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SMALL FLICS TO BIG FLIPS: A STEP-BY-STEP GUIDE TO FLIPPING YOUR CLASSROOM

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Flipped learning is becoming an increasingly popular and researched educational practice in higher education. Current research and models provide theoretical frameworks and supporting evidence for flipped learning. Yet, the notion of flipping a classroom is daunting and many instructors do not know where or how to begin. The (Flipped Learner-Centred Interactive Classroom Strategies) FLICS model provides a practical process for designing flipped learning environments. This paper discusses flipped learning, presents FLICS along with practical implementation strategies, and attempts to answer some of the common questions and concerns when creating a flipped learning environment.

Keywords: Flipped learning; Flipped classroom; Active learning; Education technology

LITERATURE REVIEW

Flipped learning moves content delivery outside of the classroom and in its place engages students in active problem solving and knowledge creation in the classroom (Bergmann & Sams, 2014). Adapted from the Flipped Learning Network's (FLN, 2014) definition of flipped learning, we define flipped learning as a pedagogical framework to facilitate meaningful student learning experiences using active learning strategies. Flipped learning utilizes online interactive instruction, content exploration and student collaboration while the classroom space is transformed into an

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interactive learning environment where the students work together and with the instructor to apply their knowledge, test their assumptions and receive feedback on their learning.

The use of flipped learning has already been shown to have a positive impact on student learning due to several reasons (Gilboy, Heinerichs, & Pazzaglia, 2015; Herried & Schiller, 2013; Tune, Sturek, & Basile, 2013). First, because the in-class activities increase the instructor-student contact time, students are better able to ask questions to clarify concepts as they work (Lage, Platt, & Treglia, 2000). Second, flipped learning also provides students with opportunities for instant feedback not only from the instructor but also from their peers (Bergmann & Sams, 2012). Students have reported the value of working with other students in this environment (Strayer, 2012) and some students have reported relying on group work to achieve better understanding of concepts (Lage et al., 2000). Third, by putting content online using media, students can be selective in the content they view and when they view it (Gerstein, 2012; Moffett, 2014), take advantage of content from different sources (Gerstein, 2012), and move at their own pace (Fulton, 2012).

FLICS MODEL

There are a few models that depict how flipped learning could be structured. For example, experiential engagement, concept exploration, meaning making, and demonstration and application are the four components that Gerstein's model (2012) connects together to create flipped learning. Strayer (2011) has a more process-oriented visualization that makes the connection between educational technology and learning through activity to influence the learning environment. Although these models provide a theoretical overview of flipped learning, they do not emphasize the process of how to create a flipped learning environment. The Flipped

Learning-Centred Interactive Classroom Strategy (FLICS) is a sequential model to help instructors adopt flipped learning.

FLICS is based on current literature and builds on the idea that components of the traditional classroom can be re-arranged by *flicking* each component to either the online or classroom learning spaces to create the flipped learning environment. By starting small, FLICS is based on the idea that microflips (Buemi, 2014) can be used to create flipped lessons. Moreover, FLICS is based on the seven principles of good teaching and learning (Chickering & Gamson, 1987) in that it 1) encourages contact between students and instructors both online and in the classroom, 2) develops reciprocity and cooperation among students by providing collaborative activities online and in the classroom, 3) encourages active learning with online activities such as simulations and time in class for participatory learning, 4) has space for timely feedback either through online interactions or in the classroom, 5) emphasizes time on task by focusing, planning and linking online content with in class activities, 6) encourages the communication of high expectations to students to ensure they come to class prepared to participate, and 7) respects diverse talents and ways of learning by providing a variety of content presentation methods and opportunities for students to take ownership of their learning.

As illustrated in Figure 1, FLICS makes use of both *blocks* and *flicks* to plan individual lessons that connect learning outcomes with the associated student assessment. *Blocks* are broad and help an instructor visualize the distribution of content, application of knowledge, and student engagement between the online and classroom environments. The content *block* can include knowledge, skills and concepts, while the application *block* is how students will use the content. The student engagement *block* prompts the instructor to include activities to engage students with each other, the instructor, and the content to facilitate meaningful learning. Consider these *blocks* as fixed

containers that do not change in size; this way, the instructor is encouraged to be intentional with what goes into each block. *Flicks* are the specific teaching and learning practices that are strategically used both online and in the classroom, and can vary between lessons and courses.

