Best Practices in Implementing an Online Learning Program for Elementary Literacy Intervention

Melissa Warr
Brigham Young University, USA
Melissa.C.Warr@gmail.com

Nari Carter
Imagine Learning, Provo, Utah, USA
Nari.Carter@imaginelearning.com

Abstract: Educators face many challenges when integrating technology into school systems. During the 2015–2016 school year, a school district in the Pacific Northwest received a large technology grant to integrate new programs into its schools. The district chose to use Imagine Learning, an online language and literacy program, to support struggling readers and English Language Learners. The Imagine Learning research team studied the district's implementation of the program through extensive interviews and observations. In this presentation, we share effective practices for implementation identified through interviews and observations. Specifically, teachers described practices related to classroom management, monitoring academic growth, and communicating and collaborating with others.

Introduction

To effectively facilitate learning, instructional technology must be integrated into school systems (Norum Grabinger, & Duffield, 1999; Hokanson & Hooper, 2004). At school levels, teachers are primarily responsible for integrating technologies within existing instructional programs. To effectively integrate technology, teachers must learn to utilize programs effectively to achieve instructional goals, including continuously evaluating and adjusting implementation (Hall & Hord, 2001).

Successfully integrating technology can be challenging (Ertmer & Ottenbreit-Leftwich, 2012; Hsu & Ping-Yin, 2013; Rogers, 2000; Zhao & Frank, 2003). Often, teachers need support to not only adopt new technologies, but to use technology to effectively support learning. In one school district in the Pacific Northwest, the district demonstrated commitment to technology implementation by purchasing software for schools, providing funding for devices, hiring staff to manage implementations and holding professional development sessions for teachers. One of the programs the district adopted was Imagine Learning, a language and literacy program. The district adopted the program to provide supplemental instruction for students in first through fifth grade. Imagine Learning is designed to support English language learners and struggling students in acquiring language and literacy skills necessary for school success. The program is adaptive and individualizes instruction for students.

As the schools used Imagine Learning, we studied their implementation models through extensive teacher interviews and classroom observations, focusing on how teachers blended online and in-person instruction and how they defined effective practice using the program. Throughout the year, teachers monitored and adjusted implementation to improve outcomes for struggling students. In this presentation, we share best practices from the first year of implementation, including strategies for classroom management, monitoring academic growth, and communication and collaboration. After a brief introduction to each area, we list effective practices teachers shared during interviews and observations.

Implementation Model

The school district received a significant amount of grant money to integrate technology into their schools. In addition to purchasing programs and devices, the district hired personnel at both the district- and school-level to support implementation. The district adopted Imagine Learning to support struggling readers and English Language Learners (ELL's). At each participating school, one certified teacher and at least one para-educator managed Imagine

Learning pull-out labs. These teachers monitored students as they used the program and used tools and data from the program to provide additional individual and/or small group instruction. Imagine Learning provided additional support, including in-person training, online training and resources, and a part-time implementation coach. Figure 1 outlines the Imagine Learning support structure in the school district.
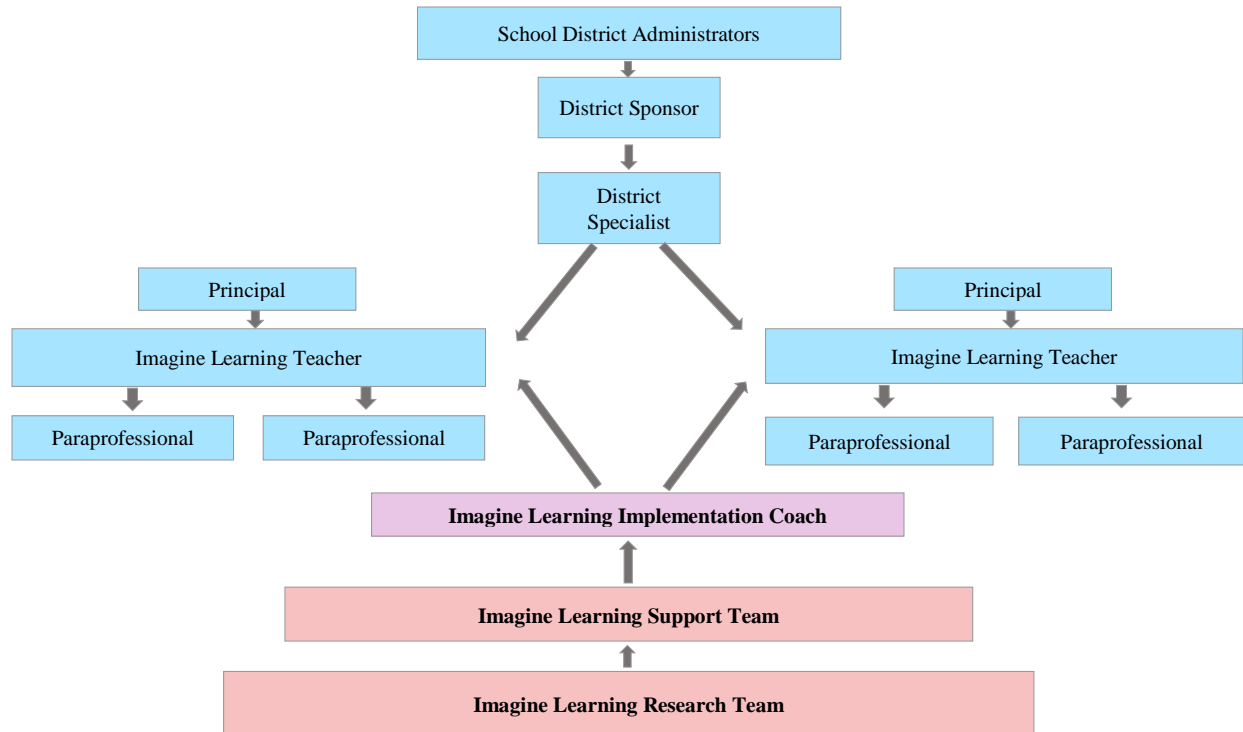
Figure 1: District Imagine Learning Support Model

