

## Flipped learning

*Summary of experience and knowledge about Flipped Learning. Written in august 2016 on behalf of the Student service department in Keilir, by Anna María Sigurðardóttir Student service manager and Sigrún Svafa Ólafsdóttir - teachers support.*

### Objectives

The goal of using flipped learning is to get the most out of the face to face time in the classroom between teachers and students.

### The History of Flipped Learning:

In 2007 Jonathan Bergmann and Aaron Sams started discuss possibilities of recording lectures. In the beginning they recorded live lessons and uploaded the videos online for students that missed class. Many of their student that were in class re-watched the videos to get better understanding. Students from other schools started questioning Jon and Aaron about this method and soon they were noticed all over the country. They started to present the Flipped model around in the United States and all around the world.

The full version of the history of the flipped class is here:

<http://flippedclass.com/the-history-of-the-flipped-class/>

### What is Flipped Learning?

Flipped learning is a pedagogical approach where learning is student - centered, rather than teacher centered. The students get more responsibility, they take ownership of their learning and the teacher is more like a guide on the sideline. The simple way to explain this method is that the students usually get prerecorded lecture online which is followed by in class exercises. In that way they can use the valuable time in the classroom with the teacher, practicing and discussing with each other what they have already learned.

Videos of the Flipped Classroom model:

<https://www.youtube.com/watch?v=iQWvc6qhTds>

<https://www.youtube.com/watch?v=ojiebVw8O0g>

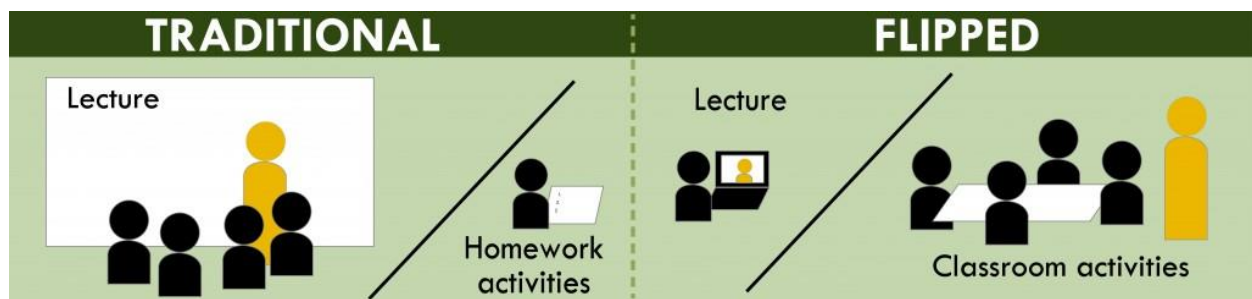
## Flipped learning vs flipped classroom?

Many people believe that flipped learning and flipped classroom is the same thing, which it is not exactly. When a teacher gives prerecorded lectures to the students as a homework and uses the time in the classroom to work with the students, it's called flipped classroom. Flipped learning on the other hand is a *“pedagogical approach in which direct instruction moves from the group learning space to the individual learning space, and the resulting group space is transformed into a dynamic, interactive learning environment where the educator guides students as they concepts and engage creatively in the subject matter”*.

A flipped class can, but does not necessarily, lead to flipped learning.

<http://www.edtechmagazine.com/k12/article/2014/07/whats-difference-between-flipped-classroom-and-flipped-learning>

The Flipped Learning model:



### How does it work

There is no single model for the Flipped Learning. It is possible for most teachers to use this method in any course by thinking: “What is the best use of your face to face time”. By setting focus on what is most important for teachers to spend time with their students, the teacher can find out which topics and lectures the students could learn online, from videos, books or by other methods.

The most common way to practice Flipped Learning is:

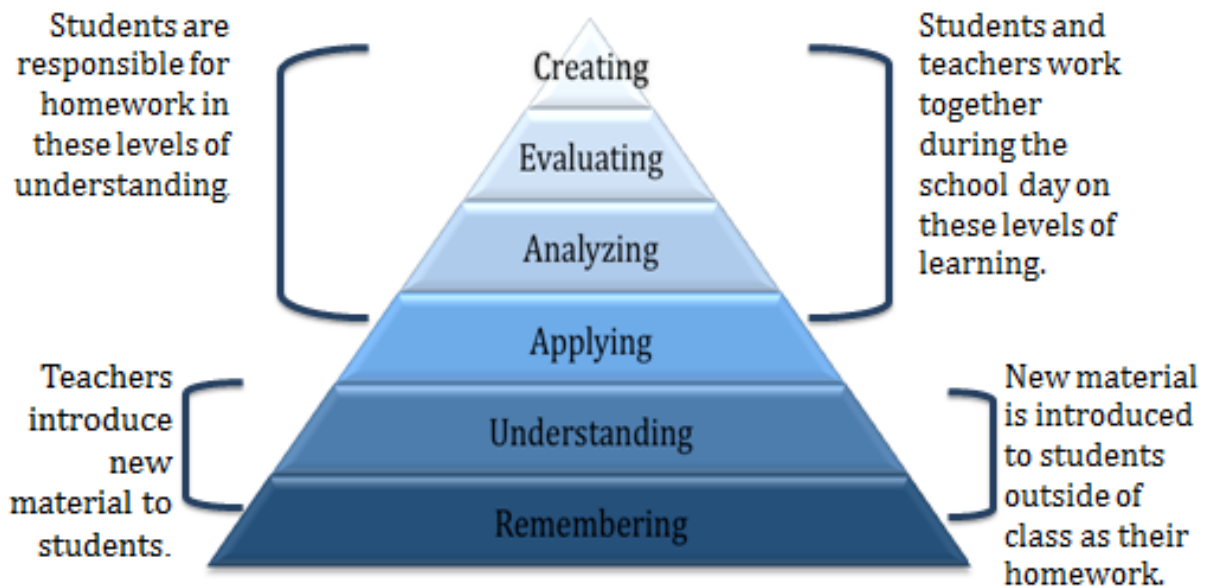
- The teacher makes prerecorded lectures and shares the videos online with his students.
- The students watch the lecture as a homework and get prepared for working with the material in class.

- The teacher prepares projects for the students to work on in class, in some groups it is important to have different projects for students that work in different pace
- The students can work together in small or big groups and help each other
- The students can work in their own pace, some might cover the material quickly and are able to get even deeper into the content while other students spend long time just to understand the basics
- The teacher can help the students, answer questions and guide them how to find more information on the content

The Flipped Learning method is good for teachers that prefer to have more time with their students in class. To make it work the teacher has to plan the whole course ahead; set up the structure for the whole semester, put in recording of all the lectures and prepare all projects for training the content. Then the students can take responsibility of their own study at their own pace throughout the course.

## Traditional Model

## Flipped Model



## Blooms Taxonomy

<https://cft.vanderbilt.edu/guides-sub-pages/blooms-taxonomy/>

## Why?

By implementing flipped learning, students have an equal opportunity to receive the material. The focus is on individual learning where the student can watch and listen whenever they want, as often as they want and rewind and fast forward if they want. This method is also good for students who have learning difficulties. Parents can watch the video with the student and support them if needed. The individual learning can also encourage social interaction among student, making it easier for them to learn from each other.

Today most of our students grew up with Internet access and all kinds of digital resources, and with using flipped learning we are speaking their language.

Flipping also allows teachers to know their students better because of increased teacher- student interaction in class.

## Benefits for the teacher

- Easier for the teacher in long term.
- The teacher doesn't have to stand in front of the students and talk constantly.
- More contact with the students and allows teacher to know their students better.
- The teachers joy to see the students develop, grow and enjoy the school more.

## Teachers experience

Quote from Jennifer Douglas, Westside high school, Macon, Georgia:

Teaching under a traditional model is draining. I feel like I have to “perform,” which requires energy, enthusiasm, and a “you are on-stage” effort at all the times. I remember last year driving into work, thinking, “Man, I feel like just being a student today. I wish I could go in and let someone else do all the work - be in the passenger seat for once.” When I switched over I felt *free*. I was able to go in and watch my students work. I don't mean that I sat back and drank coffee - I stayed busy interacting one-on-one; working with kids who were struggling; addressing questions that students had that I never had time for before; really getting to know my kids. It is just that the burden of learning had traded hands. And you know, really, it had to be passed on. I can't force someone to learn - they have to accept that responsibility for themselves. This method allows them to clearly see that - and gives them a structured environment that ensures success.

