

JUNE 2022

Enhancing Course Engagement with Harmonize at Piedmont Community College

College Innovation Network
Evaluation and Impact Report

Please direct media queries to:
cin@wgulabs.org

Citation:
College Innovation Network
(2022, June). Enhancing Course Engagement with Harmonize at Piedmont Community College.
CIN Evaluation and Impact Report.



College
Innovation
Network

Beyond the Standard Discussion Forum

As higher education continues its technological transformation, increasing student engagement in courses is of top concern for professors and administrators. With more components of learning moving online, whether it be through flipped classroom models or fully online courses, designing highly engaging learning experiences is paramount for learning success.

A popular way for students and professors to engage in courses, especially asynchronously, is through the use of discussion forums¹. Discussion forums are typically integrated into university learning management systems (LMS), such as Blackboard, Canvas, or Moodle. LMS-integrated discussion forums are some of the most common ways in which students interact with one another in courses.

The goal of LMS discussion forums is to increase course engagement to promote better learning outcomes. Research has shown that active and engaged learning leads to better outcomes in courses and reduces equity-related performance gaps^{2,3,4}. Other research has shown that participation in discussion forums is related to better course outcomes in traditional courses⁵ and in Massive Open Online Courses⁶ (MOOCs).

Although LMS discussion forums are a standard way for students to interact about course content, these forums are typically text-based and can be challenging to extract deep engagement from students. They are also difficult for professors to track and grade student participation.

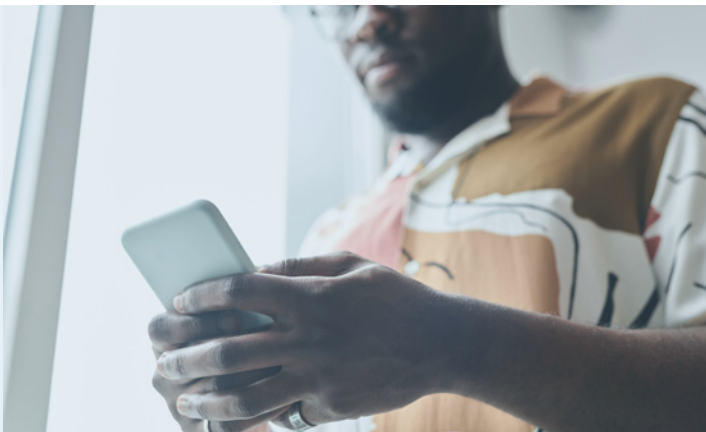


To address these limitations of traditional LMS discussion forums, Harmonize by 42 Lines has developed a product that seamlessly integrates with existing LMSs and allows for multimedia peer interactions to promote dynamic discussion and boost student engagement.

Harmonize allows students to easily embed web content via URLs, integrate visuals such as images and videos into their posts, poll classmates on ideas, annotate multimedia content, and even allows for audio replies to posts. The platform can be fully used on mobile devices as well—increasingly important as students are on the go and may not always have access to a computer.

Grading is also more seamless from the professor's point of view compared to traditional LMS discussion forums. Harmonize has a 'milestones' feature that can be added within discussion posts to keep students on track to engage with content by responding to their peers, and autograding features can reduce time spent on grading.

By making participation exciting for students, and easy to evaluate for professors, **Harmonize can boost engagement and learning outcomes for students.**



Using Harmonize for Course Discussions

This report details the results of a pilot study implementing Harmonize in courses at Piedmont Community College in North Carolina during the Fall 2021 term. Because of the small sample of courses and students, we view this report as a pilot of the impact of Harmonize on student engagement.

We first share product data to give insight into how students and professors are using the features of Harmonize in course discussions. We then compare the distribution of student course grades for a sample of three courses using Harmonize for a proportion of discussions and of which there was a comparison course (same course) not using Harmonize for any discussions (only using the standard LMS discussion). And finally we share two interview case studies with Piedmont faculty to highlight the creative ways in which faculty are using Harmonize to enhance student learning in their courses.

Overall, we conclude that **Harmonize shows strong promise for boosting course engagement and learning outcomes**, both in the classroom and asynchronously outside the classroom.

