



# Flipped Learning in Malaysia

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The 21<sup>st</sup> century of education demands for student-centred learning rather than conventional teacher-centred learning. There are several new models and approaches to be adapted to meet the demand. One of the popular models in Malaysia is flipped learning. Flipped learning focuses on meaningful learning, and it also promotes a student-centred learning style. This paper explores flipped learning studies done by researchers regardless of the discipline and level of education.

**Keywords:** *Learning; Flipped Learning, Students' Achievement.*

## Introduction

Technology-integrated learning is ubiquitous in 21<sup>st</sup>-century education (Yeop, 2019) as it provides precious resources to technology-based education (Sun & Gao, 2019). Students nowadays prefer watching videos on YouTube, scrolling for information through Google and Safari, surfing the blogs and Pinterest to get some life tips or learn how to do things and communicate with family, college friends, and even lecturers through social media. Indirectly, they are learning the elements of English, such as sentence structures and vocabulary through social media (Shazali, Shamsudin, & Yunus, 2019). The mighty Internet has changed the mind of the young generation. By having smartphones, everything is on their fingertips (Overmyer, 2012). In 2014, there were 3.035 billion Internet users in the world. It increases the number of usages in online learning (Malaysia, 2015). One of the aspects that is affected by this fast-changing world is education. It has changed a lot in recent years. Culture has been influenced by the development of information transfer and storage, as well as digital communication methods. Everything seems to be so easy that it requires fewer computer skills to produce and deliver information.

Online learning has increased enormously in recent years in both public and private universities. This is to support both general and long-distance studies (Aris et al., 2006; Embi, 2011; Goi & Ng, 2009; Salleh, 2008). The use of online learning in Malaysian tertiary classrooms is still rising, specifically in the area of tertiary teaching and learning, even though it has been used widely since 2000. More efforts on practice and research are necessary to increase and encourage online learning activities in Malaysian tertiary education

and to "tackle the digital natives" (Embi, 2014). Hussain (2004) mentions that the introduction and development of online learning in Malaysian universities have started during the e-learning era to offer online learning to students. It has become a significant problem in sustaining online teaching and learning. Thus, the second phase arises. Guided by the Ministry of Education, for the integration of ICT in teaching and learning to stimulate the use of ICT in online learning, a few strategies have been listed. The plans are the preparation for more up-to-date infrastructure to all institutions, curriculum and assessment that integrates ICT in teaching and learning, the upgrading of ICT skills for students and educators, the increasing of ICT in management, and lastly, the upgrading of ICT equipment in all educational institutions. In a study of flipped learning readiness among UKM graduate and post-graduate students, results show an acceptable level of preparedness in flipped learning. The online practice of flipped learning is also satisfactory. However, appropriate training is crucial in the adoption of flipped learning among lecturers. Lecturers should be trained well in real classroom practice; meanwhile, students need to be familiarised and encouraged to embrace this whole new approach (Embi, 2014).

## Methods

In exploring the flipped learning phenomenon in Malaysia, 19 articles had been retrieved online. Articles were accessed mostly through journals and only one from proceedings. By having this content analysis, readers can read through the table and find their interest based on the title and findings of each study. Table 1 shows the studies done in Malaysia for the past five years.

**Table 1:** Previous studies of flipped learning in Malaysia

No	Author/year	Title	Findings
1	Arumugam Raman, Raamani Thanimalai & Mohan athakrishnan (2019)	Flipping the Undergraduate Classroom: A Case Study	The intervention group has better self-efficacy. Male and female have similar level of self-efficacy.
2	Siti Fatimah Abd Rahman, Melor Md Yunus, Harwati Hashim (2019)	A Technology Acceptance Model (TAM): Malaysian ESL Lecturers' Attitude in Adapting Flipped Learning	This study found the relationship to be insignificant.
3	Mohammad Musab Azmat Ali, Melor Md Yunus, Harwati Hashim, Wahyu Hidayat, Mohd Shafeirul Zaman (2019)	Experts' Agreement towards Student Engagement Constructs for a Strategic Development of a Flipped Learning Framework for ESL Context	The agreed constructs had much in common with the latter findings, but the items were now more refined for a strategic flipped learning framework that emphasizes on students' engagement.

