Improving Collaborative Learning, Student Engagement and Student Performance through an Experiential Learning Cycle: A Case of Chinese Exchange Students of an Undergraduate Program

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Abstract

The main purpose of this research is to improve collaborative learning, student engagement and student performance through an Experiential Learning Cycle. The target group was the 36 Chinese students who study "Business and Social Entrepreneurial" subject and are currently attending Chinese Exchange program. It is the case study of private university in Thailand. Instructional Development intervention was designed and applied using Kolb's Experiential Learning Cycle and Organization Development and Change Management theories. Class activities were designed to match with students' preferences and course syllabus. Research instruments used in this study consisted of structured questionnaire, interview checklist and reflection. The students' performance was observed during and after class activities. Moreover, the academic achievement data through in class participation and examination were collected and analyzed. The data was analyzed using T-test, it showed that there was slight improvement in students' cooperation, engagement and performance after implementing IDIs. The students' cooperation increased by 0.51, the students' engagement increased by 0.43 and the average mean of students' performance increased by 0.45. Moreover, the P-value of each variable was less than the significance level of 0.05. This could imply that there was a significant difference between pre and post implementation on students' cooperation, engagement and performance.

Keywords: collaborative learning, student engagement, student performance, experiential learning, instructional development intervention

Introduction

Internationalization of higher education plays an important role in developing society and adult learners to serve the marketplace. In the context of globalization, the colleges and universities are required to exchange knowledge and experience. Exchange

program is an important part of international exchange and cooperation.

With the continuous improvement of global economic integration, internationalization of higher education has been developed rapidly. This development has become key focus in many countries and universities. According to statistics, students who chose to study abroad had increased from 1.3 million in 1990 to 5.0 million in 2014. This growth is driven by the large demand for the knowledge-based economy and highly skilled human resources. Students who enrolled in higher education institutions oversea, approximately 53 percent of them were from Asian countries, and the largest number of international students were mainly from China, India and Korea. (Gwang-Jo Kim, UNESCO Bangkok, 2013) The demand for overseas students wanting to pursue education outside their countries is also increasing every year. China has the largest pool of international students in various countries who pursued colleges and universities; and thus forcing those colleges and universities to set up student exchange program, international program or Chinese program to accommodate a growing number of Chinese students.

In Thailand, the students from China accounted for 14.3% of total foreign students. As the result of globalization, international education has become a rapid growing area for many educational institutions. In 2007, approximately 844 international programs were offered by 53 higher education institutions---30 Public universities and 23 private universities (Thailand, office of the Education Council, 2007)

Many universities in Thailand established students exchange program or international program to accommodate the growing number of Chinese students, such as Assumption University, Dhurakij Pundit University (DPU), Huachiew Chalermprakiet University (HCU), Kasetsart University, Thammasat University, and University of the Thai Chamber of Commerce. The country-to-country educational exchange program is one of the best ways to maintain the bilateral relations between the People's Republic of China and the Kingdom of Thailand. Up to now, Chinese students make up the largest number of foreign students in the Kingdom of Thailand by nationality. In 2010, there are over ten thousand Chinese nationals who studied at various higher educational institutions in Thailand. (Kelly, 2010)

With an inevitable growth of Chinese students coming to Thailand, the Universities must act responsively to ensure sustainability, growth and its reputation.   Many questions were raised among higher-education institutions,   educators, instructors and quality assurance team about how to make students to quickly adapt to the new learning

environment, how to provide good service for overseas students, and lastly how to attract more overseas students to enroll into the program, these are key challenging situations that all higher education institutions   focus on for the sakes of maintaining enrolment rates, improving the quality of teaching and learning and sustaining   the reputation of the school. These facts unavoidably become one of the key performance indicators for the Universities—administrator, instructor and program coordinator.

Statement of the problem

This action research is aimed to find out what methods could be utilized to enhance teaching and learning strategies and techniques for the purposes of   improving collaborative learning, students engagement and students performance.

Research Objectives

1. To assess and identify the current situation of undergraduate Chinese exchange students' collaborative learning, students' engagement and students' performance;
2. To identify and implement appropriate ID Interventions to improve undergraduate Chinese exchange students' collaborative learning, students', engagement and students' performance;
3. To compare the differences between Pre-IDI and Post IDI of collaborative learning, students' engagement and students' performance for undergraduate exchange students.

Research Questions

1. What is the current situation of undergraduate Chinese exchange students' collaborative learning, students' engagement and students' performance?
2. What are the appropriate ID Interventions to improve undergraduate Chinese exchange students' collaborative learning, students' engagement and students' performance?
3. Is there any difference between Pre-IDI and Post IDI of collaborative learning, students' engagement and students' performance for undergraduate exchange students?

Hypothesis

Ho1: There is no significant difference between Pre-IDI and Post IDI on collaborative learning, students' engagement and students' performance;

Ha1: There is a significant difference between Pre-IDI and Post IDI on collaborative

learning, students' engagement and students' performance.

Review of Literature

Teacher regardless of what level of education program plays an important role in enabling the learners learn how to learn. A variety of teaching-learning approaches have been researched and publicized for the purpose of broadening concepts and applications to improve student's learning outcomes at large. Some examples of teaching and learning theories are information processing theory, multiple intelligences, constructivism, constructionism, and co-operative or collaborative learning.   Regardless of theories of teaching and learning, teacher or instructor needs instructional development intervention as a means to convey essential knowledge, develop and strengthen abilities and skills.

