Developing Flipped Methods for Teaching (DFM) – Erasmus+ Strategic Partnership for Higher Education Project 2020-1-HU01-KA203-078844 Erasmus+ Programme
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Research report (final)

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1. Introduction

One of the methods which received increased attention with the spread of internet is the flipped classroom method. The idea behind a flipped classroom design is that learners can receive the material for the next lesson, video or presentation, less often reading material before in-class educational activities. Learners process and interpret the material at home so that in-class activities can focus on clarification of the questions, or practicing exercises related to the new knowledge. This avoids the need for the teacher to engage in long explanations usually associated with passive student attention. There is more time for a more personal, interactive learning, using methods like panel discussions, case-based presentations, expert led discussions, team-based discussions, role -plays and student presentations, discussions and debates.

Research results indicate that when changing traditional methods to flipped classroom it is expected to improve student's performance (Borchardt & Bozer, 2017) and satisfaction (Albert & Beatty, 2014; Andreychik & Martinez, 2019; Baepler, Walker, & Driessen, 2014; Missildine, Fountain, Summers, & Gosselin, 2013). Flipped classroom methods increase student's motivation and their self-confidence (Thai, De Wever, & Valcke, 2017), their commitment to learn (Giannakos, Krogstie, & Chrisochoides, 2014; Gilboy, Heinerichs, & Pazzaglia, 2015; Tune, Sturek, & Basile, 2013).

Reviewing 28 studies on flipped classroom O'Flaherty & Phillips (2015) conclude that teachers does not really understand the role of Flipped Classroom steps or the relation between classroom and home activities. Students will be more motivated in doing the homework tasks if they receive feedback and they see the connection with classroom activities. Betihavas, Bridgman, Kornhaber, & Cross (2016) conclude in their review that students will be more motivated if they are explained the advantages and method of Flipped Classroom.

2. Research

To address the challenges of covering a course with flipped classroom materials six European institutes (mentioned in the institutional affiliation of authors) has joined their effort to develop materials for covering a course with flipped classroom materials. The purpose of the "Developing Flipped Methods for Teaching (DFM)" project[1] is to develop educational materials for teaching an entire course of introduction to psychology with a flipped classroom design, with translation to seven European languages. The project aims at overcoming the difficulties of elaborating multiple materials for teaching with flipped classroom design. Teachers from higher and secondary education

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institutes will have all the necessary materials for teaching the subject of psychology with flipped classroom methodology. The primary target group of the project are academic staff from the domain of psychology, who have a goal to improve their teaching skills and are open to use new technologies. A secondary target group is teachers from secondary education institutes specialized in psychology. Other target groups are pre-service university students from the domain of elementary school teaching, people who interact with children and have the goal to teach them social sciences, people working in adult education, students and people willing to learn social sciences.

In order to o gain a better understanding of higher education teachers' views on flipped learning (with a special attention on social sciences), a survey was conducted in the DFM project using an online questionnaire. The survey sought to find out who's flipping, who's not, and the barriers and benefits to those who flip.

The questionnaire used was developed as part of a previous study initiated by Faculty Focus (an online publication) in 2015 (used with permission) (Faculty Focus research report, 2015). The online questionnaire was translated by DFM project partners to local languages, in order to identify flipped classroom methods used by individual higher-education teachers across seven countries: Bulgaria (BG), Cyprus and Greece (CY+GR), Hungary (HU), Portugal (PT), Romania (HU) and Slovakia (SK). The questionnaire was promoted by calls of completion sent to the main higher education institutes of the seven countries, explaining the goal of the survey and where the data will be used. Subjects were recruited with accidental and snowball sampling - existing subjects were called to recruit more subjects into the sample, so the collected data are not representative for the included countries.

Subjects were asked to provide description of the flipped classroom methods used, including the source and nature of online activities used, difficulties they experienced, and recommendations for like-minded teachers. In order to document insightful case stories, subjects were also asked if they have success stories to share. Data collection was conducted between September, 2021- March, 2022.

We present bellow the research data collected in Hungary.

Results

Answers to question 1, "Have you heard about the Flipped Classroom method" indicates that from 118 completers 79 have not heard about this method, while 39 yes (see Table 1).

N	Yes	No	% No
69	36	33	47,8

Table 1.

The most popular definition of flipped class was "The homework and lectures are reversed. Recorded lectures are viewed outside of class time, and homework is completing during class time." (see Table 2)

	HU
Students complete pre-class work individually before class and engage in team work and collaborative learning activities during class.	27,5
Lectures are recorded as videos for students to view outside of class time freeing up time in class to engage in discussions and problem solving.	
The learning environment is designed to switch the focus away from the instructor and toward the students.	4,3
The homework and lectures are reversed. Recorded lectures are viewed outside of class time, and homework is completing during class time.	20,3
	N=33

Table 2. Which of these definitions aligns with your interpretation of the flipped class? (Select all that apply.)

