Flipped Learning at University Level

Ingibjörg B. Frímannsdóttir

University of Iceland, School of Education (Iceland)
ingfrim@hi.is

Abstract

Teaching, not only, consists of the communication of knowledge to students. It also entails the searching for the correct way of getting that knowledge to student in the most effective, relevant and technically accessible way at each time. When organising courses it is natural to ask what teaching methods are the most suitable. Answers have recently been sought to this question in the course Spoken and Written Language, which about one hundred on-site and distance students attend in the Teacher Education Department of the School of Education at the University of Iceland in the fall of 2014. Various methods have been tried and in the autumn 2014 semester the method of flipped learning was used for the second time.

Flipped learning consists of turning the method of teaching upside down. The Spoken and Written Language course was taught using the flipped learning methodology, where short recordings were uploaded (on Moodle) and group sessions were organised where students worked with the material covered in the recordings. Students, as well, had a choice of attending the group sessions either in a classroom or in an online setting.

In this presentation an introduction will be given on the results of a survey were students were asked about flipped learning as a teaching method, using the experience from the course Spoken and Written Language. The main question for which an answer is sought is: How does it work to use flipped learning at the university level? What do the students think about flipped learning as a teaching methodology? The focus of the presentation will be on the students' experience of the online lectures and the group sessions they took part in; how they value them, how they value this form of teaching and the question of whether this teaching method was successful in the course.

1. Forewords

In most academic fields there is constant evolution and change in order to improve and further each field. Although that is also the case in education, we still find the method of lecturing the material that has evolved very slowly and often seems to be stuck on an evolutionary track that has little to do with the possibilities and the times we live in. Still to this day we find educators that are stuck lecturing material in a 18th century lecture room style to a group of differently motivated student who then assimilate the knowledge to a large extent away for the classroom.

However, over the past decades the thirst for new ways of communicating knowledge has been growing and the role of the educator has in many ways evolved from being "sage of the stage" to being "guide on the side" [1]. The information-sharing world of today's students has changed significantly from what the lecturing form was built upon and educators have to evolve teaching methods to cater to today's students. It is therefore that we find that in higher education there exists a growing interest in the potential value of the student-centred learning environment. There, students are more actively engaged in higher-order tasks and take charge of their own learning [2]. This requires more involved student presentations, small group problem solving, self and peer evaluation, and group discussions [3].

The student-centered learning environment is taking advantage of the potential new technology brings and the mindset of a new generation of students. A number of student-centered learning methods have been developing over the last decades and the ideology of flipped learning is one of those. The purpose of this presentation in to introduce research that was done in the autumn of 2014 at the University of Iceland in which flipped learning was used, specifically the experience of todays students being taught using flipped learning.

2. Flipped Learning

Flipped learning is an ideology that addresses the potential educators have in teaching today. With flipped learning the focus moves towards the students and away from the lecturing [4].Unlike traditional classrooms, where instructors lecture in a classroom and students take notes and complete their work at home, the flipped classroom "flips" in-class work to introduce more collaborative hands-

on activities [5].The actual lecturing takes place at home, using recordings that have been posted online by the teacher [6].

The methodology of flipped learning can be looked at as encompassing two phases. First, there are short recordings that are about well-defined subjects, which are accessible to students on the internet. Students use the recordings to guide them through the material, replacing traditional lectures. Students are able to allocate their time better and pace their (online) learning to meet their individual levels of comprehension. Students have more flexibility in selecting when and where to view the lectures and classroom time becomes more collaborative, active and engaging compared to typical lectures [6].The other phase of flipped learning is classroom work. Classwork consists of well-structured assignments aimed at furthering the students' understanding of the material, helping them overcome any hurdles and being able to apply the knowledge they are working with [6].

The model of flipped learning attempts to address challenges by allocating more class time for active learning as well as to leverage accessibility to advanced technologies to support a flipped learning approach [2]. The ideology was mostly developed by Jonathan Bergmann and Aaron Sams [6] and has been used by educators at all levels of education. There is, however, still a need for further research and understanding how students in higher education view this teaching method. The purpose of this presentation is to introduce just such a research.

3. Methods

Research was conducted during and within the course *Spoken and written language*. The teaching structure of the course was changed to apply the flipped learning ideology. Instead of having classroom lectures, there were short recordings uploaded on Moodle, group sessions were organised and students worked with the material covered in the recordings. The students also had a choice of attending workshops in the classroom or online. In this regard, it did not matter whether students had registered as onsite or distance students.

