

Developing a Flipped Classroom Teaching Model and Learning Activities to Enhance Students' Learning Outcomes

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Abstract

This study aimed to develop a teaching model and learning activities for a flipped classroom (FC) and to explore the effectiveness of the designed model. The study adopted an action research design. Data were collected through a platform analysis, a questionnaire, classroom observation, and in-depth interviews. Participants of this one-semester study were 34 students enrolled in a business etiquette course at a university of science and technology in southern Taiwan. Findings indicated that the FC teaching model was a considerably effective teaching practice. The results revealed that students had improved their learning effectiveness and had a positive perception on the quality of teaching. In terms of cognition, students had learned the knowledge of each unit, cultivated key abilities, and had a high degree of learning interest and learning satisfaction. Accordingly, it is suggested that the activity design of business etiquette courses in future research should be integrated with daily life practice. Game competition activities may be added to teaching to enhance learning interest. Question-and-answer activities may be integrated into teaching to improve students' concentration and high-level cognitive learning, respectively. Additionally, internet resource search and learning notes activities may be incorporated in learning activities to deepen and broaden learning.

Keywords: business etiquette course, flipped classroom, flipped teaching, flipped teaching model, learning activities



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1. Introduction

To promote a more favorable educational environment in Taiwan, the Ministry of Education (MOE), ROC initiated a new e-learning project in 2014. This project, known as the New Generation E-Learning Project, aims to introduce innovative e-learning models that enhance teaching flexibility and help students to adopt active learning and develop core competencies (Ministry of Education, 2014). To enhance teaching quality and learning outcomes, the universities and colleges in Taiwan have proactively followed relevant MOE policies and adopted innovative teaching models and learning technologies to improve their current curricula. The flipped classroom (FC) is a teaching strategy that has become highly popular in higher education pedagogy in Taiwan and internationally (Wanner & Palmer, 2015). Proponents of the FC argue that the conventional structure in which teachers lecture and students complete homework should be reversed. In a FC, students watch online lectures at home before class, and then complete assignments or ask questions in class. Students become more independent and responsible for their studies within such a framework; thus, they develop competence in autonomous learning (Brame, 2013). Crucially, the FC e-learning paradigm has been enabled by the emergence of massive open online courses (MOOCs) that offer free and open online learning materials. The emergence of the Covid-19 pandemic has accelerated the emphasis on digital learning by global educational institutions. Since online learning has advantages, such as flexibility, interactivity, self-pacing, the longer the pandemic lasts, the more likely online learning becomes a general acceptable mode of teaching and learning (Adedoyin & Soykan, 2020).

The concept of the FC model has been rapidly developed and highly valued; most studies have confirmed that a FC improves teaching quality and learning outcomes (Chen et al., 2014; Estes et al., 2014; Hamdan et al., 2013; Roach, 2014). Research has indicated that the FC has largely been adopted by kindergarten to 12th grade educational institutions. The application and

effectiveness of FC in higher education are also receiving more and more attention. However, numerous scholars have argued that the FC has been insufficiently adopted in higher education, and many aspects of the FC teaching model have not been fully explored, such as learning activity plans, and teaching practices (Bergmann & Sams, 2012; Chen et al., 2014; Fulton, 2012; Herreid & Schiller, 2013; Roach, 2014). There is no fixed activity model in FC. Therefore, without a rigorous curriculum design, teachers may not be able to successfully flip the classroom and waste class time on ineffective student discussions.

The action researcher (first author) taught at a private university of science and technology. Compared with students from ordinary universities or the national universities of science and technology, the learning attitude of private university students in Taiwan is more passive and negative. Several years ago, the action researcher used a lecture-based teaching method in the course of business etiquette, and some students encountered learning problems at the teaching site, such as low learning motivation, passive learning attitude, low willingness to participate in the classroom, low attendance, or playing cellphone during classes. In order to improve these teaching problems, the action researcher struggled with solutions. FC is a learner-centered teaching strategy and emphasizes self-learning before class, real-world exercises and discussion in class, and report assignments after class (Chen et al., 2014). Such a teaching strategy that allows students to actively construct knowledge may improve the chaos in the teaching scene nowadays. The action researcher found that FC might be able to solve or improve the above problems from the literature. The action researcher had implemented FC in courses such as management (Shih & Tsai, 2016) and market research (Shih & Tsai, 2017), and the research results were acceptable. The current study was to design a suitable FC model based on the action researchers' experience of implementing FC in the past to ensure that the class could be successfully flipped. This was the first rationale of this study.

Several studies have pointed out that in addition to improving teaching and learning effectiveness, FC strategy can also promote the construction of higher-order thinking skills (Baepler et al., 2014; Betty et al., 2014; Chen et al., 2014; Estes et al., 2014). One of the elements to ensure the success of FC is designing materials that engage critical thinking and high-level thinking skills (Flipped Learning Network, 2014). Sams and Bergmann (2013) also pointed out that the focus of FC is not only on teacher-made classroom videos but on how to use the classroom interactive time more effectively. Therefore, when the lecture is moved to pre-class, the learning activities of in-class become the focus of the class. In addition to passing on knowledge, teaching should also enable students to develop various core competencies (such as self-learning, critical thinking, communication, innovative thinking, problem-solving, and teamwork) through which they may be equipped to face the varied challenges of the future. Accordingly, designing various curriculum activities that simultaneously pass knowledge to students and help students develop these competencies was the second rationale for undertaking this study. Thus, the objectives of this study were to:

- (1) develop an adequate FC teaching model;
- (2) discuss the design of learning activities for a business etiquette course;
- (3) and analyze the teaching effectiveness of the FC teaching model in a business etiquette course.

The findings of this study can enhance the teaching quality as well as serve as the reference of optimal teaching methods for higher education instructors. There is no fixed implementation procedure of the FC. The research team developed a structured FC teaching model for the practical needs of the teaching practice of the universities of science and technology. The specific implementation steps for flipping teaching may provide for reference. Strategies available in FCs were also suggested, such as online tests, group presentations, quick answer races, key points lecturing, mind map, and searching websites. Problems, challenges, and solutions for

teachers implementing flipped teaching could be understood and students' perceptions on flipped teaching could be further explored.