4	Mohammad Musab Azmat Ali, Melor Md Yunus, Harwati Hashim, Azwin Arif Abdul Rahim, Nor Yazid Khamis (2019)	Strategic Development of Flipped Framework on Educators and Learning Constructs for ESL Context: The Experts' Agreement	The Fuzzy Delphi Method (FDM) analysis rejected six of the items; finalizing the framework with 36 items.
5	Teo Woon Chun & Ramesh Sathappan (2018)	The effectiveness of using Flipped Classroom Approach to teach adjectives to Malaysian Year 4	Participants have improved their scores by receiving Flipped Classroom Approach to learn English adjectives. All participants have positive perceptions towards Flipped Classroom Approach in learning English adjectives.
6	Mohd Faisal, Farish bin Ishak & Abdul Ghani Abu (2018)	Exploring TPACK domains of Malaysian non-option ESL educators in an online flipped learning course through Blendspace	Educators used their existing TPACK as a manipulative knowledge for them to plan digital tools-based activities.
7	Hardev Singh, Sokhal Jaswant Singh, Charanjit Kaur Swaran Singh, Tunku Mohani Tunku Mohtar & Nor Azmi Mostafa (2017)	A Review of Research on Flipped Classroom Approach for Teaching Communication Skills in English	Flipped learning gives a positive impact to the second language learners. Flipped learning helps improve students' verbal communication skills.
8	Michelle Jones (2016)	A Case Study of Blended Learning in Higher Education in Malaysia: Flipped, Flopped or Forgotten?	There are significant benefits to students from learning in a learning environment that uses blended and flipped approaches.
9	Amutha Sambandamurthi (2015)	Experiences and Challenges of using Flipped Classroom by Postgraduate Students: A Preliminary Comparative Study between India and Malaysia	Both countries scored higher on Experience than on Challenges. Both countries seem to accept the use of flipped classrooms.

10	Umawathy Techanamurthy, Norlidah Alias & Dorothy DeWitt (2015)	Readiness for Flipped Learning among Culinary Arts Students	Respondents have a high level of readiness towards the Flipped Classroom implementation at Community Colleges
11	Chelster Sherralyn Jeoffrey Pudim (2017)	Exploring a Flipped Learning Approach in Teaching Grammar for ESL Students	Most of the students were keen to learn grammar through flipped classroom as opposed to traditional grammar classroom.
12	Brenda Danker (2015)	Using Flipped Classroom Approach to Explore Deep Learning in Large Classrooms	Flipped classrooms had promising impact for student learning and achievement in a Performing Arts course in Malaysia.
13	Farina Tazijan, Agelyia Murugan, Suzana Abd.Rahim, Rosmaliza Mohamed, Emily Jothee Mathai & Rushita Ismail (2016)	A Survey of Flipped Learning Approach in the ESL Context	Flipped learning gives positive impact to SLL. Flipped learning promotes active learning. Flipped learning help to improve Verbal Communication skills.
14	Azlina A.Rahman Baharuddin Aris, Mohd Shafie Rosli, Hasnah Mohamed, Zaleha Abdullah & Norasykin Mohd Zaid (2015)	Significance of Preparedness in Flipped Classroom	Flipped learning has its own benefits as well as challenges in its implementation.
15	Kumar, Shobha Vijaya; Shoup, Diana Lea Baranovich (2018)	Effectiveness of Flipped Learning on Disruptive Behaviours Among Malaysian Elementary School Students	Analyses of covariance showed statistically significant effects of flipped learning on lowering post-test SDQ scores, adjusted for pre- test scores.
16	Esyin Chew (2018)	“Flipping or flapping?” investigating engineer students’ experience in flipped classroom	Flipping the classroom can offer a seamless learning experience.