*(J.Bergmann and Aaron Sams, The Flipped Classroom, 2012)*

## Benefits for the student

- Allows the student to learn when they are ready and at their own pace.
- They can get more one-on-one instruction and have opportunity to ask question if they need.
- Allows the student to have more time for collaborating with other students, which can be great learning experience.
- When the student is watching the video lecture, for instance, the lecture are free of interruption and they can watch as often as they need.
- Student can brainstorm questions to ask in the classroom.
- Different students learn in different ways, so by delivering instruction in multiple forms, the likelihood for engagement and retention is improved.
- Easy for students to refresh their knowledge from lectures later in the semester, for example before final tests or presentation of their projects.

<http://alchemylearning.com/flipped-classroom-benefits>

## Students experience

<https://vimeo.com/72489635>

Every year in Keilir, few students from every department are randomly picked to participate in evaluation meeting with the educational manager. The student talk about what is good in their department and what can be improved. Usually the students are very happy about the teaching method flipped learning and they do not wish for other traditional teaching methods.

Below are examples of comments from the meetings this year:

- Flipped learning is brilliant, it's almost criminal that not all school are using it.
- It works everywhere where it is used. It should be everywhere and flipped learning is the best thing with Keilir.
- Flipped learning is brilliant, and suits me very well.
- I want more flipped learning in my department.

## Benefits for the school

- Happier teachers
- Happier students
- Better results with the grades
- More and better individual learning

## Benefits for the parents

- Parents can support their children by watching the video with them.
- The parents can brainstorm and talk about the material with their child.
- The parents know more about what their children are learning.
- The parents are not having problems helping their children with the homework anymore, because the projects are done in the school with their teacher.

<https://net.educause.edu/ir/library/pdf/eli7081.pdf>

<http://www.slideshare.net/ssuser3b4210/flipped-learning-40946360>

If we look at the research that have been done, the most of them has positive results. Here is results of one research that Clintondale High School near Detroit did.

to physics, finance to history

## WHAT IT LOOKS LIKE

Many schools and classrooms have adopted the flipped classroom model. Here, we look at Clintondale High School near Detroit, which has employed the flipped classroom model to great success.

### HOW IT WORKED

- Teachers created three videos a week.
- Students watched the 5- to 7-minute videos at home, or in school if they didn't have Internet access at home.
- Class time was spent doing labs or interactive activities to illustrate concepts.

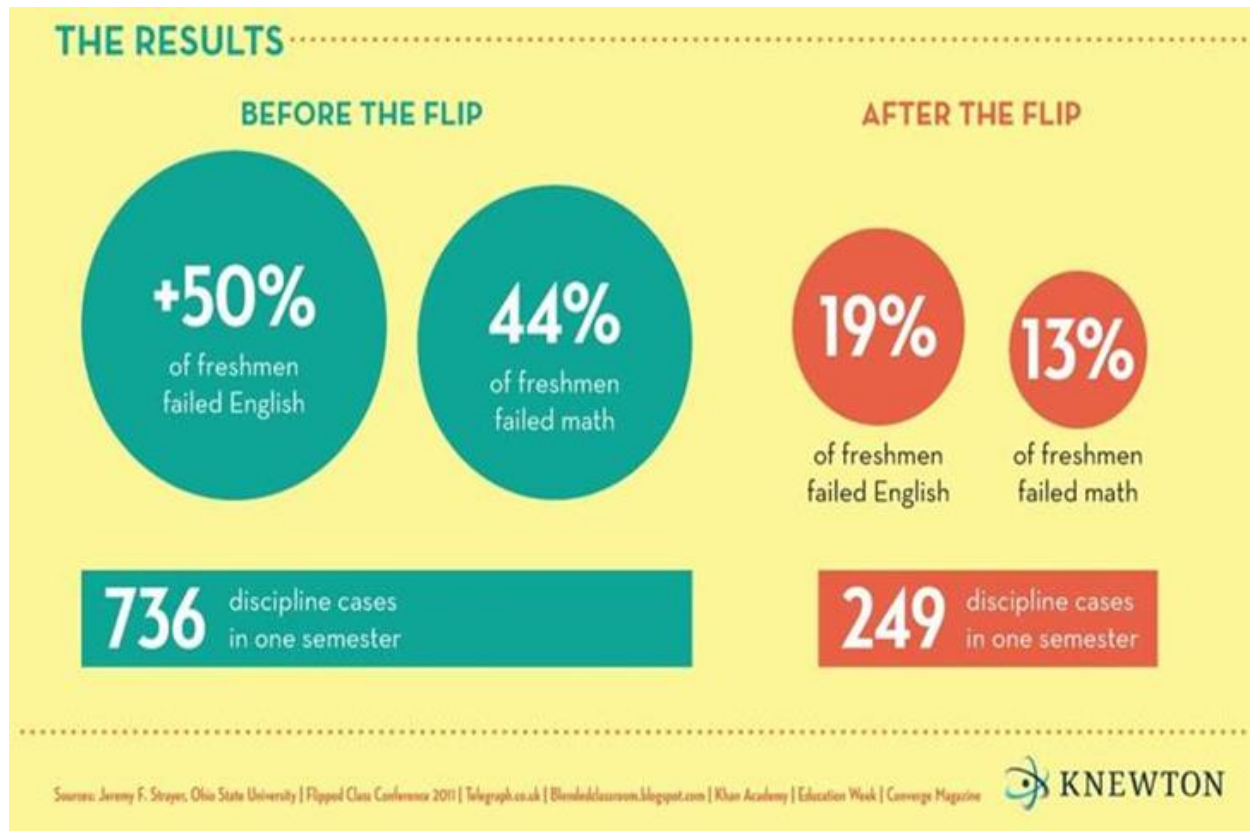
**Students receive instant feedback.** Teachers have more time to help students and explain difficult concepts.