PRODUCT DATA: HOW STUDENTS AND FACULTY ARE USING HARMONIZE

Harmonize stands out from standard LMS discussion forums for its ease of integrating multimedia content into discussion posts to engage students and promote more in-depth conversations among students.

When assessing the types of content students include in their Harmonize posts across the fall term pilot, we see that **60% of student posts included images, web content (i.e., embedding URLs), or audio and video content** in addition to text (**Figure 1**). That the majority of students elect to go beyond only text to include dynamic, multimedia content in their posts demonstrates the added value of Harmonize's features to students as they engage with their peers in discussions.

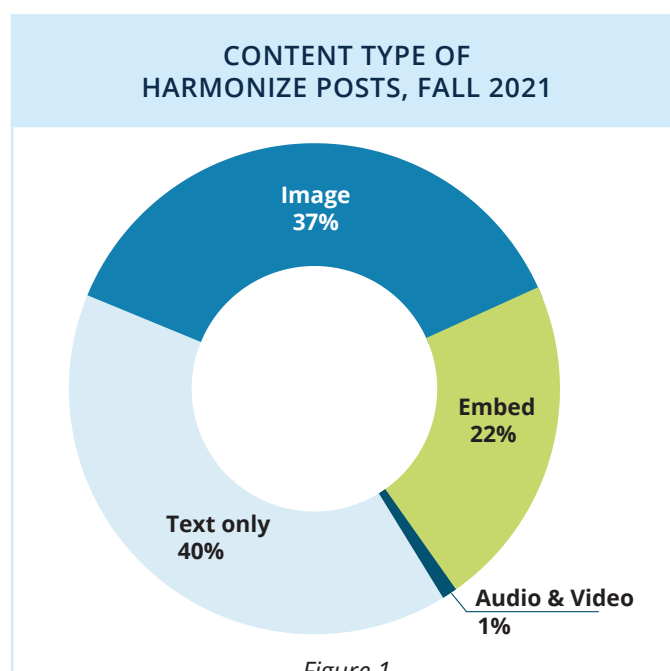


Figure 1

Harmonize also stands out for the ease by which faculty can add milestones to discussion topics they assign to students. These milestones set clear expectations for students and encourage them to remain engaged with the course content throughout the week. **The milestone feature was popular with faculty, with them including milestones in 87% of the discussion topics they assigned.** Use of milestones led to higher engagement by students: **on discussion topics that included milestones, students responded with 55% more posts and 54% more comments.**

Students responded with 55% more posts and 54% more comments on discussion topics that included milestones

Harmonize also makes grading easier for faculty, in part by allowing an autograding feature for student participation. **Faculty used auto-grading for 48% of discussion topics they assigned** across the Fall 2021 term. Features of EdTech that make the user experience for both students and faculty are clearly valued.

PILOT DATA: IMPACT OF HARMONIZE ON COURSE GRADES

Student engagement within a course is hypothesized to boost learning, and therefore course grades. At Piedmont Community College, Harmonize was introduced in some capacity across a variety of courses during the Fall 2021 term, allowing a preliminary look into how the use of Harmonize is associated with student course outcomes.

We selected courses at Piedmont Community College that had at least two sections being taught in the Fall 2021 term and in which one section used Harmonize for at least some assignments and another section did not use Harmonize for any assignments. We then compared the final course grade distributions for those pairs of courses for a Biology course and two English courses (**Figure 2**).