Instructional Development Intervention (IDI)

Lee and Adamson (2008) described that instructional development as a sequence of curriculum materials, teacher workshops, activities and actions intended to promote teachers' knowledge, beliefs, and practices in teaching science, effectively promoted students' performance and quality of learning. The intervention for developing should be designed to fit the needs of the students and core values of educational institution or organization. The main purpose of instructional development intervention is to create changes leading meaningful differences and greater effectiveness in the learners. As Garet and Stephanie (2008) articulated that instructional development interventions can be done in various way depending the target learners, namely lecture, demonstration, experiment, deduction, induction, field trip, small group discussion, dramatization, role playing, case, game, simulation, learning center and programmed instruction.

Each of the instructional development interventions has its own objectives, yet the ultimate goal remains the same, that is forming and shaping the learners with the right kind of knowledge, abilities and skills such as analytical skills, numeric analysis, interpersonal skills and moral/ethics.

Organization Development and Change Management

Change is the reality that every person and organization inevitably adapts and adopted new ways of doing things; it is an on-going process of change that requires Organization practitioners regardless of industry to pursue the organization development as a discipline of knowledge and practice.   When the organization can recognize the necessary change and know how to handle the change timely and appropriately, it can likely survive at its best. In contrast, organizations failing to recognize the change, will unlikely succeed in a long term. Such fact, organizations need to foresee the change and prepare self with an effective change management approach (Gulzar Ahmed, 2014). Change management is the approach to driving adoption and sustaining change initiatives

for expected results and outcomes. Main goal of change management is to help employees quickly accept change and avoid distractions. As early as 1946, Kurt Lewin pointed that organization should first understand why the change must take place and what will the benefits be from changes.

Three steps of change process as articulated by Lewin consisted of unfreeze, change and refreeze.
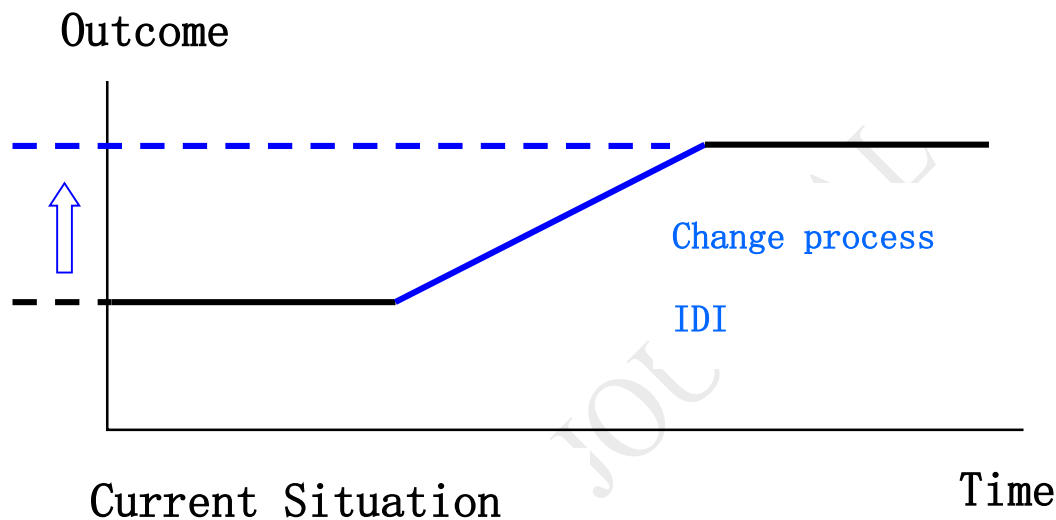

Figure1.   Process of Change

Organization development is a planned and life-long changing and learning process while change management represents specific sets of activities that particularly guide people to act in a certain way to support the organization's vision, mission and strategy.

Kolb's Experiential Learning Theory

In 1984, David Kolb published his learning styles model, suggesting that effective learning should start at the experience while allowing learners to express their views and reflect on what they learn. In this Kolb's learning process, the emphasis is placed on sharing and application through "Learning by doing"; it exerts the potential of the learners while improving learning efficiency. Learning is not the acquisition and delivery of content, but the process of creating knowledge through the conversion of one's experience.

The model consists of four steps. Reflective Observation and Active Experimentation are the steps that guide the learners to processes a task or experience. Concrete Experience and Abstract Conceptualization are steps that guide the learners to

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thinking about things. Kolb's experiential learning cycle can also be interpreted as a training cycle. The concrete experiences lead to observations and reflections. These reflections are then absorbed and translated into abstract concepts and possible actions. When the person tests and experiment new learning, it enables the learners to the creation of new experiences. (Mcleod, 2013).

Experiential learning differs from traditional teaching method; its emphasis is placed on active participation in process of learning with others as they understand and memorize the necessary learning contents of the subject matter (Zhen, 2011). Meanwhile, experiential learning also brings about new experiences and different feeling towards learning and other learners at large (Batista, 2007).

