Design and Implementation of Internet-Based Flipped Classroom in the Introduction to Chinese Business Course at the Chinese Department of BINUS University

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Abstract. Industrial Era 4.0, where the internet has penetrated the world of education along with the issuance of Guidelines for the Preparation of Higher Education Curriculum in the Industrial Age 4.0 by the Ministry of Research, Technology and Higher Education of Republic of Indonesia, university lecturers are required to try to implement internet-based learning in their subjects. This paper discusses the design of the Flipped Classroom learning model in the Introduction to Chinese Business course, by utilizing various internet-based platforms commonly used by Chinese Department students at BINUS University. The researcher implemented this learning model for 4 weeks and was evaluated by students who took the course with questionnaire and interview methods. The researcher concludes that Flipped Classroom can stimulate student enthusiasm for learning, enhance students self-learning abilities, and increase interaction between teacher to student and student to student in order to achieve optimal learning outcome of the course. In addition, Flipped Classroom can also be an alternative learning model that is transitional, from conventional learning to internet-based learning.

1. Introduction

As international relations becomes more complex, mastery of foreign languages becomes one of the requirements to face globalization. Beginning in the 21st century, along with the development of the country of China which is now becoming an "economic giant" of the world, the demand for learning Mandarin is increasing. Thus, when President Abdurrahman Wahid through a series of presidential policies allowed the teaching of Mandarin in Indonesia, informal courses and schools competed to conduct Mandarin learning. Mandarin is also the foreign language of choice for students in university.

Along with the industrial revolution 4.0, the internet seems to be the primary needs of everyone, learning is also required to use the internet as a support for learning. After the issuance of Guidelines for the Preparation of Higher Education Curriculum in the Industrial Age 4.0 by the Ministry of Research, Technology and Higher Education of the Republic of Indonesia, lecturers are asked to apply internet-based learning, changing learning that was teacher-centered approach to student-centered approach.

Flipped classroom can be an appropriate choice for implementing internet based learning and student-centered learning. The premise of flipped classrooms has been around since the late 20th century.
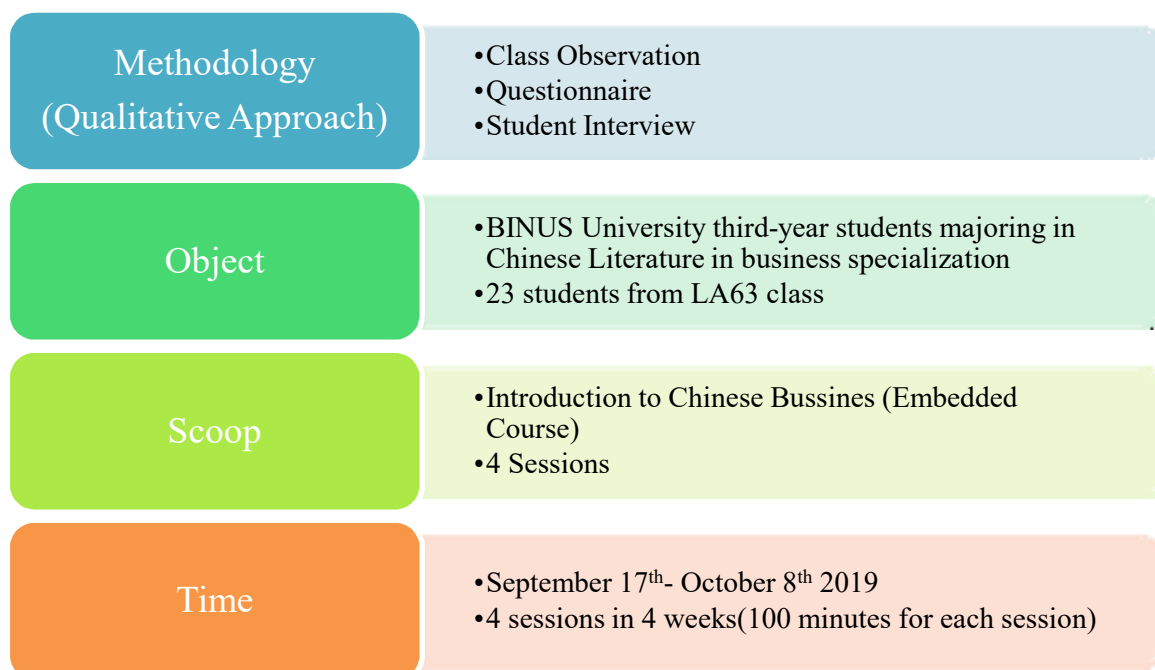
According to King. A (1993) based on constructivist theory of learning, knowledge is reconstructed from existing knowledge to make it new information, which is new knowledge. He stated that the need to implement active learning that emphasizes student involvement in learning [2]. Mazur E (1997) states that the peer instruction approach is where students get new knowledge independently outside the classroom, and conduct knowledge assimilation in the classroom under the guidance of the teacher [3]. Later, the Flipped Classroom approach was sharpened by video based learning by Khan Academy, and became popular in formal education institutions when two teachers from Woodland Park High School, Jonathan Bergmann and Aaron Sam, recorded a learning video used to help students who were absent in class. There is no concrete definition for flipped classroom, so now it is an "approach" in learning.

