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Flipped learning

From the perspective of teachers, is flipped learning a beneficial pedagogy to Hong Kong primary schools?

How can local teachers maximize the efficiency and benefits of flipped learning?

Student: Leung, Cheung Kit

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From the perspective of teachers, is flipped learning a beneficial pedagogy to Hong Kong primary schools?

How can local teachers maximize the efficiency and benefits of flipped learning?

1. Abstract

This research study discusses the efficiency and benefits of establishing flipped learning in the Hong Kong primary school context. The discussion is supported by the data collected through visiting a targeted local primary school, interviewing local primary school teachers and lesson observations. In overall, flipped learning benefits Hong Kong students and teachers and can raise the efficiency of teaching and learning. It provides opportunities for individualized learning pace, knowledge extension and better learning environment. In addition, it allows teachers to better understand students' learning gaps and misconception, and enhance the efficiency of lessons. However, catering for the uniqueness of Hong Kong primary school context, modifications have to be made in order to maximize the benefits and efficiency of flipped learning. A non-complete flipping is adopted in the targeted school to cater for the learners' differences in age, ability and interests. Furthermore, parental support and praising students are the essential factors to maximize the efficiency of flipped learning.

2. Introduction

Flipped classroom is a comparatively new teaching and learning pedagogy in Hong Kong. Proven by scholars, flipped classroom is an efficient pedagogy that can benefit both teachers and students. This research study aims at exploring the benefits of flipped learning and essential elements to maximize the benefits. It includes interviews with local primary teachers and observations of local primary school lessons to provide a comprehensive discussion on the benefits to Hong Kong students and the key issues that local teachers should be aware of. This paper starts with a literature review, introducing the concept and general ideas towards flipped classroom. A description of this qualitative research study is followed with details of the methodology and participants. Focusing on a local primary school, this paper provides detailed findings and discussion according to the research topic, including the benefits to Hong Kong primary school students and teachers and some suggestions of adopting flipped learning suggested by the interviewees. This research study is a small-scale study, thus it has a certain degree of limitations. The limitations will be addressed and the paper will conclude with the responses to the research topic and further research areas that can be conducted to dedicate to this field.

3. Literature Review

“The technological advancements have significantly altered the ways educators teach and students learn” (Wells, de Lange, & Fieger, 2008). In different levels of education, technology has become an integral part of the educational settings. As educators and scholars believe, “enriched learning environments with the use of technologies can offer students better learning opportunities” (Chun & Plass 2000; Jonassen, D. & Reeves, 1996; Means 1994). Among all the technological mediums, video, is an effective teaching tool when used properly (Hartsell & Yuen, 2006; Shephard, 2003). It caters to learners’ differences by providing visual and audio support at the same time. Due to the benefits, technologies are widely adopted by schools in Hong Kong, but only as extra resources to support students’ learning. Not only to play a YouTube video in class, or to teach a lesson with a PowerPoint, technologies can be adopted as a framework for a comprehensive teaching pedagogy, such as “flipped learning”.

Flipped classroom makes use of educational technology, a growing area of study that may improve and transform education (Selwyn, 2011; Zucker, 2008). It has also been referred to as flipping teaching or flipped learning. According to Bergmann and Sams (2012), a flipped classroom can be described as a setting where that “which is traditionally done in class is now done at home, and that which is traditionally done as homework is now completed in class”. In other words, the sequence of traditional teaching pedagogy is inverted. Students prepare for classes at home, such as by watching lecturing videos prepared by the teachers or some other form of computer-based instruction; students then engage in activities, discuss

concepts or clarify hard-to-understand knowledge in classrooms with the supports from teachers.

There are number of ways of flipping a classroom, including watching lecturing videos, listening to related audios, and looking up information about the related knowledge. After all, the pre-class activities “should not contain excessive detail, but should cover all the primary learning objectives of the following lesson” (McLaughlin & Rhoney, 2015). After all, the main focus of “flipped learning” is on the time spent inside the classrooms in order to activate the students and their learning. The traditional classrooms are mostly teacher-centered which is in conflict with the constructivist approaches to learning and teaching (Brooks, 2002). In contrast, flipped learning places more of the burden upon the students to take the lead in the learning process. It provides a student-centered learning environment for students, creating a more suitable environment for better learning opportunities (Hamdan et al., 2013). Specified by Snowden (2012), flipped learning is an appropriate and logical next-step to incorporating technology in the classroom.