Cooperative Learning

Ayali, Saatcioglu & Cerit (2005) defined teamwork as behaviors that facilitate effective team member interaction. Libo Wo and Yankun Zhen (2013) explained that cooperative learning is mainly for the purpose of overcoming the shortcoming of traditional teaching and improving teaching efficiency. Cooperative learning in groups influences the relationship among individual students from individual's competitive-oriented to "intra-group cooperation" and "inter-group competition". The traditional teaching method between teachers and students with a one-way or two-way communication is changed to multi-directional communication among teachers and students. It not only improves students' initiative and self-control of learning, but also promotes good interpersonal cooperation among students. Needless to say, cooperative learning could improve teaching efficiency.

Student Engagement

Student engagement refers to the degree of enthusiasm and initiative of students participating in teaching activities. It is the main indicator that determines whether the student implements their dominant position. Fredricks, Blumenfeld and Paris (2004) proposed a framework for student engagement which include three aspects-- cognitive engagement, behavioral engagement and emotional engagement. Student engagement is key element that brings about enhanced learning experiences, such as relationships, individual connections, behaviors, attendance, participation and classroom work. (Huang Pu District Teaching Institute, 2011)

Student Performance

Students' performance is the condition at which someone does something to achieve his/her performance Students' performance is one of the main indicators that justify his/her successes as required within the scope of the course or subject. Students' academic performance is generally measured by the individual achievement level such as, and

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students 'grade point accumulative. Student's performance is associated with motivation factor and cognitive factor. Rayachaudhuri and Debnath (2010) described that factors influencing the ability for students to perform at its best also come from innate factors such as gender, family background, belief, self motivation and previous schooling system or experience.

Conceptual Framework

This conceptual framework is drawn from various literature reviews whereby Kolb's learning cycle is the underlying element for the design of instructional development interventions.
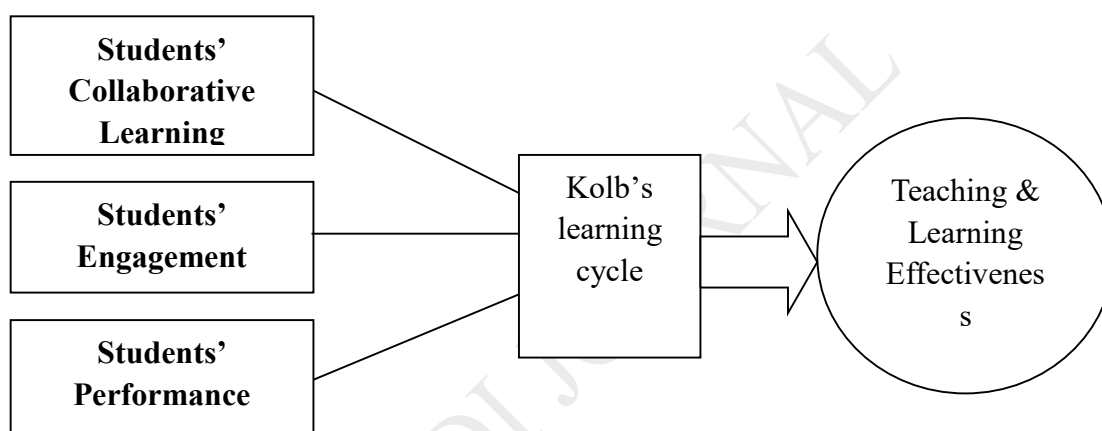

Figure 2. Conceptual Framework

As illustrated in the Figure 2, the dimensions of students' development comprise' collaborative learning, students' engagement and students' performance. Each of these dimensions for students' development is independent from one another, but yet are equally influencing the abilities to learn how to learn. Kolb's learning cycle acts as an instructional development intervention (IDI).

Research Methodology

Research Design

This action research consisted of three phases--Pre-IDI, IDI, and Post-IDI.

Pre IDI	IDI	Post IDI
1. Preparation	**4.Plan & Design Activities**	**6.Feedback collected from students & teachers.**
-Identify the problem-learning effectiveness of students.	Intervention	To measure the result and
-Diagnosing the current situation.	Lecture, coaching,	improvement based on actual and
-Literature on learning theory to	participatory learning, team	collective data through.

collect preliminary data.

-Setting population & selecting.

-Prepare course syllabus, instruments, questionnaire, interview guide and evaluation form.

mentoring.

Focus group discussion

Observation

Teachers' assessment based on students' final presentation & project.

-Interview

-Questionnaire

-Secondary data: Passing rate of course IEP303 in 1/2017.

-Teachers' assessment

2. Data Collection

-Interview

-Questionnaire

-Secondary data: Passing rate of course IBA202 in 2/2016.

Concern with collaborative learning, student engagement and student performance in the current situation and reflection of organization.

7.Analyzing and Interpreting the results

-Analyze the post data collected after ID Intervention.

-Find the differences between pre and post IDI.