Mandarin learning techniques in Indonesia in general are Teacher Centered Learning not Student Centered Learning. Over time, the learning of Mandarin also needs to utilize technology in its learning, one of which is to use a flipped classroom [4]. Flipped classroom as a learning model, can also be combined with other digital learning platforms, Moodle (Modular Object Oriented Dynamic Learning Environment) and Flipped Classroom is a form of digitalization of modern learning [5].

Therefore, with the intention of combining flipped classroom approach and internet based learning, this paper will discuss the design and implementation of internet based learning flipped classrooms. The subject of the learning model implemented is Introduction to Chinese Business for third-year students majoring in Chinese Literature in business specialization at Bina Nusantara University.

2. Methodology

Methodology (Qualitative Approach)	•Class Observation •Questionnaire •Student Interview
Object	•BINUS University third-year students majoring in Chinese Literature in business specialization •23 students from LA63 class
Scoop	•Introduction to Chinese Bussines (Embedded Course) •4 Sessions
Time	•September 17th- October 8th 2019 •4 sessions in 4 weeks(100 minutes for each session)

Figure 1. Research methodology diagram

The research methodology of this paper is qualitative research, the first author, as a lecturer, conducting experiments and observations on 23 students from LA63 class who took the Introduction Chinese Business course. This course is a business specialization course for the 5th semester students majoring in Chinese literature at Bina Nusantara University. This subject is included in the embedded class business project-2, which is a class where additional material is included to implement entrepreneurship science in the form of a business plan as the final project. Implementation was carried out for 4 sessions, for 4 weeks (September 17th-October 8th 2019), each session was held for 100 minutes. Lecturers will

give assignments and share material five days before the session begins. In the next week, students will study independently at home, then learning in class will emphasize discussion and project completion. The reason for implementing internet based flipped classroom in this course is that this class is not purely learning Mandarin business, but rather about entrepreneurship and business plans. The fifth semester students are more independent in learning, and already have a stronger basic Mandarin language, so students can active learning outside the classroom through shared material by lecturers. In addition, because it involves the learning of foreign languages and other disciplines, this internet-based flipped classroom design and implementation can provide inspiration for its application to other disciplines.