Studies across the globe have proven that flipped learning can benefit different stakeholders of the educational field in multiple ways, and facilitate and boost students’ learning efficiency. Compared to the traditional education pedagogy, flipping the classroom has been shown to improve student achievement (Fulton, 2012), allow teachers to use the class time more interactively and creatively (Fulton, 2012), ensure students’ understanding (Riendeau, 2012), enhance students’

engagement (Riendeau, 2012; Smith, 2013) and help students better absorb information and transfer concepts (Berrett, 2012).

However, studies of flipped learning in the Hong Kong context are scarce, especially on primary education. Hong Kong has its own unique educational culture and system, which studies on other contexts may not be applicable in Hong Kong. Local schools in Asia, including Hong Kong, tend to be known for their rote-learning style. This style is deeply engrained within the competitive, exam-based local education system in Hong Kong (Fan, 2004). When applying flipped learning into the Hong Kong primary education context, related culture and system should be considered as different stakeholders in Hong Kong may have a different concern towards the pedagogy. Hence, this study aims at exploring the efficiency of flipped learning in the Hong Kong primary education context. It also evaluates the benefits and provides suggestions for local primary school teachers when establishing flipped learning. Catering for the Hong Kong context, this study analyses how flipped learning can help overcome the current challenges faced by the educators.

“Flipped learning is not a set process; it allows for many expressions of the model. There is no single strategy that works in every classroom. However, it can be personalized for students” (Bergmann & Sams, 2014). Focusing on a local school, the views of experienced teachers will also be discussed in order to provide a comprehensive discussion and suggestions for this study.

4. The study

4.1 Methodology

This research is a qualitative research. It consists of two parts, including two lesson observations and interviews with five local English teachers in Pui Kiu Primary School. The details of the data collection and participants are listed below.

4.1.1 Observations

Two English language lessons are observed in two Primary 5 classes, one observation on each class, and the first lesson of Unit 10 “Road Safety” of each class is observed. Each observation lasted 40 minutes. During the observations, field notes was taken. Students’ pre-learning assignments were also collected after the observations. The focus of the observations is to evaluate students’ performances, after completing the pre-learning activities as part of the flipped learning.

4.1.2 Interviews

Semi-structured episodic narrative interviews with selected pupils is the main source of the data collection for this research. The research includes interviews with five local English teachers in Pui Kiu Primary School. Each interview is conducted in one-on-one basis. The duration of each interview varies according to the necessity, ranging from 10 to 20 minutes in overall. Permission of audio-recording was given by the interviewees. Member checking has also been done to ensure the transcription of the interview content.

4.2 Participants

4.2.1 The School

Pui Kiu Primary School is the targeted school of this research project. It is an aided primary school in Hong Kong. There are 5 classes in each grade, with 24 to 28 students in each class. The class distribution is done according to the academic performances of students. Students in Pui Kiu Primary School come from a variety of backgrounds, including locals, mainlanders, and non-Chinese students. In addition, the parental support of each student also varies.

Pre-learning, served as an essential element of flipped learning, is a compulsory stage for students to complete at the beginning of every English language unit. In addition, the school has had 5 years of experience in flipped learning. Additional pre-learning activities will be assigned to students throughout a unit if necessary. The pre-learning activities are in different formats, such as online lessons, audio listening and other preparations for upcoming lessons. Despite the public learning resources online, Pui Kiu Primary School has also established an online learning platform for students to pre-learn or study the teaching content at home before or during each unit.

4.2.2 Interviewees

Five teaching staff of English language in Pui Kiu Primary School are selected to participate in interviews according to their teaching experience. All of the participants have at least 5 years of teaching experience in Pui Kiu Primary School. One of the participants was not able to complete the interview due to his health issue during the research period. In addition, two of the participants are the teachers of the observed lessons. The information of the four interviewees are listed in the table below. The real names of the interviewees are coded randomly with the names of Amy, Bianca, Caroline and Danielle.

Interviewees	Sex	Teaching Experience in Pui Kiu Primary School (no. of years)	Teaching Audience (in the academic year 2016/17)	Experience in flipped learning (no. of years)
Amy	F	11	Primary 1, 4 & 5	5
Bianca	F	7	Primary 1, 3 & 4	5
Caroline	F	6	Primary 1, 2 & 4	5
Danielle	F	6	Primary 3, 4 & 5	5

4.2.3 Students

Two classes of Primary 5 are chosen for this research project. Students were learning the unit of “Road Safety” during the research period and the observations were conducted at the first lesson of the unit, after students had completed their pre-learning activities. Students’ pre-learning assignments were also collected for this research project. The information of the two P.5 classes are listed in the table below. The two classes are coded randomly as Class 1 and Class 2.

