

# HELPING SOLVE THE PROBLEM OF STUDENT FAILURE

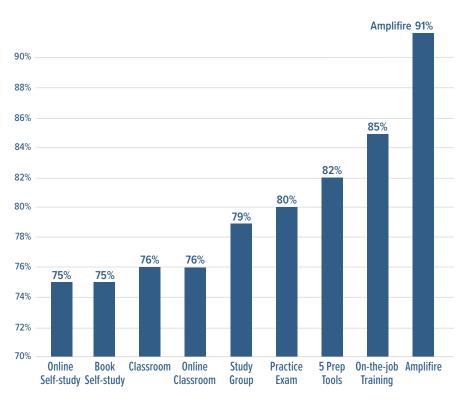
The biggest challenge universities and colleges face is student retention. Struggle is an early indicator. What if you could see students at risk and intervene before it is too late?

Two helpful prescriptions are...

First, reduce student failure by using technology that shows instructors the knowledge gaps and struggle that most students will experience at some point during their time in higher education.

Then, use the latest principles from cognitive science. These techniques make knowledge stick in the mind, so students rapidly become successful in understanding the curriculum and can pass their high-stakes exams.

#### Pass Rate for 24,356 Students Using 9 Types of Study Aid



Source: Customer Data: Certification Exam

#### THE COGNITIVE APPROACH

The end product of learning is information stored in the brain as memory. Yet most of us in education are unaware of the neurological mechanisms involved or what those mechanisms imply for learning. After a career spent researching this problem, the former Dean of Psychology at UCLA and chairman of Amplifire's Science Board, Robert Bjork, expressed the dilemma succinctly...

Current customs and standard practices in instruction, training, and schooling do not seem to be informed by an understanding of the complex and unintuitive dynamics that characterize human learning and memory. Nor do we, as individuals, seem to understand how to engage fully our remarkable capacity to learn. Instead, we seem guided by a faulty mental model of ourselves as students that leads us to manage our learning activities far from optimal ways.

-Robert Bjork, On the Symbiosis of Remembering, Forgetting, and Learning



#### THE STUDY AT A PRIVATE UNIVERSITY

A private university decided to take a scientific, design-based approach to determine if Amplifire could help their business students. Key factors considered when setting up the study included:

- A historically difficult course with high dropout rates and student struggle, such as the 401 advanced business class.
- A trusted partner who would consult and guide them to success for this course and future courses.
- A platform that could be the primary learning tool for online courses.
- An effortless implementation for busy administrators and instructors.

## Content Conversion

Guided by Amplifire's content experts, course materials were converted to exactly match the syllabus and learning goals for the course.

# Integration & Implementation

LTI integration ensured a secure launch within the learning environment and the transfer of information. Students and instructors used a single sign-on.

## Reporting

Instructors quickly learned how to use the reporting dashboard and to analyze reports that tracked course success.

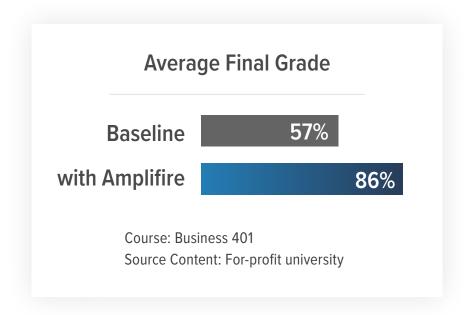
#### Analysis

Amplifire guided a private university through a full course readout highlighting key performance indicators and return on investment.

#### **FINAL GRADES**

- The average grade increased from 57% to 86%
- 77% of the Amplifire students received As and Bs
- 4% received Ds and Fs

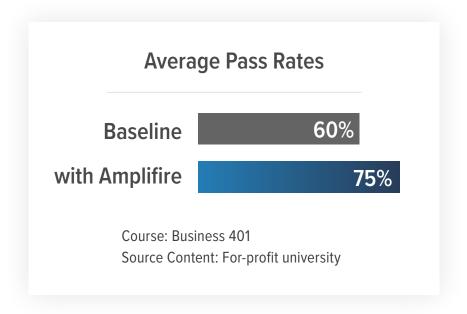
Higher grades aren't because students already knew the material. Amplifire measures "prior knowledge," which is the proportion of material students are confident and correct before learning. Prior knowledge was 37%.



#### **PASS RATES**

The pass rate increased because students were highly engaged in a personalized learning experience with the Amplifire-enabled course.

Engagement and pass rate were further lifted because students saw a significant reduction in study time needed to master the concepts presented in each module—they spent less than one hour per week completing each.

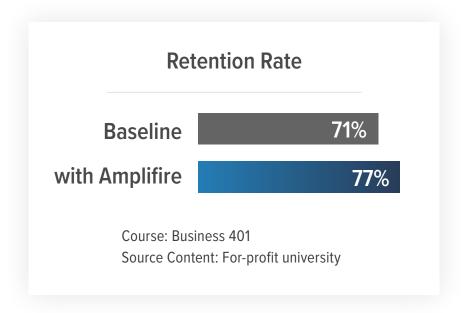


#### **RETENTION RATE**

Retention increased to 77% of students completing the course.

Students only dropped the course because of personal circumstances that prevented them from studying the material.

Over the baseline control, more students were able to master the Business 401 concepts, which enabled them to complete their coursework and progress to the next-level courses.