3.Data Analysis

Analyze all collected data related to collaborative learning, engagement and performance of students.
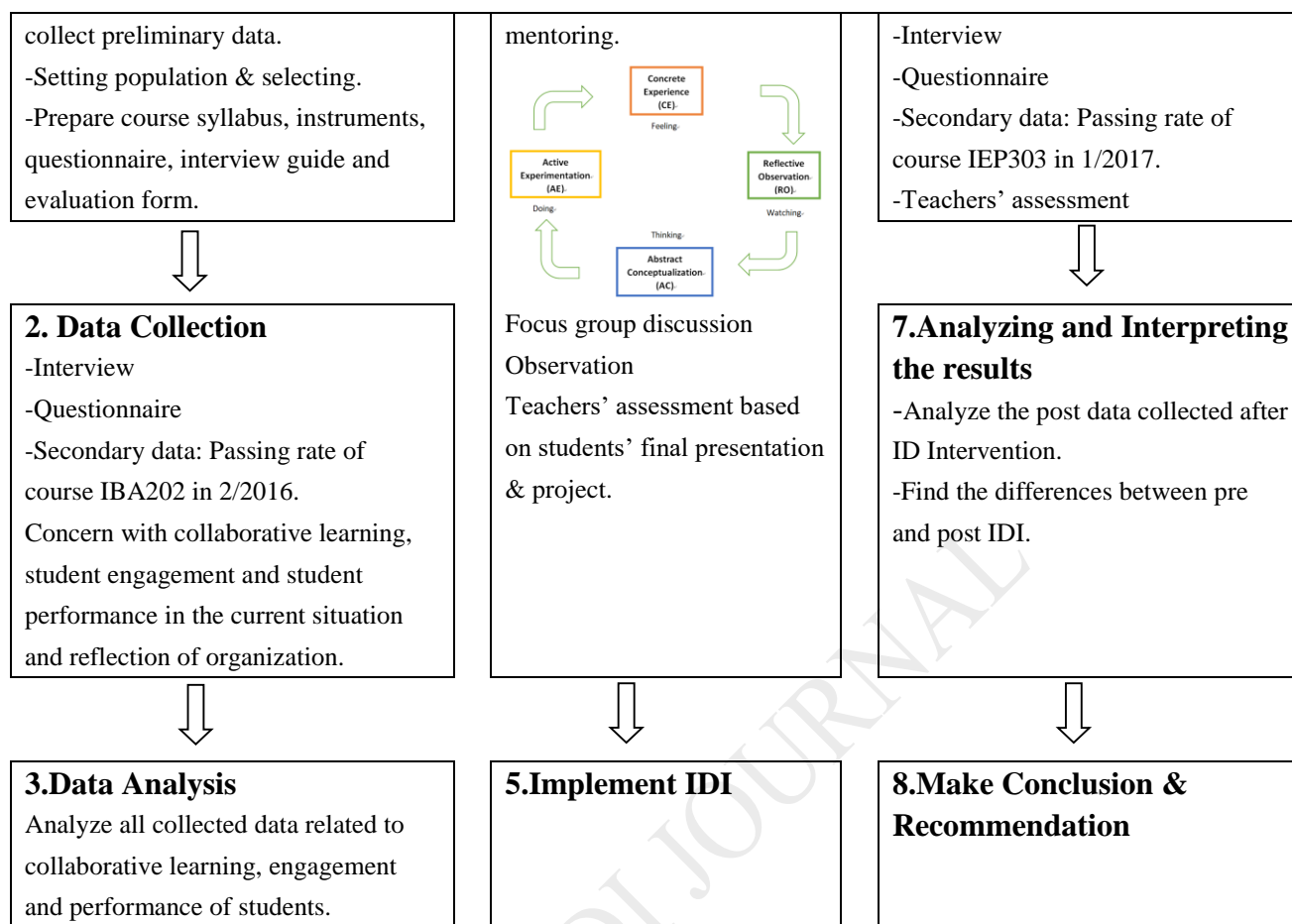
5.Implement IDI

8.Make Conclusion & Recommendation

Figure 3. Research Design

Phase I: Pre-IDI

The researcher identified the current situations of students' collaborative learning, students engagement and students performance; by accessing primary and secondary data collection and direct observation as well as the instruments, such as questionnaire, interview and evaluation form and course passing rate. The researcher developed a set of questionnaires and distributed them to all students. The data collection started on April, 2017. The researcher included some open-ended questions to understand real thinking of students.

Phase II: Instructional Development Intervention (IDI)

After analyzing all collected data related to collaborative learning, student engagement and student performance, the appropriate ID interventions were designed while utilizing the Experiential learning frameworks. The researcher designed a series of learning activities such as lecture, coaching, team mentoring and seminars to help students improve teamwork skill, engagement and performance throughout the whole semester. Then the activities implementation were set out in the way of how to improve collaborative learning, engagement and performance of students who study course

IEP303 "Business and Social Entrepreneurial" with me in semester 1/2017.

Phase III: Post Instructional Development Intervention (IDI)

After the activities were deployed and implemented, the feedback was collected from students and teachers through structured questionnaire, personal interviews and teachers' assessment. The results were analyzed and interpreted. From the analyzed data, the research was to find out whether the conducted instructional development intervention (IDI) activities have any positive, negative or no effect on the students. Additionally, the researcher used these feedbacks to make conclusion and recommendation for the continuous improvement.

Target population and target sample

Target population was 36 students. The researcher employed purposive sampling technique, this means the entire population was used. The target sample in this action research involved 36 students who enrolled in the course of "Business and Social Entrepreneurial", a Chinese Exchange Program for August, 2017. Among these 36 students, 9 females and 27 males.

The actual participated respondents were 31 students while the missing five students did not participate in the study due to personal reasons.

Table 1.

