

# Enhancing Collaborative Learning in Flipped Classroom

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## Abstract

With the advent of technology Web 2.0, two ways communication can be established among the learners in teaching and learning activities. The learners can study collaboratively with others even in different location and different time. Flipped classroom is the opposite of traditional learning where the learners watch lectures video outside the classroom and conduct interactive discussion in the classroom. After reviewing several articles, it shows that the application of flipped classroom can enhance a collaborative learning for students' learning activities. However, some challenges might potentially happened such as not all learners wish to work together, not all of them have self-directed learning skill and the teachers need more trainings before implementing flipped classroom.

## Introduction

The use of technology in teaching and learning activities has significantly widespread over the past decade and the internet plays significant role for educational purposes [1]. Many new digital tools allow the learners to be more active to collaborate, innovate, and share their ideas in learning activities [2]. With the significantly growth of technology, the learners not only can study in the classroom, but also outside the classroom virtually with technology-based instruction [3]. Using various technology tools can increase students' interest and motivation and gives more opportunities to reach various character of learners [2]. The emergence Web 2.0 or social technology media has supported and facilitated the students to learn through collaborative knowledge construction [4].

Moreover, technology supports collaborative time and feedback from teacher to students outside the class [2]. The use of web 2.0 in education can build professional relationships through collaborating, coaching, and mentoring for social interactions in sharing ideas, giving and offering support and obtaining feedback in peers [5]. Web 2.0 or social web technology has facilitated users to establish interaction and self-directed learning skill. The learners can study collaboratively in different location and time such as producing various writing on Wikis or other social media.[4] Therefore, living in a digital age demands the learners to work collaboratively outside the classroom using various technology tools [6]. A number of technologies media are relevant to use for instruction in various learning activities such as in online learning or blended learning environment with the combination of traditional classroom and technology-based learning [2].

## Collaborative learning

Collaborative learning is an instructional method where a group of learners work collaboratively or together to achieve common objectives and goal [7]. Therefore, collaborative learning does not decrease social interaction among learners even it will strengthen the interaction and communication among the learners outside the classroom using various tools on technology media.

In collaborative learning, the learners have limited guidance from the teacher because they will be more instructed by social technology tools which they can learn and construct their own knowledge through group interaction [8]. Different with cooperative learning that the activity of teaching-learning are more structured learning tasks guided and facilitated much by the instructor,

the instructor guide students to the mastery of subject and shares learning materials, facilitates to work in groups activity in the classroom and explain how the role they work together in team [9]. A number of technology tools can be used in establishing collaborative learning such as discussion boards, video, social media and chat rooms that allow the learners to share and work together to solve the problem together through virtual world [6].

Collaborative learning can be applied in every level of studies, but it has widely applied as an instructional method in higher education because adult learners tend to study based on their previous knowledge, experience and according to their convenient time and place [9]. Therefore, much research has been done focused on collaborative learning in higher education or adult learning.

### **Flipped Classroom**

According to Horizon report initiated by New Media Consortium (NMC) [10], flipped classroom is one of the important development technologies in 2014. Flipped classroom is the opposite of traditional classroom, where the learners listen to the lectures outside the class through the video and establish interactive group discussion in the classroom [11]. With the use of flipped classroom will save the time of teacher delivering the lectures in the classroom and the students can use classroom time for discussion activities with less time or without listening to lectures' talk [12]. Hence, it will make efficient teaching and learning activities during classroom hours, the students can feel confident in the classroom discussion because they have prepared the materials before coming to the class, the learners also will be responsibility and have self-directed learning skills toward their learning activities [11]. The instructional video lecture in the flipped classroom can be created by the teachers or adopted from free websites such as from YouTube, TED Talk and Khan Academy, then, teacher share to students and they can watch it in every convenient place outside the classroom, watch step by step, pause and repeat the video according to their need [13].

### **The role of Collaborative learning in Flipped classroom**

Flipped learning may take place both in the classroom and asynchronous or virtual collaborative learning with online communication options when outside the class [14]. Learning virtually like in flipped classroom will strengthen traditional academic values of sharing and collaborative creation of knowledge by providing teachers and learners with platforms for collaboration, thus enabling learners and learners to jointly develop educational content, supporting the exchange of material, facilitating community building and so on [15].

The focus of flipped classroom is interactive discussion and communication, establishing strong social interaction among students and solving the problem in team with less guidance from the teacher, all of these are characteristics of collaborative learning [16]. Flipped classroom is an active learning which makes the learners to be more interactive in learning activities and they will collaborate with each other to discuss the lesson after watching the video outside the class [12].

In flipped classroom, the learners need their own responsibility of learning to construct their knowledge and they need to work collaboratively based on their previous knowledge and experience [17]. Social technology media contributes to establish students' interaction outside the classroom and it may improve the collaborative learning among students especially when they work together in different location virtually, with the use of technology social media tools, a group of users share learning material and exchange the idea collaboratively [18].

### **Benefits and Challenges of Collaborative learning in Flipped classroom**

According to Fulton [19], students in flipped classroom will study based on self-directed learning skill and move at their own pace. Schmidt and Ralph [20] mentioned that collaborative learning tends to make students more confident to work together and solve the problem collaboratively. Then, it will save the time of teacher explaining the lectures in the classroom because the learners can study independently outside the classroom [12]. Moreover, it can give a social benefit for students' interpersonal interaction and builds diversity understanding among students [16].

However, collaborative learning in flipped classroom also has disadvantages for the students and teachers [21]. Not all learners wish to work and collaborate with each other to solve the problem of study [6]. Then, not all of students have self-directed learning skill [22]. Poor and limited internet connection becomes other common reason of applying collaborative flipped classroom. Hence, flipped classroom is a new learning model and needs more training for the teachers [23]. Applying the flipped learning also will not support students with disabilities especially for sightless students toward the video [12].

Table 1, Overview of benefits and challenges of collaborative flipped classroom

Benefits	Challenges
Self-directed learning skill and Students learn at their own pace	Not all learners wish to work together
Make students more confidents	Not all learners have self-directed learning skill
Save the time of teacher to explain the lectures in the classroom	Poor and limited internet connection
Interactive learning in the classroom	Needs more trainings for teachers before applying flipped classroom
Produce a much higher level of critical thinking	Not support students with disabilities
Build diversity understanding among students	Need to spend more times for teacher to control the students even outside the class
Obtain feedback from peers and personal feedback from teacher	Poor quality of video makes students bored to watch

### Conclusion and Potential future studies

The application of flipped classroom can enhance collaborative learning where the learners learn and construct their own knowledge through group interaction and they have limited guidance from the teacher in learning activities. The potential future study can be conducted on the effectiveness of using specific various tools of Web 2.0 to enhance collaborative learning in flipped classroom such as Facebook, Twitter, Wikis, YouTube, Mobile Learning, Blogs, Skype and Podcast. Then, some solutions can be investigated to solve a number of weaknesses in collaborative flipped classroom such as flipped classroom for disabilities students, students' motivation to work together and awareness of self directed learning skill. Therefore, the collaborative flipped classroom can be welcomed and successfully applied by all students and teachers worldwide in the future.

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