6%, n=11) scored significantly higher on exams than students who scored 69 percent or less (M=86%, SD=9%, n=22), t(31) = 2.40, p< .05. A similar t-Test performed for REVEL assignment completion rates found no significant variations in performance. From this limited sample, it appears that merely completing REVEL quizzes does not have the same effect as doing well on the quizzes. As mentioned above, the number of points students can earn for each REVEL quiz question depends on whether they answer it correctly on the first, second, or third attempt. Although students get up to three attempts to answer each REVEL quiz question, they should always do their best to answer each question correctly, in as few attempts as possible.

#### The Student Experience

I believe it is important for students to ask each other for help with understanding the course material. Students can benefit a great deal by sharing best practices.

One first generation student's advice to other students new to using REVEL is: "Do the homework; it helps you prepare for the tests"

Another student in the class would advise other students to: "Keep up with assignments, some require more time than others."

#### Conclusion

Because this was my first semester using REVEL, I wanted to start slow. I decided to assign REVEL reading as extra credit. One thing I learned is that if you want REVEL to help students succeed, you need to make it an integral component of their course grade. Otherwise, most students will not treat REVEL any differently than a hardcopy textbook.

For written work, I currently assign three papers that are worth a total of 50 percent of a student's course grade. The papers help students develop their writing and critical thinking skills over the course of the semester. In the future, I may consider having students submit the first draft of each paper through REVEL, taking advantage of its new essay assignments and the built-in Turnitin feature that checks for improper citation or plagiarism.

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http://www.collegedata.com/cs/data/college/college\_pg01\_tmpl.jhtml?schoolId=817

https://www.fsu.edu/about/students.html

M = Mean SD = Standard Deviation N = Number of learners REVEL CASE STUDY

School Name Modesto Junior College, Modesto, CA

Course Name Art Appreciation

Course Format Online

#### **Key Results**

Data indicates a very strong correlation between REVEL's section and chapter quizzes. Performance on REVEL section quizzes could be a precursor to REVEL chapter quiz and overall course success. For future semesters, REVEL section quizzes could be assigned a few days before chapter quizzes are due, providing time to identify students who are struggling and might be at risk of poor chapter quiz and overall course performance.

#### Submitted by

Deborah Barr Brayman, Professor

#### Course Materials

REVEL for Prebles' Artforms by Preble, Preble, and Frank

#### Setting

Modesto Junior College, part of the California Community College system, is a two-year school located in Northern California's Central Valley. Its enrollment of just under 23,800 includes 43 percent Hispanic and 37 percent white students. A wide range of students, including both older and younger non-traditionally-aged students, take the online Art Appreciation course. This online Art Appreciation course is devoted to the study of historical and modern art.

#### Challenges and Goals

I have been teaching the Art Appreciation course online for many years. Before REVEL, I assigned the same book in a print format. One of my greatest challenges each semester was trying to ensure that all students had access to their course material so they could complete their required reading assignments. Many students either chose not to purchase the book or purchased outdated editions that caused confusion. I decided to implement REVEL as a way to ensure that all of my students had access to their required course material so they could complete their reading assignments. I like REVEL's clean layout with everything all in one place, including the embedded quizzing throughout. I like that students are given up to three attempts on each quiz question, encouraging them to keep trying until they arrive at the correct answer. REVEL's significantly lower price compared to the print version of the textbook is also appealing.

#### Implementation

I expect my students to spend an average of four hours per week reading and studying the course material on their own. Before REVEL, I believe they were spending half of that amount of time. This spring semester (2015), I replaced Blackboard quizzes and reading assignments from the print textbook with REVEL reading assignments. REVEL reading assignments include reading plus embedded interactive content, end-of-section quizzes, and end-of-chapter quizzes. My syllabus informs students that they need to plan their time wisely; late assignments are not accepted. Students complete one REVEL assignment per week, I5 total REVEL assignments throughout the semester, which count for 80 percent of students' final course grade. REVEL assignments are due every Monday.