DISTRIBUTION OF STUDENT COURSE GRADES COMPARING COURSES WITH AND WITHOUT HARMONIZE

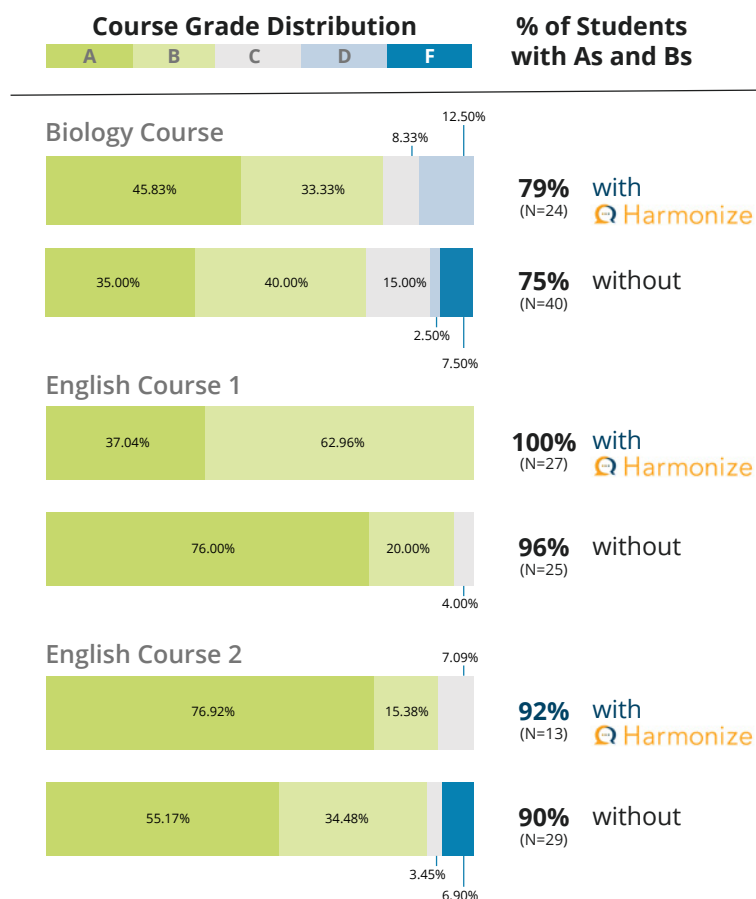


Figure 2

These **pilot data show that courses in which Harmonize was used in some capacity had more students earn As and Bs as compared with the same course that did not use Harmonize** for some of the assignments. This preliminary finding is consistent with the idea of more engaging content being associated with better student outcomes.

It is crucial to note that these data should be considered preliminary, as we cannot draw any strong conclusions given the small sample sizes and limited variation inherent in these data. As we and others continue to evaluate the impact of Harmonize on student engagement and learning outcomes with larger samples, the size and nature of the impact will become increasingly clear.

CASE STUDY: HOW FACULTY FLEXIBLY USE HARMONIZE TO ENHANCE STUDENT ENGAGEMENT



Katie Hester, M.S.

Biology Instructor with 14 years of teaching experience

“*I don't think students are getting much out of [traditional discussion forums].*”



MAKING DISCUSSIONS ENGAGING

Katie Hester began using Harmonize at the start of the Covid-19 pandemic. She observed that students were bored with the classic learning management system (LMS) discussion forums because each class uses them the same way: students were required to post something, read a prescribed number of their peer's posts, and then post a response.

But Katie noticed that students were not really engaged with the conversation. Rather, students were simply going through the motions of providing posts and responses to get their participation points. **The classic discussion format is overused and unengaging.** “I don't think students are getting much out of them,” Katie said.



BENEFITS FOR STUDENTS

Katie discovered that Harmonize had several features that went above and beyond the standard LMS discussion forum that boosted student engagement in her course.

She noted that Harmonize allows easy multimedia integration, making the discussion posts more visually appealing and engaging for students. The visual setup of Harmonize is also more appealing than a list of discussion topics typical of LMS discussion forums. Students, who are used to interacting with a variety of media forms online,

are more engaged when they can add link embeds, videos, and pictures in their discussions. **Students can even “react” and like their peers' posts, similar to social media.** Overall, these features allow students to be much more engaged and excited to participate.

Another benefit of Harmonize is that it's mobile friendly. Some students may not always have easy access to a computer. **With Harmonize, students can still easily engage with class discussion from their mobile device—it's more accessible for more students.**



BENEFITS FOR INSTRUCTORS

Harmonize was not only beneficial for students, but also for Katie's practice as an instructor. From a grading perspective, **Harmonize's “teacher view” provides an easy visual of what students have responded to other's posts, as well as showing whether she as the instructor has responded.**

Instructors can also see a student's overall engagement with course discussions. Katie notes that she can easily see for each student what original content they've created, what they have responded to, and how many of their peers' posts they've viewed. That means that instructors get a broader view of student engagement across the course with this tool.



