Revel educator study examines impact on student performance and engagement at McHenry County College

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<th>Timeframe</th>
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<td>McHenry County College, Crystal Lake, IL</td>
<td>Spring 2017</td>
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<td>Introduction to Criminal Justice</td>
<td>Bill Brogan, Instructor</td>
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| Revel for *Criminal Justice Today* by Schmalleger | ● Students earning higher Revel chapter quiz scores also earned higher final course scores.  
● Students who scored above the median on Revel chapter quizzes scored significantly higher on the research paper than students who scored below the median on Revel chapter quizzes.  
● Students earning a final grade of A, B, or C in the course skipped an average of 13.3 fewer Revel assignments than those earning a final grade of D or F in the course. |

**Setting**

- **Locale:** McHenry County college is located in the small city of Crystal Lake, IL and serves McHenry County, the seventh-most rapidly growing county in Illinois
- **Enrollment:** approximately 6,750
- **Full-time students:** 34 percent
- **Median age of enrolled students:** 21 years
- **In-state students:** 99 percent
About the Course

Introduction to Criminal Justice (CJS 101) teaches the philosophy of social control and the history of law and criminal justice. The course explores the fundamental questions of what crime is and what causes it. It also looks at the criminal justice system, including police, courts and correctional agencies, and the roles of each as they relate to offenders and society. In addition, students learn about career opportunities in the field.

Challenges and Goals

Instructor Brogan elected to move to Revel because he was seeking a product that offered eBook access with online integration so students could complete assignments directly within the reading. He also liked Revel’s seamless integration with Canvas and the option for students to purchase a loose-leaf print text. Brogan aimed to increase student preparedness for class and improve class discussion through implementing Revel.

Implementation

The course was offered in both online and face-to-face formats. The course requirements for both formats were identical. All course assignments were submitted through Canvas. Revel was integrated with Canvas so students were able to use a single sign on to access all course materials. Grades for the course were comprised of attendance, vocabulary assignments, Revel assignments and quizzes, and a research paper. The face-to-face course was comprised of instructor-led lectures followed by discussion.

Attendance scores were calculated as the percentage of classes a student was marked present. For example, if a student was present for nine of ten class meetings, his or her attendance grade was 90 percent. Leaving class early, without permission, was counted as an absence. Two percentage points were also deducted each time a student was tardy for class. Students could raise their attendance score by actively participating in class through asking questions, answering questions, or adding to a discussion. Course participation was factored into final attendance scores at the semester end. Online attendance was calculated by the percentage of assignments completed when due.

Each week students were assigned a list of terms to define in order to understand the language of the criminal justice system. All of the term definitions were found in the text, and dictionary definitions were not allowed. Students earned 20 points for each weekly vocabulary assignment for a total of 320 points.
Students were required to complete a research paper for the course with a 1000-word minimum and 1500-word maximum on a topic of their choice for 15 percent of the total course grade. Papers were submitted in Canvas and graded on a rubric system.

Revel assignments accounted for 40 percent of the final course grade. Students completed weekly chapter quizzes, each consisting of 20 multiple-choice questions covering one chapter. Each chapter quiz question was worth up to 5 points. Students had three attempts to answer each question. If they answered the question correctly on the first attempt, they received five points; four points for the second attempt; and three points for the third attempt. Students were also required to complete the two- to three-question module quizzes throughout the chapter with the same scoring system applied as for the chapter quizzes. In order for students to receive credit for the chapter and module quizzes, they also had to complete all of the journal entry essay questions that appeared periodically throughout the chapter readings.

Students had one week to turn in an assignment late. After one week, make ups were not accepted. Late assignments were scored at 50 percent. For example, a quiz that would have been an 80 percent was only a 40 percent if turned in late.