Numbers of the Participants

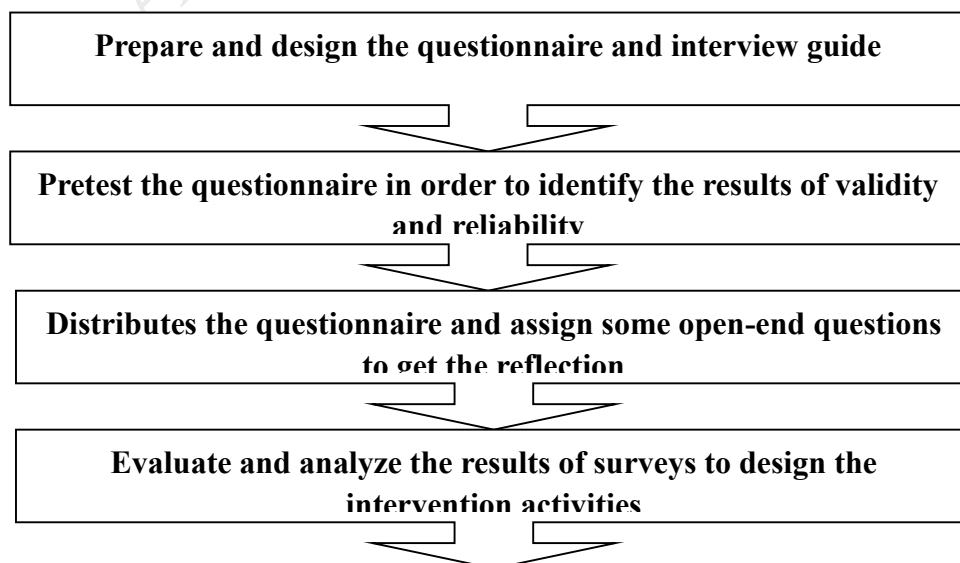| Description	Numbers of the students	Percent
Male	22	71%
Female	9	29%
Total	31	100%

Research Instruments

Five research instruments were used to assess the students' cooperative, engagement and performance before and after implementing IDI.

The researcher used interview guideline, questionnaire and teachers' assessment form for data collection. Primary data were collected from the questionnaire, interview and assessment form. Secondary data were gathered from attendance check and passing rate at the end of each semester. In addition, observation was used during speech, discussion, training, mentoring and presentation.

1. The questionnaire was designed by the researcher which covered the aspects of cooperative learning, students' engagement and students' performance. There were two parts in the questionnaire; 1) the demographic information; 2) the 4 level Likert scale statements ranging from 4 = Strongly Agree to 1 = Strongly Disagree. The participated students were asked to rate their levels of agreement regarding their Cooperative learning, engagement and performance.

2. *Interview/ Reflection.* Before the implementation of ID interventions, some open-ended questions were assigned to student using reflection as a means to extract the experiences from students. Moreover, the researcher used in-depth interview with some students after interventions to seek to understand the benefits and impacts of the implementation and how they were developed during the experimentation.

3. The evaluation form was distributed to two professors upon the implementation of the IDI to check the outcomes of students' final report.

4. The observation checklist was used before IDI and during the implementation of the IDI to check the students' attention in class, participation and interaction with activities or group works.

5. Some secondary data were collected at the end of semester 2/2016 and semester 1/2017 with the same group of students to analyzes and evaluate student engagement and performance outcomes such as, in-class participation, presentation, passing rate and teacher assessment.

Data Collection Procedure
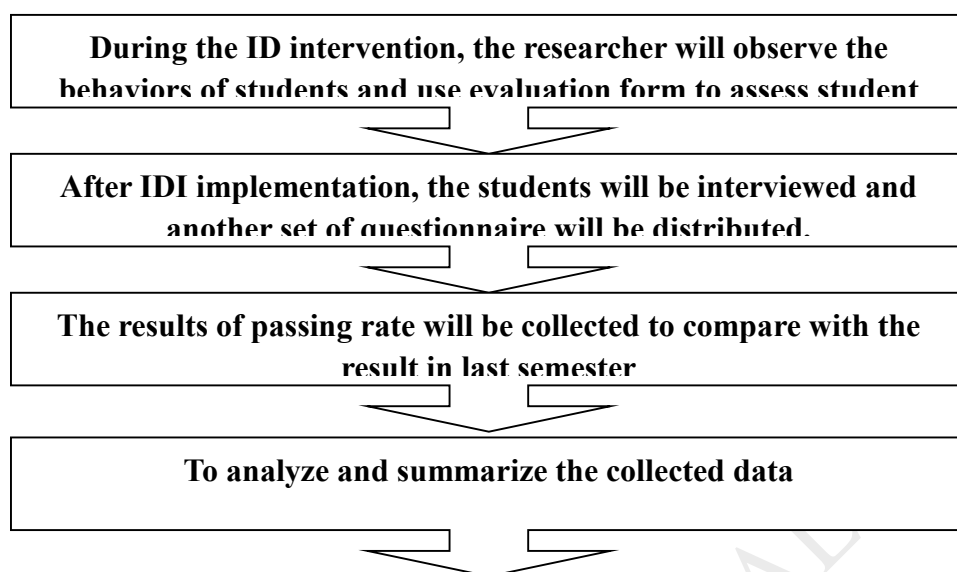
Below are showed the data collection procedure:

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┌─────────────────────────────────────────────────────────────┐
│   Prepare and design the questionnaire and interview guide   │
└─────────────────────────────────────────────────────────────┘
                              ↓
┌─────────────────────────────────────────────────────────────┐
│  Pretest the questionnaire in order to identify the results  │
│              of validity and reliability                     │
└─────────────────────────────────────────────────────────────┘
                              ↓
┌─────────────────────────────────────────────────────────────┐
│  Distributes the questionnaire and assign some open-end      │
│            questions to get the reflection                   │
└─────────────────────────────────────────────────────────────┘
                              ↓
┌─────────────────────────────────────────────────────────────┐
│   Evaluate and analyze the results of surveys to design the  │
│              intervention activities                         │
└─────────────────────────────────────────────────────────────┘
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┌─────────────────────────────────────────────────────────────┐
│       During the ID intervention, the researcher will observe the    │
│       behaviors of students and use evaluation form to assess student │
└─────────────────────────────────────────────────────────────┘
                              │
                              ▼
┌─────────────────────────────────────────────────────────────┐
│       After IDI implementation, the students will be interviewed and │
│       another set of questionnaire will be distributed.              │
└─────────────────────────────────────────────────────────────┘
                              │
                              ▼
┌─────────────────────────────────────────────────────────────┐
│       The results of passing rate will be collected to compare with the │
│       result in last semester                                        │
└─────────────────────────────────────────────────────────────┘
                              │
                              ▼
┌─────────────────────────────────────────────────────────────┐
│       To analyze and summarize the collected data                    │
│                                                                      │
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Figure 4. The diagram of data collection procedure

1) The researcher explored information pertaining to learning effectiveness through literature review prior to preparation and design of the questionnaire and interview guide.

2) Pretest the questionnaire to determine the validity and reliability results.

3) The researcher distributes the questionnaire to the respondents according to the sample procedure (purposive sampling). Prior to distribution of the questionnaire, the respondents were informed of the objectives of the research. The questionnaires were collected after completion of the questionnaires. The raw data was evaluated and analyzed to compare with the results after the IDI implementation.

4) A series of open-ended questions was assigned to students for the reflection. The collected data from questionnaire and reflection were used for the design of teaching-learning activities for collaborative learning, students' engagement and students' performance.

5) During the ID intervention, the researcher and another teacher observed the behaviors of students and used evaluation form to assess student performance. Throughout in-class activities, all learning activities were recorded and evaluated for results comparison. The grade or teachers assessment was also used to assess members from each learning group when it comes to how effective learners worked together.

6) After IDI implementation, the students were interviewed. The students did self-assessments. The results of passing rate were collected to compare with the result in last semester.

Results

The discussion of the results of the study will be based the three main areas, namely

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(1) the current situation of undergraduate Chinese exchange students' collaborative learning, students engagement and students performance; (2)   the appropriate ID Interventions to improve undergraduate Chinese exchange students' collaborative learning, students engagement and students performance, and the survey results after IDI implementation;   (3) the difference between Pre-IDI and Post IDI of collaborative learning, students engagement and students performance for undergraduate exchange students.. The data analysis and interpretation are in response to the research question for determination of the current situation of students' collaborative learning, student engagement and student performance before and after implement ID intervention.

Research question #1 :   The current situation of undergraduate Chinese exchange students' collaborative learning, students' engagement and students' performance.

The current levels of the participants' collaborative learning, engagement, and performances were derived from the data from the questionnaires distributed in the pre IDI stage, and during the initial stage of workshop 2, and data from observation, students' reflection paper and academic score of students before IDI.

Descriptive report analysis: (quantitative data from questionnaire) Students' collaborative learning, engagement, and performances toward the study.

Table 2.

Mean scores and standard deviation of student's collaborative learning, engagement, and performances before implementing IDI.

Items	Statements	Mean	S.D.	Result
1	Students' cooperation	2.77	.96913	Good
2	Students' engagement	2.82	.84610	Good
2	Students' performance	2.66	.76208	Good

The perception of respondents towards students' cooperation before IDI shows that the total average was 2.77, the standard derivation was .969 and the over score ranked at "Good Level". The results presented that students think the individual mission is more important than team mission. It is because of the scoring mechanism of university system. After completing a group assignment or project, the grade is based on group's overall performance. Each member in a group has the same score. There is no distinction among individual contributions, so students have a poor sense of teamwork. They think the result is the same no matter how much effort they have made. In contrast, individual assignment scores are easily controlled. Students have to comfortable with each other and help the fellow team member to improve overall team performance if they join in a team. Therefore, students are willing to put more effort on completing their own work.

The perception of respondents towards students' engagement before IDI shows that the total average was 2.82, the standard derivation was .846 and the over score ranked at "Good Level". It presented that student are not willing to ask teacher questions actively whether in class or after class. One-way communication is often used in classroom. The teacher is the sender of the message and the students passively receive information. So students are unaccustomed to questioning teachers directly. In addition, in Chinese classrooms, teachers are authoritative and cannot be challenged. Students prefer to find information to solve problems by themselves. From these data, we can see the interaction between me and students is not good and we need to improve the relationship between teachers and students.