2. Literature Review

2.1 The Basic Concept of a FC

A FC refers to a strategy that moves the conventional events that occur during a class (e.g. lecturing) to a time outside of class. Conversely, the activities that have traditionally taken place outside of a class become in-class activities (Bergmann & Sams, 2012; Evseeva & Solozhenko, 2015). In addition to reversing the conventional learning structure where lectures are delivered in class and discussions and assignments are completed outside of class, the FC model incorporates new technologies into curricula; for example, students are required to preview an online video lecture produced by the lecturer. Therefore, the lecturer and students can focus on interactive activities during class such as discussions, debates, presentations, and practical exercises (Chen et al., 2014; Estes et al., 2014; Keengwe et al., 2014; Tucker, 2012). This type of teaching can help students achieve the requisite levels of “knowledge” and “comprehension” in the cognitive domain of learning as per Bloom’s taxonomy before a class begins and then focus on reaching higher levels (i.e., application, analysis, synthesis, and evaluation) in class (Olitsky & Cosgrove, 2016).

Engaging students in active learning and interactive activities is the main goal of the FC model, which aims to enhance the quality and efficiency of teaching and learning (Demski, 2013; Sparks, 2011). Several studies have documented that a FC encourages and trains students to become autodidacts and to obtain problem-solving skills; helps teachers and students save class time for more interactive activities (Bergmann & Sams, 2012); improves teaching quality, increases learning motivation and outcomes, and enhances retention and transfer of knowledge (Estes et al., 2014; Evseeva

& Solozhenko, 2015; Hamdan et al., 2013; Roach, 2014); and improves students' concentration and critical thinking skills (O'Dowd & Aguilar-Roca, 2009). The results achieved by adopting FC have been mostly positive.

2.2 Theoretical Basis for the Design of the FC Teaching Model

The FC teaching model and flipped learning activities presented in this study were designed on the basis of four relevant theories regarding educational philosophy and cognitive psychology (Figure 1). The FC design generally contains three stages, namely pre-, in-, and post-class stages. Before a class begins, autonomous activities such as previewing are completed. At this stage, the strategy of mastery learning is used to help learners obtain basic knowledge. In- and post-class learning activities are designed by adopting the premises of cognitive constructivism, Dewey pragmatism, and cooperative learning to help learners achieve high levels of knowledge by engaging in the designed activities.



Figure 1. Theoretical basis for the design of the FC teaching model and flipped learning activities

(1) Mastery learning: When the optimal teaching quality and learning time are provided, most students can reach the mastery level (Bloom, 1968). Therefore, instruction is divided into small segments; sufficient chances for practice, sufficient time for learning, and remedial teaching are provided to enable each student to reach the mastery level (MOE, 2018; Bloom, 1976; Guskey & Pigott, 1988).

(2) Cognitive constructivism: cognitive constructivists emphasize that knowledge is constructed when an individual actively explores, discovers, and self-organizes the knowledge in question. Individuals thus play the major roles during knowledge construction, reflecting that learning is a process during which learners actively construct knowledge and meaning (von Glasersfeld, 1995). When learners are forced to acquire knowledge, such knowledge is not meaningful to those learners; thus, learning should be student-oriented (Wen & Shih, 2008).

(3) Pragmatism: John Dewey, one of the leading proponents of pragmatism, claimed that “Education is life.” He contended that school education should be linked to the life experience of students because education fails and becomes meaningless when it is isolated from real life (Dewey, 1916; 1938).

(4) Cooperative learning: cooperative learning refers to a systematic and organized instructional strategy. Students are divided into groups according to learning ability. In each group, a student learns, acquires, and shares experience and knowledge by expressing their opinions and interacting with other group members. Through constructing knowledge in groups and engaging in individual self-reflection, cooperative learning helps an individual to diversify learning experiences, explore innovative perspectives, and expand horizons (Liaw et al., 2008).

2.3 Design Principles of the FC Teaching Model

Estes et al. (2014) emphasized that the success of the FC strategy largely depends on the transition from passive to active learning among students. Instructors play multiple roles in FCs, including subject-matter experts, instruction designers, and media developers (Morrison et al., 2011). Kim et al. (2014) proposed a FC design framework comprising four major levels with nine design principles (Figure 2).



Figure 2. Four major levels and nine design principles of the FC strategy

Flipped Learning Network (2014) also indicated that four practical aspects should be fulfilled to ensure success in the FC: (1) creating a flexible learning environment (i.e., the physical arrangement of the classroom) to adapt to students with different learning styles; (2) using student-oriented methods for constructing knowledge; (3) designing materials that engage critical thinking and high-level thinking skills; (4) positioning teachers as active observers who can immediately offer relevant opinions, feedback, comments, and demonstrations to students. Chen et al. (2014) developed the FLIPPED model to establish the design principles of FCs in higher education. Components of this model include a flexible learning environment, student-oriented methodology, meaningful content, a professional educator, advanced online-learning activities, an engaging and effective learning experience, and a seamless learning platform with diverse learning materials. Jackie (2015) suggested that teachers can provide students with a list of courses that includes video lectures, online materials, and reference books, enabling students to choose materials in which they are most interested.

The flipped classroom faces some issues and challenges in its practice. Previous studies have shown several issues that may arise in flipped classroom activities, including: (1) Students lack self-responsibility for learning (Partridge et al., 2011); (2) Students may not preview their homework before class, and they may not be able to participate in teaching

activities in class; (3) Teachers need to put in more effort, including recording videos and designing appropriate classroom activities (Kadry & El Hami, 2014).