**Students don't get as frustrated.** Before, many students wouldn't complete homework if they got frustrated with it. Working on problems in class minimizes this problem.

**Teachers revisit concepts students don't understand.** After students watch lessons, they write down any questions they have. Teachers review those questions with students individually.

**Teachers support students in class.** Students who might not have technology or parents to help them outside of school now have teachers guiding them in class.

"It's about changing instructional models so the students can receive more instructional support in the classroom from the experts that Clintondale has on staff."  
— Bruce Umpstead, Michigan Office of Education Technology & Data Coordination



<https://www.knewton.com/infographics/flipped-classroom/>

### Simple guidelines about how to use Flipped learning

If we think about a normal teacher, that has used traditional methods throughout the years and is about to flip his classroom, he has to prepare in few different ways.

To start with it is fundamental for teachers to prepare **mentally**. If the teacher gets order from above that he should change his teaching, it is important that the teacher also feels that he gets support from his school managers and coworkers.

If the teacher makes the decision himself, it is important for him to start slowly and seek information on how other teachers have done flipping in similar situations. It's wise to choose well the topics that he wants to flip and start figuring out what would be the best way for him as a teacher to do this, according to the content of his class, his students and the circumstances he's working with. It's also recommended for new teachers to find a mentor to talk with, that could be a co worker that he trusts or someone from another school that is doing similar experiences. Being a good teacher requires good self esteem and humility, not being afraid of making mistakes - learn from them.

It's challenging for teachers to change their teaching methods, and the flipped learning theory is quite revolutionary. So **theoretically** the teacher might have to rethink his whole approach on delivering the content and how he acts in the classroom. The teacher has to believe in the new methods and remember not to give up by first mistake. To develop new perspective on teaching methods it is helpful to have someone to talk to and discuss teaching theories.

Moving from traditional teaching and start working with flipped learning methods, requires time to prepare all the **practical** aspects. To give students the space to take responsibility themselves, good planning is essential. The whole course must be planned ahead by the teacher; reading material defined, prerecorded lectures ready to view, other material to support the topics and all student projects ready for them to work on with defined deadlines. The practical preparation gives the students better feeling for what is expected from them, what to do and when. The students can take control over their own study and the teacher gets more time to answer questions and talk to each and every student. The practical preparation can be a huge job at the beginning but already next time the teacher teaches the same course, it's a lot easier. Usually some of the course planning, recordings and projects can be reused, but a teacher that is trying this method for first time, should always be prepared to make changes both during and after each course.

A big part of this method, is to face the fact that you will maybe not find the one right solution, but an ambitious teacher will be able to improve constantly if he is prepared to learn from things that could be better. It is important that teachers get time to reflect on how things are going and listen to feedback from students, parents and coworkers.

Flipped learning is not all about the technique, even though the technique can be an important parameter in the teaching method.

To prepare the course like described above, the **technique** can sometimes be a barrier. Many schools use online teaching systems, such as moodle or other platforms where teacher can share for example texts, videos, links, tests and projects to students. In that case it is easy for teachers to make a complete course set up, so the course plan gets visual for the students. If the teacher does not have access to an online teaching system, it is possible to use more simple solutions to share contents with the students, such as google docs or simply youtube. It is important to not let the technique stop the development of new teaching methods, there is always a solution.

