

2013

Flipping with FIZZ

Flipped Classroom Training Program Using the FIZZ Method

This document provides information about the development and success of the FIZZ Flipped Classroom Training Program supported by SAS and the Friday Institute. The training is a scalable model for increasing teacher quality and effectiveness. The report includes a description of the training program, a timeline of development, outcomes, and suggestions for future work.

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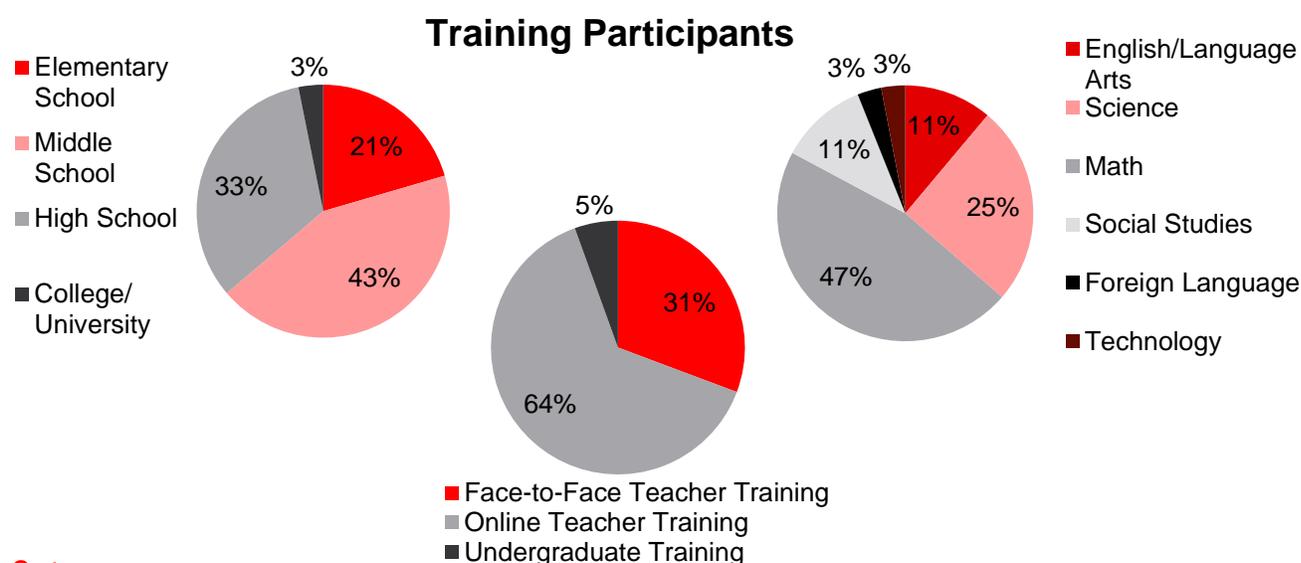
EXECUTIVE SUMMARY

Training Description

The goal of the FIZZ Flipped Classroom Training Program (FCTP) is to improve teacher quality by focusing on three key areas - efficiency, reflective practice, and relationships. This intensive training provides teachers time to explore and ask questions about flipped classroom practice and resources. During the program, participants are required to publish custom lecture videos and plan for class time. By the end, each teacher is prepared to flip at least 20 lessons.

Demographics

As of April 2013, 127 teachers have successfully completed the FIZZ FCTP.



Outcomes

The FIZZ FCTP has been highly successful at achieving the stated goal of increasing teacher quality, specifically through the focus on reflective practice. A participant stated, "Reflective practice has made me think more about what I say and how I say it. I question myself more and want to better myself as a teacher." The training has also had extremely positive impacts on job satisfaction, student and parent relationships, student achievement, and classroom management. For example, 92% of FIZZ FCTP alumni reported an increase in job satisfaction after becoming flipped teachers (see pages 8-9 for more detail). Teachers are finding that they are more effective and better at engaging students. As one teacher reported, "You know all that stuff they teach you in college about being a teacher? I have time to do all of that now, every day! Time for collaboration, differentiation, projects, and inquiry!"