After the semester, a survey was conducted aimed at analysing the experience of students exposed to the flipped learning system. Students were asked about flipped learning as a teaching method in higher education, using their experience from the *Spoken and written language* course, their experience with the online lectures and the group sessions they took part in and how they valued the course overall.

Questions were sent to 108 students with Moodle 2.6 and the questionnaire was open for ten days, from 21 – 30 November. The survey was anonymous and could not be traced back to participants. A total of 76 students, 9 men and 67 women, responded with response rate of 70.3 percent. The survey was therefore statistically significant. The data were then applied for analysis using SPSS 2.2.

Quantitative methods were used in administering the questionnaire of 15 questions. There were three base questions about age, gender and study line, seven multiple-choice questions and five open questions to which participants could write unfiltered, unrestricted opinions in detail. For the purpose of this research four central questions were highlighted, as they allowed for the best representative interpretation of the subject analysed:

- What do the students think about flipped learning as a teaching methodology at the university level?
- Are the students satisfied with the workshops that were given?
- How do they value the course *Spoken and written language*?

4. Results

The main question in this survey was to find out the relevance of using the flipped learning ideology in higher education. The first question the students were asked was: Do you think flipped learning is a suitable form for teaching in higher education?
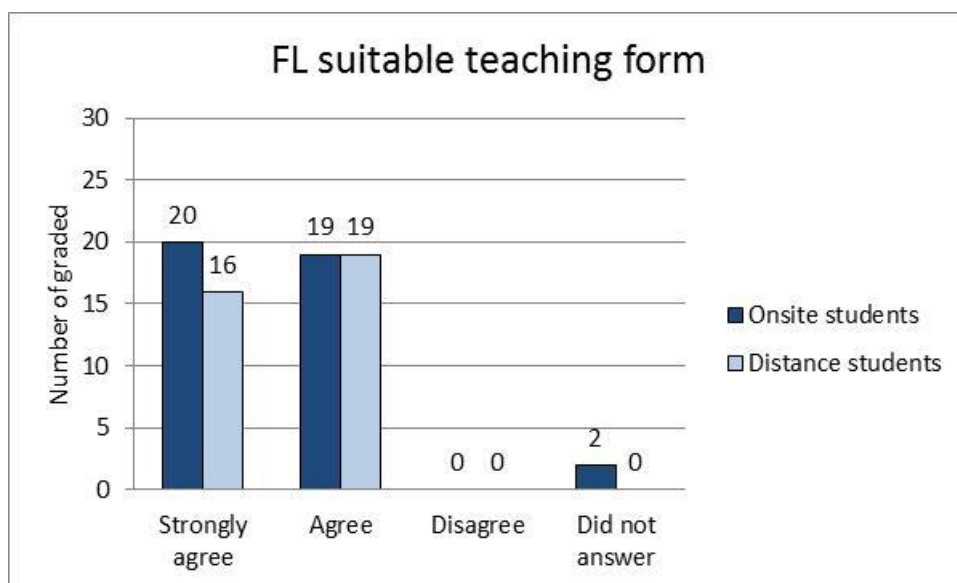

Fig. 1 Do you think flipped learning is a suitable form for teaching in higher education?

Of the onsite students, 39 of 41, or 95.1 percent, found the form suitable based on their experience from the course. Of the distance students 35 of 35, or 100 percent, strongly agreed or agreed with the suitability of this form of teaching. No one disagreed but two chose not to answer.

If the results are analysed in terms of age we find that all age groups are satisfied with the result, but we can see a slight movement towards the idea that the older the student, the happier s/he is with this form of teaching.
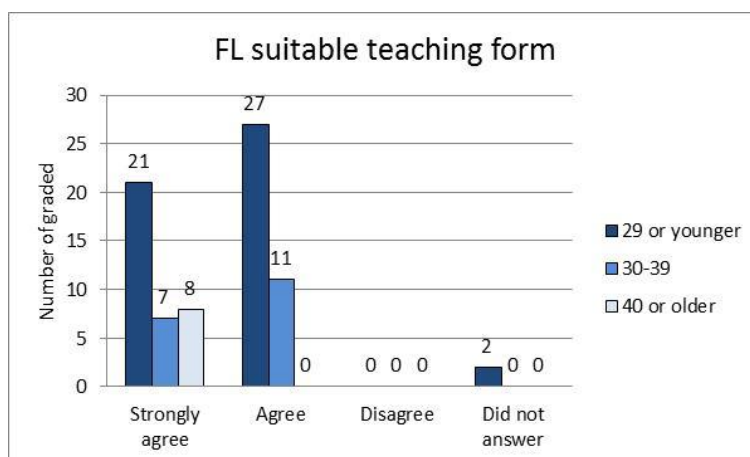

Fig. 2 Do you think flipped learning is a suitable form for teaching in higher education?

