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BLOOM TAXONOMY BASED-FLIPPED LEARNING FOR THE TEACHING OF ENGLISH SPEAKING AT INDONESIAN HIGHER EDUCATION CONTEXT

M. Junaidi Marzuki
Hamzanwadi University, marzuki.mjunaidi@hamzanwadi.ac.id

Abstract

This article provides practical application of employing flipped learning based bloom taxonomy theory in teaching English speaking at higher education. Flipped classroom/learning is defined as learning model in which content attainment is shifted forward to outside of class, then followed by instructor-facilitated concept application activities in class, while Bloom Taxonomy is set of learning framework used to classify the learning outcomes and objectives. To implement these two concepts, TED talks is used as the main teaching and learning material. Both strengths and weaknesses are analyzed for teachers' consideration to implement this teaching model.

Keywords: *Bloom Taxonomy, Flipped Learning, Speaking Proficiency*

INTRODUCTION

The rapid development of technological breakthrough has brought about profound changes in a second and/or foreign language teaching and learning (Son, 2018; Bush & Terry, 1997). Prior to the inclusion of technological tools in education, the pedagogical process is featured with teacher-fronted instruction or face-to-face mode with basic teaching equipment (e.g. simple blackboard with chalk). In addition, the learning material used is mainly derived from commercially textbook or prescribed by governments. To date, however, the unbridled development of Computer Assisted-Language Learning (CALL) or Technology-Enhanced Language Learning (TELL) has a globally profound effect (Golshan & Tafazoli, 2014), as it provides alternatives for

language teaching approach. One of the apparent changes taking place is the profusion of teaching modes, and one of them is "flipped classroom" which refers to teaching model in which classroom instruction takes place outside the classroom (Bergmann & Sams, 2012).

It is argued that activity in the flipped learning is "beneficial" to facilitate students' learning. However, what consider as "beneficial learning activity" in the instructional model is loosely defined in the literature, resulting in flexibility in innovating its application (Hung, 2018). Despite this, the innovation is limited in strategies and tools/software used (e.g. its delivery through online or off-line-based, game and apps, such as WhatsApp) to implement the learning model, and very few innovations introduced based on "a theoretical foundation" with which the "educational and instructional objectives and learning activities are constructed". Considering this, this article intends to implement Bloom Taxonomy based-flipped learning (henceforth BTBFL) in teaching English speaking course at Hamzanwadi University Lombok, Indonesia.

FLIPPED CLASSROOM IN L2 CONTEXT

To understand thoroughly the concept of "flipped learning" and relevant research, it is of paramount importance to begin with reviewing how the term is defined as a point of departure for exploring research conducted in the learning model. Much of definitions put forward tend to emphasise on "methodological perspective" (i.e. how it is delivered) rather than "content" one (i.e. what kind of material should construct flipped classroom). Bergmann and Sams (2012), who are the pioneers of the term, for example, state that flipping classroom refers to 'traditionally done in class is now done at home, and that which is traditionally done as homework is now completed in class' (p.13). It is also stated that it is "a means of enhancing communicative activities inside the class by preparing the students prior to the class" (Haghighia, et al, 2018). Similarly, Jensen, Kummer, and Godoy (2015) define it as "a learning model in which content attainment is shifted forward to

outside of class, then followed by instructor-facilitated concept application activities in class".

Although most scholars exclude the type of materials used in their definition, most of them have no dispute over the use of video as the primary tool for FC implementation (e.g. Bergmann & Sams (2012). Despite this agreement, the way how the videos are shared or presented (e.g. online or offline, web or app-based etc.) are relatively various. This is because there is no definite definition of "beneficial" learning activities for students due to video access prior to class time (November & Mull, 2012; Hung, 2018). Consequently, the methods used to implement flipped learning have increased, and so have the research on the area. Drawing on this gap, this paper defines "flipped classroom" as videos-based instruction integrated with technological tools that enable language learners to access before main classroom activities.