HOW KATIE USES HARMONIZE

Whereas classic LMS discussion forums are primarily used for asynchronous peer engagement, Katie uses Harmonize for both in person peer engagement and asynchronous engagement outside of class hours.



Using Harmonize for in person work allows for students to work on their research assignments and other students to see their work in real time, adding comments and points for further discussion. Having multiple ways for students to interact in class is more inclusive for shy students as well. Seeing students' work live also helps prompt spontaneous discussion with peers in the classroom.

Currently, Katie uses Harmonize for two primary assignment types in her Biology courses:

1

Independent learning assignments: students are provided a biology topic to research and then use Harmonize to share their work.

2

Debate assignments: students use Harmonize to discuss key issues in biology with one another.

CASE STUDY: HOW FACULTY FLEXIBLY USE HARMONIZE TO ENHANCE STUDENT ENGAGEMENT



Ryan Smith, M.A.

English Instructor with 7 years of teaching experience

“It can be scary to involve yourself in new technology for teaching, but it can be a great way to reach new students and improve their learning experience.”



ENGAGING STUDENTS IN HYBRID COURSES

As higher education shifts to increasing hybrid course options, instructors must develop ways to seamlessly tie in person course time with asynchronous learning. Interactive multimedia EdTech tools can provide a better learning experience than static content.

Ryan Smith, who is teaching hybrid English courses at Piedmont Community College, is using Harmonize to help bridge in-class and asynchronous engagement.

Having a single tool that can be accessed during class and independently outside of class allows for peer discussions to continue across the week, even when students only attend class once per week in the hybrid format.



KEEPING STUDENTS ON TRACK

Hybrid and asynchronous learning options can be challenging for keeping students on track and completing work on time. To combat this, Ryan uses the milestone feature of Harmonize regularly in his assignments.

Since switching his assignments from his standard LMS discussion forums to Harmonize, Ryan has noticed that students are staying on top of deadlines and participating on time.



ADVICE FOR INSTRUCTORS LEARNING NEW EDTECH

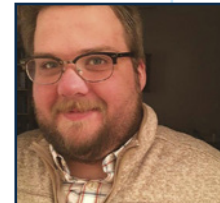
Ryan is still new to Harmonize and is learning new and creative ways to use the tool every term. But discovering new ways to use innovative tools keeps his teaching fresh for students. Ryan noted that, "It can be scary to involve yourself in new technology for teaching, but it can be a great way to reach new students and improve their learning experience."

For instructors trying new EdTech in their courses, Ryan advises to avoid thinking that adding a new EdTech product means needing to completely change everything you're doing in a course. Rather, work to integrate new EdTech tools and enhance a couple assignments in each course each term. **Instead of viewing new EdTech as a drastic change, he suggests thinking about it as another tool to improve students' overall learning experiences.**



HOW RYAN USES HARMONIZE

Currently, Ryan uses Harmonize for two primary assignments in his English courses.



1

First, he uses Harmonize as a peer-review tool in his writing courses.

Rather than exchanging document files, Ryan has his students post their writing content within a Harmonize post. **The annotation features allow students to comment and respond to one another's writing more authentically, and in real time.** Keeping classwork within one online space is also helpful to students as they don't have to communicate on platforms outside their LMS.

Harmonize allows for a seamless integration between asynchronous work and class time. During class, Ryan can bring up students' writing posts and continue the discussion that students were having asynchronously. Now, as a class, students can expand on feedback and ask questions.

2

The second way he uses Harmonize is as an immersive learning experience for his literature courses. Because Harmonize allows for easy multimedia content integration within a post, Ryan can create instructional topics that include embedded web links, videos, and other visuals. Essentially he can create custom learning content for his course. A primary benefit is that all the multimedia components display within the post, rather than opening new tabs or windows, allowing students to see everything in one single space.

He also can bring up these posts in class to continue the discussion and iterate on students' reactions and comments, which Ryan notes is beneficial for both his teaching and his students' learning experience.

