



FLIPPED CLASSROOM

Flipped classroom is a methodology where students first study the theory independently and after that they meet with the instructor to apply, analyse, and evaluate the information.

Flipped classroom (FC) is an active and reverse learning methodology consisting of student's autonomous work through videos or enriched texts and "face to face" sessions with the teacher to complete tasks with a higher cognitive demand.

With this strategy, theoretical studies can be adapted to the rhythm of each student in the virtual classroom, leaving the synchronous moments with more time available for the teacher to guide the students in the application of the content in different contexts, allowing deep learning. In addition, this methodology integrates perfectly with others such as cooperative learning, ABPs or gamification.

How to implement it

Flipped learning approaches have been identified as important for providing students with pre-class learning activities and freeing in-class time for development of critical thinking, collaboration and application of learning concepts (Fazal & Navarrete, 2020).

Pedagogically, to design a class following the FC methodology, the following points must be considered:

1. the creation of materials for the asynchronous work of the student, keys in this methodology,
2. the mechanisms that ensure the student's commitment,
3. the use of the necessary technology, and
4. probably the most important, the design of activities to apply-complete the learning of those contents with the help of the teacher during the synchronous class (face to face). That is, the

important thing in the FC is not only the video or text that you create for the personal work of the student, but what you do with the free time that you have left during the synchronous class.

We detail below the essential points of the FC:

1. **Creation of materials for autonomous study.** Some premises to take into account for the teaching video to be effective in learning are: make short videos, 6-12 min., (if the content requires more time it will be advisable to fraction it in several videos), use a natural language, do not speak too slowly and do not repeat (students can see the parts they need again), combine image with the spoken explanation, highlight keywords and do not overload the video with music or effects that do not provide an improvement to the content so as not to occupy working memory. There are many possible formats to create videos (lightboard, hand drawn, demonstration, screenshots), but without a doubt, the most efficient are those in which the teacher appears, so that the student can empathise with his teacher and also learn through his body language. In any case, choose the format with which you feel most comfortable and that fits with the content you must teach.
2. **Enriching the video, text, or other materials to ensure student engagement and to promote** their metacognition process. Promotes an active visualisation by accompanying the video or reading of the document with questions or activities that are carried out before, during or after its visualisation. This will allow students to know their level of understanding of the content, and the teacher to prepare the subsequent synchronous class adapted to the results they have obtained. In addition, the video curation tools allow you to know the progress of the student which ensures their commitment to the pre-class task “face to face”. In the case of using texts instead of videos you can use the same strategy of enriching the content with the appropriate tools.
3. **Design tasks that allow you to apply and complete the content studied autonomously to perform in the synchronous class.** Start the class by solving doubts or making a map or scheme that includes what was studied in the video, but never repeat the explanation of the content because that could promote that students do not perform the previous task on the next occasion. If there are students who have not studied the content before class, they will be able to do so individually at that time and join the completion of tasks afterwards. Design challenging activities, which force the student to think about what has been previously studied, evoke the contents and apply them in different contexts. Constantly monitor the performance of activities and support them with new explanations.
4. **Combine this methodology** with others if you wish. The time free of explanations left by the FC facilitates the use of PBL, AC or gamification, among others.

How to assess and evaluate it?

The evaluation of both the asynchronous work and the tasks proposed during the “phase to face” work can be evaluated by:

- ▶ Questionnaires. Be sure to add feedback to the results so students can self-assess.
- ▶ Problem or practical cases to receive an evaluation by peers or by the teacher.
- ▶ Participation in forums.
- ▶ Participation in wiki or shared documents.
- ▶ Evaluation of content created (videos, infographics, podcasts, group work)

Tools

In Moodle:

- ▶ Kaltura
- ▶ Embedding videos, games, Livescribe
Pencast
- ▶ Forum Tool
- ▶ Quiz Tool
- ▶ Book Tool

Tools for video creation:

- ▶ Explaineverything
- ▶ Power Point
- ▶ Screencastify
- ▶ Stopmotion

Tools for video editing:

- ▶ Adobe Premiere
- ▶ DaVinci Resolve
- ▶ iMovie
- ▶ VideoLouder

Tools for video enrichment:

- ▶ Edpuzzle
- ▶ Kaltura
- ▶ Hihaho
- ▶ IBM Watson
- ▶ MELO
- ▶ EdApp
- ▶ G Suite for Education

Tools for text enrichment:

- ▶ Perusall

The screenshot displays a Moodle course interface. At the top, there is a navigation bar with the language set to 'English (en)' and the user identified as 'Claudia Martin Carrmasi Alumno'. Below this is the header for 'Universidad Francisco de Vitoria UFV Madrid'. The main content area shows a quiz titled 'Your body language may shape who you are | Amy Cuddy: QUIZ'. The quiz question is: 'Why does body language have an impact on how much a person may participate in a class?'. Two options are visible: 'People who have an open body language tend to feel more confident and with participate more' (which is selected) and 'Participation has nothing to do with body language. It is a personal choice'. The interface includes a 'CONTINUE' button and a progress indicator showing '6:20 / 21:03'. On the right side, there is a navigation menu with options like 'Home', 'Dashboard', 'Profile', 'My courses', and 'Administration'.

An interactive video with questions embedded in the Kaltura application