Classes	No. of students	No. of students participated in the observation	English language ability
Class 1	28	28	The highest among the five P.5 classes
Class 2	24	23	The lowest among the five P.5 classes

5. Findings

The two observed lessons have the same objective of enabling students to better understand the road safety rules and the related context and text type, according to the revised text (see appendix 1) designed by the teachers. In addition, students of both classes were asked to listen to the recording of the revised text before they attended the observed lesson. Students also had to look up the dictionary to understand the vocabulary in the revised text. Following the pedagogy of flipped learning, the two teachers shifted the stage of vocabulary teaching to an online activity which students could complete at home, before the lesson. The teachers expected students had learned the pronunciation and meaning of the vocabulary, and were able to fully understand the revised text before the observed lesson. The findings of the two observations are described below separately, together with a simple lesson plan for each class, constructed after the observation. In both observations, there is a gap between “students’ performance in class” and “students’ performance in the pre-learning activity”, indicating that students either failed to complete the pre-learning activity ideally or had forgotten the content during the gap period between the pre-learning activity and the in-class activity.

5.1 Class 1

Duration (40 mins)	Procedures
2 mins	<ul style="list-style-type: none">- Praise students' pre-learning performances
10 mins	<ul style="list-style-type: none">- Test students' pre-learning outcome by questioning students about the meaning of the vocabulary- Further explain the revised text (i.e. introducing some synonyms, the text type and the meaning of the text)
28 mins	<ul style="list-style-type: none">- Students work in groups and act out one or two bullet points assigned by the teacher from the revised text (with 8 mins of preparation) <p>The groups take turns and perform in front of the class. The non-performing groups have to guess which sentence(s) that the group is acting out and read aloud the guess(es)</p>

Class 1 focused on the entire revised text during the lesson. The teacher spent approximately 10 minutes in assessing students' performances on the pre-learning activity and in extended teaching of the revised text at the beginning of the lesson. Although this class has a high English language ability and everyone in the class had completed the pre-learning activity, some students failed to pronounce the key vocabulary of the revised text. However, students of this class could fully understand the revised text as they successfully showed their understanding through the in-class activity, without any support from the teacher. This situation, to a small extent, contradicts the pedagogy of flipped learning because the teacher spent a quarter of the class time learning on revising and teaching the content of the pre-learning activity, which is not suggested in the definition of flipped.

The table below lists out the key vocabulary from the revised text. The percentages are generated approximately when the whole class was reading the text together. There are gaps between the “% of the students that were able to pronounce the vocabulary correctly” and the “% of students who looked up the vocabulary”. Attention should be paid to the gap which has a higher percentage of students who looked up the vocabulary than the percentage of the students that were able to pronounce the vocabulary correctly. This is because it indicates that students failed to produce the acquired knowledge learned from the pre-learning activity in the in-class activity.

Vocabulary	Students’ performance in class	Students’ performance in the pre-learning activity
	% of the students that were able to pronounce the vocabulary correctly (approximately) [0%/ 25%/ 50%/ 75%/ 100%]	% of students who looked up the vocabulary
briskly	75%	57%
crossing	100%	11%
dangerous	100%	18%
dividers	50%	54%
footbridge	100%	32%
injured	50%	21%
jaywalk	75%	57%
kerb	50%	68%
motorists	25%	71%
pavement	25%	71%
pedestrian	50%	82%
possible	100%	39%
traffic	100%	39%
vehicles	75%	79%
victims	75%	32%

5.2 Class 2

Duration (35 mins)	Procedures
5 mins	<ul style="list-style-type: none">- Students share their pre-learning results in groups- Students copy from each other if necessary
15 mins	<ul style="list-style-type: none">- Each group draws a picture to describe one of the four road safety rules assigned by the teacher- Students practice reading the assigned road safety rule
15 min	<ul style="list-style-type: none">- The groups take turns to read the assigned road safety rule and explain their drawing to the class- Test students' pre-learning outcome by questioning students about the meaning of the vocabulary

Class 2 focused only on the second half of the revised text during the lesson due to the lower English language ability of students. At the beginning of the lesson, instead of assessing students' performances on the pre-learning activity, the teacher allowed students to share and copy their learning results in groups of three to four. In addition, 6 students had not completed the pre-learning activity, hence, they were not able to contribute to other classmates and had to rely on their classmates during the lesson to understand the revised text. Furthermore, some students failed to pronounce the key vocabulary during the lesson, and were not able to understand some of the content in the revised text when questioned by the teacher. As a result, during the class activity, the teacher provided a lot of support, including teaching and explaining the vocabulary, and using Chinese as the first language to ensure students' understanding. This situation, to a large extent, contradicts the pedagogy of flipped learning.