There has been an upward trend in flipped classroom research for the last decade. It is recorded that there was about 61% of the research conducted since 2012 (Talbert, 2018). Despite this, much of the study has mainly focused on its effectiveness or benefits it brings for learners. Generally, the advantages could be categorised into two affective and cognitive. Affectively, the vast majorities of research share common finding that flipped classroom help to promote active learning, a type of learning model which restricts teachers' dominance role in the classroom and allow students to understand a concept by engaging in a well-designed question or learning task (Andrews et al, 2011). Hung (2018) reported that flipping classroom has significantly decreased students' anxiety, resulting in their active participation in the classroom and boosted students' motivation and positive relation between students and teachers (Tucker, 2012; Zainuddin, 2017).

The flipped method also has cognitively benefited students in learning a second and/or foreign language. It was revealed that students' idiomatic and communicative skill is increased (Hsieh,

Wu & Marek, 2017). Similarly, Haghighi, et al (2018) found that flipped learning has led to increased learners' pragmatic competence (i.e. ability to use the word appropriately based on the context). It was also reported that the flipped model has successfully increased students' vocabulary (Tafazoli, 2012). The learning model also allows students to personalise their own learning (Bergmann & Sams, 2012), creating more opportunity for consciousness-raising to take place (Leow & Mercer, 2015). Bezzazi, (2019) found that employing flipped classroom increased students' public skill in terms of body language and paralanguage.

In relation to the implementation of flipped learning based on taxonomy framework, it seems that much literature has been more focused on alternative models to implement the principle than research conducted. Central issue of the model lies on a different level of taxonomy used in each flipped classroom cycles. Li-li (2017), for example, an attempt to employ flipped model in college English education of Shanghai, China, she proposed "remember and understand" are the primary cognitive skills that construct pre-class activities, and the rest in while and post activities. Wright (2012) proposed a different idea about Taxonomy implementation. Instead of flipping the classroom, she argues to flip the taxonomy per se, form creating to remembering. The design is based on her difficulty in teaching the principle of English grammar. Rather than first explaining the grammar rules, she asks her students to write a free paragraph based on prompt or students' free writing. The students then work in a group to evaluate and analyse the language structures. Students apply what they have learned when doing another writing activity, while their understanding and knowledge is enhanced through a podcast.

Reviewing literature on the use of flipped learning and its development, it could be concluded that the emergence of the learning model has positive response from both teachers and student's perspective. The positive impacts on students cognitive and affective factor shown in the research and the differing models

emerged can be a good indicator for this. Despite this, there is little implementation of the flipped learning in accordance with Bloom Taxonomy framework, which is the main reason for this proposal.

RATIONALE

This part focus on the rationale and stage of implementing Flipped Classroom based on Bloom Taxonomy together with strength and weakness

There are two overarching reasons for proposing flipped classroom that based on Bloom Taxonomy in Indonesian higher education. First is the institutional factor. Since 2007, the Indonesian Minister of Higher Education introduced a curriculum model called the Indonesian national qualification framework. It is a model that incorporates the aspects of cognitive, affective and psychomotor within a course. However, it is must be acknowledged that it is challenging to address the three domains with a single instructional framework. Despite this, the implementing the concept of Bloom taxonomy (e.g. remembering, understanding, applying, analysing, evaluating and creating) in educational and instructional objectives could be the most effective model to deal with cognitive aspect without neglecting the others.

Another reason lies in the importance of keeping abreast of current teaching trend and evolving way of learning. Given that the technology provides a lot of possibilities in the field of education, it has a profound impact on educational practices. As Bush and Terry (1997) pointed out, the technology revolution has directly influenced the conceptualisation of educational objectives, instructional approaches and technological tools used to support the learning of foreign language. This indicates the significance of a teacher to be technically literate in her/her profession. While it is true that "technology will not replace teachers, but teachers who use technology will replace those who don't" (Kiddle, 2013:173). Furthermore, unbridled technological development profoundly affects students' learning preferences. As a part of the millennial generation, today's learner, especially in the given institution,

expose frequently with technology. Although they are not taught with sophistically technological tools in the classroom, they are, however, actively engaged with technology to locate resource or material through their smartphone or computer. This intense engagement is likely to influence their learning strategies, and thus a teacher needs to adjust to this if they want to maximally achieve the expected learning outcomes.

