In a nutshell - What is the flipped classroom design?

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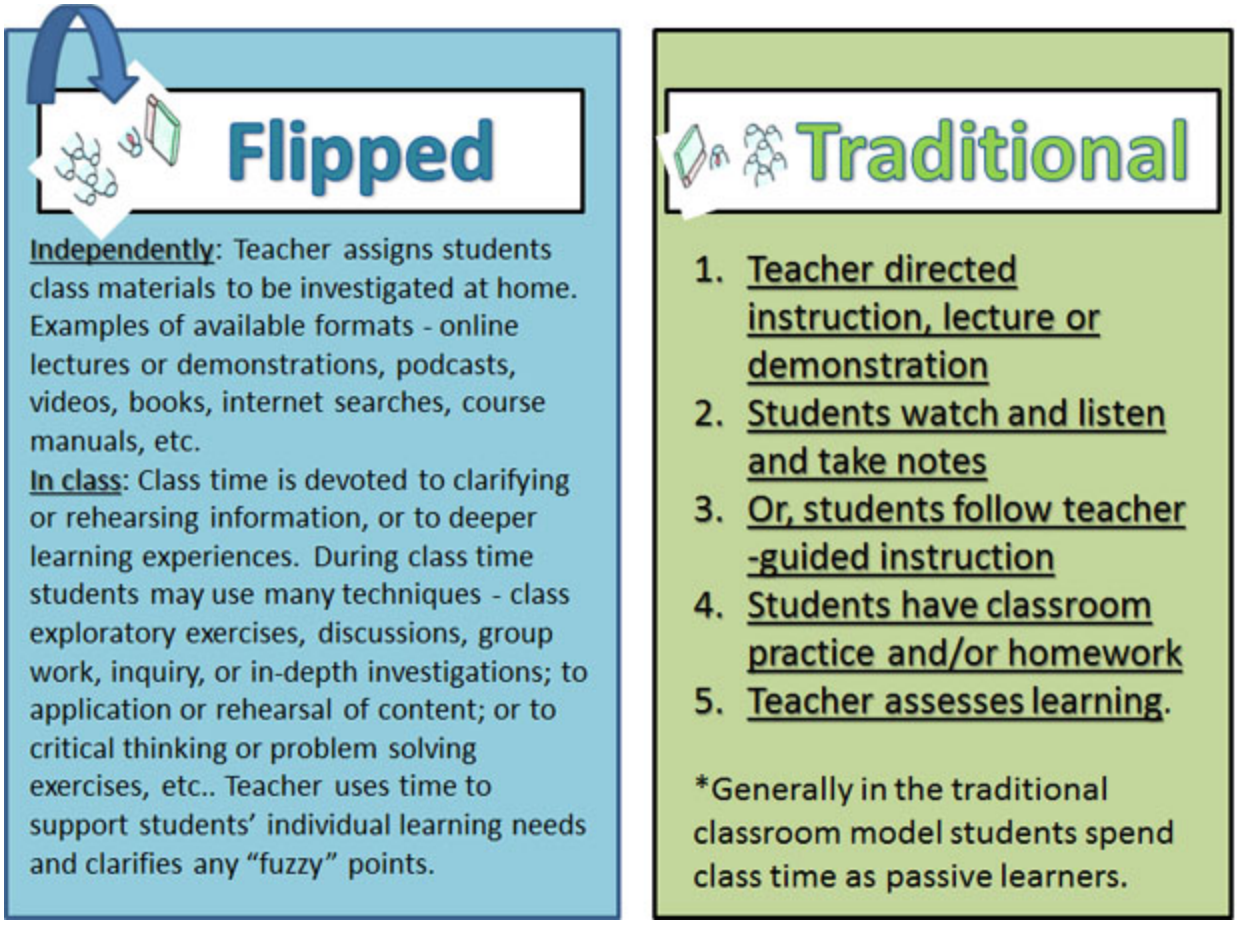
While there are emerging a number of definitions and designs referred to as "the flipped classroom model," the main intentions of this teaching model are to reverse the traditional presentation methods of classic teaching away from what teachers are saying to concentrating on how students are learning and retaining knowledge and information. In doing this teachers are encouraged to utilize a myriad of educational tools, to include technologies and e-formats, as well as tried and true educational models and techniques teaching. The flipped model has also been referred to as "blended learning" or "hybrid learning," implying the integral inclusion of online learning technologies as combined with face-to-face learning.

