

Plunge into Flipping! An Instructional Strategy for 21st Century Learning.

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Educators are in constant search for strategies to reinforce learning and engage students. This generation of “digital natives”, (who have had access to technology almost from birth), are “hard-wired” to make it is easier for teachers to tie technology into learning. Students today at both the k-12 and higher education levels use technology (cell phones, computers, tablets) to “plug in” to a larger world, where knowledge, communication and collaboration are at their fingertips (Prensky, 2008). The impetus to bring technology into the educational arena has been slow and met with some reservations. However, those who embrace technology, do so with excitement and enthusiasm. A newer trend in the classrooms derived from new technology is “flipped” classroom learning.

Flipping comes from the idea of swapping homework for classwork (Ash, 2012). The flipped method allows students to receive in-class support with the teacher during class time thus leveling the playing field for all students.

Many classrooms engage in the “I do, We do, You do” instructional method. The teacher models a strategy, then the class does the strategy together and finally the students do the strategy individually (Schmidt & Ralph, 2016). The flipped model changes to a “We do, “You Do”, “I Do” method where this process is reversed, thus the term “flipped classroom.” In this strategy, investigation and homework happen in the classroom. At home students participate in preparation work including watching videos and completing readings. After they complete their preparation work, students come to class ready to start solving problems, analyzing text, or finding solutions.

Mazur (2009) further elaborates on how it has achieved success at the college level. Students prepare for class with a short teacher led video lecture that the student views at home or before the class. Then, during the actual class time, the professor does the harder work of assimilating that knowledge through problem-solving, discussion, or debates. Berrett (2012) points out that flipping allows colleges, particularly large lecture classes, to make the traditional lecture model more productive. Flipping epitomizes Bloom’s revised taxonomy (2001) in which students are doing the lower levels of cognitive work (gaining knowledge and comprehension) outside of class, and focusing on the higher forms of cognitive work (application, analysis, synthesis, and/or evaluation) in class, where they have the support of their peers and instructor. This model contrasts from the traditional one in which “first exposure” occurs via lecture in class, with students assimilating knowledge through homework.

The idea of “flipping the classroom” is now being used in k-12 schools. The ease of access to various technology platforms, podcasts, videos, etc. has made it simple to create a “flipped classroom.” Ashley Holton, a sixth grade math teacher at Valley Middle School in Oakland, New Jersey, easily implements the tenets of the flipped classroom while her students have fun learning in a non-traditional instructional model.

Holton incorporates tutorial videos in her classroom and maximizes class time by allowing more opportunities for students to be engaged within the depth of a concept. The videos are used as a way of introducing or reinforcing a lesson and serve as a tool to introduce the lower levels of Bloom’s taxonomy, learning, knowledge and comprehension. Then the classroom time will be used for the higher level thinking such as application, evaluating, and analysis.

Flipping is also assisting with meeting the needs of all students by helping to eliminate learning barriers. The tutorial videos provide the ultimate differentiation within a lesson as students have the ability to control their own learning experience by pausing, revisiting, and reviewing through a lesson at their own pace. The videos become interactive notes for students who learn best through auditory and visual opportunities.

Often students face frustration when completing homework as they don’t understand or remember what was learned in class or they see homework as busy work. By having the videos, students can easily go back and review any material and stop, review and rewind to recognize any mistakes as they are occurring. When students can immediately access the explanation of a problem or clarify any questions, their content knowledge and confidence improve, and they feel more empowered. Holton finds that students are more likely to complete the video for homework than they would if given a worksheet or textbook assignment.

The following are three screen shots from a review lesson that Ashley Holton has designed. Students are learning to solve “real world” ratio word problems. The ratios are read out loud for students who benefit from auditory learning. Each step for completing the problem is modeled and explained. At times colors are changed to help certain information stand out. For each portion of the work used to reach the correct answer students are reminded how to use the information given to solve the word problem. For example, once completing the bar model and explaining why there are 5 boxes in one bar and 7 boxes in another, the information in the word problem states: "There are 10 more girls in the hiking club." This represents the value of the two additional boxes in the bar model. All of the information is labelled and explained until the answer is found.

The ratio of the number of newspapers Joshua sold to the number of newspapers Ron sold is 5:3. After Ron sold 28 more newspapers in the evening, the ratio became 10:13.

- A) how many newspapers did Joshua sell?
- B) how many newspapers did Ron sell in

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A) $4 \times 10 = 40$

B) 52

$\square = 4$
 $\begin{array}{r} 13 \\ \times 4 \\ \hline 52 \end{array}$

The ratio of the number of boys to the number of girls in the hiking club is 5:7. There are 10 more girls in the hiking club. How many children are in the hiking club?

B 25
 G 35

$\begin{array}{r} 25 \\ + 35 \\ \hline 60 \end{array}$

60 children

[Watch the whole video!](https://youtu.be/0SWzQVKKLEE) <https://youtu.be/0SWzQVKKLEE>

Since the videos are the key component of a flipped classroom, some teachers may find this strategy to be daunting and intimidating. However, the new technology enables busy teachers to quickly create videos with iPhones, handheld video cameras and easy editing software. Ashley Holton provides these implementation tips for successful flipping:

- understand that this process takes time
- Go slow and create one video at a time, Eventually you will create a solid library of videos
- Work with a colleague who teaches the same courses and or grade level. Split the work. Students enjoy hearing voices of different teachers who they know.
- Create the videos during common planning time.
- Create and set a goal to complete this project.
- Continue to improve your video library once you have a video for each lesson.
- When recording, it is okay to make a mistake! Students enjoy hearing an error and then listening to how you correct the mistake. This helps students understand that importance of checking work and how to find mistakes.

Teachers should not be afraid to take the plunge and begin flipping. The summer is a good time to experiment and overcome fears. It is easy to reverse the traditional lesson model, create videos, and, more importantly, see students enjoy learning and succeed!

References

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