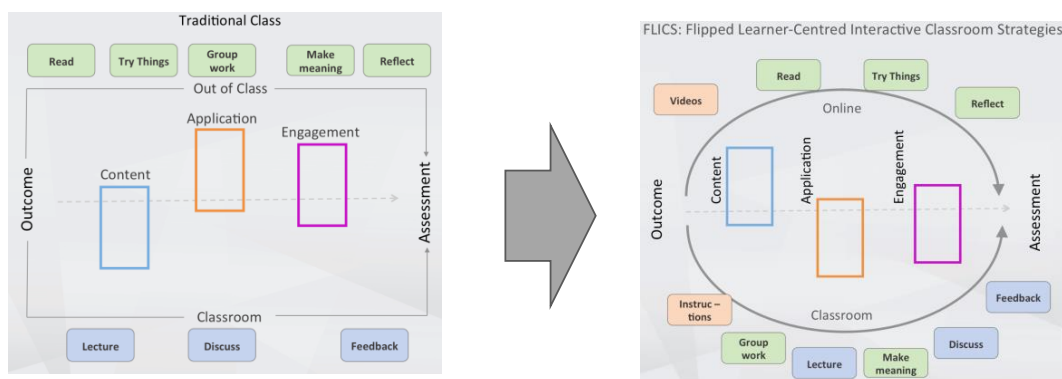


Figure 1: Comparison of Traditional Classroom to FLICS

USING FLICS

The following two phases and associated steps outline how to use the FLICS model to plan a flipped lesson.

Phase 1: Establish the blocks

Step 1: Set the end parameters by writing clear and measureable learning outcomes, and determine student assessment strategies.

Step 2: Identify which content supports the learning outcomes and select content for the online and classroom environments.

Step 3: Select activities for both the online and classroom environments for students to apply content and skills. Maintain a focus on supported active learning in the classroom.

Step 4: Plan how to engage students for both the online and classroom environments.

Phase 2: Do the Flicks

Step 1: Flick selected content online using videos, podcasts, and readings. Ensure content is concise (i.e., podcasts should be no more than 10 minutes and focus on one topic).

Step 2: Flick short activities online such as simulations or games for students to try things out and receive feedback.

Step 3: Flick any group work or problem-solving activities into the classroom where students work together, create meaning, and receive clarification. Plan for individual work time as well when appropriate.

Step 4: Flick instructions and short mini-lessons into the classroom. Often, short lessons are required to provide students with further content at the beginning or during the class.

Step 5: Flick feedback into the classroom to provide students with immediate feedback on their learning. When the course consists of multiple sections, correct answers can be provided online at a later time, but preferably before the next class.

Step 6: Flick opportunities for student reflection of their learning online.

By following these steps, FLICS provides a flexible process to flip a lesson or module. Individual flipped lessons can then be linked together over time to flip an entire course (see Figure 2).



Figure 2: Linking FLICS together to create a flipped course.

ADVANTAGES OF USING THE FLICS FRAMEWORK

The FLICS framework is built around the notion that flipped learning is flexible and adaptable to instructors' needs, as highlighted by Bergmann and Sams (2014). Flipped learning provides instructors the flexibility to check in with students (Lage et al., 2000) to not only inform student learning, but also the instruction. The flexibility of FLICS allows for real-time changes during the lesson, module or course by re-arranging or adding additional *flicks* to address immediate student and instructor concerns.

Moreover, as the *flicks* in the FLICS framework are interchangeable depending on the learning situation, FLICS is flexible to learner needs. To maintain a learner-centred focus, FLICS emphasizes the importance of linking all teaching and learning elements to learning outcomes. As underlined by Bergmann and Sams (2012), FLICS highlights the importance of identifying which learning outcomes are best achieved by students through direct instruction or through inquiry.

Challenges and questions of flipped learning

Through offering professional development workshops using FLICS, the authors have collected and provided answers to the following common questions and concerns about flipped learning and the FLICS framework in higher education.

How do I ensure students come to class prepared?

As flipped learning creates an environment for students to take ownership of their own learning (Bergmann & Sams, 2012; Lage et al., 2000), it is recommended that low-stakes mini-quizzes be used to encourage students to complete any online, pre-class work. Moreover, it is important to design in-class activities that are strongly linked to pre-class material. By setting clear expectations for each lesson, students can see the purpose of both online and in-class activities.

What types of assessments are most appropriate in a flipped classroom?

Assessments must be clearly linked to both the online and in-class material, and they should require application of knowledge and concepts. Preferably, these assessments should contain questions that have multiple correct answers so that student collaboration and rich discussions are encouraged.

How much time does it take to record a 10-minute podcast or video?

