The Transformation of Homework

As education evolves, some things remain the same. Even as technology is transforming the classroom, higher education instructors perpetually struggle with two issues: ensuring that learners come to class prepared and keeping them engaged in what they are learning.

Instructors assign homework to encourage practice of key concepts, learn course content and get ready for the next class. But, traditional homework can be dull and frustrating for those accustomed to rich media experiences and immediate feedback. For instructors, preparing and grading homework assignments is labor-intensive, and may not be the best use of time and brainpower.

Aplia addresses these challenges. This innovative online solution transforms homework — often the least favorite part of class for both learners and instructors — into an interactive and engaging learning tool.

Aplia, Cengage Learning’s online homework and assessment tool, has been used by more than one million learners at more than 1,200 universities, colleges and other institutions. Recently, Cengage Learning reviewed data from several sources to determine how well Aplia:

- Supports learning.
- Aligns with course materials.
- Enhances instructor effectiveness.
- Improves success in the classroom.

About Aplia

Aplia is an online learning solution that provides interactive chapter assignments correlating to specific textbooks. Aplia makes use of tutorials, news analysis, experiments and other multimedia features to maintain learner interest. As learners complete online assignments, they receive immediate grades and automatic feedback on each problem set. Assignments are automatically graded and entered into the instructor’s Aplia gradebook, enabling instructors to focus on less labor-intensive and higher-impact areas of teaching. Aplia coursework is available for use with more than 200 textbooks across 21 disciplines including business communication, economics, finance and statistics.
Success Rates Jump with Aplia

Mid-South Community College is one of many institutions that has experienced positive results with Aplia. Looking to improve learner success rates, an instructor in Developmental Studies redesigned the curriculum of its developmental reading program to place more emphasis on individualized learning and chose to incorporate Aplia as a core component of the course.

Course instructor Dr. Nakeisha Griffin liked that Aplia succinctly reiterates key course concepts and provides learners with immediate and applied practice. She also saw the benefit of Aplia’s flexible grading option: with three attempts to correctly answer each problem set, learners truly learn the course material while working toward improving their grades.

When compared to the course before the redesign, Aplia still supported the course goals and led to a dramatic increase in success rates. As shown below, the percentage of learners that passed the developmental reading course jumped by more than 20 percentage points the first semester Aplia was used — from 44 percent to 65 percent. Over time, Mid-South has maintained this improved rate of learner success, with an average three-fifths of learners achieving a passing grade of C or higher over the subsequent three semesters.

Course Success Rates Improve with Aplia

“Aplia allows my students multiple attempts to master key concepts...they compete with themselves and want to work to improve their grade.”

Nakeisha Griffin
Ed.D., Developmental Communications Instructor, Mid-South Community College
Aplia Leads to Higher Grades

A study recently presented at the 1st International Conference on Education and New Learning Technologies showed the positive impact of Aplia on learner performance. At Grambling State University, one section of a business statistics course used Aplia, while another section (taught by the same instructor using the same textbook) did not. The results were impressive: learners using Aplia achieved test scores that were an average of 11 percentage points higher than scores for non-Aplia users.

Aplia helps learners learn, not just complete assignments. As online homework is completed, they receive instant feedback on whether their answers are correct or incorrect, with explanations, tutorials and real-world scenarios to help internalize the material. A 2009 study at Auburn University provided evidence that using Aplia in a microeconomics class led to higher grades. A 10-point improvement in graded Aplia homework scores from the first exam to the second exam resulted in a 2.3-point exam grade improvement, even after controlling for differences in GPAs (which affect test scores).

Learners Using Aplia Are Better Prepared for Tests

Feedback from an online survey of learners and instructors using Aplia shows that both groups feel that Aplia effectively prepares learners for tests. Unlike with traditional homework assignments, learners do not have to wait to find out if their answers are right or wrong. More importantly, they don’t have to wait until the next class to ask the instructor if they are having difficulty. The interactive nature of Aplia helps them better understand the content so they are better prepared for exams.

Aplia Prepares Learners for Tests

In an online survey of Aplia users, 88 percent of instructors said that Aplia has a positive effect on performance.
**Aplia Complements Classroom Materials**

One of the reasons that performance increases with use of Aplia is because the online homework solution is so tightly integrated into the course. For each of the more than 200 textbooks it supports, the Aplia content was specifically developed to match the content, tone and terminology used in the book.

As shown below, the vast majority of both learners and professors feel that Aplia content works well with the textbook and within the framework of the course.

**Aplia Aligns with Course and Textbook**

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<tr>
<th></th>
<th>Learners</th>
<th>Instructors</th>
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</thead>
<tbody>
<tr>
<td>Aplia content fits very well with course</td>
<td>69%</td>
<td>72%</td>
</tr>
<tr>
<td>Aplia content fits very well with textbook</td>
<td>72%</td>
<td>83%</td>
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“\[quote\]Aplia is a valuable learning and assessment component of my courses. Its problem sets are well integrated with the textbook. The readings are current, illustrate concepts well and the discussion questions are probing.\[/quote\]

David Ortmeyer
Economics, Bentley College
Aplia Helps Instructors Teach Better

For instructors, a key benefit of Aplia is that it enables them to focus their teaching efforts where they can have the most impact. Rather than spending a lot of time preparing and grading homework assignments, instructors can focus on answering learner questions. And when learners come to class better prepared due to Aplia, instructors are able to lead more in-depth discussions on course content.

Aplia also helps instructors assess learning through diagnostic tests and reports that show overall class, learner-by-learner and topic-by-topic performance.

Ninety percent of instructors said that Aplia helps them teach better, according to an online survey.

Aplia: The Evolution of Homework

For both on-ground and online courses, Aplia has transformed homework. Much more than an alternate way of completing assignments, Aplia is a comprehensive learning tool. Multiple data sources and years of experience show that Aplia is an effective solution for both learners and instructors.

For learners:

The interactive nature of Aplia, along with the immediate feedback and grading components of the tool, increases understanding of course material, leading to stronger performance and deeper understanding of key concepts.

For instructors:

When learners come to class better prepared, instructors can make more effective use of class time. Additionally, Aplia reduces the labor-heavy tasks of preparing and grading homework, enabling instructors to focus more on class instruction.
About the White Paper Data

Content from this white paper was derived from the following sources:

• ForeSee Results online customer satisfaction survey of approximately 1,400 learners and instructors who used Aplia and provided feedback from May 11 – June 4, 2012.

• A study of the effectiveness of Aplia as used at Mid-South Community College in West Memphis, Arkansas from 2010 to 2012.


• “Homework, Practice and Performance in Principles of Microeconomics,” Steven B. Caudill, James E. Long, Department of Economics, Auburn University, Alabama.
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