3. Methodology

3.1 Research Design

This research adopts an action research design and is practice-oriented. Researchers, as teachers, reflect on, obtain feedback, and make corrections from the teaching process to solve the teaching problems at hand. Data were collected through a platform analysis, a questionnaire, in-depth interviews, and classroom observation of students in a business etiquette course. The platform analysis was conducted to understand the status of online learning among students before and after the class. The questionnaire aimed to explore students' perceptions of the teaching and their self-awareness of learning outcomes. The interview was used to identify students' opinions regarding the adoption of a FC; their feedback was solicited to inform improvements. The classroom observation was completed by the instructor during the course, and examined the behavioral changes of students with respect to learning. At the end of the semester, seven of the students who attended the business etiquette course were selected through purposive sampling for a two-hour in-depth interview.

Regarding developing an adequate FC teaching model, the course implement was divided into three stages: pre-class, in-class, and post-class in this research. The pre-class flipping strategy was based on the suggestions made by Kim et al. (2014): In the teaching presence, teachers provide an opportunity for students to gain initial learning prior to class, provide an incentive for students to prepare for class, and provide a mechanism to assess student understanding. Pre-class preparation materials and online test strategies were thus designed in the current study. The in-class strategy

was based on the practical aspects that students should be fulfilled to ensure success in the FC suggested by Flipped Learning Network (2014). Group presentation, question and answer, and mind map strategies were thus designed in the current study. The post-class strategy was based on a seamless learning platform with diverse learning materials in Chen et al. (2014) FLIPPED model. The searching for useful websites strategy was designed in the current study.

Regarding the design of learning activities for a business etiquette course, the business etiquette course had three major lessons, namely etiquette of life, international etiquette, and business etiquette. The design of these activities was based on cognitive constructivism, pragmatism, and cooperative learning to help learners achieve high levels of knowledge. According to the concept of cognitive constructivism (Wen & Shih, 2008), shooting videos introducing table manners, fashion shows, wedding gifts etiquette activities were thus designed in the current study. According to the concept of pragmatism (Dewey, 1916; 1938), handshake etiquette, business cards exchanges, and interviews activities were thus designed in the current study. According to the concept of cooperative learning (Liaw et al., 2008), all activities were conducted in groups.

3.2 Participants

Participants originally consisted of 43 sophomores who were enrolled in the business etiquette course offered by the business management department of a university of science and technology in southern Taiwan. A total of 34 participants finished the course after excluding students who took leaves of absence, withdrew, or simply did not complete the course.

3.3 The Business Etiquette Course

Business etiquette course was one of the professional elective courses of the department of business management in the university (2 credits). The content of the course introduced the etiquette norms and application scope of workplace and daily life, which was a practice course. The course was divided into three parts: life etiquette, international etiquette, and workplace etiquette. Life etiquette and its application introduced the basic personal etiquette in clothing, food, shelter, transportation, education, and music. International etiquette introduced the etiquette and culture in different countries, entry and exit in airports, and international travel etiquette. Workplace etiquette introduced workplace phone answering, social contacts, welcome reception, workplace letter writing, etiquette for getting along with bosses and subordinates, and proper manners and dress in the workplace.

3.4 Research Tools

The online-learning platform. The online-learning platform of the participating university was used in this study. Data concerning the number of views of course materials, how long students browsed the materials, and the scores of online tests and assignments were analyzed.

The pretest and posttest. The pretest and posttest of business etiquette were designed according to the targets and materials of each lesson. The pretest was conducted at the beginning of the semester and the posttest was administered at the end of the semester. These tests comprised 50 multiple choice questions with a maximum score of 100. After being designed, the tests were assessed by two subject-matter experts and achieved expert validity.

The questionnaire. The FC questionnaire used in the present study was designed by modifying the questionnaire used in Shih and Tsai (2016). In the present study, the questionnaire contained four subscales with 40 items

in total; these subscales were used to evaluate student's perceptions of the teaching performance and learning in the cognitive (i.e., students' learning outcomes), psychomotor (i.e., core competencies), and affective (i.e., level of interest in and satisfaction with the course) domains. The overall Cronbach's α was .990; the values of Cronbach's α among the subscales of teaching performance and the cognitive, psychomotor, and affective domains were .947, .933, .918, and .963, respectively.

Interview protocols. The interview protocols were framed according to the FC teaching procedures. Participants were asked for their opinions concerning (1) previewing through the use of the online lectures and online tests designed by the instructor; (2) in-class learning engagement (such as sessions of group presentations, quick-answer races for bonuses, key-points lecturing, flipped-learning activities, and mind-mapping); (3) after-class reviewing, which involves writing learning logs and searching for useful websites; and (4) the instructor, course, and teaching methods.

3.5 Data Analyses

This study adopted the SPSS Statistics 22.0 to analyze the quantitative data. Descriptive statistics were conducted to analyze the data from the online learning platform and questionnaire. The results of pretests and posttests were processed using Student's *t* test. The questionnaire data were then analyzed using descriptive statistics. Recordings of the in-depth interview were transcribed, and the transcript was assessed by performing a qualitative analysis.

4. Results and discussion

4.1 Design of the FC Teaching Model

Each week's class was divided into three stages: pre-class, in-class, and post-class. The flipped teaching model was designed on the basis of the principles of mastery learning, cognitive constructivism, Dewey pragmatism, and cooperative learning (Figure 3).

