

Spotlight on *Revel Programming*

Introduction to Java Programming

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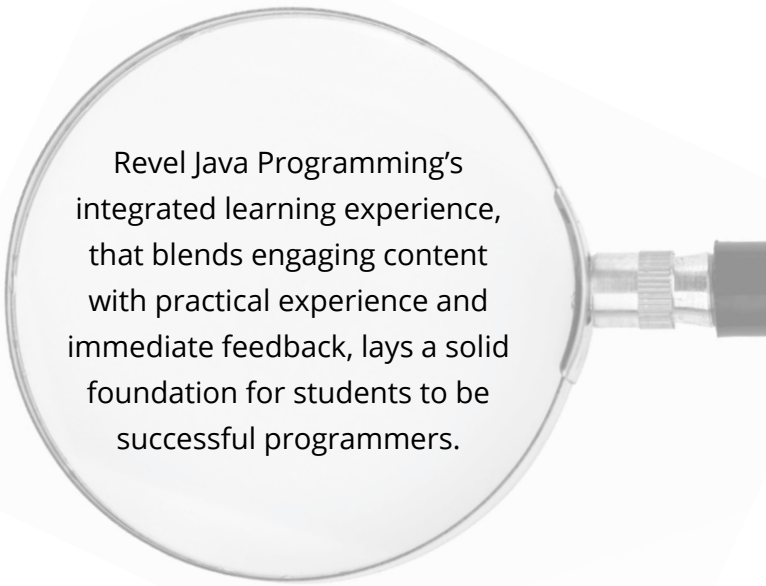
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In August 2020, Pearson published a *correlational efficacy study* with the University of North Carolina at Greensboro that found Revel students who persisted in assigned programming tasks until they improved their score* saw almost **half a letter grade increase** in final course grade.

To understand if this is a shared outcome across a wide variety of institutions in the United States, we identified instructors who were using Revel Java Programming in a similar way to the instructor in the efficacy study and interviewed them about their experience using Revel.

In addition to iterative improvements on programming tasks in Revel Java Programming contributing to student success, we found that:



Revel Java Programming's integrated learning experience, that blends engaging content with practical experience and immediate feedback, lays a solid foundation for students to be successful programmers.

* A 10-point increase in gain scores was associated with an almost 4-point increase in final course grade score.

Integrated learning experience that encourages active participation

George Meghabghab, professor at Roane State Community College in Tennessee, feels the integrated and immersive learning that Revel Java Programming offers means it is an

“optimal learning space which encourages students to go into Revel... and engages them to stay there until finished.”

George has developed his entire course around Revel and it has led to increased participation, engagement and confidence.

Joe Parks, recently retired Lead Java Instructor at a community college in North Carolina, finds the main benefit for his students to be the integrated content, which he believes gives a much better presentation of the material than a traditional printed book, saying:

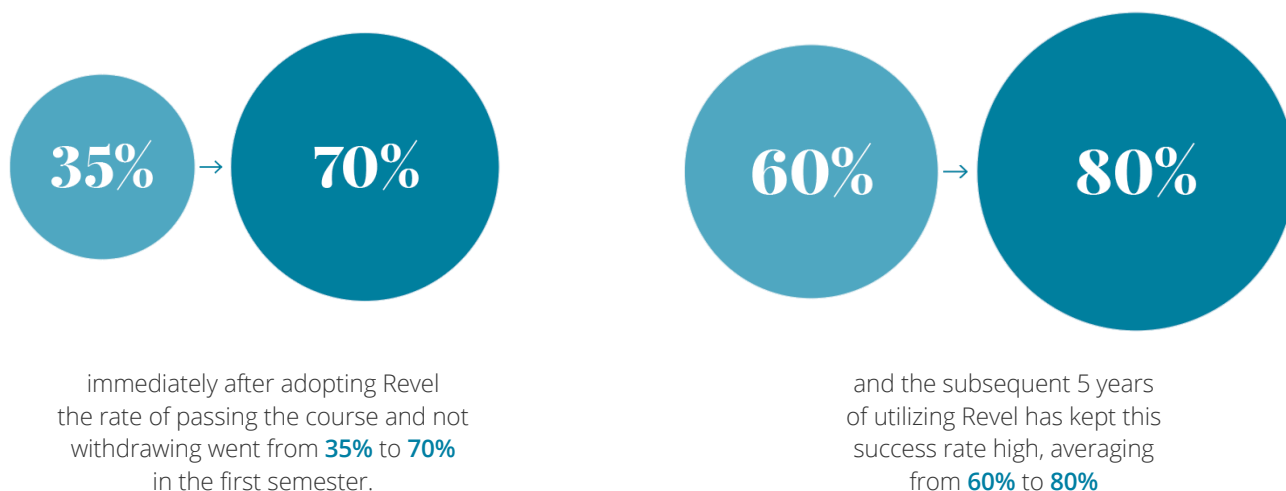
“Revel gives a better environment to our students.”

