Flipped classroom

Method & Rationale

A differentiated teaching approach where the delivering of the instructional content happens beforehand (as home-work via a you Tube clip or similar) outside of the classroom. During class time, related exercises and class work are completed.

Description

As a homework exercise, students have to watch a clip on YouTube, explaining the subject you want them to learn. If necessary, the student watches it more than once.

During the follow up class, students can ask questions they have as a result of watching the video. These can be discussed with the other students.

Then all pupils start working on specific exercises which require knowledge of the theory they learned in the clip. The teacher has the time to walk around in the classroom, helping out those who have problems. If necessary, students can watch the clip again, or the teacher can explain the subject for a small group of students.

Students Outcomes
- Expand your knowledge on a particular topic
- Work as an individual on problem solving exercises
- Work at your own level
- Engage in peer learning through discussion.

Key Skills
- Follow Instructions
- Problem Solving
- Working alone
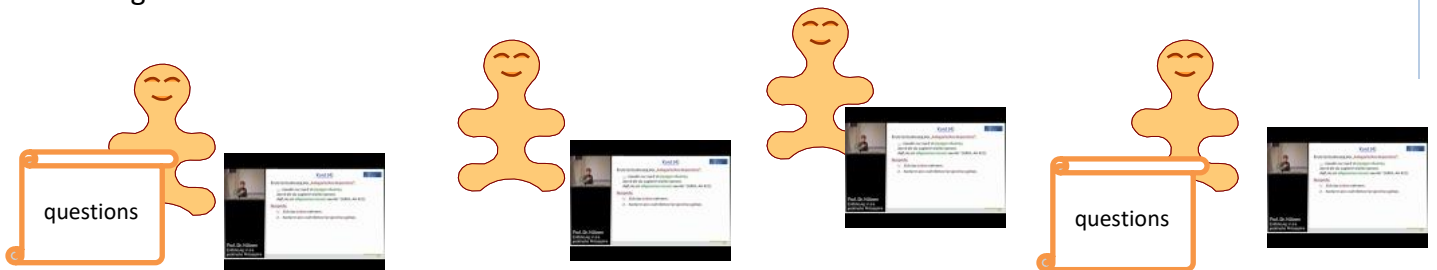- Working together
- Active Listening

Tipps
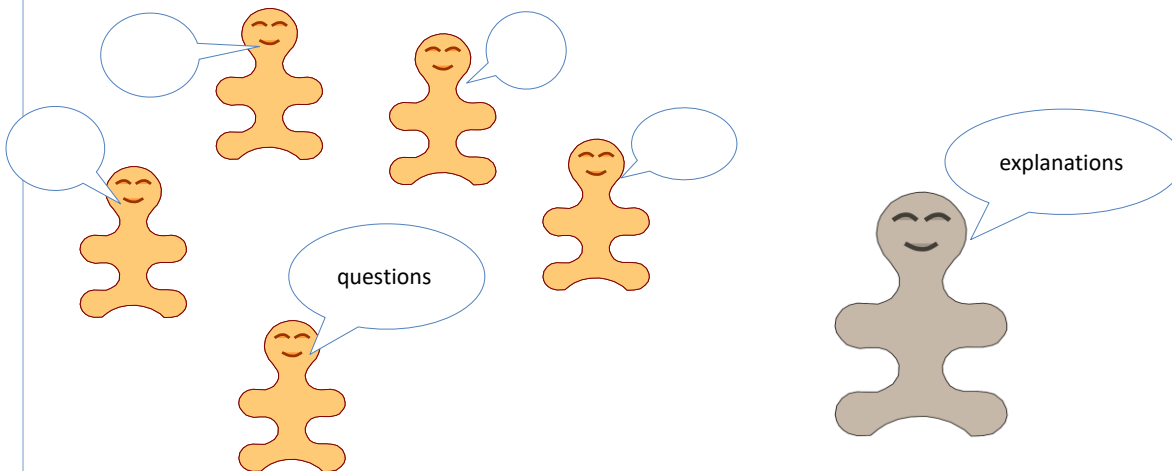
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Viszualization

Phase 1: teacher prepares or looks for a clip to explain the topic

Phase 2: students watch the video to prepare themselves and prepare questions, if they do not understand something

questions

questions

Phase 3: students ask questions in the following lesson and discuss the topic

explanations

questions

Phase 4: students work on specific exercises (either alone or in groups)

exercise 1
exercise 2

exercise 1
exercise 2

exercise 1
exercise 2
…
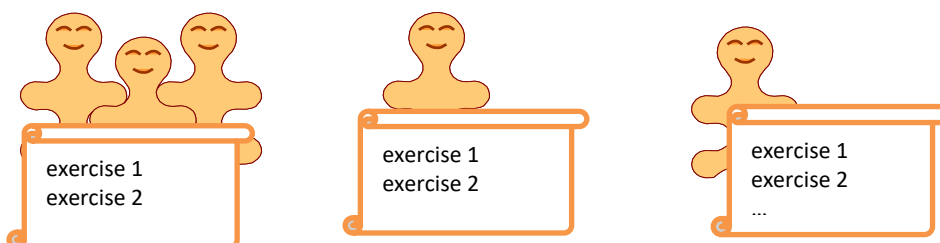
Evaluation – Flipped classroom

