Students' Perceptions on the Use of Flipped Learning

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Abstract: The rise of flipped learning in higher education has become apparent along with technological advances. Higher education must stay up with cutting-edge pedagogy and cognitive sciences to guarantee inclusive and equitable quality education for all students and to equip them with current knowledge and applicable skill sets for lifelong learning. Traditional teaching methods are profoundly teacher-centered and usually students pay attention to the teachers during the course. Flipped learning is distinct in that there are more engaging learning activities within the time spent in the classroom. Compared to the conventional approaches, it allows students to participate in the lesson more actively. However, flipped learning also presents several challenges for the students. This study aims to examine the advantages and challenges of flipped learning in higher education. Sixty-two students in Character Building Civics course participated in this qualitative study. Students' views on the implementation of flipped learning were gathered through an open-ended questionnaire. The findings showed that flipped classroom gave students more chance for independent learning and flexibility during both online and in-class sessions. The students also reported that flipped learning allowed them to be more well-prepared before class. However, the findings also indicated the difficulties with flipped learning. Some students expressed the challenges to be self-regulated learners as required in the flipped classroom. In addition, students also reported their poor Internet accessibility outside of the classroom.

Keywords: Flipped Learning, Online Learning, Higher Education, Character Building, Civics

Introduction

The advancements of technology in the twenty first century have increased demand for the learning settings. Mobile phones, notebooks, and tablets are widely prevalent. New skills are highly valued in the competitive job market that college graduates must navigate. Some of the needed skills for twenty-first-century cultures include creativity, innovation, critical thinking, problem-solving, collaboration, information and communication literacy, and responsibility (Gunduz & Akkoyunlu, 2019).

The World Economic Forum (2016) categorized the skills necessary for the 21st century into three domains: foundational literacies, competencies, and character qualities. These skills are shown in Table 1 along with their respective domains. The fast-evolving technologies also require students to be nurtured with lifelong learning

capabilities which encompass all three 21st Century domain skills.

TABLE 1. 21st Century Skills (World Economic Forum, 2016)

Foundational literacies	Competencies	Character qualities
Literacy	Critical thinking/problem solving	Curiosity
Numeracy	Creativity	Initiative
Scientific literacy	Communication	Persistence/grit
ICT literacy	Collaboration	Adaptability
Financial literacy		Leadership
Cultural and civic literacy		Social and cultural awareness
	Lifelong Learning	

Consequently, higher education institutions need to demonstrate the effectiveness of their programs and improve student learning (O'Flaherty & Phillips, 2015). Although academics have access to a wide variety of online teaching resources, technology is not the only factor in teaching and learning. Universities now pay more attention to the demands of the modern workforce. In place of memorizing formulas and data from textbooks, students today prefer to concentrate on learning knowledge relevant to real problems and issues (Bäcklund & Hugo 2018; O'Flaherty & Phillips 2015)

Flipped learning

The term flipped learning refers to a method of teaching that combines face-to-face interaction in the classroom with independent study outside of it, frequently through watching the pre-recorded video content (Gunduz & Akkoyunlu, 2019).

There are several definitions of flipped learning in the literature. Essentially, flipped learning is a model where students are expected to study articles, view videos, and listen to podcasts to prepare for the lesson before class (Mull 2012). Flipped learning is a pedagogical approach in which direct instruction is moved outside of the classroom and the emphasis is on changing the learning environment into one that is interactive, with the instructor directing students they engage with the subject matter (Pettis, 2014). In flipped classroom, both instructor and students are proactive and frequently call for learning new or improving existing skills. The instructor creates purposeful learning experiences to engage students. Students in flipped classroom are responsible for independently exploring materials such as modules, videos, or readings. Before class, they try to learn the prior knowledge so they can actively apply it in the collaborative classroom (EDUCAUSE Learning Initiative, 2012 as cited in Brewer & Movahedazarhouligh, 2018).