Using EdTech For the Hybrid, Multi-Modal Future

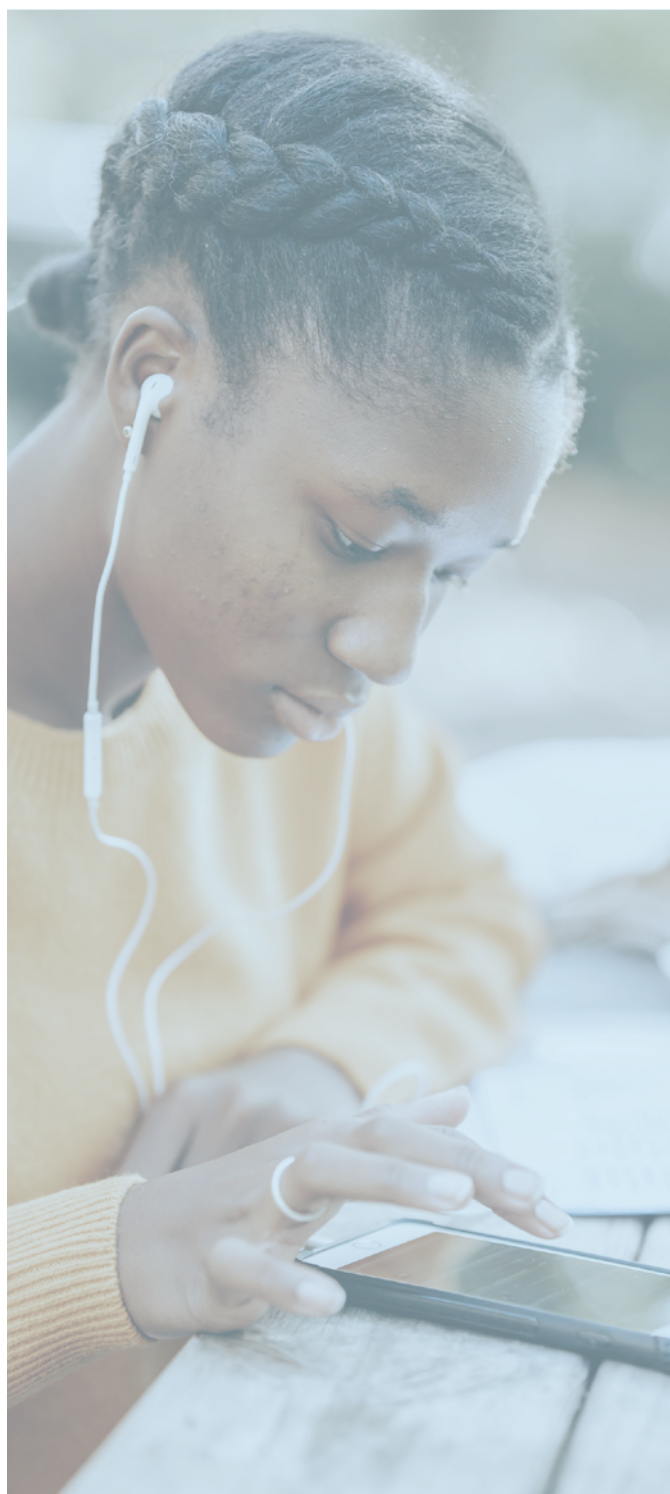
Student engagement will continue to bring new challenges for faculty as courses diversify in their course modalities. Courses are increasingly moving into hybrid and multi-modal formats, requiring new technology to build seamless engagement and learning experiences online and offline—and both at once.

A recent College Innovation Network survey⁷ of faculty shows that **88% of faculty agree that they will be delivering increasing amounts of content online moving forward**. Importantly, the CIN survey also shows that 81% of faculty are confident in their ability to integrate new EdTech into their courses, and 71% of faculty feel that EdTech enhances their teaching.

This is good news: **Faculty are enthusiastic about using EdTech to enhance learning experiences for students**. This report provides a case study into how an EdTech tool can be used flexibly and creatively by faculty to enhance student engagement in courses. The examples of how faculty at Piedmont Community College used Harmonize shows that EdTech should not only be synonymous with online learning. In fact, **EdTech can enhance in person class instruction and provide a seamless bridge between asynchronous online and in person learning experiences for students**.

Faculty will be the leaders of the technological transformation of courses and instruction. By highlighting the innovative ways faculty are using EdTech to their teaching practice, we can ensure that student engagement in diverse course modalities stays high.