3.   Design of Internet-Based Flipped Classroom
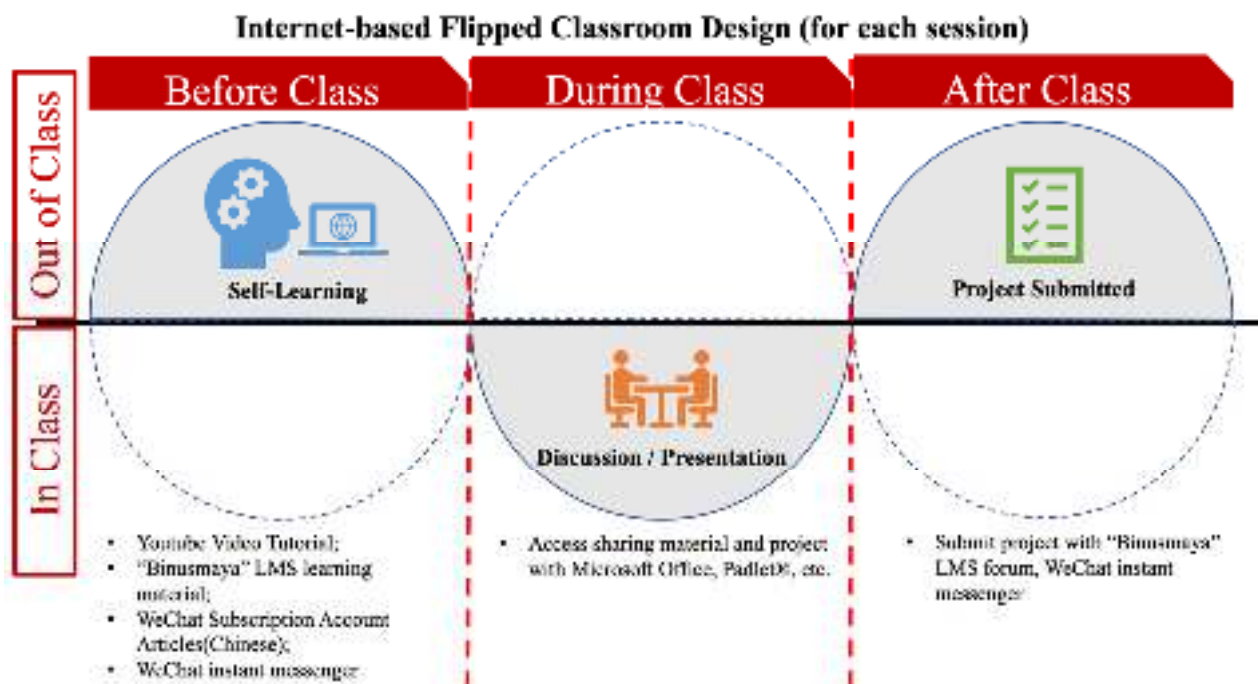
Figure 2. Internet-based flipped classroom based model design

Introduction to Chinese Business courses in one semester is divided into 13 sessions, each for 100 minutes. Experiments carried out in the first 4 weeks, with details of sessions 1 and 4 are Mandarin business material, sessions 2 and 3 are entrepreneurship and business plan material. The textbooks used are Business Chinese: Challenge to Speak (Immediate) by Xiaomeng Li (2012)[6]and Disciplined Entrepreneurship: 24 Steps to A Successful Startup (1st Edition) by Bill Aulet (2013)[7]. Bina Nusantara University has a student learning management system named "Binusmaya", providing main material file for each session in the form of PPT. In addition, there are also supporting material files in the form of web or video links. The forum feature allows lecturer and student communication through Binusmaya. However, to support instant communication and facilitate material sharing, lecturers create group chats through the Wechat application. Wechat is a chat and social media platform that makes it easy for lecturers to share Chinese Business material in Mandarin through numerous links and videos and it is easy to find in this application. As Figure 1, students access the learning material before class using their laptop or smartphone, all the materials is online sources. During class, students sitting in group, using Microsoft office to make a presentation, share the project with Padlet through their smartphone. After class, the project has been done, student submit it in "Binusmaya" LMS online forum, or with WeChat instant messenger, so they can give the feedback to each other.

Table 1. Material components of internet-based flipped classroom

Session	Topics	Shared Learning Material	Internet-based platform to accessed
1	Business Visit	·Main Learning Material (PPT)	"Binusmaya" LMS
		·Nongfu Mineral Water Production (1 Videos)	Youtube
		·Chinese "business visit" (2 articles)	WeChat
2	Creating Customer Profiles	·Main Learning Material (PPT)	"Binusmaya" LMS
		·Bill Aulet Video Tutorial (1 Videos)	Youtube
		·"Beachead Market" in Chinese language (1 articles)	WeChat
3	Who are our next 10 customers	*Similar as Session-2*	*Same as Session-2*
4	Market research	*Similar as Session-1*	*Same as Session-1*

Session-1 with the topic Business Visit is Mandarin business material. Five days before the session, the lecturer asks students to learn independently about the main material and supporting materials at Binusmaya. In addition, the lecturer sent a Chinese-language link about Chinese Business Visit and Etiquettes. Classroom learning focuses on discussing exercises in textbooks and discussing several business case visits by Chinese company partners.

Session 2 with the topic Creating Customer Profiles, five days before the session, the lecturer asked students to study independently with learning materials available in Binusmaya, and provide direction for the formation of a business plan group of 4 people, as well as a business plan mechanism and template to be collected on early November. In addition, the lecturer sends other learning modules and also video streaming about related material. Classroom learning focuses on a theoretical discussion related to how to create customer profiles, followed by the presentation of the business plan proposal in chapter 1, an introduction that provides background to the business prototype and formulation of the problem by each group.