Looking Forward

Based on these initial findings, it is recommended that the training continue to serve teachers in all content areas and grade levels (K-20). There is growing list of over 500 teachers interested in our online FIZZ FCTP, and it should be possible to train many of them over the next 10-12 months. Additionally, steps should be taken to aggressively move forward with the training of pre-service teachers. The future of improving education relies directly on our ability to develop a new highly prepared workforce that will thrive in our public school classrooms.

TRAINING DESCRIPTION

Dr. Lodge McCammon has long pioneered efforts to make K-20 education more engaging. He focused his efforts around the concept of using simple “1-take” video to transform teaching and learning, calling this the “FIZZ method”. In early 2011, Dr. McCammon started working with Ms. Katie Gimbar, an 8th grade math teacher in Wake County, North Carolina in order to explore the idea of a flipped classroom using the FIZZ method. Thanks to a generous donation from SAS and support from the Friday Institute, they were able to develop the FIZZ Flipped Classroom Training Program (FCTP).

Training Development

The FIZZ FCTP was originally developed specifically for North Carolina middle school math teachers, in an effort to help improve students’ success with math. In the early stages of development, the main focus of the FIZZ FCTP was creating efficient, custom video lecture content that students would watch outside of the classroom. By removing the traditional lecture from the classroom, teachers could then use class time to challenge students to work collaboratively.

Not long into the first FIZZ FCTP pilot program, Dr. McCammon realized that having teachers critically watch their own lecture videos and critique their delivery was incredibly powerful. Reflecting on their practice had a positive impact on teacher confidence and skill level. As the training progressed, it became apparent that having teachers publish their content on YouTube actually aided them in developing stronger relationships with students, parents, and administration. These early outcomes led to changes in the FIZZ FCTP, and new focus was developed around increasing teacher quality.

FIZZ Flipped Classroom Training Program Curriculum

The FIZZ Flipped Classroom Training Program (FCTP) focuses on improving teacher quality by emphasizing the importance of efficiency, reflective practice, and relationships. This curriculum covers all that is necessary for implementing a successful flipped classroom.

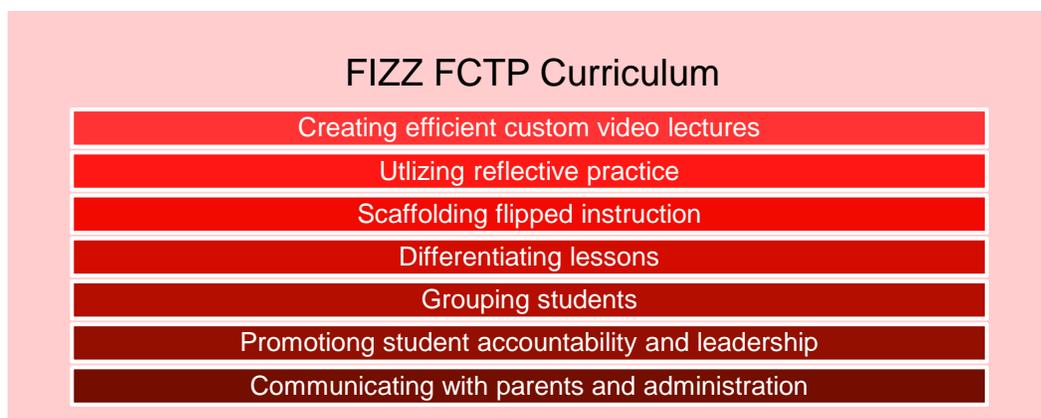


Figure 1. Basic curriculum for the FIZZ FCTP.