17	Siti Hajar Halili & Rafiza Abdul Razak (2018)	Flipped classroom approach for preschool students in learning English language	Students have positive responses toward the T&L processes using a FC approach.
18	Jowati Juhary & Ahmad Fahimi Amir (2017)	Flipped Classroom at the Defence University	Respondents are positive about flipped classroom concept. The main factor is the online materials and content.
19	Bawadi Abdullah & Muhammad Tazli Azizan (2017)	A Flipped Classroom Technique in Improving Students' Grade of Transport Phenomena Course	It is found that flipped classroom is effective in improving the students' performance in term of their grades and understanding. The number of students obtaining 'A' grade in each assessment has been increased after implementation of the flipped classroom. It shows that the flipped classroom has met objectives of this study. Most students enjoy learning in the new learning mode.

## Results and Discussion

### Previous Studies on Flipped Learning

Ever since blended learning has become a phenomenon all over the world, various types of blended learning have been implemented in teaching and learning. Flipped learning is one of the latest technology-enhanced teaching approaches that fall under blended learning (Rahman, Yunus, & Hashim, 2019). Flipped learning is one of the strategies that has been implemented in teaching practices (Zainuddin & Attaran, 2016). Flipped learning focuses on 'before' and 'during' class activities. Students prepare for the class beforehand by listening to instructions or videos uploaded by educators. And then, they do some readings or tasks to understand the topic.

Meanwhile, in class, educators will dedicate most of the time for more meaningful learning, such as workshops or discussions regarding the given topic they did before coming to the

class. This is the stage where students engage in interactive activities for better comprehending.

A study of the flipped learning approach to explore deep learning in large classrooms has been done by Danker (2015). The participants are the students of Performing Arts at Sunway University. They were given a video to watch as homework. During the class, the lecturer was present to facilitate the students. The results show that flipped learning can remodel a large classroom into one active-learning type. Students also get the opportunity to get personal feedback during class time. (Jones, 2016) I also found that there are significant benefits to students in Malaysian Higher Education institutions in applying flipped learning approaches.

A case study done by Zainuddin & Attaran (2016) found significant results when applying flipped learning in classrooms as flipped learning generates positive impacts, especially for shy and quiet students, as well as for the international students who have a lower proficiency level of English language. The study has been done at University Malaya. Studies of flipped learning in teaching communication skills in English as Second Language (ESL) had been reviewed by Hardev Singh, Charanjit Kaur, Tunku Mohani, and Nor Azmi in a higher education setting. They focused on the Technical and Vocational Education and Training (TVET) students. The study hopes to see a positive enrichment and learning environment with well-planned flipped learning lesson plans. They found out that flipped learning gives positive impacts to second language learners, and it is not just a model or a medium in delivering the instructions (Singh, Jaswant, Singh, Mohtar, & Mostafa, 2017). Chun & Sathappan (2018) conducted a study on Chinese ESL learners to see the effectiveness of the flipped learning approach. They did their research with two groups of students, the control and intervention groups, with pre and post-tests. Based on their findings, there is a significant difference between control and intervention groups — the flipped classroom approach scores higher results than the traditional teaching approach.

In exploring educators' Technological Pedagogical and Content Knowledge (TPACK) domains in planning activities, Mohd Faisal Farish Ishak and Abdul Gani Abu have researched two non-option English as a Second Language (ESL) educators. The results show that both educators are motivated to implement flipped learning in their teaching and learning practices (Ishak & Abu, 2018). Last but not least, a case study was done by University Utara Malaysia (UUM) lecturers, Arumugam Raman & Mohan Rathakrishnan, and a teacher from a secondary school in Kedah. Raamani Thannimalai has done the implementation of flipped learning for undergraduate students. The students were divided into two groups, a control group, and an intervention group. The results show the intervention group has higher self-efficacy. Meanwhile, gender has no significant difference in self-efficacy (Raman, Rathakrishnan, & Thannimalai, 2019).