#### Benefits observed

- REVEL is easy to use and more affordable than a traditional printed textbook.
- The ability to assign both reading and quizzes within REVEL holds students accountable for completing their assigned reading while providing valuable feedback along the way.
- The REVEL performance dashboard allows me to see that most students are completing their reading assignments on time. Because students keep up with the work, they are more engaged and better prepared to participate in online class discussions.
- Students appreciate having several chances to get the answer correct on quizzes. They also utilize REVEL's audio feature to listen as they read and look at images included in the chapter.

#### Assessments

80 percent REVEL (25 chapters; 15 assignments)

9.5 percent Discussions (5)4 percent Midterm (Collage)

4 percent Final Paper

1.5 percent Short Writing Assignments (Doll Face;

Power of Art in Society)

.5 percent Class Participation.5 percent Woordle Assignment

#### Results and Data

The data indicate that the correlation between overall REVEL scores and final course grades is very strong (Figure I). This is not surprising given the fact that REVEL makes up 80 percent of a student's final course grade. Students averaged 73 percent on their REVEL assignments throughout the semester. A visual comparison of passing final course grades and overall REVEL scores (Figure 2) could be shared with students at the start of next semester to motivate them to spend more time on REVEL assignments. I believe this motivation would encourage students to complete REVEL assignments and contribute to their success in the course. There is also a very strong correlation between a student's performance on REVEL's short end-of-section quizzes embedded within each assigned REVEL chapter and their performance on REVEL's longer end-of-chapter quizzes (Figure 3).

Performance on REVEL section quizzes could be a precursor to REVEL chapter quiz and overall course success. While correlation does not equal causation, understanding these correlations will be valuable when implementing early intervention strategies in the future. In addition, REVEL section quizzes could be assigned a few days before chapter quizzes are due, providing time to identify students who are struggling and might be at risk of poor chapter quiz and overall course performance.

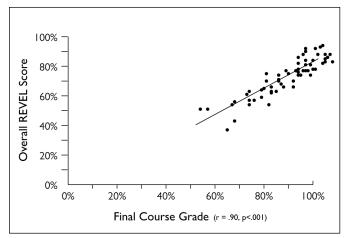


Figure 1. Correlation Between Overall REVEL Score and Final Course Grade (Spring 2015, N=67)

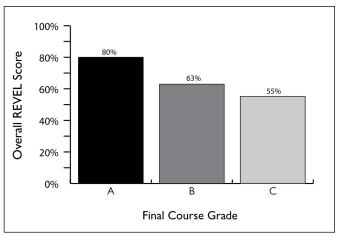


Figure 2. Students Receiving an A (n=46), B (n=10), or C (n=8) in the Course and Their Corresponding Average REVEL Score (Spring 2015, N=67)

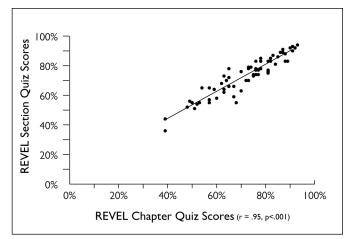


Figure 3. Correlation Between REVEL Chapter Quiz Scores and REVEL Section Quiz Scores (Spring 2015, N=67)

#### The Student Experience

Seventy-nine percent of students responded to an end-of-semester survey (spring 2015) where they were asked to share feedback and best practices for other students using REVEL.

#### Student feedback related to access/experience

- "Some of the benefits are that it is efficient to use and easy to access."
- "I can use it everywhere and when I have time."
- "It's pretty easy to use and is cheaper than having to buy a physical textbook."
- "It has been a new experience that I enjoyed, a different way of learning."

## "Because students keep up with the work, they are more engaged and better prepared to participate in online class discussions."

#### Student feedback related to timeliness/completion

- "The benefit of using REVEL is that I know when everything is due. I can plan accordingly with my assignments from many other classes."
- "It forces students to learn more on their own, and that is good for our generation."
- "Easy to learn the class material and great for studying."