The table below lists out the key vocabulary from the revised text. The percentages are generated approximately when the whole class was reading the text together. There are gaps between the “% of the students that were able to pronounce the vocabulary correctly” and the “% of students who looked up the vocabulary”. Attention should be paid to the gap which has a higher percentage of students who looked up the vocabulary than the percentage of the students that were able to pronounce the vocabulary correctly. This is because it indicates that students failed to produce the acquired knowledge learned from the pre-learning activity in the in-class activity.

Vocabulary	Students’ performance in class	Students’ performance in the pre-learning activity
	% of the students that were able to pronounce the vocabulary correctly (approximately) [0%/ 25%/ 50%/ 75%/ 100%]	% of students who looked up the vocabulary
briskly	25%	22%
crossing	50%	22%
dangerous	50%	52%
dividers	N.A.	N.A.
footbridge	50%	30%
injured	N.A.	N.A.
jaywalk	N.A.	N.A.
kerb	N.A.	N.A.
motorists	N.A.	N.A.
pavement	N.A.	N.A.
pedestrian	25%	65%
possible	75%	30%
traffic	50%	30%
vehicles	N.A.	N.A.
victims	N.A.	N.A.

5.3 Interviews

The interviewees, in general, are positive towards the pedagogy of flipped learning. They affirm the benefits of flipped learning as in the international context. However, specific procedures and concerns have raised by the interviewees according to the local context in Hong Kong, especially in teaching English as a second language. As a result, the interviewees believe that a Hong Kong classroom, meanwhile, cannot be completely flipped as the original pedagogy suggested. However, with more experience and mature procedures and materials, flipped learning can be completely adopted to raise students' learning efficiency.

6. Discussion

6.1 The benefits of flipped learning to Hong Kong students and teachers

6.1.1 Benefits to Hong Kong students

6.1.1.1 Individualized learning pace

Flipped learning allows students to have their own pace of learning, which is also stated by Caroline in the interview. Although Hong Kong students normally spend eight hours a day in school, they are given limited time to absorb knowledge because of the tight teaching schedule set by the Hong Kong Education Bureau and schools. Under the time pressure, the less able students do not have sufficient time to learn under the traditional teaching method. In contrast, supported by the interviewees, those less able students can spend more time on the pre-learning activities according to their needs, such as watching a lecturing video at home several times to ensure understanding. In addition, as Amy mentioned, Hong Kong students are generally passive and afraid of asking questions, especially when they are unsure with the learning content. Flipped learning can provide time for students to process the learning content, come up with questions at home, and question teachers in the following lesson. Good questions can always benefit the student him/herself and other classmates. Futon (2012) conducted a study on flipped learning and the interviewed students appreciated both the ability of watching the pre-learning content several times to ensure understanding and the immediacy of being able to ask teachers questions during class time. Supported by flipped learning, Hong Kong students can deepen their learning through individualized learning pace and questionings.

6.1.1.2 Extended learning

Flipped learning provides an opportunity for students to learn more than required. Agreed by the interviewees, establishing flipped learning can shorten the time of instructing during the lessons, hence more time can be spent on other extended knowledge. A common and simple teaching of extended learning adopted by the interviewees is the teaching of synonyms. Hong Kong students learning English as a second language have a small vocabulary bank and they rarely develop it due to the lacking of interest, time or opportunity. The time saved from adopting flipped learning can be used in other activities to make students learn more. Other learning activities can also be adopted as the time for instructing is diminished, such as discussions. As noted by Danielle, discussions allow students to be inspired by one another and extend their learning. Aligned with Forsey et al. (2013), discussion is one of the key in-class activities teachers may use to extend students' learning within a flipped classroom.

6.1.1.3 Better classroom learning environment

Davies et al. (2013) found that the flipped classroom model allowed students to pace themselves through the material, thus raising students' motivation. Aligned with the interviewees mentioned, Hong Kong students are generally passive and have less confidence especially in learning English language. Under the flipped learning model, students can gain more confidence in class due to their prior knowledge and understanding gained from the pre-learning activities, thus have a higher sense of accomplishment after the in-class activities. Bianca also added that students would have a higher incentive in learning after the pre-learning activities because of the confidence gained.