Regarding the use of flipped classroom methods, percentage of usage are presented in table 3.

	HU
Yes	25,0
I tried it, but I do not plan to do it again	27,8
No, I don't intend to flip my class	27,8
No, but I plan to flip in the next year	19,4

Table 3. Have you tried flipping an activity, class period, or course?

The reasons for not being interested in the FC method are presented in table 4.

	HU
Not enough knowledge about flipping	33,3
It's a fad that will soon be replaced by the next new thing	22,2
Too time consuming	22,2
Uncomfortable with the approach	11,1
Limited experience with and/or knowledge about technology	
Lack of recognition and/or support	
This type of work is not part of my position/role	

Table 4. We'd like to know more information about why you are not interested in flipping your class or what prevents you from flipping. Select the statement(s) that best explains your decision. (Check all that apply)

The persons who have already tried to use flipped methods were asked how long ago they had this initiative. Results are presented in table 5 (percentages).

	HU
1 year ago	13,9
2 years ago	19,4
More than 3 years ago	25,0
Implementing now	58,3
N	19

Table 5. When did you first implement the flip?

Those with experience in FC methods were asked to rate their experience as teachers, and also how would they appreciate the experience of students. Results are presented in table 6 and 7.

	HU
Positive	68,4
Neutral	5,3
Negative	26,3

Table 6. How would you rate the experience for you?

	HU
Positive	31,6
Neutral	52,6
Negative	15,8

Table 7. How would you rate the experience for your students?

A more detaled appreciation of effects of FC method on students was required from respondents; results are presented in table 8.

	They are more engaged	Their grades are improving	They are resistant
Agree strongly	33,3	4,8	4,8
Agree somewhat	50,9	47,6	9,8
Disagree somewhat	14,3	43,4	77,8
Disagree strongly	1,5	4,2	7,7
	They adapt to the approach	They ask more questions	They come to class prepared
Agree strongly	14,3		25,0
Agree somewhat	57,1	50,0	50
Disagree somewhat	21,6	24,0	38
Disagree strongly	7,0	1,0	2
	They are more collaborative	They see the value of this type of experience	They are comfortable using the technology
Agree strongly	15,0	30,0	85,0
Agree somewhat	50,0	51,0	14,0
Disagree somewhat	30,0	15,0	
Disagree strongly	5,0	4,0	1,0

Table 8. Indicate the extent to which you agree or disagree with the following statements related to students in your flipped course

Subjects with experience in using FC methods were asked about the perceived benefits. Results are presented in table 9.

	HU
Increased student engagement	15,0
More learner-centered teaching	50,0
Improved student learning	30,0
Improved learning environment	5,0
I know my students better	15,0
I am more excited about teaching	50,0
I look forward to class more often	
Re-energized a course	
I have been asked by colleagues to share what I am doing	
I have produced scholarship related to my flipped teaching	
I didn’t realize any benefits	

Table 9. What were the biggest benefits experienced from flipping? (check all that apply)

There are several impediments mentioned in the scientific literature regardin the use of FC methods. Subjects were asked to rate their opinion regarding these difficulties using a 4-point Likert skale. Results are presented in table 10.

	Time	Lack of support (resources/ funding/space)	Competing department/ college/campus goals
Very Significant/Always a challenge	83,3	42,1	7,7
Significant/Often a challenge	16,7	52,6	7,7
Moderate/Sometimes a challenge		5,3	46,2
Insignificant/Rarely a challenge			38,5
	Not valued by colleagues/ administration	Not understood by colleagues/administration	Being creative/developing new strategies and ideas
Very Significant/Always a challenge	31,6	55,6	13,3
Significant/Often a challenge	57,9	38,9	40,0
Moderate/Sometimes a challenge	10,5	5,6	40,0
Insignificant/Rarely a challenge			6,7
	Student resistance/ lack of motivation	My experience/comfort with technology	Other responsibilities required by my position
Very Significant/Always a challenge	16,7	25,0	7,7
Significant/Often a challenge	72,2	56,3	38,5
Moderate/Sometimes a challenge	11,1	18,8	53,8
Insignificant/Rarely a challenge	16,7	25,0	7,7

Table 10. What challenges do you face when thinking about flipping your class?

No respondent was willing to participate in an interview for sharing more experience about using flipped classroom methods.

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