FIZZ FCTP TIMELINE

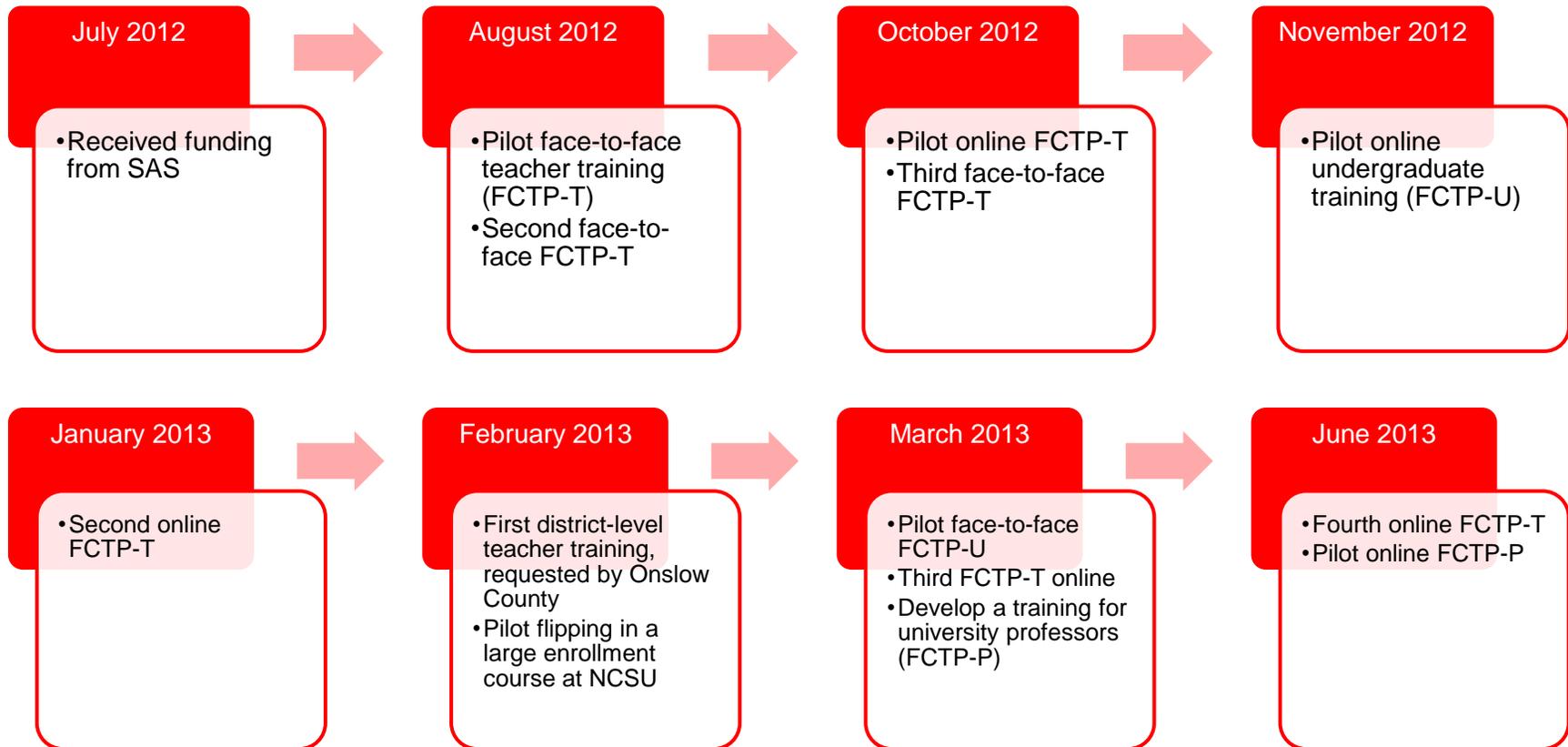


Figure 2. Timeline of significant events related to the FCTP.

FIZZ FCTP – PROGRAM TYPES

Advertising for the FIZZ FCTP pilot was conducted via Facebook, Twitter, and word-of-mouth. The success of the initial training and the creation of training related materials (all freely available online) generated interest from teachers of all grade levels and content areas. Dr. McCammon recognized that the FIZZ FCTP worked for any K-20 educator, not just middle school math teachers. In order to offer this training to as many teachers as possible, he developed the following training programs:

K-12 Teacher Training

(teacher.fizzedu.org)

The FIZZ FCTP for K-12 teachers (FCTP-T) was the first to be developed. This 40-hour training program provides teachers time to explore and ask questions about flipped classroom practice and resources. Participants are required to publish custom lecture videos and plan class activities. By the end of training, each teacher is prepared to flip at least 20 lessons.

