Revel educator study examines student performance and engagement at Des Moines Area Community College

School name Des Moines Area Community College, Des Moines, IA **Course name** Introduction to Sociology **Course format** Hybrid, web enhanced **Course materials** Revel for *Societyology: The Basics* by Macionis	**Timeframe** Spring 2017 **Educator** Laurie Linhart, Associate Professor **Results reported by** Stephanie Fritson, Pearson Customer Outcomes Analytics Manager

Key Findings

- Students who scored above the median on Revel module quizzes scored an average of 19 percentage points higher on essay assignments than students who scored below the median.

- Data indicate a strong correlation between the overall percentage of Revel points earned and course participation scores.

- 71 percent of respondents agreed or strongly agreed Revel made them better prepared for class and more engaged in the content of the course.

Setting

Des Moines Area Community College (DMACC) is a public institution and Iowa's largest two-year college. DMACC offers 168 programs, certificates, and transfer degrees, serving more than 75,000 credit and non-credit students annually at six campuses and six learning centers throughout central Iowa. DMACC serves a 6,560 square mile area in 22 counties and has a student-to-faculty ratio of 18:1. Of the total population enrolled, 60 percent of those are enrolled full-time, and 36 percent receive some form of financial assistance. Its student population is the most culturally diverse in the Iowa higher education system.

About the Course

The Introduction to Sociology (Soc 110) course introduces students to the discipline of sociology through a wide range of topics, including: culture, socialization, organizations and institutions,

deviance, inequality, gender, health, family, social change, theories, and research methods. The course is offered in three formats: face to face, online, and hybrid web enhanced. The hybrid, web-enhanced course combines the advantages of online learning with periodic on-campus meetings and classes with faculty, enabling students to learn conveniently online for the majority of their coursework, yet also receive the advantages of in-person learning and insights.

Challenges and Goals

Professor Linhart was previously using MySocLab™ with Writing Space™ in Soc 110. She elected to use MySocLab with Writing Space because the auto-feedback feature allowed her to assign writing homework with meaningful feedback provided in a timely manner. Results from a Spring 2014 educator study in her Soc 110 course indicated students who completed all work in Writing Space out-performed other students on the exams.

Although Linhart saw improved scores when using MySocLab with Writing Space, she chose to implement Revel™ because of the integrated reading assignments and ability to use the Performance Dashboard to intervene early with challenging concepts and struggling students. She continued to assign the auto-graded writing to help students move beyond basic memorization to higher levels of learning related to analyzing and applying concepts through essay assignments. She hoped the frequent Revel module quizzes would prepare students for participation in class discussion, improve student essay performance, and lead to higher summative assessment scores.

Implementation

When initially implementing Revel in the Summer of 2016, Linhart continued to use Writing Space as a separate tool. The two were integrated in Fall of 2016, allowing her to assign the auto-graded writing from within Revel. At that time, she also elected to use Revel with Blackboard integration so students had a single sign on for all of their course materials. All student assignments for the course were available within Blackboard, and grades were recorded in the Blackboard gradebook.

Soc 110 hybrid, web-enhanced courses met once a week for an hour and 25 minutes with the majority of the coursework taking place online. Linhart expected students to spend at least six hours per week outside of class time studying for the course. Grades for the course were comprised of Revel module quizzes, Revel chapter quizzes, Revel auto-graded writing assignments, and class participation. Students were expected to complete assigned readings, discussion questions, quizzes, and writing assignments prior to each class meeting in order to arrive at class prepared to participate in discussion. Participation credit was received for asking meaningful questions and making substantive comments during class meetings. Revel assignments account for a total of 95 percent of the final course grade. Linhart believes that the Revel quiz and writing assignments prepare her students for improved class discussion and promote critical thinking, so they account or the largest percentage of the course grade.

Assessments

- 58%   Revel module quizzes
- 30%   Revel chapter quizzes
- 7%   Writing assignments

- 5%   Participation

Results and Data

In implementing Revel, Linhart aimed to assign the Revel readings and module quizzes to help prepare students for the essay assignments. The formative Revel module quizzes are also intended to provide frequent check-in points to help ensure students are understanding the reading. These lead up to the more in-depth, summative chapter quizzes.

- A *t*-test, which measures whether the means of two groups are statistically different, was used to compare average essay scores of students who scored above and below the median Revel module quiz score. Results indicate that students who scored above the median Revel module quiz score earned significantly higher essay averages than students who scored below the median, where $t(55) = 2.39$ and $p<0.05$, indicating that this difference was statistically significant (figure 1).

- A *t*-test was also used to compare average Revel chapter quiz scores of students who scored above and below the median Revel module quiz score. Results indicate that students who scored above the median Revel module quiz score earned significantly higher Revel chapter quiz score averages than students who scored below the median, where $t(55) = 5.81$ and $p<0.05$, indicating that this difference was also statistically significant (figure 1).