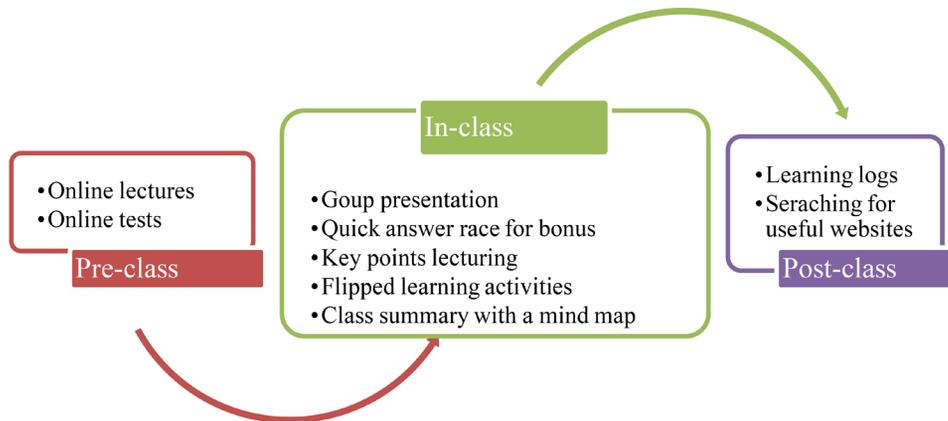


Figure 3. The FC teaching model

Pre-class. According to the mastery learning theory, the materials in this study were separated into several lessons before they were submitted to the online-learning platform. Before a class began, participants could watch online lectures according to their own preferred pace until they mastered the content. Next, they took an online test to evaluate the results of previewing. This procedure was designed to help students develop the habit of active learning and to acquire basic knowledge of the target lesson.

In-class. Each class was divided into several sessions, namely group presentations, quick-answer races for bonuses, key-points lecturing, flipped-learning activities, and summarizing using a mind map. These sessions

were developed to create structured instruction, effectively manage time, and facilitate a structured class. In-class activities were designed according to principles of cognitive constructivism by which all the aforementioned sessions were student-oriented, except for the lecturing. The content of flipped learning activities was connected to the life of students according to principles of pragmatism. In-depth discussions were facilitated concerning the actual practice of etiquette in business or possible etiquette problems. Moreover, cooperative learning served as the theoretical basis undergirding the design of group presentations and learning. These learner-oriented activities enabled learners to explore and construct knowledge, form their own insights, and acquire various core competencies.

Post-class. As suggested by the principles of constructivism, students should independently summarize class content and acquire knowledge beyond the classroom. Therefore, students were required to complete weekly learning logs and Google a video or article related to the class, thereby strengthening the learning effectiveness.

4.2 Design of Flipped-Learning Activities

The principles of FC design explored in the literature review such as student-oriented learning, rewards for students who preview online content, mechanisms to evaluate students' understanding, and providing sufficient time for students to practice, are referred to as flipped-learning activities. Additionally, the foundation of pragmatism was adopted to link these flipped activities with real-life experience. Other than simulating real-life situations for students, these activities allowed students to develop various core competencies. The business etiquette course had three major lessons, namely etiquette of life, international etiquette, and business etiquette. The design of each lesson was as follows.

4.2.1 Etiquette of life

This lesson taught the etiquette rules of table manners, clothing, interacting with neighbors, staying in a hotel, car seat assignments, gifts for weddings and funerals, and entertaining. Table manners were taught by inviting participants to choose a Western restaurant for real-time practice, and then participants were required to shoot videos introducing table manners. To teach clothing etiquette, participants were divided into groups that demonstrated the dress code for a wedding, banquet, funeral, work event, school event, excursion, or interview by holding a fashion show (Figure 4). Then, the top male and female role models were selected. During the lesson of housing etiquette, topics such as dealing with problematic neighbors, resolving disputes with neighbors in buildings, and rules of staying in a hotel were discussed. Car seating rules were taught through a role-playing activity; students from different groups simulated situations where a manager and subordinate take a car, minibus, or a bus together, and exhibited the correct seating etiquette based on different ranks of the guests. The gifting etiquette for weddings and funerals was also taught, and included topics such as the appropriate amount of cash in a red envelope as a wedding gift and inappropriate wedding gifts. Entertaining etiquette was taught by holding discussions concerning impolite behaviors to avoid at a spa resort, museum, opera house, ballparks or stadiums, and the gym.



Figure 4. Dress code for different occasions

4.2.2 International etiquette

This lesson aimed to educate participants concerning the etiquette for traveling abroad and the cultural customs of various countries. During the lesson, the instructor and students shared their experiences of traveling abroad. The class then discussed key points to bear in mind when traveling abroad, items that would be confiscated by customs officials, and rude behaviors to avoid on an airplane. Moreover, a knowledge competition was held wherein each group of participants selected a country in Europe, the Americas, or Asia and introduced the taboos and customs of the selected country.

4.2.3 Workplace etiquette

Participants learned business greetings through engaging in an actual drill to practice the etiquette of handshakes, bowing, kissing, and namaste in business settings. Students were divided into groups of four and practiced self-introductions, business-card exchanging, handshakes, and the protocol for introducing people (Figure 5). The students also learned office etiquette by summarizing the types of employees that employers do not want to hire, the top 10 annoying office habits, and solutions for office sexual harassment. Next, an interview exercise was executed, wherein each group played either the interviewers or interviewees. Afterwards, the participants who were hired were announced to the class and the strengths and weaknesses of each interviewee were analyzed (Figure 6). The group drills were held to teach approaches for managing situations where a manager, subordinate, or customer are behaving irrationally.



Figure 5. Students introduce one another and exchange business cards



Figure 6. Interviews

4.3 Effectiveness of the FC Teaching Model

4.3.1 Platform Analysis

Online lectures. Students watched video and audio lectures and read PowerPoint files designed by the instructor. The learning materials comprised basic and advanced lectures; watching the basic lectures was mandatory, whereas watching advanced lectures was considered extended learning. On average, each participant logged in to the online course 2.2 times and browsed course materials 1.4 times for 30 minutes per week (Table 1). The data indicated that the results of online learning were positive; however, several students advised that each video should not last more than 15 minutes.

Table 1

Record of browsing the online course materials among students

Record	Semester (total)	Weekly (avg.)	Weekly individual records (avg.)
Number of logins	1,705	113.7	2.2
Instances of browsing materials	1,056	70.4	1.4
Duration of browsing materials (mins.)	23,754	1,583.6	30.5

Online tests. Ten tests were administered, and scores for each test averaged > 84 (the highest score was 93.2) with a total average of 88.7 (Table 2), demonstrating positive learning outcomes. To achieve high grades, students gradually developed the habit of browsing the online course materials.