What was - In the traditional classroom model students are usually passive – mostly they listen and watch. During class time students are given background and new information, and often they observe demonstrations of procedures, problem solutions, or subject related processes. Information is offered through activities like reading texts or using guided reading assignments, informational lectures or demonstrations, or by PowerPoint presentations, etc. Usually these are delivered by a single teacher in a teacher-directed learning environment. Homework is then based on information covered in class, and given with the expressed purpose of practicing a skill or rehearsing or expanding on the initial knowledge as presented or guided by the teacher during class time.

What could be - It is perhaps too simple to just say in the “flipped” model of teaching the processes are reversed. The primary intention of this inverted model is to provide students with more active roles through interactive, more concentrated learning experiences during class time. Ideally the model is executed so that during class teachers can better personalize students' learning though individual help or small group interactions. The pattern of the “flipped” model usually involves an "at home or independent" preparatory assignment whereby students are required to acquire background information. This is achieved through some form of digital presentation or format, or using a hard copy source -- videos, podcasts, e-instruction, e-demonstrations, explorations of designated websites, or through books or course manuals, etc. Additionally, in some interpretations of the model, the "at home" component may also include opportunities for review or learning extensions. Class time is then reserved for more active learning experiences -- exploring, rehearsing, practicing, and discussing what they have learned independently, or during this contact time students will be called upon to extend preliminary knowledge into deeper learning experiences. In the flipped model, class time is meant to be allocated time where teachers can offer multiple opportunities and different types of learning experiences. During class time students are not just rehearsing targeted information; ideally they are also having types of quality educational experiences so that they might develop some level of content mastery. The concentration during "class time" in the flipped model is on promoting student understanding and competency rather than on information gathering and dissemination.

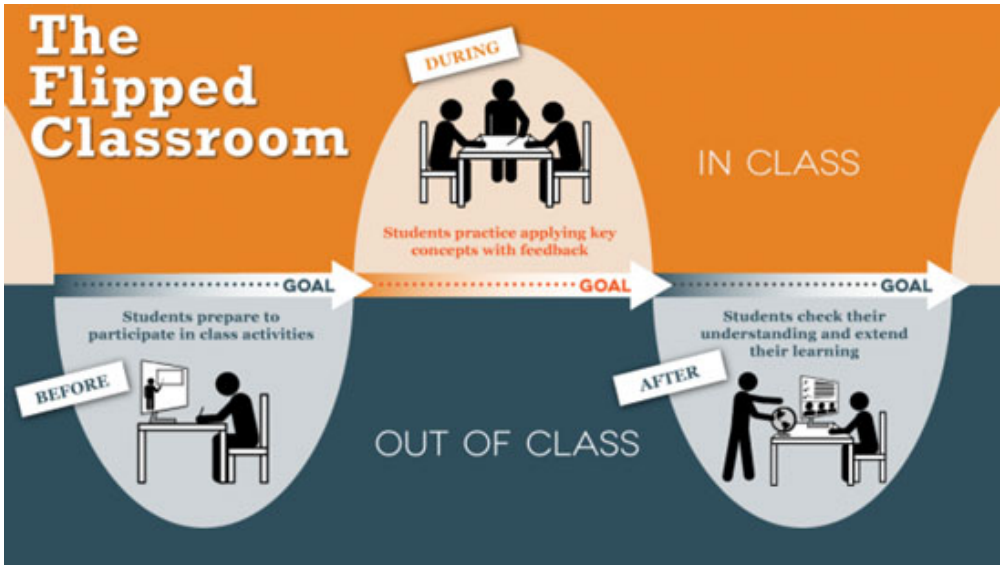


Design 1 - 2 Part flipped design - Tables: L.O. Wilson/2015

The central premise of the flipped model hinges on the fact that in today's information rich age, course content can be easily accessed electronically and previewed, read or reviewed outside of the classroom. As indicated, either preliminary examination of information, or information review and extension, can be done independently by each learner. Students can read, view, or hear information **at their own speed** in preparation for a forthcoming class. Lectures and demonstrations introduced and absorbed from an e-source also have the decided advantage where learners can replay segments any number of times, or even pause or reverse content while they examine it more closely and/or take notes. Class time can then be devoted to exercises and activities where learners explore, practice, examine, and discuss assigned concepts more thoroughly and in more depth.

