

## Chapter 3

### Methodology

The purpose of this research was to study the motivation in learning of International College students using the flipped classroom approach in teaching and learning business subjects.

#### Research Design

To answer the research questions, a mixed-methods approach including both quantitative and qualitative research design was used to analyse the data collected. Data were gathered by three lecturers in the Innovative Business Management Department at the International College, Chiang Mai Rajabhat University, who taught business subjects.

#### Research Methodology

This research commenced with a literature review to identify relevant theory, concepts and research related to the use of flipped classroom teaching techniques and students' motivation in learning. Questionnaires were used to identify and address students' motivation in learning when using the flipped classroom method in teaching and learning in business contexts, and students' opinion towards flipped classroom teaching. A total of 60 students from the International College, Chiang Mai Rajabhat University participated in the survey using a standardized questionnaire. The classes chosen as the sampling group were the result of a randomized sampling method.

#### Group One

The lecturer taught 24 students who enrolled in a course in the Global Business Management program. The lecturer recorded and shared ten videos through the Facebook group created for the purpose of teaching and learning as well as for communication between lecturer and students. The lecturer's videos consisted of 10-40 minutes of learning content. During the in-class teaching, the lecturer summarized the important information at the beginning of class. In-class activities usually consisted of answering questions orally, taking quizzes, summarizing the information in writing, and drawing mind maps. Students were allowed to watch the videos again in class if necessary when they completed the in-class activities.

## **Group Two**

The research was done in the course Leadership for Global Business Management, taught during semester 2/2560. The duration of each class was 180 minutes. 14 students were enrolled in this course, and all participated in this study. Materials used for the course were video, online lessons, independent learning such as individual report and other homework, group discussion, and active learning exercises.

On the first day of class, the lecturer introduced the flipped classroom and explained how it works. Each week, students were assigned online study before coming to class. There were various modes of study and online participation, such as sending assignments online and watching video lessons before coming to class.

Each class, the lecturer first summarized the assigned lesson before asking students to complete activities such as group discussion, answering questions, taking quizzes, or analyzing case studies. The lecturer provided students with the correct answers to questions, quizzes, and case studies, and also gave feedback to students in a PowerPoint presentation together with some discussions and note-taking. In some of the more challenging chapters, the lecturer provided students with a printed summary to help them understand the complete lesson, and to bring all students to the same level of preparation and learning.

Besides assigning videos for students to watch, the lecturer also assigned readings for the students to complete before coming to class in order to prepare for in-class activities. These assigned reading comprised the individual preparation component of the flipped classroom.

At the end of the semester, student attendance was almost 100%. All students were given a questionnaire to answer, and two students' representatives were interviewed.

## **Group Three**

The lecturer taught the course "Fundamental Knowledge of Business Practices" in the GBM (Global Business Management) program within the Department of Innovative Business Management, in semester 2/2560. The lecturer's flipped classroom approach was to prepare video lessons and make these available to the students a few days before class. The students were asked to watch the videos before coming to class, memorize the topics and take notes of parts they did not understand. During class, the lecturer gave

students some exercises to test their knowledge and understanding, such as essay questions or case studies. If the lecturer believed that there were some specific topics that were too difficult for the students to understand, then the lecturer would take some time during class to explain these topics in detail.

Throughout the whole semester the lecturer in this group filmed a total of eight video lessons with an average duration of 30-40 minutes each. The lecturer used Quick Time to film the lesson while explaining the slides one by one, using the mouse to highlight the specific topic being covered each moment. The goal was to speak slowly and clearly about the subject and use the explanation to support the content already present in the slides and provide some extra information, such as extra theoretical concepts or practical examples. The goal in adding extra information to the material covered in the slides was to incentive the students to listen carefully to the lecturer's voice. In fact, the lecturer was hoping that, once students found out that reading the slides was not enough to learn all of the topics that the lecturer would ask about on the exam, they would put extra effort to follow all of the lecturer's explanations.

## **Research Instrument**

The research instruments consisted of two kinds:

1) Questionnaires about students' motivation in learning. Sets of questionnaires were created in the form of a self-rated questionnaire, based on the ARCS Motivation Model (Keller, 1987) and the TPACK (Technological Pedagogical Content Knowledge) model (Koehler and Mishra, 2009). Each set included three parts; 1) general information about participants; 2) questions about students' motivation in learning using the Likert five rating scale; 3) open-ended questions about students' opinions about the flipped classroom method applied in the study.

The Likert five rating scale (Likert, 1932) was used to rate students' motivation for learning using the flipped classroom method. This questionnaire asked the participants' opinions about the flipped classroom in business classes in the International College. Students rated their opinions on a scale of 1 to 5, with 5 meaning "strongly agree," and 1 meaning "strongly disagree."

## **Research Instrument Validity and Reliability**

Since this study used the mixed-methods approach of qualitative and quantitative research, the instruments used in this research consisted of self-reported questionnaires and semi-structured interviews.

The validity and reliability of the instruments were verified as follows. Prior to administering the questionnaire and interview, the questionnaire and the interview questions were examined and proved by experts in the field of classroom research. The questionnaire and interview questions were then corrected, improved, and revised regarding the comments and recommendations of the experts.

The content validity of the questionnaires was analyzed and approved by three experts using the standards of the Item Objective Congruence (IOC). Then the approved questionnaires were trialed with 20 students to evaluate the reliability using Cronbach's alpha coefficient. Items that were not significant at 0.05 levels were removed. Then the questionnaires were adjusted by eliminating certain questions according to the experts' comments and the results of Cronbach's alpha coefficient.

## **Research Population and Sampling**

The population for this research was 60 students from three different business classes taught during the second semester in academic year 2017. The first class included 24 students from Global Business Management who registered in a Global Business Management course in the second year. The second class involved 14 students who enrolled in a Leadership for Global Business course. The third class consisted of 22 students who enrolled in a Fundamental Knowledge of Business Practice course. The three classes were randomly and systematically chosen as the sample group.

## **Research Variables**

Independent variable: Flipped Classroom Method

Dependent variable: Students' motivation in learning

## **Data Collection**

The qualitative and quantitative methodologies were conducted by using a questionnaire and semi-structured interview. The questionnaire was designed as the qualitative instrument to measure students' motivation in learning, particularly with the use of a flipped classroom teaching method. The five-point Likert scale was implemented



in the questionnaire (Likert, 1932). The self-report questionnaire included three parts: part one was the general demographic information about the participants, as well as questions about electronic devices and students' access to the internet at home. Part two was the survey using the five-point Likert scale. Part three included three open-ended questions asking students' perspective on the flipped classroom teaching method. Students were asked to complete the questionnaire at the end of the semester. The representatives of each group were interviewed using the semi-structured interview questions.

## **Data Analysis**

All data was gathered from the self-rated questionnaire and interviews. The questionnaires were analyzed using the SPSS software program. We analyzed the open-ended questions and interview scripts using content analysis.

The survey was conducted for data collection, and the results were analyzed by frequency, percentage, mean, and standard deviation. The comparison among the groups was analyzed using One-Way ANOVA.

The data analysis consisted of three parts using the SPSS program to analyze the statistical description. Part one of the data analysis included the general information about the participants using percentage and means on a descriptive form. Part two included the results of the self-rated questionnaires asking students' to rate their opinions about their motivation for learning and we measured these results using the statistical mode, mean, and standard deviation to describe the results of each group as well as the overall results of the students' motivation in learning. Additionally, the results of mean and standard deviation were also reported. Part three consisted of students' opinions about their motivation for learning in the flipped classroom.