It, however, cannot be said that age is a determining factor as to whether flipped learning is a suitable form of teaching from a student's perspective. Any fear that this form of teaching would be more directed towards younger students is not found here. Of students 29 years or younger, 48 of 50, or 96 percent, strongly agreed or agreed that flipped learning is a suitable form for higher education, while in the age group of 30-39 years old, 18 of 18 agreed and 8 of 8 in the age group of 40 years or older agreed.

Because of how important workshop work is to the flipped methodology, it was important to analyse the satisfaction with the workshops conducted. Students were therefore asked about their experience

with the workshops and how satisfied they were with them. Of the students who chose to do their workshops online, were they positive about how workshops were conducted?
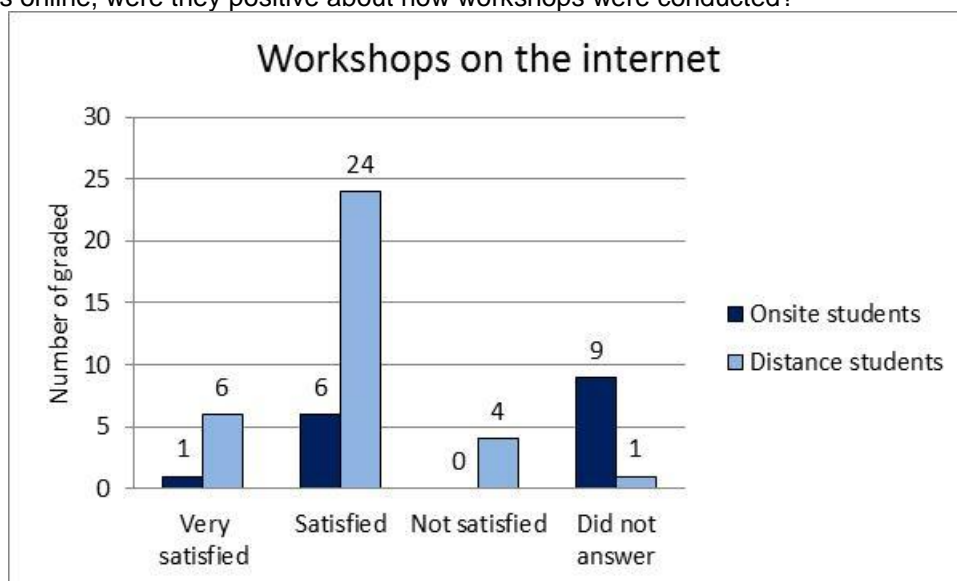
Fig. 3 Are you satisfied with the workshops on the internet?

The results showed that 37 of the 51 students, both onsite and distance students, were very satisfied or satisfied with the online workshops. Only four distance students were not satisfied but nine onsite students and one distance student did not answer.
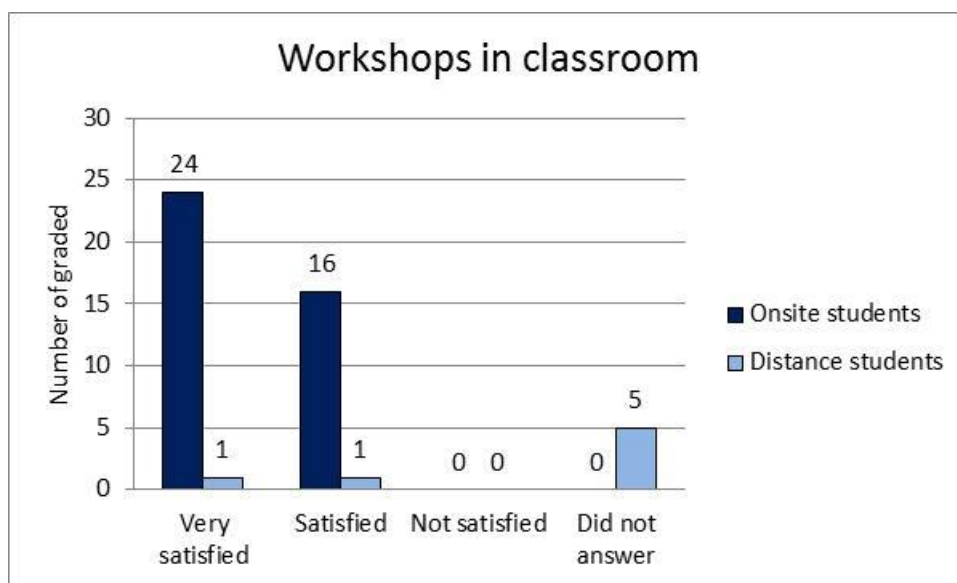
Fig. 4 Are you satisfied with the workshops in the classroom?

