

Friday Institute Education Brief

ASSISTments Use During In-Person and Remote Instruction



Executive Summary

The NC ASSISTments Replication Study began in the 2017-18 school year and aimed to replicate the findings from a prior study conducted in Maine. That study found that the students of 7th-grade mathematics teachers who used ASSISTments for homework scored significantly higher on the Terra Nova mathematics exam than the students of teachers who did not use ASSISTments. Unfortunately, the COVID-19 pandemic forced North Carolina's schools to move to all-remote instruction in March 2020 and the End-of-Grade exams were canceled, which made the replication study impossible to complete. This forced a change in the ASSISTments study and a re-evaluation of what researchers could learn about the use of ASSISTments in schools in North Carolina. Using surveys and interviews, researchers at the Friday Institute for Educational Innovation conducted a case study of teachers' use of ASSISTments in in-person instruction and in remote instruction, both during the NC ASSISTments Replication Study and outside of the study.

ASSISTments is an online tool math teachers use to assign homework. Students enter their answers into ASSISTments and get immediate feedback and hints to help them develop their understanding. Teachers receive real-time data reports showing student and class results, as well as common wrong answers, which they use to guide homework reviews and follow-up instruction.

Study Findings

Q1. How did teachers implement ASSISTments during the NC ASSISTments replication study, prior to COVID-19 and with COVID-19?

- **Teachers' use of ASSISTments did not significantly change from in-person to remote instruction.**
Survey and interview findings indicated teachers used ASSISTments primarily for classwork and for homework, both in person and remotely. It was also used, less commonly, for assessment.
- **ASSISTments reports were used to complete steps 3 and 4 of the Four Steps of Independent Practice.**
The ASSISTments reports were used by teachers to identify which problems to review with students and to drive class discussions regarding the problems reviewed together.
- **Technology issues and local requirements were sometimes obstacles to ASSISTments use.**
Many teachers shared that their students had difficulties accessing ASSISTments due to technical limitations, such as a lack of digital devices or a lack of reliable internet access. This was more prevalent during in-person instruction but remained a problem in some schools during remote instruction, even after many schools provided students with digital devices and hot spots.

Q2. How did ASSISTments affect teachers' instructional practices during the NC ASSISTments replication study, before COVID-19 and with COVID-19?

- **ASSISTments changed how teachers determined if their students had understood lessons.**
The ASSISTments reports were used by teachers to determine the overall success of lessons and to home in on which parts of their lessons students had struggled with.
- **Teachers used ASSISTments reports to adjust their instruction.**
Teachers reported using the ASSISTments reports to write or adjust their lesson plans, to respond to the ASSISTments reports with skill reviews and/or to create small groups for individualized instruction.

- **Teachers' attitudes toward homework changed with ASSISTments use.**
Some teachers shared that using ASSISTments had affected how they viewed and used homework in their instruction. They said that homework became more valuable to them because of the feedback provided to students and because the reports helped them plan follow-up instruction.

Recommendations

Design a drawing tool. ASSISTments users would value an in-program drawing tool. Some ASSISTments problems require students to upload pictures of their work, which can lead to difficulties for users. Some students and parents had difficulty using the upload tool, and teachers were sometimes unable to explain how to do it when teaching remotely. This contributed to teachers using other programs, such as Nearpod, which offered them more options and flexibility.

Ensure ASSISTments has a uniform appearance across devices. A small number of users noted that they faced difficulties assisting their students remotely because the program looked different across device types. This made using ASSISTments difficult in a remote environment, especially when teachers tried helping parents and students who struggled with the program. Teachers realized that what they saw on their screen was not the same as what was on their student's screen. As consistency of platform appearance across all device types would benefit ASSISTments users, ASSISTments may want to consider developing an app that students and parents could access easily.

Continue to solicit feedback from users. During data collection for this study, researchers heard from teachers about things they'd like to see added to ASSISTments and ways that ASSISTments was difficult for them to use. ASSISTments should continue to regularly ask users for their feedback about the platform. This practice has already led to improvements in the platform, helping drive the third iteration (Fresh New Look). It would be beneficial to ASSISTments to have a users' group to consult regularly, whether through surveys, interviews or group discussions. If ASSISTments can regularly hear from teachers using ASSISTments with their students, the platform will be able to respond to issues, provide features teachers need and remain a useful tool.

Address varied understandings of formative assessments. Survey results and interview findings revealed that teachers have vastly different conceptions of, and definitions for, formative assessments. ASSISTments should address these various understandings so that teachers are using a common language, which could lead to less confusion. ASSISTments could produce and feature introductory video tutorial explanations of formative assessment on the ASSISTments website. ASSISTments should also consider creating a short professional development module to help teachers understand what formative assessments are and the many ways they can be used.

Investigate further teachers' uses of ASSISTments in both remote and in-person instruction. Teachers shared, via the survey and interviews, that they used ASSISTments in the same ways whether they were teaching in person or remotely. This presents an opportunity to dive deeper into the uses of ASSISTments in both contexts and to learn whether this finding could be replicated in other locations and conditions. This finding indicates ASSISTments has the potential to support teachers and students in multiple learning environments and to become an important tool for instruction, whether in person or remotely.

About the Researchers



[Jamie Gillespie, Ph.D.](#), is a research associate at the Friday Institute.



[Kevin Winn, Ph.D.](#), is a research assistant at the Friday Institute.



[Malinda Faber](#) is a research associate at the Friday Institute.