Table 2

Average scores for online tests

Test	1	2	3	4	5	6	7	8	9	10
Number of participants	37	40	34	36	22	30	35	37	35	39
Average score	87	84.5	90	86.7	89.1	91.3	86	93.2	90.6	88.7

4.3.2 Comparison Between Pretest and Posttest

The scores of the pretest and posttest averaged 58.17 and 84.32, respectively (Table 3). The t value was -13.86 with a significance; thus, this result reached the level of significance, suggesting a significant difference between the pretest and posttest. Thus, because the scores of the posttest outperformed those of the pretest, one can conclude that the students progressed during the class.

Table 3

Comparison between the results of pretest and posttest among students

Item	Minimum	Maximum	Average	Standard deviation
Pretest	48	74	58.17	18.82
Post-test	62	98	84.32	21.99

4.3.3 Questionnaire

(1) Perceived teaching performance

Statistical results demonstrated that the perceptions of teaching performance among students averaged 4.21 points overall, among which the average for each item ranged between 4.41 and 4.09 (Table 4), demonstrating that students largely agreed with the quality of the instruction. Specifically, the highest scoring item was “the instructor–students interaction increased” (M = 4.41), followed by “the course was clearly delivered” (M = 4.32).

Table 4

Students' perceptions of teaching quality

Teaching performance	M	SD
1. The learning progress of students was considered	4.15	.610
2. The instructor–students interaction increased	4.41	.609
3. The course was clearly delivered	4.32	.638
4. The flipped activities were effective	4.09	.668
5. Instructions for engaging in the flipped activities in class were straightforward	4.21	.641
6. The instructor guided me to participate in flipped activities to acquire new knowledge	4.18	.673
7. Actual examples were provided, enabling me to understand the lesson	4.24	.654
8. Clear explanations were offered and helped me become involved in class activities	4.24	.554
9. The instructor immediately solved my learning problems	4.09	.621
10. The instructor wisely used the in-class time, which enabled me to learn more	4.18	.626
Average score	4.21	

(2) Perceived cognitive learning

The perceptions of learning in the cognitive domain averaged 4.36, among which the average of each item scored between 4.44 and 4.15, indicating that students believed they acquired the knowledge delivered in each lesson. The highest scoring items were cultural customs of various countries, table manners, wedding and funeral gifting and entertaining etiquette, and business etiquette (M = 4.44; Table 5).

Table 5

Students' perceptions of learning in the cognitive domain

Cognitive domain	M	SD
1. Basic social skills	4.15	.657
2. Etiquette for traveling abroad	4.38	.652
3. Cultural customs of various countries	4.44	.504
4. Table manners	4.44	.613
5. Clothing etiquette	4.32	.638
6. Housing etiquette	4.38	.652
7. Car seating rules	4.32	.684
8. Wedding and funeral gifting and entertaining etiquette	4.44	.613
9. Office etiquette	4.29	.676
10. Business etiquette	4.44	.613
Average score	4.36	

(3) Perceived cognition learning

The perceptions of learning in the cognition domain among students averaged 4.27, among which the individual items averaged 4.45–4.09, exhibiting that students believed they acquired various core competencies. The highest scoring item was critical thinking (M = 4.45; Table 6).

Table 6

Students' perceptions of learning in the cognition domain

Cognition domain	M	SD
1. Autonomous learning	4.09	.668
2. Critical thinking	4.45	.688
3. Communication	4.18	.797
4. Innovative thinking	4.32	.638
5. Problem solving	4.21	.770
6. Teamwork	4.38	.604
7. Knowledge construction	4.26	.666
8. Knowledge integration	4.32	.589
9. Knowledge application	4.24	.654
10. Learning concentration	4.21	.641
Average score	4.27	

(4) Perceived affective learning

The perceptions of learning in the affective domain (i.e., level of interest in and satisfaction with the course) among students averaged 4.27, among which the individual items averaged 4.38–4.15, exhibiting that students were interested in taking the course and experienced a high degree of learning satisfaction. Among all the items, business etiquette was considered the most interesting and practical (M = 4.38; Table 7).

Table 7

Students' perceptions of learning in the affective domain

Affective domain	M	SD
1. I enjoyed taking the course of business etiquette.	4.18	.716
2. Learning business etiquette was interesting.	4.38	.604
3. I can apply the learned knowledge about business etiquette to daily life.	4.38	.697
4. This course can help me solve real-life problems.	4.35	.646
5. The content of this course was what I wanted to learn.	4.24	.606
6. I am satisfied with my learning performance in this course.	4.12	.626
7. I am satisfied with the content of this course.	4.35	.691
8. I believe the strategies adopted by the instructor were suitable to me.	4.24	.654
9. I am pleased to have taken this course.	4.35	.646
10. I will continue to learn by using the FC strategy.	4.15	.744
Average score	4.27	

Note: The course using the FC strategy was exciting and without any dull moments.

4.3.4 The Action Researcher's Challenges, Reflection, and Reaction in the Class

During the implementation of the flipped course, the action researcher encountered some problems and challenges. In order to solve the problem, the action researcher discussed with the research team and the whole class and took some methods to improve the implementation of teaching, and the improvement effect was acceptable.

(1) Challenge 1: At the beginning of the implementation, students responded that they were not familiar with flipped teaching.

At first, students were unfamiliar with the FC concept. Even after the instructor explained the FC ideas, they were still uncertain of what to do.

The action researcher proposed the solution. In the first three weeks, the teacher led the students to do it step by step to familiarize themselves with the flipped teaching method. To help students become familiar with such an innovative teaching model, the instructor guided and taught students how to learn using the FC strategy during the first three weeks. In the fourth week, the first group of students started to present to their classmates, and the class gradually mastered the use of the FC strategy.

(2) Challenge 2: When starting flipped teaching, students did not have the habit of autonomous learning.