As of April 2013, 39 teachers (all from North Carolina) have completed the face-to-face FCTP-T and 81 have completed the online FCTP-T. The majority of the online participants were from across the U.S. However, there were also teachers from other countries including Canada, Italy, Jordan, Spain, Egypt, Poland, and Mexico.

Pre-Service Teacher Training

(preservice.fizzedu.org)

The FIZZ FCTP for undergraduates (FCTP-U) is a 50-hour training program that closely models the FCTP-T, with special attention to the needs of pre-service teachers. Participants are required to publish custom lecture videos and plan class activities, resulting in them being prepared to flip at least 30 lessons.

The first pilot was the online FCTP-U, with one student from Duke University and one from Maryville College. The face-to-face version was later piloted at the Friday Institute with five math education students from NC State's College of Education.

Professor Training

(professor.fizzedu.org)

Although a few college professors completed the online FCTP-T, Dr. McCammon recognized a need for a training tailored for the college instructor. Collaborating with Dr. Steven Toaddy at NC State, he piloted a flipped classroom in a large enrollment Psychology course. The FCTP for professors (FCTP-P) is a 40-hour training tailored to meet the needs of college/university instructors. As with the other programs, participants are required to publish custom lecture videos and plan for class time, with each professor prepared to flip at least 20 lessons. The online FCTP-P will be piloted in Summer 2013.

TRAINING OUTCOMES AND FUTURE DIRECTION

Positive feedback from trainees, as well as continued interest from teachers who seek out the FIZZ method of flipping, are clear indicators that the program is effective. However, it is important to understand whether the goals of the training were met and whether teachers were able to apply what they had learned. A survey was sent to 70 teachers who completed the online FCTP-T. These trainees were selected because they had not been previously asked to complete other training-related surveys. A total of 54 teachers provided feedback (survey response rate was 76%).

FCTP-T alumni were asked to reflect on their experience as flipped teachers since having completed the training. The survey focused on eight outcomes: job satisfaction, quality of education, parent relationships, instructional skill, student preparation, student behavior, student achievement, and student relationships. Each item had the prompt “Since becoming a flipped teacher, my [outcome] is...” and teachers chose from five response options: a lot worse, slightly worse, the same, a little better, or a lot better.

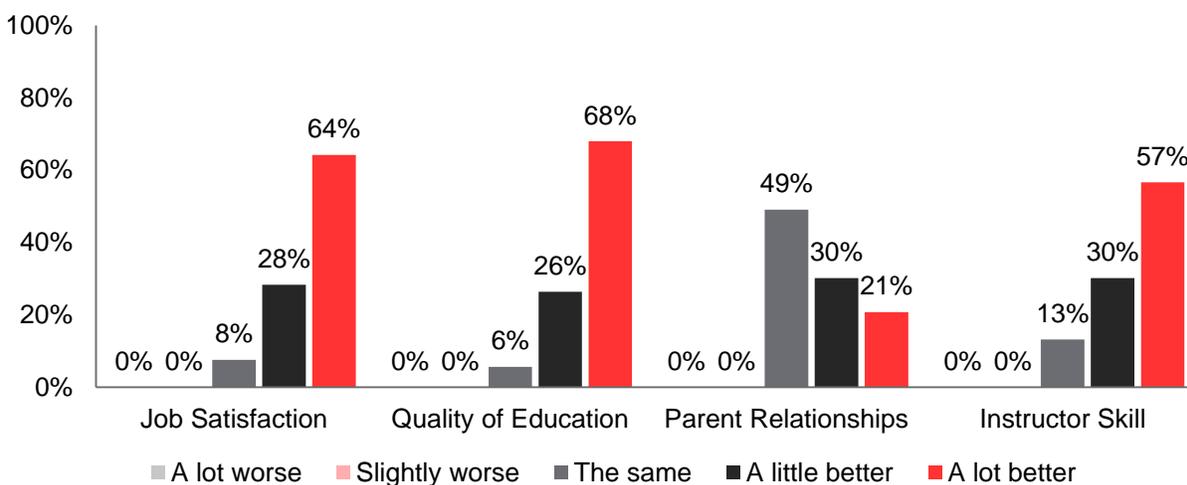


Figure 3a. Reported outcomes as a result of completing the Online FCTP – Teacher-related.