The rationale of the model reports to help students explore more difficult or complex concepts while in class, with the benefit of receiving individual or small group help, or where students are engaged in instructional activities that involve higher levels of thinking, learning, and problem solving. The "in class" portion is where the teacher not only "checks for understanding," but allows students to rehearse new information as well as seek clarification on any of the "fuzzy" points or misunderstood portions. Too there are all kinds of video and audio capture formats, as well as new learning technologies, programs, and informational websites that are designed to help initiate, implement, support and enhance the concept of the flipped classroom.

Additionally, a number of prestigious institutions, and sponsored online resources are offering free information to students and teachers. These resources are often outstanding, and far beyond what might be accessible through traditional teacher-led lectures and presentations.



Design 2 - 3 Part flipped design - Clipart MS Word 7/2010

Background - New technologies and new attitudes about information sharing:

In the recent past "information" was often considered to be proprietary, but the internet has certainly changed that. There have been several pivotal events leading to what generally passes as the popularization of the "flipped classroom" through easy information access. In 2001 MIT (Massachusetts Institute of Technology) released a program called OpenCourseWare (OCW) whereby previously exclusive notes and course information were released so that anyone could have access. Continuing this general access trend, in 2006 an MIT alumni, Salman Khan developed the Khan Academy. This learning library houses a huge collection of several thousand lectures and related practice exercises. Several professors at Stanford University mirrored the Khan example making information from their courses available for general access online. Other prestigious universities like Princeton, University of Pennsylvania, University of Michigan, and Coursera have followed suit joining these efforts to expand access to quality courseware for free. Both MIT and Harvard have joined forces in a 60 million dollar project entitled "**edX**" where they are providing an array of classes gratis. Additionally, world-famous organizations like **TED** (Technology, Entertainment, and Design) have cached TED Talks online from their worldwide conferences for easy access by anyone.

Much of the rationale for the "flipped classroom" draws on two components:

1. The general accessibility and proliferation of quality online information, lectures, and related activities as in the examples offered previously, and

2. Time management issues whereby taped e-lectures and demonstrations appear to be **as effective in disseminating new and basic information** as those classes and presentations that happen in real time. If the seat time issue is true, then devoted class time can be used more effectively interacting with students and focusing or directing their learning efforts toward active learning experiences, content rehearsal and mastery, and encouraging them to think at critical or creative levels as well as problem solve.

Leslie's Baker's Dozen -- Thirteen important things to consider both before and while implementing the flipped classroom model

At this juncture I think it is important to note that successful attempts to initiate a quality "flipped classroom" model often depend on the teacher's professional philosophical orientation. This model properly executed falls under the classification of "constructivist learning"-- where learners are actively engaged in activities that allow them to explore and interact with chosen content at personalized levels. In considering, initiating, or refining the use of the flipped model, it is **extremely important to consider and answer** the following questions.

1. Are your students sufficiently intrinsically motivated to be able to self-initiate the "at home" or independent portion of this model, and how can you best determine this?

2. Beyond the books or teacher-created manual choices, do your students have ready access to the many e-format(s) that can be used to deliver information assigned for the out-of-class explorations? Specifically which technologies are best suited and accessible to your particular students?

3. Often we make unilateral assumptions that today's students are all tech-savvy, but are your particular students adept in using the technology you want them to use? If not, are you willing to offer tutorials so that they can more easily access and master the desired technologies?

4. How do the materials chosen for the independent portion of the model relate to your institutions' curriculum? Will the relationships be clear to students, their parents, and to your peers or administrators?

5. Are you willing to develop easily understandable information on the intentions and processes of the "flipped classroom model" so that students, and their parents might understand the concept, procedures, and expectations?

6. Are the chosen "at home" materials at the appropriate grade and/or reading levels, as well as developmentally appropriate for your students? Have you

carefully created or chosen materials that can be easily understood at independent levels for the self-directed "at home" portion of the model?

7. If you are using materials from others, are those from credible sources? And can these sources be easily accessed by students?

8. How will the materials you are requiring students to access independently be displayed and linked? How will you assure that any e-materials being used are always successfully linked for easy student access?

9. How will you tie the materials accessed independently to the "in class" portion of the model?

10. Specifically which models, activities, formats, groupings are you considering using for the "in class" portion of the model? And how will these techniques lead to further understanding, deeper learning, and content mastery?