Classroom Management

Most teachers are well-versed in designing and implementing effective procedures for managing common classroom events including: (a) creating instructional schedules, (b) managing physical space, (c) teaching routines, rules, and behavior expectations, and (d) engaging and motivating students. However, when technology is implemented, it adds a new dimension to classroom management that can present challenges for teachers. (Lim et al., 2003; Sandholtz, Ringstaff, & Dwyer, 1997; Varank, 2013). Specifically, teachers may struggle to know how to structure technology use to maximize learning. In the schools included in our study, teachers addressed scheduling, physical space, routines, and engagement in ways that allowed them to effectively manage the technology and instruction.

Physical Space

- Keep student work stations close to the teacher's work station.
- Position devices so the teacher can see all screens from their work station.
- Design the space for flexibility, including space for small-group interventions as well as large group instruction.

Routines, Rules, and Behavior Expectations

- Create a log-in card for each student. Students pick up log-in card as they enter the lab. The teacher takes roll by looking at remaining cards.
- Stress procedures during the first weeks of school. For the first week or two, give students a small reward each day they follow procedures. Gradually reduce rewards to weekly, bi-weekly, or monthly.
- Teach students basic troubleshooting skills, including checking headphone jack and adjusting computer volume. Older students can learn to restart the computer when appropriate.
- Incorporate procedures and expectations in the school's positive behavior support initiatives.

Engagement and Motivation

- Tell students the goals for technology use and why they were selected to use the program.
- Keep progress charts on the wall to track milestones (usage time, level completions, etc.)
- Create certificates for students when they complete a program. Take pictures of the students with their certificates and post them in the classroom or computer lab.
- Hold a party to celebrate student progress.

Scheduling

- Create a consistent, school-wide schedule for program use.
- Make sure pull-out programs do not interfere with core instruction or classroom activities.
- Schedule older students at the beginning and end of the day so they can assist in managing devices or help younger students log into the program

Monitoring and Promoting Academic Growth

Regularly monitoring student progress and using the information to manage and differentiate instruction can increase learning outcomes (Stecker, Lembke, & Foegen, 2008; Stecker, Fuchs, & Fuchs, 2005). Technology can streamline progress monitoring, but teachers still must continually use the data from the system to modify instruction to maximize student academic growth (Ysseldyke & Bolt, 2007). Furthermore, including students in the progress monitoring process can help students develop personal accountability and self-regulated learning practices. The teachers we observed not only carefully monitored the progress of students using the program and used the information to modify instruction but also used helped students develop self-regulated learning skills.

Academic Accountability

- Conference with students to review work completed online. For example, teachers met with students to listen to and evaluate oral reading recordings using a rubric.
- Ask students to place a clothespin on their computer when they are working on a specific activity, such as a writing activity. The teacher can then review the work with the student in real time.
- Share program reports with students. This can be done online or through printed reports.

Monitoring Progress

- Print intervention reports weekly. For example, Imagine Learning's Action Areas Tool provides a list of students struggling in specific skill areas. Teachers used these reports to form weekly or daily intervention groups.
- Regularly review usage reports to insure students are using the program at an appropriate level.

- Keep track of each intervention and student conference and make sure all students get time to work individually or in small groups with the teacher.

Adjusting Instruction

- Change intervention groups often, preferably by using reports provided in the program.
- Teach interventions across several days to promote retention.
- Pre-assess students at the beginning of intervention activities, and re-assess after the intervention. Follow up with students several days later to insure retention.
- If there are skills that many in the class struggle with, practice the skill at the beginning of each session. For example, one teacher reviewed Imagine Learning's vowel chants at the beginning of each day.

Communication and Collaboration

Several studies have shown a direct link between faculty collaboration and student academic performance (for example, Goddard, Goddard, & Tschannen-Moran, 2007; Wheelan & Kisselring, 2005). Collaboration is especially important for school specialists; they can feel isolated because they don't belong with a specific grade-level group but often work with a large number of students. To combat this isolation and to provide continuity for students, the school district in our study created opportunities for cross-school collaboration, and individual teachers found creative ways to connect with general education teachers.