IMPLEMENTATION STAGE

There are three main areas where Bloom's framework can be integrated into a given course. They are learning objectives, instructional objectives and assessment.

Learning objectives

The first and foremost stage is to formulate "learning objectives or educational objectives". "Learning objectives are the things that instruction wants to achieve (Gershon, 2015). As for BTBFL in English Speaking Course, educational objectives are constructed with three cognitive thinking skills; analyse, evaluate and create as opposed to the low level (i.e. remembering and understanding). The high level of thinking, as Gershon (2015) argued, can maximise students' learning progress, which is the overarching goal of instruction. Instead of "to be able to "recall" the advantages and disadvantages of learning English in early age", it is more intellectually engaging to state "to be able to "evaluate" the advantages and disadvantages of learning English in early age". It should be noted that to formulise precise and measurable objectives based on Taxonomy framework, a teacher should be aware of action verb referring to those three thinking levels.

Instructional/learning activities

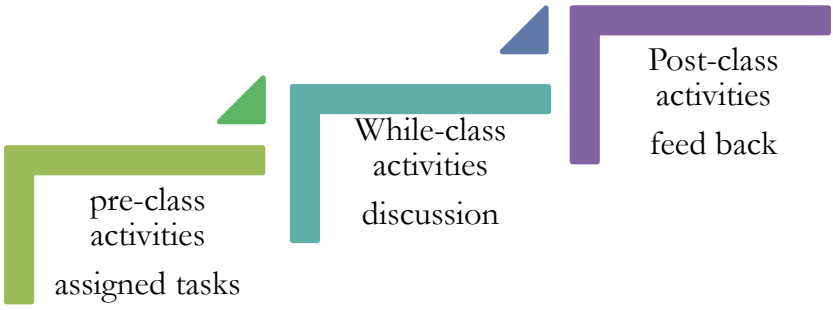
This stage deals with types of learning activities based on BTBFL. Learning activities created are based on higher order thinking skills. In this proposed model, teaching activities are divided into three main phases. Firstly, "Pre-Class Activities", referring to any sort of learning activities designed for students

prior to the class. In this stage, a teacher chooses TED Talk video from which the learning experiences are developed. It is crucial to note that only two levels of cognitive skills are used; "remember" and "understand". These two domains are considered low level which enables the learner to have r prior knowledge before engaging to high ones.

The second stage is that of 'While-Class Activities', learning activities that take place in the classroom. At this stage, all activities are built around four other thinking skills; applying, analysing, evaluating and creating. This is an opportunity for the students to share their understanding of the given topic in pre-instructional phase. Students are expected to involve in more intellectually engaging learning activities, such as discussion, simulation debate, role-play, and demonstration to achieve a higher level of thinking skills. The lecturer solely takes the role of a facilitator who makes sure all students are actively involved in the learning process.

The last stage is "Post-Class Activities". This stage of learning intends to evaluate the teaching and learning process as a whole. Simply stated, it is a moment where both teacher and learners are doing reflection as well as reinforcement over learners' performances. It should address not only the strengths and the weakness of the pedagogical contents and activities (e.g. how students express and evaluate a piece of information, the linguistic skills or expression used, etc.), but also suggest practical strategies to improve the students' work. It should be noted that while this stage seems to be the teacher's time to take over the class, it does not necessarily mean that students cannot contribute to the class. They are also encouraged to ask questions and make a clarification and even share the idea regarding learning strategies used to complete the pre-learning tasks. Below chart is general implementation of BTBFL.

Figure 1.1. Stages of BTBFL implementation



Assessment

In implementing BTBFL in English for General Communication course, two types of assessment are used: formative and summative assessment. Formative refers to learning assessment taking place while the instruction in progress, while summative is the assessment that students take at the end of the instruction (Brown and Abeywickrama, 2005). Formative assessment worth 60%, that consists of pre-classroom activities (30%) and in-classroom activities (30%). The rationale for this is the fact that both learning activities are equally important. Although the focus of pre-class activities is low-level thinking skills (i.e. remembering and understanding), they play a significant role in the success of the class activities. The summative test covers all level of cognitive abilities, but each question worth different marks based on the level of cognitive thinking skills used in a given question.

