Teaching in a Flipped Classroom

Grade level and Subject Area: Professional Development for high school and middle teachers teaching math and science (although other subjects could be integrated easily).

Instructional Objective: Increase use of technology for “homework” and increase classroom discussion time.

This annotated bibliography is designed for teachers in a professional development setting who are interested in teaching in a flipped classroom model. The objective is to introduce teachers to the concept of “flipped classrooms” as referred to by Khan Academy. The training would include general terminology, discussion of pedagogy, lesson design and pro’s and con’s of shifting from traditional classroom teaching. Effective technology integration will be modeled and students will have time to share with each other and develop lessons during class.

Google Scholar search: Khan Academy, flipped classroom, technology

References

This article refers to four empirical studies and summarizes evidence that technology use can increase student and teacher interest and level of engagement in activity and even an increase in student achievement. What is interesting is that even across research projects and utilizing different types of technology, similar themes emerge as evidence of increased performance.


While evidence might point to a growing increase in online learning there is still a lack of prepared teachers who are comfortable teaching in or with online lessons. This article nicely summarizes key steps a teacher should incorporate for success. The recent article speaks to technology integration in general and cites several examples of classroom integration.


This article is dated but the discussion of a paradigm shift in the classroom still readily applies today. An excellent history of paradigmatic shifts in the classrooms is provided. The article cites a large research project n=15,000 referencing what works in online teaching. This article is necessary for teachers to understands when beginning to include technology in their teaching.

Middle-grade students read, write, and create videos. *Journal of Adolescent & Adult Literacy, 55*(6), 483-493.

This article focuses on engaging students in their own learning through technology use, specifically video creation. What is important is the pedagogical shift, the inquiry based learning and the follow up discussions. Teachers can learn from this example, prevent mistakes, and lead students through the process by providing scaffolding along the ways.


In the medical world, in an effort to keep training relevant, interesting and comprehensible, some schools are “flipping” the classroom. The problem of research integrating within practice happens in K12 schools as well as medical schools. This article addresses the need for quality training, effective implementation and increased funding. Sounds familiar to K12 discussions.