By placing the student at the center of the learning process, the classroom can become more student-centered. This method offers the chance to motivate and pique the student's interest. To create a student-centered

classroom, employ in-class time to actively involve students in the learning process, and offer them with tailored support, the instructor must continuously innovate and monitor student progress (Hamdan et al., 2013). Bergmann and Sams (2014) provided the simplest definition of flipped learning: "what is done at school done at home, homework done at home completed in class." Furthermore, Flores et al. (2016) emphasized that the foundation of flipped learning is a model that restructures time spent inside and outside of the classroom. All these definitions stress the fact that learning is more flexible when students can finish their coursework on their own schedule and in their preferred locations. Additionally, in-class time is planned to encourage participation in interactive learning activities, peer collaboration, evaluation of progress, and identification and correction of misconceptions.

Flipped learning makes it simple for schools to switch from an environment where learning is concentrated on the instructor to one where learning is centered on the students. Additionally, flipped learning has been shown to increase student engagement and motivation compared to traditional classroom settings, as well as student-student and student-teacher interaction (McLean et al. 2016). Shea et al. (2012) emphasized that students develop their knowledge by interacting and cooperating with one another in both the classroom and the online environment, contradicting Toto and Nguyen's (2009) assertion that flipped learning is an approach that increases active learning activities and gives students opportunities to apply their knowledge in class while receiving guidance from the teacher.

Despite all the benefits mentioned in the literature, flipped learning also has some drawbacks, including low student participation, technological difficulties, teachers' need for preparation time, and poor teacher-student communication. The motivation of the students to finish their work on their own schedule and in their working habits are key factors in the success of flipped learning. Because of this, the most common critique of flipped learning is that some students can be averse to it at first and show up to class unprepared. According to certain studies, students could find it difficult to adjust to this paradigm and forego pre-class activities (Herreid & Schiller 2013; Strayer 2012; Chen et al. 2014).

Flipped learning in higher education

For several reasons, flipped learning is especially well-suited to higher education settings. The in-class discussions and enrichment activities made possible by relocating content delivery outside of class time give students the chance to develop crucial 21st-century skills like teamwork, critical thinking, and creativity (Brewer & Movahedazarhouligh, 2018). Some studies investigated the advantages of flipped classes in higher education were driven by the idea that the traditional teaching approach fall short in creating a strong knowledge structure. According to some findings of these studies, a flipped learning method aims at maximizing the use of students' own times (Pettis, 2014).

Gunduz and Akkoyunlu (2019) found that flipped classroom allowed students an opportunity to benefit from more flexible instruction both online and in-class sessions. The students stated that they felt more in charge of

their own learning. However, some of them also voiced dissatisfaction with the slow Internet access outside of the classroom and the lack of immediate response while watching videos. A study by Birgili and Demir (2022) shows that students felt relatively unmotivated with flipped learning approach although they were satisfied with the course structure. The students in this study also reported that they faced difficulties in all three types if interaction: student-student, student-educator, and student-content. Other issues were long poor-quality videos and students' lack of class preparation.

Research Objective

In the present study, the researcher examined the effectiveness of flipped learning and to highlight both the benefits and drawbacks of the flipped learning approach. The researcher flipped her Character Building-Civics course by placing the lecture content online for the students to view and study in their own time, while using in-class sessions to provide more opportunities for group learning and discussion activities.

Method

Research method and research question

This qualitative study attempts to answer the following research questions:
1. What do the students think of the benefits of flipped learning?
2. What do the students think about the difficulties they encountered with flipped learning?

Data was gathered through a qualitative survey with an open-ended questionnaire which then was analysed with the descriptive analysis method.