Of the students who did their workshops in the classroom, 40 onsite students were very satisfied or satisfied with the workshops in class. Two distance students did come to class, and they were both satisfied. No one was dissatisfied and five did not answer.

Finally, it was important to know how the students rated the course *Spoken and written language* (SWL) overall.
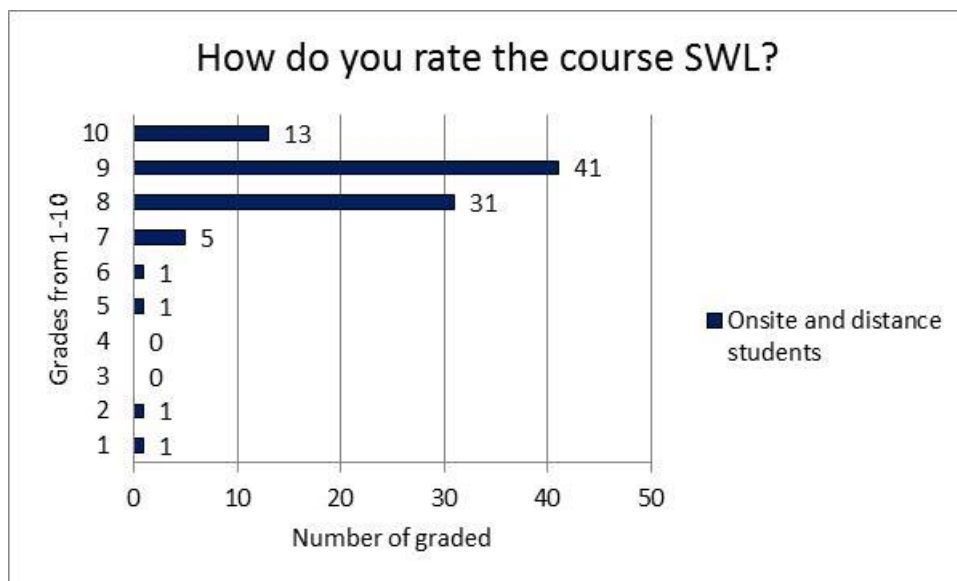
Fig. 6 How would you rate the course *Spoken and written language*?

The rating was taken from the survey conducted in all classes within the University of Iceland. Of the 115 students assigned to the class, 94 responded, or 81.2 percent. 90.4 percent of students gave the course grades from eight to ten, five gave the course seven and four gave the course grades from one to six.

5. DISCUSSION

In essence the experience of the students was very positive. Nearly all students, 95 up to 100 percent depending on different groups, in the course *Spoken and written language* felt that the flipped learning method was suitable at the higher education level. There was also no difference in opinions between onsite and distance students or in terms of the students' age.

The experience of specific tools within the flipped learning methodology, such as online lectures and group sessions, also got positive feedback from students. In terms of the workshops, students working in groups both online and in-class seemed satisfied. This result confirms that the assignments had the desired effect and functioned as a help to students in understanding and applying the material.

The average grade for the overall course *Spoken and written language* was 8.47, compared to average grades of 7.74 for courses in the University of Iceland as a whole. The result for the *Spoken and written language* course is therefore more than acceptable and supports the supposition that flipped learning can belong at the university level, from the student's perspective.

This research provides, however, only one angle in the discussion of the theory of flipped learning. Here we looked at flipped learning from the perspective of the student in higher education. Further research will then be conducted from the perspective of the educator as well as to look at how flipped learning functions in different study fields/academic disciplines. This research, however, supports the theory that a change in the method of teaching at the university level is possible using the flipped learning ideology. The student's perspective is that the methodology is suitable in higher education.

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