11. How will you best assess the success of using this type of instructional model? Will you assess the independent and classroom portions of the model together or separately? Which types of assessments will you use to know if your learning objectives have been met?

12. As teachers, often in grave error, we make the assumptions that our students naturally develop study skills - to include note-taking abilities. The truth is many students (even ones at the college level) struggle in this area with hit or miss techniques. How will you assure that your students are prepared to succeed in the independent portion of the model? What skills will they need?

13. Lastly, in my mind, all good instruction begins with a well-developed and considered vision of learners at the end of their contact with the teacher. How does the flipped model fit into your vision of your students at the end of their contact with you? How might using this model have changed them? What will they know and understand as a result of being engaged in the flipped classroom model?

Leslie's Comments:

The wrong way to flip! I was at a social event recently when a mother of a high school junior was complaining about a teacher's use of the flipped classroom model. She seemed incensed that her son constantly complained that he "wasn't learning a darn thing!" Being interested in how teachers are using and organizing this model, I asked the mother several gently probing questions about how her son's class was structured. Personally I think the model has great potential for those teachers who actively embrace constructivist learning principles, and also for learners who are sufficiently intrinsically motivated to complete the critical "at home" preparation portion of the model. Through a series of casual questions I

was able to ascertain pretty quickly that this model was not right for her son, nor was it being presented in a way that optimized student learning.

Essentially the teacher in question seemed to send students to class related YouTube videos where other instructors demonstrated science concepts. He would then have students read related materials in class and discuss them. The process seemed a bit haphazard. There appeared to be no preparatory discussions or introductions provided for the "at home" portion, nor where there companion worksheets, study guides, or questions offered by the teacher to guide the students through the videoed demonstrations. Students were directed only to "take notes" on what they watched so they could discuss concepts in class in small groups or as a class. Multiple choice and short answer quizzes and tests were based mostly on the viewed videos. After a few more questions about her son, I also had the impression that he didn't really like science, and had trouble forcing himself to watch the assigned videos, much less take comprehensive notes about what he was viewing.

The potential of the model - There are hundreds of different **teaching models** and techniques. Part of good teaching is picking the ones that match the learning task at hand. Also part of good teaching is selecting models and techniques which reflect ones' teaching style and professional beliefs about how students learn best, and choosing those class activities which best fit the subject and content being taught. Exceptional teachers are ones who know their students and what motivates and engages them.

One of the strong "pros" of the flipped classroom model is that it is highly adaptable to many different subject and content areas. While students are acquiring baseline information and knowledge or reviewing information at self-paced, independent levels, what goes on in class can utilize many different separate teaching models and different teaching techniques. A committed and gifted teacher can actively engage students and accommodate different types of learners and their individual learning styles by actively investigating and using **different types of learning models** for the “in class” portion of the flipped design. However, one cannot do the flipped classroom model justice by just slapping a list of some random videos together and then allocating time to discuss them in class.

A course utilizing the flipped classroom model **fully** has to be carefully researched, designed, sequenced, orchestrated, and assessed. It needs to be constructed and paced with appropriate content that not only reflects the approved or targeted curriculum, but also strongly relates to the age and achievement levels of the students involved. It is imperative that the teacher designing the course asks and answers the questions I have posed above, and has thought carefully about how e-components or independently investigated elements are chosen and delivered. "In class" time is doubly important, not merely for information rehearsal, but for promoting deeper learning and critical or creative thinking. The flipped classroom, when done correctly and thoughtfully, can be an excellent instructional model, but like all models it is not one for every student, nor for every teacher.

 Contact Leslie

Additional Resources:

- **Edutopia Flipped #1** - Offers overview some good questions and the pros and cons
- **Edutopia Flipped #2** - Things to consider - more pros and cons
- **Faculty Focus** - College teachers weigh in
- **FlippedInstitute** - While pushing MediaCore and IPhone/IPad products, this site **has a lot of information** about setting up a flipped classroom for **both Higher Ed and K-12** educators. While they profess that it is "easy," what is not easy and missing are discussions on all the instructional "back-steps" and instructional design decisions good teachers need to make before they even begin to think about flipping!
- **From Educause** - Things you should know about the flipped design
- **TechSmith** - Example of the types of commercial software available for instituting a flipped design