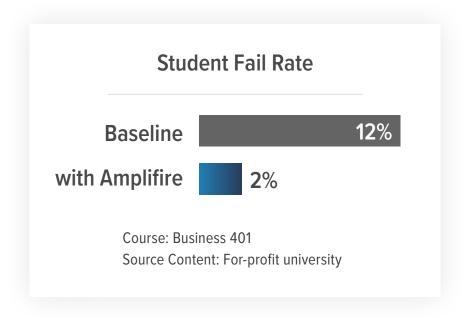


#### STUDENT FAIL RATE

The fail rate dropped significantly to 2%.

Reduced failure caused the next course progression rate to increase to 84%.

Amplifire students efficiently mastered the concepts presented to them, and they gained the confidence to succeed in later coursework.



#### STUDENT ENDORSEMENTS

The course format was new and I thought it really gave a better perspective of the course material.

I loved the new course set up without the weekly discussion posts.

I loved this class and the new format! I felt much more engaged with the professor with this format as well.

This is by far my favorite class of the ones I have taken.

...all the extra instruction material was helpful in understanding the business concepts.

This new way of class is very engaging.

I was a little intimidated by the new class changes but I actually liked it.

I enjoyed the interaction of this course.

I really would like to say that this format really helped to better my confidence in the material.

HellIII yesssssss! Amplifire should be used in every course here!

Easy to learn. I love using this to study. If I get the answer wrong it explains the correct answer and tells me what I put down actually is. Best of all I do not have to carry my book around with me to study.

Got an A. Thank you!

The Amplifire Modules really deepened my understanding and helped me get A's.



#### BRIEFLY...

#### How it works

Built on learning triggers discovered in cognitive science and now with over three billion student interactions, Amplifire has proven to help students learn faster, retain knowledge longer, and perform better in class.

#### For students, Amplifire...

- Makes learning stick
- Stamps out confidently held misinformation that leads to mistakes
- Gives Al-generated guidance when struggle occur
- Replaces knowledge gaps and uncertainty with confident mastery

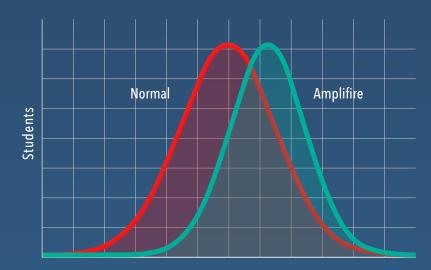
#### For instructors, Amplifire...

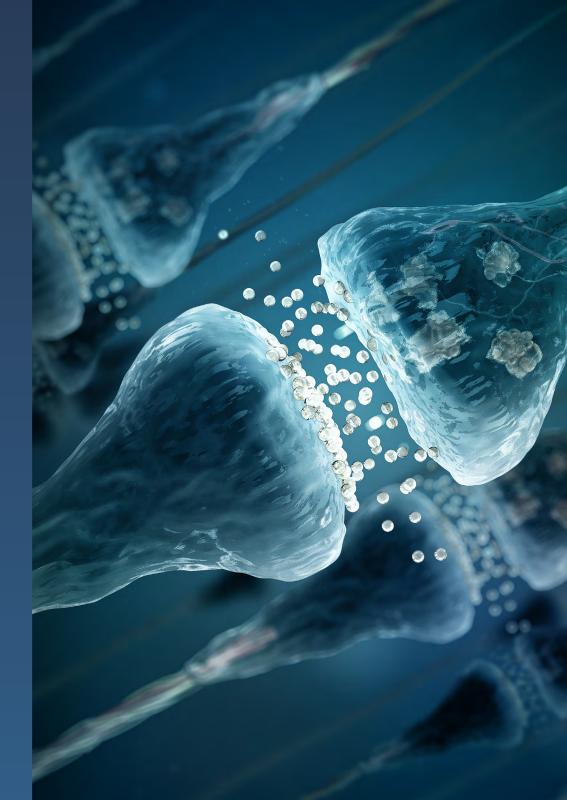
- Delivers actionable insights that identify students who struggle
- Recommends a corrective course of action based on student learning patterns
- · Reveals the topics where confusion or misconceptions exist
- Provides a road map that shows which topics need to be emphasized

## IMPROVING EARNING OUTCOMES

Amplifire delivers the best learning results because it is the only platform that:

- Uses patented algorithms that find and fix knowledge gaps, doubts, and misconceptions that exist in all students
- Intelligently personalizes the learning experience for each student
- Pinpoints student struggle and alerts appropriate staff members of students at risk with actionable insights
- Shifts the bell curve by lifting lower-performing students while supporting long-term learning for all students





#### **ABOUT AMPLIFIRE**

With more than 3 billion learner interactions, Amplifire is the leading results-based learning platform built from discoveries in brain science and proven to help learners master faster, retain knowledge longer, and perform better. It detects and corrects knowledge gaps and misinformation that exist in the minds of all people and hinders their optimal performance. Healthcare, education, and Fortune 500 companies use Amplifire's patented learning algorithms, knowledge analytics, and diagnostic capabilities to drive improved outcomes with a significant return on investment.

#### **CUSTOMERS INCLUDE...**













- Amplifire provided us the ability to assess critical knowledge gaps on the material and identified the topics that the departmental teams might need additional training to maintain competency.
  - Tressa J. Daniels, M.S.
    Global Director, Human Factors Engineering