## Student feedback related to competence/standards of achievement

- "I enjoyed the short section quizzes. They really helped me retain and recall information."
- "The main benefit is being able to remember more things from the course since [REVEL] quizzes you often."
- "It helped me understand the material that I needed to know for [online] discussions."

## Students shared the following best practices and advice for other students using $\ensuremath{\mathsf{REVEL}}$

- "Familiarize yourself with the REVEL layout, but don't stress too much about it because it is pretty easy to use."
- "Stay on top of your quizzes because they are a lot of points and a major portion of your grade."
- Don't wait until the last minute to do the assignments because you never know how long it will take for you to complete. Do assignments when they are first available."
- "Read and highlight the important parts and then take the quiz."
- "Read along with the audio. It helped me better understand the information."

#### Conclusion

I am planning to implement early intervention strategies using the REVEL performance dashboard the next time I teach the online Art Appreciation course. The data showing a very strong correlation between student performance on REVEL end-ofsection quizzes within each chapter and student performance on REVEL end-of-chapter quizzes has given me some ideas for planning my REVEL implementation next semester. For example, this semester all REVEL guizzes were due on Monday; however, I might consider making the REVEL reading and end-of-section quizzes due a few days before REVEL's end-ofchapter quizzes. This will provide students with some additional time to work through the material they found challenging. In addition, it will give me a chance to reach out to students who struggled on the section quizzes to see if they need help, or perhaps could benefit from an additional "study group" in the form of an online discussion.

#### References

# Best Practices: Steps to Success with your REVEL Implementation

The educators included in this report did more than simply add a new learning technology to their curricula; the ways that they implemented REVEL significantly contributed to their results. Following are recommended best practices that will help you and your students get the most out of your REVEL implementation.

- I. Identify your challenges and goals. Why did you decide to implement REVEL in your course? What challenges and goals are you hoping to address?
- 2. Plan your REVEL implementation based on your challenges and goals. On the following page we offer suggestions for how you can connect your challenges and goals with your REVEL implementation. If this is your first time implementing a learning technology solution, we recommend keeping things simple by following the *first* REVEL implementation suggestion listed.
- 3. Position students for success by holding them accountable for assigned REVEL reading and writing assignments. Students tend to skip optional assignments. Experienced educators recommend making required course content part of your course grade. One easy way to require REVEL is to assign one overall REVEL grade. Based on initial efficacy study results, we recommend making REVEL at least 10-35 percent of a student's overall course grade. In REVEL, click "performance" then click "students" to see the total number of REVEL points assigned for available assignments\* and the total number of REVEL points earned by each student. This approach helps students see the big picture. Because it is their overall REVEL grade that counts, students don't have to worry if they perform poorly on one or two REVEL quizzes. Depending on your implementation goals, you may also choose to assign higher-stakes assessments in REVEL in the form of essays or end-of-chapter quizzes.
- \* Future assignments will not be visible on the performance dashboard until they become available to students. These points will, however, be included as "Total Points Assigned" when you export data from the REVEL performance dashboard.
- **4. Build an assessment plan.** How will you measure the success of your REVEL implementation? What are the quantifiable goals you want to achieve? If your goal is to have students complete their REVEL reading assignments before coming to class, you

- can assess whether they did so by looking at the total number of REVEL points, or overall REVEL score, each student earned. It may also help to look for correlations between student performance on, or completion of, REVEL assignments vs. their performance on in-class exams and in the course. Other pertinent metrics include comparisons of exam scores with those of previous semesters along with pre and post student survey data.
- 5. Get everyone—and keep everyone—on the same page. Communicate your goals and implementation plans to colleagues, students, and administrators. Train all full-time instructors, part-time instructors, adjuncts, tutors, and other key players—and make available plenty of opportunities for continuous training. Conduct a Getting Started orientation on the first day of class to explain the benefits of REVEL and show students how to access the REVEL assignments they'll be responsible for completing. Pearson provides implementation training for instructors and Getting Started resources to use with your students. Visit www.pearsonhighered.com/revel/educators/support for details.
- 6. Track learning gains and communicate results. Educators who monitor and measure learning gains can make informed decisions about product implementations and increase their ability to prove institutional effectiveness, meet accreditation standards, track quality-enhancement plans, and fulfill grant requirements. Sharing past students' successful results after using a learning technology can increase student motivation, leading to greater persistence in your course.