Difference in average essay scores and Revel chapter quiz scores between students who scored above and below the median Revel module quiz score
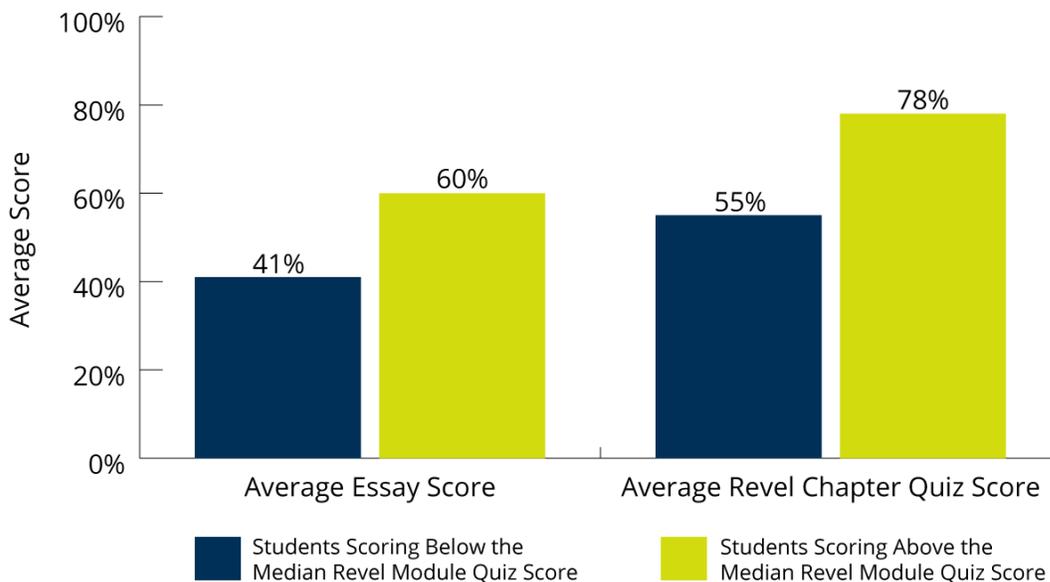

Figure 1. Difference in Average Essay Scores and Revel Chapter Quiz Scores between Students who Scored Above and Below the Median Revel Module Quiz Score , Spring 2016 (*n*=55)

Another goal of Revel implementation was to utilize Revel assignments to prepare students to participate in class discussions for which participation points were awarded.

- The correlation between the percentage of participation points and percentage of Revel points earned was strong (r(55)=.65, p<.001 [figure 2]).

Correlation between percentage of participation points and percentage of total Revel points earned
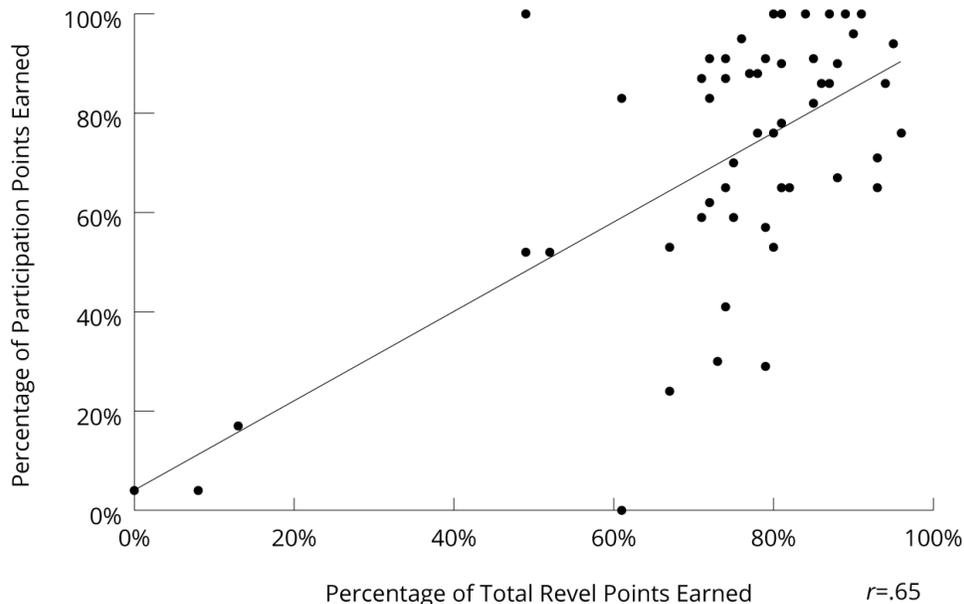

Figure 2. Correlation between Percentage of Participation Points and Percentage of Total Revel Points Earned, Spring 2016 (n=55)

The Student Experience

In Spring 2017, students completed a voluntary, end-of-semester survey (69 percent response rate), providing valuable insight on their experience using Revel.

- 92 percent of respondents rated the "read a little, do a little" approach of Revel as good or excellent.

- 74 percent of respondents agreed or strongly agreed their experience with Revel was better than with a printed text.

- 71 percent of respondents agreed or strongly agreed Revel made them more engaged in the content of the course.

- 71 percent of respondents agreed or strongly agreed Revel made them better prepared for class.

Student survey comments regarding their Revel experience included:

- *"I enjoyed the format and how Revel works. It really helped in my ability to learn the material."*

- *"Revel is much better than any other program I have used in any other class."*

- *"Revel is an online learning experience that is an easy way to do your homework, anywhere at anytime. "*

"I think the major advantage that Revel presents is the ability to work and learn as you progress through a chapter. Meaning that there was always hands-on activities going on throughout the chapter." —Anonymous student on end-of-semester survey

Conclusion

Linhart implemented Revel in her Soc 110 course with the goal of increasing participation in class discussion, and improving student writing through essay assignments. She hoped requiring Revel would prepare students for summative assessments and improve mastery of the course objectives, ultimately leading to improved critical thinking skills. Students who scored above the median score on Revel module quizzes scored an average of 19 percentage points higher on essay assignments and an average of 23 points higher on summative Revel chapter quizzes than students who scored below the median. Student survey responses indicated 71 percent of respondents agreed or strongly agreed Revel made them better prepared for class and more engaged in the content of the course. There was also strong correlation between the percentage of total points earned in Revel and the percentage of course participation points students earned. Linhart believes Revel has improved student performance and preparedness in the course while the Performance Dashboard has allowed her to intervene early with struggling students. She will continue to utilize Revel and make adjustments to ensure students are performing at their highest level.

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