Using the FLICS framework, instructors can create their own podcasts to deliver online material using a variety of either freely- or commercially-available software programs. The most effective podcasts are those whose learning outcomes are clear and tied to specific classroom or online activities. Videos should also not be longer than 10 minutes in length and focus on one topic (Bergmann & Sams, 2012). It is recommended to write a script and generally a 10-minute podcast takes on average 60 minutes to create. The benefit is that podcasts can be viewed many times by students, paused, and replayed. Instructors can also take advantage of existing content and resources such as videos by Khan Academy or from other experts in the field (Gerstein, 2012).

How are student groups managed in class?

Group work in a flipped learning environment is encouraged, and can be managed both informally and formally with group contracts and agreements, regardless of how groups are made. Moreover, from our experience assigning individual roles to each group member such as leader, recorder, time keeper and reporter can help create a sense of responsibility to their group. There are also several different rubrics that can be used to make use of peer evaluations and provide overall group scores or scale individual assessment marks (Michaelson, Knight & Fink, 2002).

How can I still cover all the content I used to?

The FLICS framework requires the instructor to be very selective in course content to provide appropriate tools so that students can be responsible for their own learning and achieve the intended learning outcomes. It is important that the content container does not expand; meaning flipped learning is not a means for more content. Lage et al. (2000) found that course coverage was not sacrificed in a flipped learning environment; instead, there was more time in class for student-instructor interactions.

What if the students resist?

Student resistance is defined as negative student reactions observed when new teaching approaches are used (Seidel & Tanner, 2013). Seidel and Tanner (2013) suggest a number of different strategies that can be used to prevent it, which include practicing instructor immediacy, being transparent about pedagogical choices, and structuring group activities to promote fairness.

SUMMARY

Flipped learning has benefits for both students and instructors (Bergmann & Sams, 2014; Lage et al., 2000; Strayer, 2012). FLICS provides a practical and flexible framework to flip a lesson or entire course. By starting small, FLICS provides boundaries to intentionally select teaching and learning practices to facilitate a rich and meaningful student-centred learning environment.

REFERENCES

Bergmann, J., & Sams, A. (2012). *Flip your classroom. Reach every student in every class every day*. Eugene, Oregon:ISTE

- Bergmann, J., & Sams, A. (2014). *Flipped learning: gateway to student engagement*. Eugene, Oregon:ISTE.
- Buemi, S. (2014, April 21). Microflipping: a modest twist on the ‘flipped’ classroom. *The Chronical of Higher Education*. Retrieved from <http://chronicle.com>
- Chickering, A., & Gamson, Z. (1987). *Seven principles for good practice in undergraduate education*. AAHE Bulletin, 39, 3-7. Retrieved from <http://files.eric.ed.gov/fulltext/ED282491.pdf>
- Flipped Learning Network (2014, March). *Definition of flipped learning*. Retrieved from <http://www.flippedlearning.org/definition>
- Fulton, K. (2012). Upside down and inside out: Flip your classroom to improve student learning. *Learning & Leading with Technology*, 39(8), 12–17.
- Gerstein, J. (2012). *Flipped classroom: The full picture for higher education*. Retrieved from <http://usergeneratededucation.wordpress.com/2012/05/15/flipped-classroom-the-full-picture-for-higher-education/>
- Gilboy, M.B., Heinerichs, S., & Pazzaglia, G. (2015). Enhancing student engagement using the flipped classroom. *Journal of Nutritional Education and Behavior*, 47(1), 109-114.
- Herried, C.F., & Schiller, N.A. (2013). Case studies and the flipped classroom. *Journal of College Science Teaching*, 42(5), 62-66.
- Lage, M.J., Platt, G.J., & Treglia, M. (2000). Inverting the Classroom: A gateway to creating an inclusive learning environment. *The Journal of Economic Education*, 31(1), 30-43

- Michaelson, L.K., Knight, A.B., & Fink, D.L. (2002). *Team-based learning: a transformative use of small groups*. Westport, CT: Preager Publishers
- Moffett, J. (2014). Twelve tips for “flipping” the classroom. *Medical Teacher* 37(4), 331- 336
doi: 10.3109/0142159X.2014.943710
- Seidel, S.B., & Tanner, K.B. (2013). “What if students revolt?” – considering student resistance: Origins, options, and opportunities for investigation. *CBE Life Science Education*, 12(4), 586-595.
- Strayer, J. (2012). How learning in an inverted classroom influences cooperation, innovation and task orientation. *Learning Environments Research*, 15(2), 171-193.
doi:10.1007/s10984-012-9108-4
- Strayer, J. (2011). *The flipped classroom*. Retrieved from
<http://www.knewton.com/flipped-classroom>