For help measuring REVEL's impact on student learning in your course, contact Pearson's Senior Efficacy Results Manager, Nicole Kunzmann at nicole.kunzmann@pearson.com.

## Plan your REVEL implementation based on your challenges and goals.

Challenges and Goals	REVEL Implementation Suggestions
Students don't read the book.  Students don't come to class prepared to ask questions, participate in discussions, or participate in active learning activities.	Consider assigning REVEL reading to be due before students come to class. You can assign the entire chapter in just a few clicks. Throughout the chapter, quizzes and journaling opportunities help students retain the information they have read.
2. Students don't read the book.  Students don't come to class prepared to ask questions, participate in discussions, or participate in active learning activities.  Students need help preparing for exams.	Consider assigning REVEL reading to be due before students come to class. You can assign the entire chapter in just a few clicks. Throughout the chapter, quizzes and journaling opportunities help students retain the information they have read. When assigning REVEL reading, de-select the end-of-chapter quizzes. To encourage students to use the chapter quizzes to prepare for exams, you'll want to assign them to be due the night before or the morning of the exam.
3. Students don't read the book.  Students don't come to class prepared to ask questions, participate in discussions, or participate in active learning activities.  Want to assign both low-stakes formative assessments and higher-stakes summative assessments for each chapter.  Want to provide opportunities for students to develop better writing and critical thinking skills.	Consider assigning REVEL reading to be due before students come to class. You can assign the entire chapter in just a few clicks. Throughout the chapter, quizzes and journaling opportunities help students retain the information they have read. When assigning REVEL reading, de-select the end-of-chapter quizzes. Then, assign the end-of-chapter quizzes to be due the day after you cover the chapter in class. To provide opportunities for students to develop better writing and critical thinking skills, in addition to end-of-chapter quizzes, consider assigning essays (autograded or instructor-graded) to be due after you cover the chapter in class.
4. Want to personalize in-class experience or focus on more challenging topics in class.  Want to implement a "flipped classroom."	Consider assigning REVEL reading to be due before students come to class. You can assign the entire chapter in just a few clicks. Throughout the chapter, quizzes and journaling opportunities help students retain the information they have read.  Use data from the REVEL performance dashboard to prepare for class.
5. Want to improve success rates.*  Want to provide support for students with a broad range of academic and study skills.  * Success rate is the percentage of students who registered for the course and earned a final course grade of A, B, or C.	Consider assigning REVEL reading to be due before students come to class. You can assign the entire chapter in just a few clicks. Throughout the chapter, quizzes and journaling opportunities help students retain the information they have read.  Use data from the REVEL performance dashboard to implement early intervention strategies.

## Conclusion

We applaud the institutions included here for their efforts and determination to enhance their courses by implementing new technology. Behind the successful outcomes are students who have become better equipped to pursue their academic goals and achieve their life dreams.

Instructors featured in this report are now armed with data that can be used to make informed decisions about their REVEL implementations in future semesters. A successful technology implementation is an ongoing process, ever evolving with the emergence of new and improved pedagogy, the entry of each unique cohort of students, and increased amounts of information gleaned from the long-term tracking and measuring of student data.

The links provided here are intended to inspire, support, and promote conversation among educators, and to ensure that the latest and most effective practices get disseminated to all educators using or considering REVEL. We hope you find them useful and urge you to share them with colleagues and others committed to improving the teaching and learning experience.

#### **TEACHING & LEARNING BLOG**

www.pearsoned.com/blog/higher-education-2

## REVEL IMPLEMENTATION TRAINING

www.pearsonhighered.com/revel/educators/support

## RESULTS LIBRARY (AVAILABLE JULY 2015)

www.pearsonhighered.com/revel/results

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