Figure 3a provides four “teacher-related” outcomes for flipped classroom instructors. As seen above, 92% of alumni reported having a little better or a lot better job satisfaction since becoming flipped teachers. This is a particularly interesting outcome because while higher job satisfaction is a desirable outcome, it is not a direct goal of the training. One of the training goals, “quality of education,” was considered better as well, with 94% of alumni reporting it was a little or a lot better after flipping the classroom.

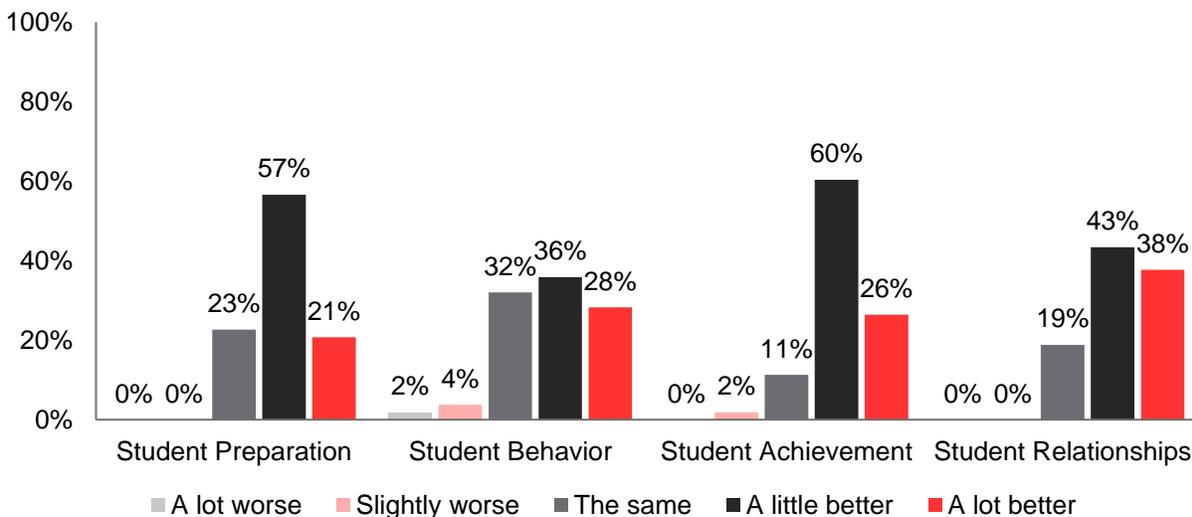


Figure 3b. Reported outcomes as a result of completing the Online FCTP – Student-related.

Figure 3b provides four “student-related” outcomes for flipped teachers. Though responses are generally favorable, it is worth noting that for student behavior and student achievement, a small percentage of alumni reported that these outcomes were a lot or slightly worse after training (2% - 4%). This is likely due to the “newness” of a flipped classroom, as some students may need time to adjust to the expectations of a flipped class.

Teachers were also asked to share their thoughts regarding how or why those eight outcomes may have changed for them. Figure 4 provides the top three themes found within the comments provided about each outcome.