STRENGTHS AND WEAKNESSES

First of all, implementing Bloom taxonomy-based flipped learning could promote critical thinking, that is, an individual's ability to identify, analyse a piece of information and be able to do reflection and draw conclusion upon it (Linn, 2000). Stated simply, critical thinking is the ability to think clearly and rationally. The high chance of critical thinking to occur is due to the systematic

way of how the Bloom's theory is embedded in the proposed instructional design. As clearly described in the implementation stage, lower order thinking (e.g. remembering and understanding) (Barak, Ben-Chaim & Uri, 2007) and higher order thinking (e.g. apply, analyse, evaluate and create) skills are subsumed under educational and instructional objectives. In the first phase of proposed flipped learning, students get exposure to pre-instructional video to activate lower order thinking skills (LOTS) (e.g. recalling a fact or concept and understand it). In the following phase, students involve in more complex and intellectually engaging learning activities as they apply, analyse, evaluate the given facts or information in the form of active classroom discussion. This allows student to have a wide variety of information from others, and at the same time critically analyse and evaluate the given input before reaching a conclusion on a given topic.

Another benefit emanating from BTBFL would be notion knowledge construction (i.e. students' ability to produce new understanding or knowledge). The provision of pre-instructional videos as the main principle of flipped learning (Rotellar, Pharm, and Cain, 2016), and knowledge sharing in the classroom reflects the idea of constructive learning/theory of constructivism by Piaget (1957). In constructivism theory, it is argued that knowledge is constructed as opposed to receive it and it is developed through individuals' experience. In pre-class activity of the flipped model, students are expected to comprehend instructional materials individually or in group as opposed to spoon-feeding them in the classroom. This way, students have an opportunity to actively make meaning of their learning without heavily depending on the teachers. The knowledge creation is further enhanced in in-class activity when Taxonomy's highest level of thinking skills (e.g. apply, analyse, evaluate and create) are applied. Students in the second stage of flipped model are engaged in critical analysis and evaluation in the form of whole-class discussion, and this kind of learning experience is likely to generate and form a new concept

and understanding on the topic being discussed. As Vygotsky's (1978) social interaction theory stated, "Knowledge is constructed in groups that collaboratively create cultures of shared artefacts with shared meanings".

In addition, well organised BTBFL could improve speaking proficiency. The notion of having exposure to learning material prior to the class can promote what Krashen's (1985) term as "comprehension input", i.e. successful language acquisition is because of understandable message from listening or reading. In the first cycle of flipped model, this input takes the role of background/prior knowledge that can help to promote active learning, and this, in return, will be of great impact on student speaking ability. As Krashen (1985, p.168) stated, "speaking is a result of acquisition not its cause". Simply stated, students should have prior knowledge in a given topic so as to actively make a contribution during classroom activity. This argument bears a striking resemblance with my teaching experience in the given context. It is challenging for students to talk about a topic in which they are not familiar with. Even though they manage to share their thought, the quality of statement or argument proposed tends to be weak and groundless. It is totally different when students are informed about the topic to come. They usually have at least one foundational fact or concept through which they develop their argument. Although notifying students about the incoming course topic is not complete form of flipped learning, it is principally, however, could be considered small form of flipped model implementation as they aware of the topic that is expected to be engaged with.

Last but not least, student can benefit greatly from the TED material itself in several ways. First, TED talks present authentic learning materials. Authentic refers to learning material that is not produced for language teaching purpose (Nunan, 1988). As Allwright (1979) pointed out, the use of authentic material can boost students' motivation in learning. TED talks, as one of

authentic materials, can create an opportunity for students to get exposure and emulate TED speakers' natural pronunciation, accent, as well as words choice when talking about a particular topic. Second, flipping classroom with TED video could broaden students' horizon. TED talks provide insightful ideas from global and influential thinkers. Topics addressed are quite various, ranging from education, science, technology, health, and so forth. This content variety well fits with the expected outcomes of in English speaking course in general topics.