Used in following lessons:

Country	Number of teachers	Number of pupils	Aged	Topic
Austria	**4**	**77**	**14-18**	**Standard SW, Accounting, Programming**
Belgium	**1**	**17**	**17-19**	**Programming**
Spain	**2**	**30**	**15-16**	**Ethics, Spanish**
Ireland	**2**	**50**	**15-16**	**History, Geography**
Sweden	**3**	**68**	**12-16**	**German, Mathematics**

Results of evaluation of students:

The experiences with flipped classroom are very different. Sometimes students really like to work on a new topic themselves, sometimes not. If they are allowed to do their own research in school (not as a homework) they are very much more motivated and results are good. Younger students are more motivated than older ones. In general, they feel good if they have a challenging task, but nor an overwhelming one. Students often felt overwhelmed if they got too less information (e.g. only a topic title and no source list)

Sometimes, students just want the teacher to explain the subject to them. Especially when the clips have to be looked at as a homework, students don't like it.

For students it is interesting to be prepared for the lesson, you already know the content. It is also good to hear explanations from different persons, not just the teacher.

So, flipped classroom is an interesting method to use every now and then.

Results of evaluation of teachers:

Method was easy to explain to the students.

The method really enables students to follow an individualized path towards the goals set by the teacher.

Pupils can work at home at their own pace.

Experiences have been very different. Some students really liked this method, for example when they like to work practically. In this case, the results have been excellent, topics have been understood very fast. Students helped each other if they had problems.

The older students – especially programming – have not been able to find good sources themselves, so they could not really solve the assignments. Flipped classroom has to be used from the beginning and has to be trained, also some skills have to be trained before using flipped classroom, e.g. internet re-search.

When not all pupils watched the video at home, they could still watch it in class during the lesson and were able to work on their exercises.

The time of preparation was different, depending on the given information. If there was only a title and a short description – preparation time was short, if they have had a complete source list or a video or a prepared text, preparation time was long.

Evaluation was done by tests, homework or tasks.

For the teacher it is time consuming to create material or to watch content created by others to be able to know if it is of good/high quality.

The method is very interesting when combined with a Symbaloo. Students can then also share the video's they find with their peers.

When students don't have access to a computer or Internet at home, the method can't be used.

Motivation of the students and given information are the biggest influence size of the results.

Evaluation – Flipped classroom – Second Period

Used in following lessons:

Country	Number of teachers	Number of pupils	Aged	Topic
Austria	**6**	**98**	**15-18**	**Programming, Data-Base, Business**
Belgium	**1**	**34**	**17-19**	**Programming, webdesign**

Results of evaluation of students:

As mentioned in the year before the feedback of this method strongly depend on the given materials. This period teachers tried to find more materials easy to understand, so feedback became better.

On the other hand, the feedback was influenced negative by the form of testing. If students felt, that details of a topic had been asked, which are not completely explained in the materials, feedback was very poor. They were not willing to look for additional information to understand the topics. Of course, there were some problems too, if the teacher refused to answer questions (they expected the students to get hold of the information on their own).

Students also mentioned negative, if assignments have not been formulated exactly.

As last period feedback was positive if material was good, additional information has been easy to get for the students and tests had an average level.

Pros
- Individual time management for working on the topics at home.
- Possibility to get detailed information after working on the basics at home.
- More time to differentiate in the classroom.
- Absent pupils can more easily retake a lesson.

Cons
- Preparation of a topic and testing do not fit together all the time
- If details are not explained, motivation gets lost
- Difficult topics cannot be understood alone, should be explained by teacher.
- Not all pupils take their homework seriously and have to work with the materials during the lesson. They have no time to ask questions.
- Students often feel left alone.
- Pupils are more easily distracted on the computer, if they are not used to work with at home.

Results of evaluation of teachers:

Success of this method often depends on the interest of the students. If they are interested in the topic, they are motivated enough to do work at home. If not, not. As most of the time, only part of the class is interested, part of the class needs extra explanation afterwards. That's why you have troubles to avoid normal frontal teaching in the second part of the work. But if you do so, motivation to work at home goes down, and a downward spiral starts.

On the other hand, method is very successful if you find interesting topics and materials. We observed that Flipped-classroom also was much more successful, if it was a smaller group of students. Also, students aged 17 and older gave positive feedback, younger once rather negative. Best feedback was given if teacher gave a short introduction to a topic, and afterwards materials to work with at home.

Pros
- Individual approach for students, especially in time management at home
- If interested, students are highly motivated.
- Students remember more details, because of self-study work.

Cons
- Very poor results, if students are not motivated.
- Wasted time, if part of the class does not fulfil the home-assignments.
- Students try to wait for next hour to ask everything and next hour becomes a normal frontal teaching
- Although part of the teaching is outsourced, method sometime needs more time, because a lot of question can come up.
- Very good students often focus on details, or information besides the necessary core knowledge. They want to ask a lot of questions, other students get bored.