The perception of respondents towards students' performance before IDI shows that the total average was 2.66, the standard derivation was .762 and the over score ranked at "Good Level". During the discussion organized in class, students did not actively participate in the discussion. The researcher obtained the similar results in teacher's observation process. In the review session, students had a high degree of participation, even though the students with learning difficulties are generally actively involved. However, the participation is obviously not enough to explore the new knowledge or comprehend expressions.

Descriptive report analysis: (quantitative data from class observation)

There are fifteen lessons per semester. The observation was performed by the instructor in order to check the performance of the students.

Table 5.

The learning observation checklist Pre-IDI of students.

NO.	Items	N	Mean	Std. Deviation	Result
1.	Students listen to the teacher when the course is handling on lecture method with information, explanations or gave instructions.	15	2.3333	.72375	Seldom
2.	Students always do their assignment by themselves and submit on time.	15	3.8667	.51640	Often
3.	Students like to take notes or write things down in the class.	15	2.2667	.70373	Seldom
4.	Students can actively participate in class exercises, such as question answer, discussion or interaction.	15	2.0000	0.00000	Seldom

5.	Students share ideas in group/class when discussion was proceeded.	15	2.1333	.35187	Seldom
6.	Students were actives in class by asking questions.	15	2.1333	.35187	Seldom
7.	Students get along with their group.	15	2.0000	0.00000	Seldom
8.	Students can help each other in group to accomplish their task instead of each doing their own thing.	15	2.2000	.56061	Seldom
	Average		2.3667	.40103	Seldom

From the data of observation checklist for the learning performance of students by the teacher as shown in the above table, the most of the items were rated seldom. The average mean was 2.37 and Standard Deviation was .401, rating was seldom. It means the serious degree, initiative and cooperation of students is not good. Students are not interested in blindly lecturing. If the class is not interactive, many students can concentrate on a short time.

Contents analysis : (Qualitative Data from students reflection paper)

The researcher sorted 36 students into 8 groups according to their ID number. At the end of the last school term, some questions were assigned to students, requiring feedback results in groups. The summary results are as follows:

Students give some recommendations for improvement the learning effectiveness and express their expectation of teaching activities, as fellows,

- Encourage students to participate in class through teacher-student interaction. The teacher can organize some activities to increase the interest of learning and activate the classroom atmosphere.

- The teacher should actively create an equal atmosphere of teachers and students, arrange teaching links reasonably, enhance the logic of teaching contents and guide students to actively participate in the study.

- For the students with weak foundation or the students who have problems in their study, teachers can reserve an additional time after class to provide targeted counseling. This method could help them better and faster access to learning.

- Teacher should increase mutual help among students through interventions.

- In the evaluation, the proportion of exam scores and regular grades should be appropriately distributed.

- The teacher needs to observe the students' reactions during lectures. Students should

also communicate with the teachers to improve the relationship between teachers and students.

Table 7.

Academic score of students before IDI

Academic Score	Range	Number of students	Cumulative number of students	Percentage
A	80~99	4	4	11.1%
B+	75~79	6	10	16.7%
B	70~74	5	15	13.9%
C+	65~69	8	23	22.2%
C	60~64	2	25	5.6%
D+	55~59	2	27	5.6%
D	50~54	7	34	19.3%
F	0~49	2	36	5.6%
Total		36		100.0%

The passing rate of course before IDI is 34/36= 94.44%

Research question #2:   The appropriate ID Interventions to improve undergraduate Chinese exchange students' collaborative learning, students' engagement and students' performance, and the survey results after IDI implementation.

The interventions were conducted during the whole semester. 36 students were invited to participate in the ID intervention process. There were 15 weeks in this semester.

Experiential learning refers to understand things around through practice and be able to apply in real life. Hence, the curriculum design adhered to the following principles.

-Streamline the course content to minimize the lecture.
-Develop attitude of students.
-Develop and practice skills of students.
-Promote understanding of thematic concepts and models, so that participants know the theoretical knowledge and how to practice it.
-The learner becomes the main characters in the class. To offer opportunities for participants to learn from each other

The interventions were established to flow the Experiential learning cycle with CE. RO, AC, AE into four phases:

Statistical Findings of "POST-IDI" Phase

Descriptive report analysis: (quantitative data from questionnaire). Student's collaborative learning, engagement, and performances toward the study.

Table 8.

Mean scores and standard deviation of Student's collaborative learning, engagement, and performances after implementing IDI.

Items	Statements	Mean	S.D.	Result
1	Students' cooperation	3.28	.88064	Outstanding
2	Students' engagement	3.25	.68644	Good
2	Students' performance	3.11	.73343	Good

Descriptive report analysis: (quantitative data from class observation).The observation was performed by the instructor in order to check the performance of the students.

Table 9.