## **The Advantages**

There are many reasons to apply flipped learning, according to Bergmann and Sams (2012). Flipped learning can benefit busy students as it is flexible, and students can enjoy learning anytime, anywhere. Flipped learning supports students with different abilities, from beginners to advanced students, as they can play the video hundreds of times if they have trouble understanding the instructions. As for advanced students, they can watch as little time as they need. Flipped learning allows students to pause or rewind their educators (in video form) or replay the video anytime they want, according to their pace. If they are absent, they will still receive the same instructions as their peers did. Compared to the in-class lecture, students cannot stop the teachers or ask them to repeat the necessary information. Let alone if the student is shy. He or she will just keep quiet for the rest of the class (Springen, 2013). It is a bonus for teachers too, since teachers do not have to repeat themselves in class. Lastly, science has proven that students have merely 10 minutes of introduction to a new topic before they lose interest (Goodwin & Miller 2013). It is why the pre-recorded video is limited to only 5 to 10 minutes, in contrast to the traditional classes, where a standard period could be up to 45 minutes.

Another benefit of flipped learning is the face-to-face time spent with teachers and peers. Flipped learning offers more time for feedback between teachers and students and better interactions between teachers and students (Goodwin & Miller 2013). It also boosts interaction between students and educators. Educators could be absent without worrying about giving lectures. Flipped learning tackles better engagement compared to traditional addresses. Bergman, Overmyer, and Willie, (2011) adds that by using flipped learning, he could talk to every student, every day like he has never done before in his previous 20 years of teaching. Some misconceptions of flipped learning have also formed throughout the years of implementing it (Bergmann et al., 2011). Flipped learning is not about replacing teaching with recorded videos or letting students learn on their own. Flipped learning is intended and created to provide personalised learning space and encourage students in autonomous learning. It also offers in-class engagement, which can be accomplished in the classroom (Bergmann, Overmyer, & Willie, 2014).

## **The Challenges**

The implementation of the flipped classroom does not require the traditional lecture method to be eliminated. Some lessons still need the traditional lecture approach to enhance the learning outcomes. Covill (2011) carried out a survey of 51 learners to learn about their views on the traditional lecture method. Results showed that learners do not have negative perceptions of the conventional way, contrary to what a majority of educators believe. Through traditional lecture approaches, learners have been reported to demonstrate high levels of learning and engagement in independent thinking and problem-solving concepts.



Even so, this study does not have quantitative data to support the coherence of the perceptions of learners with performance and achievement results. Two interpretations of the learners' encouraging views towards lecture-based learning have been suggested by Covill (2011). First, the picture may be contrary to the reality of the objectives, and they are probably demonstrating learning weaknesses with such a method of content delivery. A second interpretation is that the learners' perceptions are authentic, and learners demonstrate long-lasting content knowledge.

Additionally, Johnson (2011) suggests that in improving the traditional lecture, the fundamentals of the flipped classroom model can be utilised through pedagogies that combine both active learning and lecture approaches. Malik (2011) found that the learners' level of motivation has been escalated; they also have improved their communication skills and demonstrated significant levels of achievement through the implementation of active lecturing pedagogies. This technique proved that the traditional lecture technique is useful, and it is a valuable pedagogy if it is used correctly in the classroom.

In developing classroom lectures through the usage of videos or podcasts, the instructor may face obstacles in the flipped classroom, such as time-constraints and lack of energy (Herreid & Schiller, 2013). Though there are differences between the flipped classroom and digital instruction, most of the flipped classrooms utilise this approach to allocate more class time to promote active learning engagement. To ease the flipping process of the school and minimise the efforts needed in creating videos, the instructor can access various online databases of instructional videos such as Khan Academy and similar resources sites for classroom use (Bergmann & Sams, 2012; Khan, 2011). To implement the assessments for mastery learning, or find suggestions for classroom activities and peer instruction concept tests, one can access the additional online database sources (Fagen, Crouch & Mazur, 2002). There are a few other challenges that are being faced by the faculty as they shift to a flipped classroom model, as discussed by Aronson, Arfstrom & Tam (2013). Their research has identified several concerns on the initial course redesign. The faculty needs additional time and effort to transform their courses into a flipped model. The faculty may be teaching a lot of classes, at different locations and may have other formal duties that may hinder the required initial effort.