Most students were not used to previewing course materials. They thus often forgot to preview the online lectures before a class. This finding was similar to the study by Partridge et al. (2011). The action researcher proposed the solution. The development of spontaneous learning depends on the students' motivation of scores. The instructor had to continuously remind students to watch the lectures beforehand. To encourage participants to develop the habit of autonomous learning, the instructor may consider that test scores may be included as a part of the course grade (Partridge et al., 2011). Students eventually developed the autonomous learning habit a few weeks after the course launched. Because the learning materials were thoroughly categorized and the lecture videos were entertaining, students were satisfied with the online learning materials. Students finally learned to flip, and their learning attitude changed from passive to active learning. This point echoed the comments made by Estes et al. (2014).

(3) Challenge 3: Students could not continue to pay attention to the group report.

With respect to the group presentations, several groups did an excellent job preparing their presentations and thus delivered exciting and vivid presentations that caught the attention of the other classmates (Figure 7). However, several groups were not fully prepared or the group members were nervous. In these instances, the presentation did not satisfy the other classmates, prompting the classmates to make noise or check their phones.

The action researcher proposed the solution. Students were instructed on the report skills and strategies. To maintain audience students' order, appropriate presentation skills were taught to the students and the inappropriate behaviors of the audiences were reflected in the course grades the presenting group received. The action researcher guided group reporting techniques. For example, the reporter might ask questions after a short period of speech. The audiences got points of prizes for correct answers. Group reports were extremely helpful for cultivating students' teamwork and communication skills.



Figure 7. Group presentations

(4) Challenge 4: The course participation of a small number of students was low.

A small number of students did not participate in the course activities, or constantly played with mobile phones during the course. This was the same as the question raised by Partridge et al. (2011). The action researcher proposed the solution. The course was arranged with games, competitions, or quizzes during the flipped learning activity time to enhance the students' concentration of the class. Question and answer sessions and discussions can stimulate a higher level of learning in the cognitive domain and transition passive learning to active learning (Chen et al., 2014). Adding game competition to activities could increase learning interest. This point was based on the opinions of Chen et al. (2014), Estes et al., (2014), and Keengwe et al. (2014). Question-and-answer activities could improve concentration and high-level cognitive learning. When a presentation ended,

the presenters would lead a quick-answer race with 10–20 items through which the audience students could gain bonus points. A few groups creatively designed a buzzer game and successfully engaged the audience (Figure 8). Thus, students looked forward to the different activities each week.



Figure 8. Students are fully engaged in a buzzer session

(5) Challenge 5: A small number of students are unable to understand the curriculum.

These students had incomplete knowledge due to insufficient preview. The action researcher proposed the solution. The action researcher encouraged that group members drew mind maps to strengthen the overall concept of the curriculum. The action researcher allowed a ten-minute session at the end of class for each group to discuss and draw a mind map summarizing what they learned in the class (Figure 9). After several classes, students were skilled at summarizing key points using mind maps.

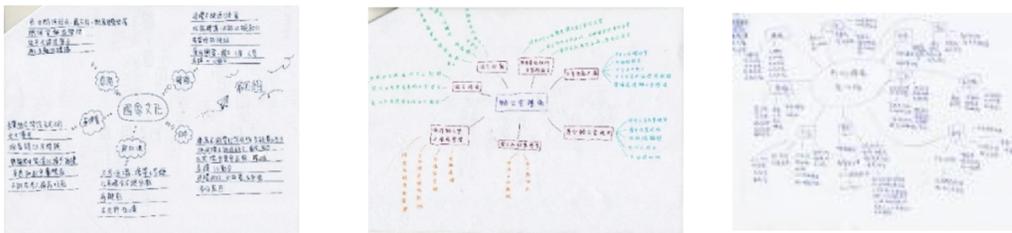


Figure 9. Mind maps

(6) Challenge 6: The action researcher reflected on how to enable students to deepen and broaden their learning.

Online resource search and learning notes were used to deepen and broaden learning. The method of searching for useful websites was employed to disrupt the traditional notion that learning only happens in class. By googling online sources, participants could review the lessons they had just learned. Eventually, students discovered helpful websites. In addition, learning logs aimed to enable students to review the lesson through recalling what they learned in class and writing down their experiences of the class. Furthermore, the instructor could identify the learning status of individuals by reading their logs.

4.3.5 In-Depth Interview

The in-depth interviews summarized students' views on flipped teaching, including pre-class preparation to cultivate the habit of autonomous learning, online quizzes to understand the learning situation, interesting activities that could increase students' participation in learning, various flipping strategies to cultivate core competencies, and review after class helped to integrate knowledge.

(1) The preview before class was an important factor of FC learning.

The students felt that previewing a class enabled them to engage in discussions in class, develop the habit of autonomous learning, and assess the acquired knowledge. This finding was similar to the findings of Demski (2013) and Sparks (2011). For example, two participants claimed the following:

Completing reviews and tests together motivated me to self-study. I watched online materials to pass the online tests. (401)

Watching pre-class lectures helped me become familiar with relevant knowledge to engage in the class discussion, and the online tests helped me to examine what I learned from those lectures. (426)

(2) Designing interesting activities could increase students' participation in learning.

The students concluded that a course employing innovative teaching methods could hold their attention, thereby enhancing their interest in learning. Group presentations, discussions, drills and exercises, and mind-mapping helped participants acquire various core competencies; this teaching methodology also enhanced their learning interests and improved their learning outcomes. For example, several students reported the following:

The classes were fun, so I would stop using my mobile phone and join the class. I would look forward to the next week's class. (426)

I learned different things from those five activities. Drills were my favorite because everyone learned more through actual practices, and such practices were the most attractive activity. (417)

[The in-class activities] helped me develop abilities relating to communication, teamwork, autonomous learning, oral presentation, and knowledge integration. (219)

(3) Review after class helped to integrate knowledge.