Job Satisfaction	Teaching is more enjoyable - Flipping provides a better way to reach all students - Flipping provides a more efficient way to teach
Quality of Education	There is more time for group work - There is more time for application - There is more time for differentiated instruction
Parent Relationships	Parents can help students at home - The teacher is transparent - Parents are excited and appreciative of this change
Instructor Skill	Teachers are more reflective - Teachers develop deeper content knowledge - Teachers are able to challenge all students during class time.
Student Preparation	Students don't want to miss the in-class activities - Students don't want to be unprepared for group work - Students find video homework more appropriate/accessible
Student Behavior	Students are more active (less bored) - Class is structured for all students to succeed - Students have increased ownership/responsibility
Student Achievement	Students care more - Students can learn at their own pace - Teachers have more time to challenge students during class
Student Relationships	The teacher has more time to get to know students - The teacher is a respected/published expert - Students develop better relationships as a result of the group work

Figure 4. Top three themes of comments from alumni regarding outcomes of being a flipped teacher.

Flipping with FIZZ

As previously noted, alumni reported that job satisfaction increased greatly after becoming a flipped teacher. With regards to the efficiency theme (see Figure 4), one teacher stated “I used to be so concerned about covering all the content that is required for the course. I find that I am able to deliver that content in a fraction of the time on video so that I can concentrate on student engagement and learning during class time.” With regards to quality of education, the theme of application was very common throughout alumni feedback. One teacher noted that “The students are able to understand the content better because they “do” rather than listen and remember.”

Though the results are overwhelmingly positive, some critics of the flipped classroom cite various barriers as impossible to overcome. Teachers were asked to indicate the extent to which they may have experienced some of the commonly cited barriers of flipped instruction. As seen in Figure 5, the majority of alumni reported that there are indeed some challenges when one starts flipping, but accommodations can be made in order to make flipping successful.

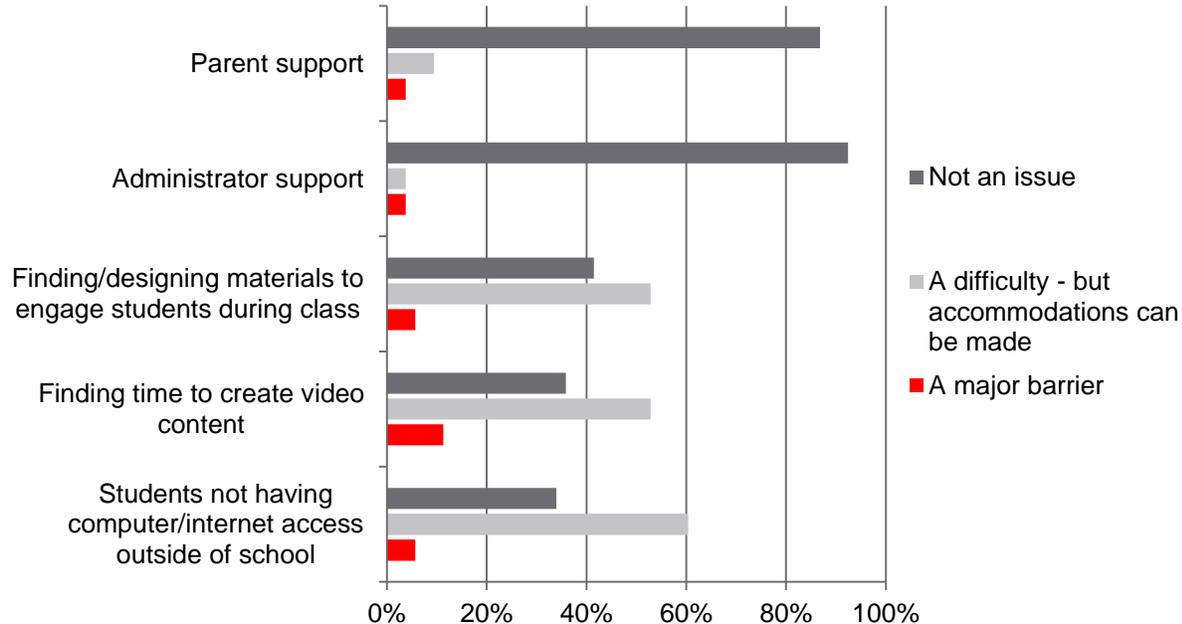


Figure 5. Potential barriers of flipped instruction.

Future Direction

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