Participants

The participants of this study were 62 students who enrolled in Character Building- Civics course which some of the sessions the researcher flipped in the Odd (Fall) semester of 2022-2023 academic year.,

Implementation process

This section explains how flipped learning was implemented in the Character Building-Civic course including the basic procedures and tools. The flipped learning approach comprised two main components: the online learning environment and classroom sessions. Additionally, the researcher (also the instructor of the course) created WhatsApp Group (WAG) of the class to support online and class sessions and to enhance communication between the students and the instructor. Instructor shared the materials through the Forum in LMS and informed the students both through the LMS and WAG. The materials were: modules, PowerPoint presentation and videos on LMS, external video on YouTube, and readings from online articles.

Online learning environment

This section describes the infrastructure of the system, including the design process and course materials. The process was planned carefully, and the lesson plans were developed for online and class activities for 3 weeks. The instructor used videos on LMS that were prepared as online resources by the subject content specialist of the Character Building-Civic course. In addition, some external videos on YouTube channels were also used. The instructor shared the external videos through the Forum on LMS and WAG of the class. PowerPoint presentations and reading materials were also ready in the online learning environment. The instructor also assigned all groups to prepare two questions for in-class discussions. Students have been divided into groups of 6-7 students before taking active participation in their own group to create higher order thinking questions and in class discussions.

In-class session

Students studied the course materials, watched the videos, then with their group they prepared and turned in two questions for each subject before the in-class sessions. Discussions were conducted in class. Each group asked two questions to one group. For example, group 1 asked their questions to group 2, group 2 asked group 3, and so on. Every group had to answer the questions they received from the other group. The instructor observed the course of the discussion and intervened when the group in charge of answering was not quite right in giving the answers. Before the class ended, the instructor assessed the understanding of the students through quiz on Kahoot. The students also wrote their reflection of what they had learned in the class session.

Survey through an Open-Ended Questionnaire

The open-ended questionnaire used for this study, in particular the questions about the benefits of the flipped learning and was mainly derived from Gunduz and Akkonyulu (2019) and Louisa Tomas, Neus Evans, Tanya Doyle, and Keith Skamp (2019). In addition, the researcher asked students about their in-class sessions and the challenges they faced during the flipped learning. Hence, the open-ended questionnaire consisted of the following questions:
- What do you think about the benefits of the flipped learning?
- Tell me about the reading materials and videos given before class.
- What do you think the group and class discussions or in-class sessions?
- What do you think about the challenges you faced during the flipped learning?
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Data Analysis

Then, data were analyzed through coding to find the similarities and differences of the students' views on the implementation of flipped learning.

Results

The benefits of the implementation of flipped learning

Findings show that most participants (98.38%) in this study found that flipped learning an effective teaching method. Students were very positive about the implementation of the flipped learning.

Here are some responses of the students regarding the benefits of flipped learning:

> *In my opinion, flipped learning is an effective method because students can prepare in advance what they must learn before class. I also learn to be self-regulated and learn at my own pace. For example, I can watch a video that is given to be studied first. I can pause watching when I whenever I want then I continue until I finish watching.*
>
> *With flipped learning I know what to learn first and this makes me understand the topic more quickly.*
>
> *It is definitely a good way to have the students have more insights before class, meaning students can be more active and understand the materials in advance.*
>
> *Flipped learning enables student to prepare for class and that preparation really helps students to understand better after being explained again by the lecturer.*

The benefits of the reading materials and videos provided before class

Most students claimed that studying the articles and watching the flipped videos gave them the necessary information to either better prepare for class or comprehend the lectures.

The primary explanations for how the reading materials and videos helped students' learning are presented below.

> *The videos contained clear and concise explanations of the concepts so that they enabled you to understand the lesson before class.*

> *The visual representation of information helped me to understand the topic.*

> *The ability to pause and to replay the videos makes learning occur at my own pace. I was able to stop and to replay the parts were hard to understand.*

The group discussions or in-class sessions

Students in this study reported that the group assignment and group discussion motivated them to attend class because they had to be solid working together as a group. Students also stated that the group discussions or in-class sessions provided opportunities for the students to more engaged in the lessons.

You must work together as a group. You therefore feel guilty about disappointing your group if you do not come to class.