The learning observation checklist Post-IDI of students

NO.		N	Mean	Std. Deviation	Rating
1.	Students listen to the teacher when the course is handling on lecture method with information, explanations or gave instructions.	13	3.6923	.85485	Often
2.	Students always do their assignment by themselves and submit on time.	13	4.8462	.37553	Always
3.	Students like to take notes or write things down in the class.	13	3.9231	.27735	Often
4.	Students can actively participate in class exercises, such as question answer, discussion or interaction.	13	4.0000	.40825	Often
5.	Students share ideas in group/class when discussion was proceeded.	13	3.9231	.64051	Often
6.	Students were actives in class by asking questions.	13	3.1538	.55470	Sometimes

7.	Students get along with their group.	13	3.6154	.65044	Often
8.	Students can help each other in group to accomplish their task instead of each doing their own thing.	13	3.6154	.65044	Often
	Average		3.8462	.55151	Often

According to the table above, the result of the observation checklist by the teacher of participation of students in the class shows that the performance of the students in each point changes from the rating of seldom to often. The total average mean was 3.85 and standard deviation was 0.552.

Content   analysis : (Qualitative Data from students interview paper)

In-depth interview was direct and face to face conversation with five students using a random-selection method after intervention by asking what they gained from the implementation and how they developed during the process. The summary results are as follows:

1. *What learning activities do you like in the class? Why?*

The students preferred the activities like brainstorming and The Organizational Metaphor. In brainstorming activity, students can freely express their opinions without judgments and restriction. Moreover, they hoped to add more interesting activities in class to participate.

2. *Do you think working in a team help you LEARNING BETTER? What have you learned from group working or peer study?*

Most of them thought working in a team help them learning better. The peer work helped them to broaden the width and depth of their own thinking. They could inspire and helped each other.

3. *How could you contribute your effort in team learning?*

In the team learning, students could actively participate in the discussion. When others express their opinions, they will certainly listen to carefully and will be prepared for supplements.

4. *Is there any help for you with these teaching methods and activities provided in this semester, such as cooperative learning and experiential learning?*

Instructor provided teaching material in English, the students could pay more attention and take notes in class. The students were asked to preview chapters by looking at subheadings and illustrations before they read each chapter is also helpful them to clear the objectives.

The Kolb's experiential learning cycle and participatory learning were useful for students. They identified the objective of learning and understood how the knowledge or theory they learned can be used in practical problems in the future.

Table 10.

Academic score of students after IDI

Academic Score	Range	Number of students	Cumulative number of students	Percentage
A	80~99	4	4	11%
B+	75~79	5	9	14%
B	70~74	5	14	14%
C+	65~69	6	20	17%
C	60~64	7	27	20%
D+	55~59	6	33	17%
D	50~54	2	35	6%
F	0~49	0	35	0%
Total		35		100.0%

The passing rate after IDI is 35/35= 100%

Research question #3:   The difference between Pre-IDI and Post IDI of collaborative learning, students engagement and students performance for undergraduate exchange students.   (Comparison of the Pre and the Post IDI/OID; Hypotheses Testing)

Table 11.

The Paired Sample t-test on students' cooperation before and after IDI

		Mean	N	Std. Deviation	t	Sig. (2-tailed) (P-value)
Pair 1	PRE_ODI	2.77	31	0.969	3.639	.036
	POST_ODI	3.28	31	0.881		

		Mean	N	Std. Deviation	t	Sig. (2-tailed) (P-value)
Pair 1	PRE_ODI	2.82	31	0.846	5.415	.006
	POST_ODI	3.25	31	0.686		

Table 12.

The Paired Sample t-test on students' engagement before and after IDI

		Mean	N	Std. Deviation	t	Sig. (2-tailed) (P-value)
Pair 1	PRE_ODI	2.66	31	0.762	11.121	.000
	POST_ODI	3.11	31	0.773		

Table 13.The Paired Sample t-test on students' performance before and after IDI

The p-value (sig 2 tailed) was .036, .006 and .000, which were less than 0.05. So the null hypothesis (Ho1) was rejected and the alternative hypothesis (Ha1) was accepted. These data represented that there were significant differences between pre and post implementation on students' cooperation, engagement and performance.

Conclusion

The findings confirmed that the students' cooperation, engagement and performance were improved through the experiential learning and intervention. Through the paired samples t-test analysis, it was found that mean score of the posttest was higher than the mean score of the pretest which means some of the activities need to be carried out and continued based on action plan. Class activities also need to continue to maintain students learning effectiveness. The results of the P-value were less than the significance level of 0.05. So the null hypothesis was rejected and the alternative was accepted. Therefore, there was significant difference between pre and post implementation on students' cooperation, engagement and performance. The IDI designed were suitable and useful for improving collaborative learning, engagement and performance of undergraduate Chinese exchange students.

Variables	Results after IDI
Students' cooperation	• The relationship between students from study competition changes into "intra-group cooperation" and "inter-group competition". • Students could accept others' difference and collaborate one another. • Students could get along well with each other. • Students helped fellow team member to improve overall team performance. • Students were responsible their duties to complete their group tasks.
Students'	• The experiential learning method created an active class

engagement	atmosphere. • Students participated in class activities and put more effort on learning. • Students would like to communicate with teacher and ask question after class. • The relationship between students and teacher was improved.
Students' performance	• Students could apply the knowledge or theory they learned in practical problems in the real situation. • The overall academic scores were improved.
Passing rate of course	• The passing rate and GPA of the course were improved.

Table 14. Summary of qualitative result

Based on the interview, reflection and observation, researcher found out that student preferred divide group by themselves. They could get along with each other well if they were familiar with each other. Students realized that the cooperation and engagement are core factors will impact on the learning effectiveness. They had cultivated sense of teamwork and could actively participate in the group discussion or question and answer session.

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