The students believed that writing learning logs and Googling useful websites helped them integrate the acquired knowledge, strengthen the in-class impression, and learn beyond the classroom. For example, two participants mentioned the following:

While Googling useful websites, I integrated my knowledge and came to know more about the course, leaving a stronger impression in my mind. (232)

To Google a helpful video or article, I had to browse numerous

websites. Thus, I watched videos or read articles more than once when they were interesting, enabling me to learn beyond the classroom. (208)

5. Conclusion

The FC teaching model established in this study was appropriate and feasible, and worthy of promotion. This study divided the FC teaching model into pre-class, in-class, and post-class stages. Before a class began, students were required to watch or read online learning materials and complete an online test. During the class, students participated in five sessions of group presentations, quick-answer races for bonus points, key points lecturing from the instructor, flipped learning activities, and mind-mapping. After the class finished, students wrote learning logs and Googled websites containing relevant information. The aforementioned activities were student-oriented. This study demonstrated the effectiveness of the employed FC teaching model; thus, the FC strategy should be promoted.

The design of learning activities for business etiquette courses may be combined with daily life practices. The curriculum may incorporate game competition elements and practical exercises to enhance learning interest and learning satisfaction. The activity design of life etiquette may consider practicality. If daily life problem situations are integrated into the curriculum, students may use what they have learned to deal with or solve problems. In the design of international etiquette activities, the course may adopt the game competition method, in which the knowledge arena competition is used to understand the cultural etiquette and life taboos of various countries. Teachers and students may share the experience of traveling abroad and matters needing attention when entering and exiting airports, which may enhance learning and participation. In the design of workplace etiquette activities, the curriculum may be based on reality, such as interview drills and social etiquette exercises. If students perceive these courses are innovative and interesting, their interest in learning and learning satisfaction

may be enhanced.

The effectiveness of flipped teaching in business etiquette courses includes students' semester grades, perceptions of teaching quality, and improvements in cognition, skills, and affection. Regarding to semester grades, the results of pretests and posttests also verified that the FC strategy considerably increased the grades of participants. Grades were a crucial motive for students to engage in autonomous learning before a class began. Regarding to perceptions of teaching quality, the questionnaire demonstrated a high rating of teaching quality among participants. Implementing the FC strategy substantially increased the instructor–students interactions. Regarding to improvements in cognition, the average score of all students on the 10 online tests was 88.7. Regarding to improvements of skills, the interviews revealed that students knew pre-class preparations enabled them to engage in discussions in class, thereby motivating the habit of autonomous learning. The flipped learning actives in this study such as discussions, drills and exercises, and quick-answer races incorporated the course content into daily life and simulated real-life situations. Therefore, students mastered the subject of this course and developed core competencies from those activities. By engaging in flipped learning activities, participants gained core competencies such as communication, teamwork, critical thinking, and problem-solving. Regarding to improvements of affection, most participants highly rated the use of the FC strategy because innovative teaching methods attracted their attention and stimulated their learning interest. Compared with conventional teaching, implementing competitions and games can effectively increase students' learning interest. In the affective domain, the levels of learning interest and satisfaction were high among respondents.

Regarding learning activity planning suggestions for future research, teachers may enhance their flipping teaching skills and design appropriate flipping learning activities. The classroom observation in the current study showed that instructors might make considerable efforts to change the learning attitude of students from passive learning to active learning.

Instructors may strengthen the skills of utilizing the FC strategy by designing learning activities that are highly interactive, can motivate the whole class, and are closely related to the course objectives and content of each lesson. In terms of improving learning motivation, connecting learning activities with practice to solve daily problems can increase learning motivation and demonstrate real-life applicability. In terms of group cooperation, teachers may guide the work of the group to avoid uneven labor. When preparing for a group presentation, group members, particularly those from different classes, may be subject to an unequal distribution of work. Therefore, more training is required for students to help them distribute responsibilities among group members.

The potential contribution of this research was to establish a structured flipped teaching model, plan and design suitable flipped teaching strategies, provide empirical results in the teaching field, and understand the perception of teachers implementing flipped teaching. The research results may provide some reference for teachers in universities and schools at all levels when implementing flipped classrooms. This proposed model has the flexibility to be adjusted, and teachers may adjust the teaching model according to the nature of the course and teaching expertise.

There were several limitations in this study. Participants in this study came from a single course in a university. If the findings of the current study were to be generalized to other studies, the research context must be similar to that of this study. In addition, action research was adopted in this study. Future research can use a quasi-experimental research design to confirm the findings of this study.

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References

- Adedoyin, O. B., & Soykan, E. (2020). *Covid-19 pandemic and online learning: The challenges and opportunities*. Interactive Learning Environments. <https://doi.org/10.1080/10494820.2020.1813180>
- Baepler, P., Walker, J. D., & Driessen, M. (2014). It's not about seat time: Blending, flipping, and efficiency in active learning classrooms. *Computers & Education*, 78, 227-236.
- Bergmann, J., & Sams, A. (2012). *Flip your classroom: Reach every student in every class every day*. ISTE.
- Betty, L., Angie, H., Neal, G., & Andrew, W. S. (2014). Student learning and perceptions in a flipped linear algebra course. *International Journal of Mathematical Education in Science and Technology*, 45(3), 317-324.
- Bloom, B. S. (1968). Learning for mastery. *Education Comment*, 1, 1-12.
- Bloom, B. S. (1976). *Human characteristics and school learning*. McGraw-Hill.
- Brame, C. J. (2013). *Flipping the classroom*. Vanderbilt University. <https://cft.vanderbilt.edu/guides-sub-pages/flipping-the-classroom/>
- Chen, Y. L., Wang, Y. P., Kinshuk, Y. P., & Chen, N. S. (2014). Is FLIP enough? Or should we use the FLIPPED model instead? *Computers & Education*, 79, 16-27.
- Demski, J. (2013). *6 expert tips for flipping the classroom*. Campus Technology. <http://campustechnology.com/articles/2013/01/23/6-expert-tips-for-flipping-the-classroom.aspx>
- Dewey, J. (1916). *Democracy and education*. Macmillianco.
- Dewey, J. (1938). *Experience and education*. Macmillianco.
- Estes, M. D., Ingram, R., & Liu, J. C. (2014). *A review of flipped classroom research, practice, and technologies*. International Higher Education Teaching & Learning Association. <https://www.hetl.org/feature-articles/a-review-of-flipped-classroom-research-practice-and-technologies/>
- Evseeva, A., & Solozhenko, A. (2015). Use of flipped classroom technology