I really liked the group assignment and class activities. So, we were required to make two questions to be asked to a group. For example, group 1 gave their questions to group 2, group 2 asked two questions to group 3, and so on. This activity was really engaging us. The lecturer was also ready to clarify when there were unclear answers from the group who got their turn to answer.

The challenges the students faced during the flipped learning

The following quotations illustrate how one disadvantage of flipped learning was the lack of Internet connection for watching videos at home.

It was sometimes difficult to watch the videos because of the poor Internet connection in my home.
I had to view the videos on campus since the Internet connection was stronger and faster.

Another challenge the students faced was to become discipline and self-regulated learner as required in the flipped learning.

Sometimes I was too lazy to study the reading materials and to watch the videos before class.
In flipped learning, students need to study the learning materials before class. I find it not always easy to be a self-regulated learner as required by this approach.

Discussion

In the present study, the researcher examined: (1) the benefits of the flipped learning and (2) the difficulties that the students encountered with the flipped learning. The researcher conducted this study through open-ended survey questionnaire with students in Character Building-Civics course in a private university in Jakarta, Indonesia. In response to Research Question 1, the survey revealed that nearly 98.40% of the students as the respondents believed that flipped learning an effective instructional approach. This finding is in line with some existing studies on the effectiveness of the flipped learning in higher education, i.e. the study findings of Gündüz and Akkoyunlu (2019), Tomas, Evans, Doyle, and Skamp (2019), and Zhao, We, and Su (2021).

In this study, the learning materials that the students had to study at home were applied in class. According to Biggs and Tang (2007) this enables the facilitation of a deeper conceptual coverage and offered a setting that is conducive to the promotion of deeper learning. In addition, this study reveals that peer learning as a major component of the in-class activities can help to promote peer-based learning. This study finding is consistent with a lot of existing studies, for example Tomas et al. (2019) and Khodai, Hasanvand, Gholami, Mokhayeri, and Amini (2022).

In response to Research Question 2, there were two challenges the students faced with flipped learning. First,

some students voiced dissatisfaction about the slow Internet outside the classroom. Second, the difficulty of being self-regulated learner as required in flipped learning. The first challenge is similar with the study finding of Gündüz and Akkoyunlu (2019). Clark (2015) suggested that instructors might need to provide a few extra copies of the flipped learning materials on DVDs to overcome the problem of a bad Internet connection.

Regarding the second challenge that some students found it difficult being self-regulated learners, previous existing research has shown that self-regulated learner (SRL) interventions (e.g. SRL instruction and SRL prompts) could enhance students' SRL and in turn improve learning outcomes (Zeng, 2016; Jansen, van Leeuwen, Janssen, Jak, & Kester, 2019). According to Panadero (2017) and Zimmerman and Moylan (2009 as cited in Alten, Phielix, Janssen, & Kester, 2020), students that exhibit SRL behavior actively regulate and monitor their cognition, behavior, and motivation while learning. This involves using strategies and goal-setting processes. Self-regulated learners have the capacity and drive to reflect on what, how, and why of their learning (metacognition), which allows them to manage their learning behavior. In the context of blended learning, Van Laer and Elen (2017) proposed seven key attributes that can support SRL: authenticity, personalization, learner-control, scaffolding, interaction, cues for reflection, and cues for calibration.

Conclusion

Flipped learning is beneficial for Character Building-Civics course as it gave students more chance for independent learning and flexibility. Students also learned from their peers through group discussions in in-class sessions. The flipped learning allowed students to be more well-prepared before class. Some students expressed the challenges to be self-regulated learners as required in the flipped classroom. In addition, students also reported their poor Internet accessibility outside of the classroom.

Limitation and Recommendation

This study only involved a small number of students in Character Building-Civics course and applied qualitative method with open-ended survey questionnaire. Future study should be conducted in a different Character Building course with mix-method approach and involve a larger number of students as participants. To help enhancing students' self-regulated learning, the future flipped learning study should use SRL instructions and SRL prompts.

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