Teachers that want to make pre recorded lectures, can do it in many ways - both simple and more advanced. The teacher can start with simply using PowerPoint where he can record his voice while scrolling through the slides. Lectures can also be recorded by many different apps on a simple tablet, for eksempel iPad. The more advanced way is



to use more complicated software, such as TechSmith screen recording, video editing and hosting solutions.

In many courses the teacher is able to find supporting material online. For example in mathematics it's possible to find a lot of supporting material, tutorials and explanations that can help students to understand. In that case the teacher would not be forced to record his own lectures, he could just pick the best online recordings for his students and guide them how to use it.

The **teacher's role** in the classroom will be different while using flipped learning. Maybe the biggest challenge for an experienced traditional teacher is to give the classroom back to the students, not talk all the time and take control over every movement in the room. To let the students take responsibility of their own study with the teacher as a guide on the side. To make this happen, the teacher has to have everything well prepared, and be ready with effective projects that focus on the main essence of the course each time.

Since the teacher's role will be changed, the **students role** will be different as well. To get the best out of this, it is important to teach the students to work in this environment. Explain their responsibility, show them how to listen to a pre recorded lecture and take notes, like they were in a traditional lecture in the classroom. If the students are used to traditional teaching methods, it will take them a while to understand how to behave in this new classroom, but as soon as they understand the concept and get the freedom to take control of their own study, they will realize that they do not want to go back to traditional teaching.

### **My experience: (Sigrún Svafa Ólafsdóttir, teacher in Keilir, Iceland)**

I've been a teacher for 6 years, teaching adults the danish language. The first two years I used traditional methods, standing in front of my class and talking the whole day. I remember that many times my students had questions for me, but I did not have time to answer, because I was so busy talking myself. I was exhausted, my students were both bored and exhausted, they had a lot of homework they had problems with finishing because they needed help from me, but I didn't have the time to help them.

The year 2012 my school director heard about "The Flipped Classroom" theory for first time. He suggested in a teachers meeting if we could try that method with our students. As a small group of 12 young teachers we agreed, even though no one of us knew how to do this. The first year we did our best, we pre recorded all of our lectures and tried to activate students in the classroom, but we made many mistakes in the beginning. To mention few of our mistakes:

- To many students in one group - not enough time for the teacher to help them all.
- If some of the students didn't listen at the lecture at home and came unprepared in class, the teacher just repeated the lecture. That is a big mistake, the result is that no one will listen next time, knowing that it would be a waste of time since the teacher will repeat it in class.
- Not having enough of projects for students to work on in the class.
- To long recordings, the video lecture should be short and focused on one topic.

The first year I started out with my “flipped classroom” with my best intentions. I had my course all planned out, all my lectures were ready and I had defined all projects and deadlines. In the beginning of each class I defined in details how my students should spend their time and wrote the schedule on the whiteboard. I even defined how many minutes the students should spend on each topic. So every now and then I said to my students “now you should change project, stop doing this and start doing that”. In only few days I felt that this was very wrong. I was constantly stopping the workflow of the students that were slow and all the students that were quick wanted to leave class when they had finished all the projects of the day. I realized that I was trying to have the control, I was still trying to be in charge of everything in the classroom. After that I started to let students work in their own pace and take more control over their own study. The result was that no one was at the same place in the book, but it didn't really matter, because the lectures were all accessible all the time and the right answers were online as well, so the students could check if they were right or wrong and then just keep working. I had a lot of time to walk around, talking to all the students, answering questions and getting to know each and every one of them.

After the first year I felt that this teaching method had worked well, most of the students were happy with my course, even though many things could still get better. Throughout the years I've been improving my teaching every year, always trying something new and rethinking new ways to deliver the content to my student in effective way, aiming to make the study easier and more interesting.

One of the most interesting thing for me was to realize why I was teaching things the way I did in the beginning. Usually the ideas of my teaching methods came from my own experience as a student. Now I try to remember to ask myself the question “why are you doing that this way?” Sometimes the answer is ok, but even still after all this years of work I once in awhile get the answer “It has always been done this way” or something similar. And then I know that I have to work more on that topic.

I would never even consider to change back to my traditional way of teaching and the positive feedback I've had from my students support my opinion. And I love the challenge to constantly try to improve my work, think of new ways to do things better for my students.