Despite the strengths mentioned above, there are number of potential ramifications should be taken into account in an attempt to implement BTBFL in the proposed instructional setting. First of all, the pre-interactional video is not interactive in nature, making it less potential to improve spoken proficiency. Instead of interacting with real people, the students tend to be forced to deal with monologue discourse (i.e. lecturer or presentation), which is not representing the feature of normal conversation. This reflects Bush and Terry's (1997) statement regarding the challenges of teaching productive skills (e.g. speaking and writing) when they are mediated with technology. Similarly, Pusack and Otto (1997) point out that there is less possibility for learning speaking in natural setting as it is restricted with the use of technology. This argument indicates that there is a concern in relation to the nature of speaking (i.e. genuine and face-to-face communication) to occur due to the dominance use of technology that learners must interact with as opposed to communicate with real human in natural setting.

Another drawback may emerge is related to teachers' inability to monitor students' motivation or commitment to complete pre-class activities. As the teacher risks the comprehension input taking place outside classroom through instructional video, it is their responsibility to make sure that students complete the instructional tasks. Abeysekera and Dawson (2015), for example, remain flipped learning teachers the

importance of the assigned works to be completed prior to the class, unless the instructional process will be the same as the traditional method. They also even question how a teacher can know and guarantee that the students' work is successful, despite completing all required tasks. Similar concern raised by Acedo (2019). Since the successful implementation of flipped model heavily depend on students' participation, a teacher has to put trust on students' independent learning which is there is no guarantee for them to be cooperative. This concern also reflects my experience as a Teaching English to Speaker of Other Language (TESOL) student at University of Nottingham, UK. In the TESOL program, students are usually expected to complete a task through learning cycle prior to the class, and upload discussion result through moodle, which could be considered Flipped model or Blended learning. The problem I found is that not all members of learning cycle has the same spirit to accomplish the tasks, and sometimes failed to post the learning cycle result. Lecturers also seem to have the same concern about the students' commitment. This can be seen form their frequent reminder given to the students in the classroom regarding the importance of completing assigned tasks.

Lastly, teachers' competence and technological literacy in flipping classroom could be a source of the problem. As Cuban (2001) pointed out, "Technology alone cannot improve the delivery of knowledge then; a new computer cannot make a teacher better. Nor can it provide a magic formula to improve learning; a new pencil does not make a child better at writing essays". This statement indicates that despite the technologically studded environment that surrounds our today educational practice, it will have no impact on educational improvement without teachers' competence and knowledge. Teachers' ability to adapt and adopt learning materials as well as tools used to deliver them is of paramount importance in flipped learning implementation as they have to produce an interactive video or instructional presentation slide. The employment of technology also requires teachers'

integration skill in accordance with students' need. As bust and Terry (1997, p. xvii) argued, "unless they know how to use technology in the instructional program they devise, it seems obvious to conclude that students will not benefit (Bush and Terry, 1997: xvii), and it is no more than just delivering technology (Thomas, Reinders & Warschauer, 2012). This indicates that the technological devices and software available do not always fit with flipped model. It is the teacher's responsibility to select and adopt those teaching aids and resources based on the learners' need and level of competence.

CONCLUSION

This paper has presented the proposal of implementation of BTBFL in English for English Speaking course at English language education program of Hamzanwadi University Lombok, Indonesia. Prior to deeper exploration to the proposed model, it is preceded by addressing the concept of flipped learning as well as research on the effectiveness of flipped classroom implementation. Research on application of flipped learning has generally indicated that it has cognitive benefits (e.g. increased vocabulary, pronunciation etc.) and affective benefits (e.g. promote active learning and boost confidence) for learners.

The idea of BTBFL emerges in response to the increased number of flipped learning that mainly concern for tools and strategies used for its innovation, instead of grounding its new design based on a certain theoretical framework that construct the course aims and learning experiences. Whilst several advantages and disadvantages of BTBFL implementation have been discussed in the given subject and teaching context, an empirical research is needed as the arguments provided in the discussion mainly based on secondary resources and my teaching and learning experience. Further, since the flipped classroom and proposed BTBFL model is generic in nature, its implementation, therefore, is not confined to the given course and institution. It can be applied to English language-related courses, such as teaching listening, reading and writing in various teaching context.

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