Flipped classroom: Benefits and challenges in a Corporate Finance course

Webinar with Jianhua Zhang

04 September 2020
Our Housekeeping Rules for this webinar
Housekeeping Rules

- Questions at the end (Q&A Session)
- Use the Q&A to type your question
- Or use the “raise hand” button to ask your question via audio
- Upvote a question if you also have the same question
- Recordings will be shared
- Slides will be shared
Jianhua Zhang
University of Gothenburg
Box 640, 405 30 Vasagatan 1
Göteborg Sweden
jianhua.zhang@economics.gu.se
MyLab Finance: a virtual and web-based learning environment

• Digital Technology in the Classroom (DTC) and Information and Communication Technology (ICT) encourage active learning, knowledge construction, inquiry, communication, and data sharing between teachers and students.

• One example of applying DTC and ICT is to use MyLab Finance
  – Partially flip our classrooms
Objectives

• To share my experience and to discuss the benefits and challenges of embedding MyLab Finance (MLF) in my undergraduate finance course during the period 2014 – 2018.

• 1) Lectures 2) Homework 3) Quizzes 4) Written exam

• 2014 – 2017
  – Homework and Quizzes were given in MLF

• 2018 – 2020
  – Homework was given in MLF
  – Quizzes were given in Inspera
### Table 1  MyLab Finance used in an undergraduate basic financial economics course (EPN302) 2014 - 2017

<table>
<thead>
<tr>
<th></th>
<th>2014 Fall</th>
<th>2015 Fall</th>
<th>2016 Fall</th>
<th>2017 Fall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of homework assignments</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Number of quizzes</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Quiz duration</td>
<td>1 hour</td>
<td>1 hour</td>
<td>1 hour</td>
<td>1.5 hours</td>
</tr>
<tr>
<td>Percent quiz score to total score</td>
<td>50%</td>
<td>50%</td>
<td>38%</td>
<td>38%</td>
</tr>
<tr>
<td>LockDown Browser</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Quiz place and room size</td>
<td>Anywhere</td>
<td>For those students with their own laptops: 2 big classrooms with 350 seats and 250 seats, respectively.</td>
<td>1 big digital examination room (DISA) with 110 seats.</td>
<td>The same as those in 2016</td>
</tr>
<tr>
<td></td>
<td></td>
<td>For those students without laptops: 4 school computer rooms (15 computers in each room)</td>
<td>The same quiz had to be given twice for two groups because of the limitation of the room.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>AC power plugs and sockets</td>
<td>Two groups</td>
<td>Two groups</td>
</tr>
<tr>
<td></td>
<td></td>
<td>WiFi points</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Issues</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 2  MyLab Finance used in an undergraduate basic financial economics course (EPN302) 2018 - 2020

<table>
<thead>
<tr>
<th></th>
<th>2018 Fall – 2020 Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of homework assignments</td>
<td>7</td>
</tr>
<tr>
<td>Number of quizzes</td>
<td>2</td>
</tr>
<tr>
<td>Quiz form</td>
<td>Close book</td>
</tr>
<tr>
<td>Quiz duration</td>
<td>1.5 hours</td>
</tr>
<tr>
<td>Percent quiz score to total score</td>
<td>38%</td>
</tr>
<tr>
<td>LockDown Browser</td>
<td>-</td>
</tr>
<tr>
<td>Digital examination platform</td>
<td><a href="https://www.inspera.com/">Inspera</a></td>
</tr>
<tr>
<td>Quiz place and room size</td>
<td>DISA with 250 seats</td>
</tr>
</tbody>
</table>
Results from the course evaluation
2014 - 2016

1. 95% of the students use MyLab Finance to a large and very large extent during the period when the course is given.

2. 80% of the students think that MyLab Finance supports their learning activities to a large and very large extent.
Results from my dataset
2014 - 2016

3. The correlation tests show that the average homework grades and the average quiz grades are positively correlated.

4. The total time students spending on the homework and their quiz grades are positively correlated for 2014, but small and negatively correlated for 2015 and 2016 when the number of quizzes and difficulty level of the quizzes were increased.
Benefits

• It lets us use flipped classroom formats in the exercise sessions of a large class with more than 250 students.

• It helps us to get feedback from the students fast, i.e. by looking at the grade book in MyFinanceLab, we can see how much time a student spends on different assignments and which questions are difficult…

• It encourages the students to study by themselves.
Challenges

- Capacity and the infrastructure of the room for digital quizzes, i.e. AC power plugs and sockets, internet connections…
- The students need to be fully responsible for their computers.
- The students must be familiar with MLF, i.e. the decimal point used, rounding, percentage …
- The instructors need to set the quiz carefully and thoughtfully.
- The unpredictable exposures or risks.
Conclusion #1

• MyLab Finance enables us to use a flipped classroom format (partially) in a large course efficiently and effectively.

• There are some challenges and risks of embedding MLF in the course.
Conclusion #2

• Open-book quiz: MLF itself works well.

• Closed-book quiz: MLF plus Inspera works well.
Currently what I am doing and interested in

• To add the materials of other textbooks to the main one in MLF.

• The possibilities to export the Test Bank Questions in MLF to Inspera, which is for the examination purpose.
Thank you!

And special thanks to
Kristine Angeby
Pearson, Stockholm, Sweden
There’s so much more to learn

Find out more about us at
www.pearson-studium.de
www.pearson.ch
ALWAYS LEARNING
Appendix

Figure 1 The extent to which MyFinanceLab supports the students learning activities

This figure is based on the course evaluations. The response ratio is 72% (157/240) for the autumn of 2014 (14ht), 75% (179/239) for the autumn 2015 (15ht), and 64% (162/254) for the autumn 2016 (16ht). 5 = to a very large extent; 4 = to a large extent; 3 = to a little extent; 2 = not at all; 1 = no opinion.
Appendix

Figure 2   The extent to which the students use MyFinanceLab

This figure is based on the course evaluations. The response ratio is 75% (179/239) for the autumn 2015 (15ht), and 64% (162/254) for the autumn 2016 (16ht). This question is not included in the course evaluation for 2014ht. 5 = to a very large extent; 4 = to a large extent; 3 = to a little extent; 2 = not at all; 1 = no opinion.
Appendix

Figure 3 Average quiz grades

This figure shows the histograms of average MyFinanceLab quiz grades for the courses that were given in the autumns of 2014 (left), 2015 (middle), and 2016 (right). The numbers of the students are 228 in 2014, 232 in 2015, and 259 in 2016.
### Table 2 The correlations between average MyFinanceLab homework grades and average quiz grades, and total time on homework and average quiz grades

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Quiz score</td>
<td>Quiz score</td>
<td>Quiz score</td>
</tr>
<tr>
<td>Homework score</td>
<td>0.63</td>
<td>0.17</td>
<td>0.21</td>
</tr>
<tr>
<td>Homework time</td>
<td>0.40</td>
<td>-0.20</td>
<td>-0.15</td>
</tr>
</tbody>
</table>