Collaborative Learning Through Flipped Classroom to Promote Pre-service Teachers’ Ability to Develop Local Curricula

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Introduction

- Knowledge in curricula is the key for a teacher of any subject, especially that of basic education in which the teacher must be able to develop local curricula.

- A teacher must be trained to be proficient in their profession where they are required to be able to develop new techniques of teaching.
Introduction

- Collaborative Learning approach is one of those that encourage learners to contribute to team objectives and earn mutual success.
- Apart from using teaching techniques, the technology of the 21st century “3R7C (C=Computer)” where online information on the Internet can be of use. This idea is called Flipped Classroom.

A learning method where learners can study at home and do their homework at school.
The approaches of both collaborative learning and the idea of Flipped Classroom, if being applied to a classroom instruction, can effectively develop understanding and skills of any subject taught.
Research Questions

What are collaborative learning and flipped classroom approaches?

Effectiveness of collaborative learning and flipped classroom approaches in the following aspects:

• What are the learning outcomes of the local curricula development?
• What is the level a teacher student’s ability to develop a local curriculum?
• What is the level of a teacher student’s ability to apply the developed curriculum?
Objectives of the study

- To use collaborative learning and flipped classroom concept to develop the local curricula development courses for student teachers who study Curriculum Development

- To study the effectiveness in terms:
  - learning outcomes on the local curriculum development
  - ability to develop a local curriculum
  - ability of curriculum implementation and students’ opinions towards learning
Step One: Research (R1) was the analysis of collaborative learning approach through flipped classroom:

- A research on documents or studies in the field of learning and instructions.
- An analysis of the contents of Curriculum Development an analysis of Co-operative Based learning approach and Flipped Classroom concept.
Step Two: Development (D1) was the development of collaborative learning approach through flipped classroom for student teachers

- Used the analysed result of R1 to develop a new method of instruction.
- Developed tools for data gathering which included:
  - 30 items of multiple-choice test
  - 1-5 rating scale assessment forms curriculum development ability including 12 aspects
  - 1-5 rating scale assessment forms on ability to apply the developed local curriculum for the following 4 aspects including
  - 1-5 rating scale questionnaires on students’ attitudes
Step Three: Research (R2) was the implementation of collaborative learning approach through flipped classroom using the instruments from D1

- the sampled group of 31 undergraduate students who study Curriculum Development
- The timeframe of this implementation was 6 weeks starting from March-April 2016.
- have set up a Facebook Page called “Curriculum Development” where learning resources or videos were shared
- then were assigned to develop a local curriculum for their subjects during April time
- by the students and coordinated with 2 School requesting the curricula to be implemented
- Assessment on the implementation was completed and questionnaires
Step Four: Development (D2) assessed the implementation of collaborative learning approach and flipped classroom concept on the aspects of:

- learning outcomes,
- ability on local curricula development,
- assessment on the ability to use the local curricula,
- students’ attitudes after the implementation of collaborative learning approach and flipped classroom concept.
Research Question 1:
The implementation of collaborative learning approach and flipped classroom concept as additional skills for student teachers the following 7 steps of instructions called A-TCIAPE.
A-TCIAPE (7 steps)

1. “Ask and Answer”
2. “Topic Selection”
3. “Cooperative Planning”
4. “Implementation”
5. “Analysis and Synthesis”
6. “Presentation and Final Report”
7. “Evaluation”
Research Question 2: A-TCIAPE revealed that

- learning outcomes of students on the Curriculum Development course were at good level,
- students’ abilities to develop curricula were at high level,
- students’ abilities to implement the developed local curricula were at high level,
- students’ opinions towards the learning based on "A-TCIAPE" was appropriate at a high level.
1. The development of collaborative learning approach and Flipped Classroom concept as additional skills for student teachers at the Faculty of Education of Silpakorn University to develop local curricula using the 7 steps of “A-TCIAPE”; A number of academics have identified the collaborative learning as the approach where different knowledge and skills are shared to complete tasks and achieve mutual goals and The researcher has also studied on a very popular instruction method called Flipped Classroom concept that has been considered as skills of the 21st century
Discussion

2. The effectiveness of the implementation of collaborative learning approach and Flipped Classroom concept

2.1) Learning outcomes of students on the Curriculum Development course were at good level as a result of learning activities that the researcher had developed to meet the learning requirements of the students. The A-TCIAPE allowed students to work in groups and use appropriate technology to gather, share, and discuss the information among groups. Using technology as a tool for learning gives students their own pace to learn the video of lessons and build their own understanding prior to sharing and discussing with classmates.
Discussion

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2.2) high level of students’ abilities to develop curricula can reflect the effectiveness of previous studies database that students have access to which could help them developed their own local curricula. Flipped Classroom concept is an innovation of education that allows learners to do the “Mastery Learning” and escalates the values of teaching to the next level by using technology as tools in learning (Pahe, 2013)
Discussion

2. The effectiveness of the implementation of collaborative learning approach and Flipped Classroom concept

2.3) students’ abilities to implement the developed local curricula were at high level, especially the abilities to prepare learning materials and activities as well as learning atmosphere. The researcher has observed the implementation of the local curricula developed by the student teachers and found that the learning atmosphere was delightful and fun because learning materials such as songs, or games were used in the classroom.
Discussion

2. The effectiveness of the implementation of collaborative learning approach and Flipped Classroom concept

2.4) students’ opinions towards the learning based on "A-TCIAPE" was appropriate at a high level for the reason that students were able to work mainly on their own by interacting and discussing knowledge among their groups.
Suggestions

Suggestions for implementation

- videos or learning materials should be suitable for each learning unit
- Conditions, learning plan, learning objectives, and criteria of assessment must be informed since the first hour of lecture