In using a flipped model, Seaboyer (2013) and some of his colleagues have redesigned their courses to enhance reading effectiveness. The case study found that although they have to invest some time, it is paid off as they have lighter future workloads, and learners tend to experience more in-depth learning. Faculties can work hand-in-hand with each other in flipping a course by sharing resources or utilising co-teaching practices (Seaboyer, 2013). Based on a supporting study, to create a more professional experience and boost pedagogical practices for instructions, collaboration efforts in designing guidelines are required (Brown, Eaton, Jacobsen, et al. 2013). Some universities, such as the University of Washington and



Vanderbilt University, provide other instructional design resources through resource centres to help instructors seeking help in teaching and learning (Aronson et al., 2013).

A digital boundary of computer and Internet accessibility is still there for 21st-century learners, although it is slowly deteriorating. Ever since 1984, data on Americans ownership of networks and Internet usage has been collected from time to time by the United States Census Bureau. 8.2 percent of Americans were reported to have a computer in their households in 1984 (File, 2013). In 2003, the number was increased to 61.8 percent, and the latest report in 2012 claimed that computers were owned in 78.9 percent of American households (United States Census Bureau, 2012). The similar increment can be observed for household Internet used, with 71.7 percent of households were reported to be accessing the Internet in 2011, which has been increased from 18 percent in 1997 (the first year when the Census Bureau began collecting data about Internet use) and 54.7 percent in 2003 (the first year that observed more than 50 percent of households were reported to be accessing the Internet. The 2012 report also featured the variances of usage based on several characteristics, including age, household income, and level of education. 82.8 and 82.0 percent of individuals aged 18 and 34 years old respectively were reported to have the highest percentages when it came to home computer ownership and Internet usage (File, 2013). The study also showed that computer ownership and Internet usages have relations to the household income. The report exhibited that merely 56.7 percent of households with an income of less than \$25,000 have a home computer. Not only that, but educational attainment also has a relationship with computer ownership and Internet use. A household with highly educated individuals tends to have a higher percentage of computer ownership and Internet usage (File, 2013). The census report also collected data on the usage of smartphones, in which "48 percent of individuals aged 15 years and above" were reported to use it (File, 2013, p. 11).

Although the amount of computer ownership, Internet access, and smartphone usage are escalating, educators still need to come up with alternative options in terms of accessibility, which will be able to suit all learners. To promote digital equity, CDs, DVDs, or institution-provided devices, including iPods or recycled smartphones, can be distributed amongst learners who may have issues with Internet accessibility to watch the videos or podcasts at home (Bull, Ferster & Kjellstrom, 2012). Hamdan et al. (2013) also claimed that in creating equal learning environments, there are a variety of possible ways that can be taken to deliver instruction digitally: Review the course material - learners can be equipped with memory devices that have video content. Other than that, digital content can also be made available to be accessed from the growing number of smartphone devices. The learners can access the material, and they are suggested to use iPod or iPad devices with a free iTunes account so that they can access the content. Finally, for those unfortunate learners who do not have home accessibility, schools can team up with local libraries and community centres in providing easy availability of material to them (November & Mull, 2012).



## **Conclusion**

Flipped learning in Malaysia is rather new, and the exact number of higher education institutions and schools that are practising flipped learning still cannot be justified. From the previous studies, it can be concluded that flipped learning is a practical approach in enhancing students' achievement regardless of the discipline, such as the Performing Arts, ESL, and TVET. It is also applicable to both higher education and school level. Danker (2015) also confirms that flipped learning is not explicitly meant for a confined, small classroom, but it is also suitable to be practised in a large class. Also, much research had been done on flipped learning's effectiveness. Hence, there is a need for researchers to examine the other aspects of flipped learning, such as the type of technology used in the classroom or students' learning preferences.

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