Meaningful family involvement between home and school is also a key element of successful schools (Ferguson, 2008), and research shows that students with involved parents earn higher grades, show improved behavior, and are more likely to enroll in college (Henderson & Mapp, 2002). Few parents have experience with adaptive technology programs and may struggle understanding what their student is working on in the computer lab. Some of the teachers we observed found innovative ways to involve parents with the Imagine Learning program.

Communication with Classroom Teachers

- At the end of each intervention session, fill out a brief form outlining what students worked on. Attach additional practice worksheets to the form and send to the general education teacher.
- Attend grade-level and RTI meetings where possible.
- Provide an open house where teachers can come try the program and learn about program resources.
- Print lesson plans and worksheets to share with classroom teachers.
- Demonstrate program activities in faculty or grade-level meetings.

Collaboration with Teachers in Other Schools

- Hold district meetings for school specialists. Invite teachers to share ideas and ask each other questions.
- Share forms, resources, and presentations across schools.
- Visit other schools to learn how they are implementing the program.

Communicating with Parents

- Provide an open-house for parents during parent-teacher conferences. Invite parents to come to the computer lab and try out the program.
- Send home print-outs of books students read in the program.
- Send progress reports home several times a year.

Conclusion

As schools invest more money in educational technology, teachers are faced with the challenge of how to implement the programs in their classrooms. The teachers we observed developed strategies to manage classroom procedures and set clear expectations for students, monitor and promote academic growth, and collaborate with parents and other teachers. Careful attention to each of these areas led to successful implementation.

References

Ertmer, P. A., & Ottenbreit-Leftwich, A. (2012). Removing obstacles to the pedagogical changes required by Jonassen's vision of authentic technology-enabled learning. *Computers and Education*, *64*(May), 175–182. doi:10.1016/j.compedu.2012.10.008

Ferguson, C. (2008). *The school-family connection: Looking at the larger picture. A review of current literature*. Austin, TX. Retrieved from http://www.sedl.org/connections/resources/sfclitrev.pdf

Goddard, Yvonne L. Goddard, Roger D. Tschannen-Moran, M. (2007). A theoretical and empirical investigation of teacher collaboration for school improvement and student achievement in public elementary schools. *Teachers College Record*, *109*(4), 877–896.

Hall, G. E., & Hord, S. M. (2001). *Implementing change: Patterns, principles, and potholes*. Needham Heights, MA: Allyn and Bacon.

Henderson, A. T., & Mapp, K. L. (2002). *A new wave of evidence: The impact of school, family, and community connections on student achievement*.

Hokanson, B., & Hooper, S. (2004). Integrating technology in classrooms: We have met the enemy and he is us. In *Association for Educational Communications Technology*. Paper presented at the Annual Meeting for the Association of Educational Technology, Chicago, IL.

Hsu, S., & Ping-Yin, K. (2013). The impact of multilevel factors on technology integration: The case of Taiwanese grade 1-9 teachers and schools. *Educational Technology Research & Development*, *61*(1), 25–50. doi:10.1007/sl 1423-012-9269-y

Lim, C., Teo, Y., Wong, P., Khine, M., Chai, C., & Divaharan, S. (2003). Creating a conducive learning environment for the effective integration of ICT: classroom management issues. *Journal of Interactive Learning Research*, *14*(4), 405–423.

Norum, K. E., Grabinger, R. S., & Duffield, J. A. (1999). Healing the universe is an inside job: Teachers' views on integrating technology. *Journal of Technology and Teacher Education*, *7*(3), 187–203.

Rogers, P. L. (2000). Barriers to adopting emerging technologies in education. *Journal of Educational Computing Research*, *22*(4), 455–472. doi:10.2190/4UJE-B6VW-A30N-MCE5

Sandholtz, J. H., Ringstaff, C., & Dwyer, D. C. (1997). *Teaching with technology: Creating student-centered classrooms*. New York, NY: Teachers College Press.

Stecker, P. M., Fuchs, L. S., & Fuchs, D. (2005). Using curriculum-based measurement to improve student achievement: Review of research. *Psychology in the Schools*, *42*(8), 795–819. doi:10.1002/pits.20113

Stecker, P. M., Lembke, E. S., & Foegen, A. (2008). Using progress-monitoring data to improve instructional decision making. *Preventing School Failure: Alternative Education for Children and Youth*, *52*(2), 48–58. doi:10.3200/PSFL.52.2.48-58

Varank, I. (2013). The effects of teachers' educational technology skills on their classroom management skills. *Mevlana International Journal of Education*, *3*(4), 138–146.

Wheelan, S. A., & Kesselring, J. A. N. (2005). Link between faculty group development and elementary student performance on standardized tests. *The Journal of Educational Research*, *98*(6), 323–330. doi:10.3200/JOER.98.6.323-330

Ysseldyke, J., & Bolt, D. M. (2007). Effect of technology-enhanced continuous progress monitoring on math achievement. *School Psychology Review*, *36*(3), 453–467.

Zhao, Y., & Frank, K. A. (2003). Factors affecting technology uses in schools: An ecological perspective. *American Educational Research Journal*, *40*(4), 807–840. doi:10.3102/00028312040004807