Assessments

- 40% Revel assignments and quizzes
- 20% Attendance
- 25% Vocabulary assignments
- 15% Research paper

Results and Data

Results indicate that students who had higher average scores on the Revel chapter quizzes also had higher final course scores. The correlation between student performance on Revel chapter quizzes and final scores in the course was very strong ($r(33) = .96, p < .001$ [figure 1]). Total Revel scores (including chapter quizzes) made up 40 percent of the final course grade, influencing this relationship.
Correlation between average Revel chapter quiz scores and final course scores

![Correlation Graph]

Figure 1. Correlation between Average Revel Chapter Quiz Scores and Final Course Scores, Spring 2017 (n=33)

A t-test, which measures whether the means of two groups are statistically different, was used to compare the average research paper scores of students who scored above the median Revel chapter quiz score with students who scored below the median Revel chapter quiz score. Results indicate that students who scored above the median Revel chapter quiz score earned significantly higher research paper averages than students who scored below the median Revel chapter quiz score where $t(33) = 4.46$ and $p<0.01$, indicating that this difference was statistically significant (figure 2).
Average research paper scores of students earning below and above the median Revel chapter quiz score

Figure 2. Difference in Average Research Paper Scores between Students who Scored Above the Median Revel Chapter Quiz Score and Students who Scored Below the Median Revel Chapter Quiz Score, Spring 2017 (n=33)

Students who received a final course grade of D or F completed an average of 13.3 fewer Revel assignments than those who earned a final course grade of A, B, or C (figure 3). Students receiving a D or F in the course also earned an average final attendance score 24 percentage points lower than students who received an A, B, or C in the course.
Comparison of average number of revel assignments skipped between students with a final grade of A, B, or C and students with a final grade of D or F

![Comparison of average number of revel assignments skipped between students with a final grade of A, B, or C and students with a final grade of D or F](image)

**Figure 3.** Average Number of Revel Assignments Skipped by Students with a Final Grade of D or F ($n=11$) and Students with a Final Grade of A, B, or C ($n=22$)

Comparison of average final attendance score between students with a final grade of A, B, or C and students with a final grade of D or F

![Comparison of average final attendance score between students with a final grade of A, B, or C and students with a final grade of D or F](image)

**Figure 4.** Average Final Attendance Score of Students with a Final Grade A, B, or C ($n=22$) and Students with a Final Grade of D or F ($n=11$)

**The Student Experience**

In Fall 2016, Criminal Justice students at a variety of U.S. colleges completed a voluntary, end-of-semester survey (24 participants), providing valuable insight on their experience using Revel.

- 100 percent of respondents were able to login to Revel the first week of class.]


Only 8 percent of respondents reported very often or often attending class without having completed the Revel assignment.

88 percent of respondents rated reported participating in class discussion after using Revel.

Student survey comments regarding their Revel experience included:

- “Revel gives you an opportunity to use all of your resources at once.”
- “Revel is awesome. It’s cheaper and the audio option is super helpful.”
- “The benefits of Revel include: easy access, convenience, audio, end quizzes/tests, lets you know your progress and grades.”
- “Revel offered supplemental examples that went beyond the text.”

“Revel has impacted my learning a great deal because I was actually able to remember what I learned since it was mandatory to complete assignments from Revel before class.” —Anonymous student on end-of-semester survey

Conclusion

Brogan implemented Revel in his Introduction to Criminal Justice course with the goal of providing an integrated online experience and increasing class discussion by being able to hold students accountable for assigned readings. Results were identical in online and face-to-face formats and indicate students who scored higher on Revel chapter quizzes also received higher final course scores. Students who scored above the median on Revel chapter quizzes scored an average of 56 percentage points higher on the research paper than students who scored below the median. Final attendance scores of students receiving an A, B, or C in the course were 24 percentage points higher than students receiving a D or F in the course and those students completed an average of 13.4 more Revel assignments. Brogan believes Revel has improved student participation and outcomes in his course, and he will continue to utilize Revel in future terms, making adjustments as necessary based on student results.