- in language learning. *Procedia - Social and Behavioral Sciences*, 206, 205-209.
- Flipped Learning Network. (2014). *The four pillars of F-L-I-P*. https://flippedlearning.org/wp-content/uploads/2016/07/FLIP_handout_FNL_Web.pdf
- Fulton, K. (2012). *Inside the flipped classroom*. The Journal. <http://thejournal.com/articles/2012/04/11/the-flipped-classroom>
- Guskey, T. R., & Pigott, T. D. (1988). Research on group-based mastery learning programs: A meta-analysis. *Journal of Educational Research*, 81, 197-216.
- Hamdan, N., McKnight, P., McKnight, K., & Arfstrom, K. M. (2013). *A review of flipped learning*. Research Gate. https://www.researchgate.net/publication/338804273_Review_of_Flipped_Learning
- Herreid, C. F., & Schiller, N. A. (2013). Case studies and the flipped classroom. *Journal of College Science Teaching*, 42(5), 62-66.
- Jackie, G. (2015). *Flipped classroom: The full picture for higher education*. User Generated Education. <http://usergeneratededucation.wordpress.com/2012/05/15/flipped-classroom-the-full-picture-for-higher-education/>
- Kadry, S., & El Hami, A. (2014). Flipped classroom model in calculus II. *Education*, 4(4), 103-107.
- Keengwe, J., Onchwari, G., & Oigara, J. N. (2014). *Promoting active learning through the flipped classroom model*. Information Science Reference.
- Kim, M. K., Kim, S. M., Khera, O., & Getman, J. (2014). The experience of three flipped classrooms in an urban university: An exploration of design principles. *The Internet and Higher Education*, 22, 37-50.
- Liaw, S. S., Chen, G. D., & Huang, H. M. (2008). Users' attitudes toward Web-based collaborative learning systems for knowledge management. *Computers & Education*, 50, 950-961.
- Ministry of Education. (2014). *New generation e-learning project*. Author.

- Ministry of Education. (2018). *Mastery learning*. Education Wikipedia. <http://pedia.cloud.edu.tw/Entry/Detail/?title=%E7%B2%BE%E7%86%9F%E5%AD%B8%E7%BF%92>
- Morrison, G. R., Ross, S. M., Kalman, H., & Kemp, J. E. (2011). *Designing effective instruction* (6th ed.). John Wiley & Sons.
- O'Dowd, D. K., & Aguilar-Roca, N. (2009). Garage demos: Using physical models to illustrate dynamic aspects of microscopic biological processes. *CBE Life Science Education*, 8, 118-122.
- Olitsky, N. H., & Cosgrove, S. B. (2016). The better blend? Flipping the principles of microeconomics classroom. *International Review of Economics Education*, 21, 1-11.
- Partridge, H., Ponting, D., & McCay, M. (2011). *Good practice report: Blended learning*. QUT ePrint. <http://eprints.qut.edu.au/47566/1/47566.pdf>
- Roach, T. (2014). Student perceptions toward flipped learning: Newmethods to increase interaction and active learning in economics. *International Review of Economics Education*, 17, 74-84.
- Sams, A., & Bergmann, J. (2013). Flip your students' learning. *Educational Leadership*, 70(6), 16-20.
- Shih, W. L., & Tsai, C. Y. (2016, April). *An effective teaching model for flipped classroom*. Paper presented at the 2016 Global Business Management and Operation, Cheng Shiu University, Kaohsiung City, Taiwan.
- Shih, W. L., & Tsai, C. Y., (2017). Students' perception of a flipped classroom approach to facilitating online project-based learning in marketing research courses. *Australasian Journal of Educational Technology*, 33(5), 32-49.
- Sparks, S. D. (2011). As schools 'Flip' for lesson model promoted by Khan Academy: Lectures are homework in schools following Khan Academy lead. *Education Week*, 31(5), 1-14. http://www.edweek.org/ew/articles/2011/09/28/05khan_ep.h31.html

- Tucker, B. (2012). The flipped classroom: Online instruction at home frees class time for learning. *Education Next*, 12(1), 82-83.
- Von Glasersfeld, E. (1995). *Radical constructivism: A way of knowing and learning*. Studies in mathematics education series: 6. ERIC. <https://files.eric.ed.gov/fulltext/ED381352.pdf>
- Wanner, T., & Palmer, E. (2015). Personalising learning: Exploring student and teacher perceptions about flexible learning and assessment in a flipped university course. *Computers & Education*, 88, 354-369.
- Wen, J. R., & Shih, W. L. (2008). Exploring the information literacy competence standards for elementary and high school teachers. *Computers & Education*, 50(3), 787-806.

發展翻轉教室的教學模式與學習活動規劃 以提升學生的學習成效

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摘要

本文旨在發展翻轉教室的教學模式與學習活動規劃，並探討此模式在教學現場實施的成效。本研究採行動研究法。以問卷調查、深度訪談等方式收集資料。研究對象為臺灣某科技大學商業禮儀課程的學生34人。研究期間為一學期。研究結果發現，本研究的翻轉教學模式，在教學實務的實施成效良好。學生提高了學習效率，並對教學質量抱有積極的看法。在認知方面，學生學習了單元知識，培養了關鍵能力，並具有很高的學習興趣和學習滿意度。建議將來課程活動設計可以與日常生活結合、添加遊戲競賽活動以增強學習興趣、問答融入教學以促進高層次的認知學習。

關鍵詞：商業禮儀課程、翻轉教室、翻轉教學、翻轉教學模式、學習活動規劃



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