Revel Java Programming increases student engagement with the material and therefore helps students come to class more prepared.

Frank Ducrest, recently retired professor at a 4-year school in Louisiana, was pleasantly surprised when immediately after adopting Revel the rate of passing the course and not withdrawing went from 35% to 70% in the first semester. The subsequent 5 years of utilizing Revel has kept this success rate high, averaging from 60% to 80%, depending on the student majors. He attributes this to a variety of reasons, but mainly Revel, as the higher success rates correlate with Revel's introduction. Frank feels the interactive nature of Revel Java Programming and resulting engagement with the material has led to this dramatic result.

“It has really been amazing, the difference I have seen in my students since starting Revel.”

Frank Ducrest found that:



Hands-on practice with immediate feedback...

An instructor at a 4 year university in the southeast, finds the main benefit for her and her students to be the hands-on, extra practice they get in Revel. For students she appreciates how

“it is targeted to specific (topics) that can be assigned along with more traditional programming assignments to help students learn concepts quicker and more thoroughly.”

Further, she has noticed how students' grades are higher:

“due to the extra practice... and it provides incentive for students to practice their programming skills.”

Joe Parks, recently retired Lead Java Instructor at a community college in North Carolina, understands that programming is a learn-by-doing skill and the shorter time there is between seeing and doing, the better. The immediate feedback Revel Java Programming offers helps students realize a concept may not be well understood, thus allowing them to address the concern while the material is still fresh.

“The integrated quizzes, animations, activities, etc. follow this model, and allow a student to realize immediately that he or she needs to go through the current material again. Revel does this on an individual level, which is impossible to do in a classroom setting.”

Caroline Budwell, professor at Virginia Commonwealth University, appreciates how Revel's practice opportunities encourage deep thought, especially compared to programs she previously used.

“I like Revel because it does make the kids practice problems and it's not as fluffy as what I was using previously because that program just gave them a lot of points to read and try stuff. Revel makes you think more; the practice activities in Revel makes my kids think more.”

The autograde feature saves time grading programming assignments

Four of the instructors we spoke to, including **Caroline Budwell** and **Sujing Wang**, a professor at a 4 year school in the southern region of the United States, all find the autograding feature to be the most beneficial aspect of Revel, with Caroline saying:

“I haven't manually graded anything since implementing Revel, so I would say it works very well for me. It reduces the time I have spent grading, I just go into Blackboard, sync the grades, and I don't mess with it at all.”

Terrance Adam Smith, professor at a 2-year school in Texas, appreciates the time saved grading programming assignments saying, **“I am definitely doing less work due to automatic grading.”**

Top tips for using Revel Programming

Have a substantial amount of Revel contribute towards the final grade to encourage participation

Joe Parks and an instructor at a 4 year university in the southeast both suggest attributing 10-25% of the course grade to work in Revel. They believe this is enough to encourage participation, but not too much that it would be detrimental to a student's grade if they did not fully complete their work.

Utilize animations in lecture to aid in understanding and engage students

An instructor at a 4 year university in the southeast suggests using animations from Revel during class time to illustrate new concepts. She finds this not only aids in understanding during lecture, but it also engages students and encourages them to read the text more, as well as helps put concepts in concrete form.

Require students to complete readings and assignments before attending

Caroline Budwell, professor at Virginia Commonwealth University, requires students to do all of their assignments and reading before they attend lab, which was consistent with the implementation in the study. She finds this helps them prepare to participate in class. If they do not do their assigned work, Caroline has them complete it before starting lab work. She finds this has been beneficial and

"It made a huge difference in lab. Previously in lab their hands would immediately go up in the air and they would be confused. Now that they have everything done before lab, they are coming to lab as intelligent beings ready to do work. Revel is so nice and while they sometimes go down the wrong path, everybody is at least working."



Allow unlimited attempts to solidify learning

A full-time professor at a 2-year school in Hawaii suggests giving students unlimited attempts to complete the end-of-section quizzes, as it is a

"low-stakes opportunity (that) gives students the chance to make sure they understood what they just read."

Caroline Budwell agrees saying,

"It is nice when it is unlimited, and I don't think it detracts from their learning."

Find out more about Revel Programming

<https://www.pearsonhighered.com/revel/educators/browse-products/disciplines/programming.html>

About Efficacy at Pearson

The Efficacy & Learning Research team focuses on the science behind how people make progress in their lives through learning. Learn more at:

<https://www.pearson.com/news-and-research/efficacy.htm>