Session 3 with the topic Who are our next 10 customers, the mechanism is the same as session 2, learning in the class is focused on the theoretical discussion related to case studies, followed by the presentation of the business plan proposal in chapter 2, the implementation of which contains a prototype description and implementation details.

Session 4, with the topic Market research, uses the same learning mechanism as session 1, focusing on training exercises from textbook materials and discussing the topic of The luxury market of China.

4.   Implementation of internet based flipped classroom

For 4 weeks, the lecturer implements a flipped classroom design that has been made in 100 minutes of face-to-face meetings in class and conducts evaluations. In addition, lecturers use questionnaires and

interviews to get student feedback. The results of the evaluation and student feedback as findings in this study include three aspects, namely learning effectiveness, learning material and assessment.

Students who are millennial generation, have their own enthusiasm to do independent learning. Through class observation, most students have done self-learning from material sharing by lecturers. This is proven by 95.65% of respondents stating that they are willing to learn independently with the material provided. In addition, some students interviewed stated that independent learning can be done as long as they have access to learning at their convenient time and place. Thus, it can be seen that flipped classroom can encourage students to learn more actively to achieve better learning outcomes and develop better attitudes towards their learning experiences, and devote more effort in the learning process [10].

Therefore, learning material for self-learning is also a part of the effectiveness of internet based flipped classrooms. Students prefer learning material that is easily accessed on their smartphones. The preferred learning material is a short video tutorial, chart and table with an explanation. Through observation, the authors find that learning materials in the form of video tutorials are more desirable compared to text, but learning material in the form of text and ppt still play a dominant role. Those who like learning material in the form of video tutorials are 30.43%, and like learning materials in the form of text and PPT are 21.73% and 26.08%. This shows the use of technology in learning is preferred and can increase student motivation [9].

Looking further, students still dominant like physical material (text and PPT) because they can make their own notes on it, besides making it easier for them to summarize the material. In addition, some students think that short video tutorials, pictures and their short explanations are easier to access via smartphones, making self-learning easier. Correlating with preferred learning material, 52.17% of respondents like accessing learning material via smartphone, and 39.13% like accessing learning material in the form of hardcopy.

Through class observation, the authors find that not all students do self-learning, some students also seem to have not mastered all the material to be discussed in class. Therefore, assessment becomes one of the important aspects that should be taken into account. Assessment can be in the form of quizzes or projects that will be discussed during class. As many as 95.65% of respondents prefer projects that are prepared at home and will be discussed in class. As many as 86.95% of respondents state that the project could encourage them to learn independently and be more active in class. In addition, through observation and interviews with several students, the authors find that this project become a motivator for them to do self-learning and projects discussed in class helps them to do it with maximum results.

5. Conclusion

The application of internet-based flipped classroom in the Introduction to Chinese Business course at Bina Nusantara University reveals that internet-based learning for material sharing in the flipped classroom approach can stimulate students to become more active in class and encourage students to begin to make a habit of self- learning. Through projects done at home and discussed in class, it has increased two-way interaction between lecturers and students. This makes the lecturer not as a teacher in the classroom, but as a mentor who guides learning in the classroom, so it can be concluded that the flipped classroom approach is a transition from lecture-centered learning to student-centered learning. Flipped Classroom is a boring alternative to conventional learning to become more varied and exciting internet-based active learning. Providing a platform to learn online and do online assignments that are part of a flipped classroom can also motivate students to learn more actively [8].

Making conventional learning rooted in the Indonesian education system and switching to internet-based flipped classrooms is not easy, especially on learning platforms that can support this learning model. The Learning Management System (LMS) of each university can evaluate its role and function to support internet-based learning platforms: Is the LMS now easily accessible via portable devices (especially smartphones)? Does the discussion forum function in LMS support bi-directional learning such as group features in instant messenger? Can LMS contain material sharing in large amounts and data sizes?

This paper might be one of the results of preliminary research for the development of internet-based flipped classrooms for other science subjects. At least, aspects of learning effectiveness, learning material and assessment become one of the main aspects that can be considered in applying internet-based flipped classrooms.

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