This report drives home the need for EdTech vendors and college leaders to field the faculty voice in EdTech decisions and learn from faculty to identify what they need from EdTech in their courses. Doing so requires continuous conversations and research to ensure meeting the constantly evolving needs of faculty and students.



References

1. Bond, M., Buntins, K., Bedenlier, S., Zawacki-Richter, O., & Kerres, M. (2020). [Mapping research in student engagement and educational technology in higher education: A systematic evidence map](#). *International Journal of Educational Technology in Higher Education*, 17, 1-30.
2. Freeman, S., Eddy, S. L., McDonough, M., Smith, M. K., Okoroafor, N., Jordt, H., & Wenderoth, M. P. (2014). [Active learning increases student performance in science, engineering, and mathematics](#). *Proceedings of the National Academy of Sciences*, 111, 8410-8415.
3. Hew, K. F., & Lo, C. K. (2018). [Flipped classroom improves student learning in health professions education: A meta-analysis](#). *BMC Medical Education*, 18, 38-50.
4. Haak, D. C., HilleRisLambers, J., Pitre, E., & Freeman, S. (2011). [Increased structure and active learning reduce the achievement gap in introductory biology](#). *Science*, 332, 1213-1216.
5. Green, R. A., Whitburn, L. Y., Zacharias, A., Byrne, G., & Hughes, D. L. (2018). [The relationship between student engagement with online content and achievement in a blended learning anatomy course](#). *Anatomical Sciences Education*, 11, 471-477.
6. Wise, A. F., & Cui, Y. (2018, March). [Unpacking the relationship between discussion forum participation and learning in MOOCs: Content is key](#). In *Proceedings of the 8th International Conference on Learning Analytics and Knowledge* (pp. 330-339).
7. College Innovation Network (2022, May). [Faculty as edtech innovators: Moving beyond stereotypes to promote institutional change](#). *CIN EdTech Survey Series*.



College
Innovation
Network

PIEDMONT COMMUNITY COLLEGE is a public two-year institution serving Person and Caswell counties operating under the direction of a local Board of Trustees and a dedicated leadership team. Piedmont Community College strives to be the leading contributor to the economic, educational, and cultural vitality of our communities by providing high-quality services and programs that ensure student success in personal development and professional achievement. The College employs about 300 full-time and part-time faculty and staff. These numbers include all employees working at both campuses and all off-campus locations. Learn more about Piedmont Community College at www.piedmontcc.edu.

HARMONIZE provides a suite of online discussion and collaboration tools for higher ed that help instructors increase student engagement in their courses. Built to integrate seamlessly with the LMS, Harmonize enriches the learning experience with tools that boost engagement, promote inclusive learning, and save valuable time for instructors. Learn more about Harmonize at harmonize.42lines.net.

THE COLLEGE INNOVATION NETWORK (CIN) at WGU Labs is a network of higher education institutions committed to addressing the core challenge of promoting belonging and engagement in the modern higher education environment. We're leveraging technology to build highly engaged learning communities from enrollment through graduation—and beyond. CIN supports educational institutions by identifying areas of need, implementing effective education technology for students, and demonstrating impact through research. Join us as we build learning communities where all students belong. Learn more about CIN at www.wgulabs.org/cin.

REPORT CONTRIBUTIONS

This research was made possible through the collaboration of Don Miller, Joey Sanders, Katie Hester, and Ryan Smith at Piedmont Community College; and Marcus Popetz, Alicia Villarreal, and Lauren O'Brien at Harmonize. Nicole Barbaro at WGU Labs designed the study, analyzed data, and wrote the report. Omid Fotuhi, Natalie Berkey, and Erika Wandsneider at WGU Labs provided critical revisions to the report. The final report was designed by Christine McDonough at WGU Labs. The work was made possible, in part, by funding provided to the College Innovation Network by the Charles Koch Foundation.

Inquiries about this report can be addressed to cin@wgulabs.org

Citation:

College Innovation Network (2022, June). Enhancing Course Engagement with Harmonize at Piedmont Community College. *CIN Evaluation and Impact Report*.



College
Innovation
Network