The relationships within the classroom, including teacher-student relationships and peer relationships, can be enhanced through flipped learning. Flipped learning is a tool to boost the learning environment of Hong Kong classrooms as Hong Kong students are less interactive in English lessons. Caroline mentioned that peer relationships can be enhanced because students have to frequently rely on each other for information exchange during the in-class activities. Building on this idea, Brunsell and Horejsi (2013) have proven that the flipped classroom model can strengthen teacher-student relationships by the increase of interactions during class time. As a whole, stronger relationships inside the classroom have a positive correlation to student engagement levels, building up a better classroom learning environment.

6.1.2 Benefits to Hong Kong Teachers

6.1.2.1 A tool to promote self-learning responsibility

Researchers Álvarez (2012), Davies et al. (2013), Forsey et al. (2013), Fulton (2012), Riendeau (2012) and Smith (2013) found that student engagement was raised through improved interactions in the classroom, and by encouraging students to take a more active role in their own learning. This idea is also supported by Bianca, she agreed that it is important for teachers to promote self-learning, and flipped learning is an efficient way and tool because it allows students to take up more responsibility of acquiring knowledge by themselves, supported by teachers. Students should understand and realize that the role of teachers is to facilitate their learning and provide support when necessary to maximize their learning. Teachers can always make use of flipped learning to instil the value of self-learning responsibility in students.

6.1.2.2 Understand and cater for individual needs

Flipped learning allows more classroom interaction which eventually allows more time for teachers to observe and understand students. Amy admitted that, by adopting flipped learning, teachers are given more time to observe, understand and close students' learning gap during the class time. In addition, teachers can correct misunderstanding and provide support individually. Learning English as a second language usually brings challenges and misconceptions to Hong Kong students, flipped learning creates a practicing time which teachers can assist students' learning closely. Suggested by Berrett (2012), the immediacy of flipped learning allows teachers to correct students'

misconceptions on a more timely basis, without the need to wait for formal assessments.

6.1.2.3 Lesson enhancement

The interviewed teachers agreed that flipped learning can shorten the instructing time of the lessons because students have prepared and have a certain degree of knowledge and understanding. It makes teaching more efficient as students can get exposed to the general knowledge or basic knowledge, and get ready for clarification, consolidation and extended learning in the lesson, which is important for Hong Kong students when learning English as a second language. Bianca admitted that the learning content of English language is sometimes tedious to Hong Kong students, thus lowering students' learning interests. If the tedious instructing stage can be shifted back home in a more interesting way, teachers can adopt different interesting and interactive learning teaching models and activities in class, such as project-based and problem-solving activities, to enhance students' learning interests, creating a positive and active learning environment.

6.2 How can Hong Kong teachers maximize the efficiency and benefits of flipped learning?

6.2.1 Preparing Hong Kong students for flipped learning

It is essential to prepare Hong Kong students for a new learning model in order to maximize the efficiency of it, especially when they are familiar and used to the traditional learning model of force-feeding. The Hong Kong education system is critiqued as a “Peking Duck-style education” (Deters, 2011), meaning that students in Hong Kong are learning in a way of force-fed. Lecturing inside a classroom face-to-face is the most accepted way in traditional Hong Kong schools. Students play the passive role of receiving knowledge during lessons, afterwards, practice and consolidate the learned knowledge at home individually. Bianca states that the traditional pedagogy is well-accepted because of its efficiency and it caters for the exam-oriented style in Hong Kong’s education field. In contrast, flipped learning is the opposite of the “Peking Duck-style education” and it is a relatively new learning model for Hong Kong students. Teachers need to prepare students in multiple ways to maximize the benefits and efficiency of flipped learning.

Teachers have to demonstrate the procedures of completing the pre-learning activities for flipped learning, especially during the beginning stage of establishing flipped learning. Caroline responded that she had to demonstrate the ways of accessing to the online learning content and the ways of using related tools for online self-learning before letting students complete the learning stage

individually at home. Bianca declared that she even brought one of her classes to the IT room and let students try accessing to the learning content by themselves. This is necessary for Hong Kong students, especially when they are young or less experienced in the learning method of flipped learning.

Teachers also have to set clear the expectations. Researchers have found that some students felt lost without a traditional lecture (Mangan, 2013). Hence, teachers should always brief students about the online learning resources and what students are going to do and learn. Bianca claims that a briefing session is essential and sometimes a two to three minute of briefing is enough. This allows students to get prepared and familiar with what they are required and expected. Students would then have a higher sense of readiness and incentive to complete the pre-learning activities for flipped learning.

6.2.2 To flip or not to flip a Hong Kong classroom

Flipped learning is mature in international institutes, especially in tertiary education. In contrast, flipped learning is less mature and less welcomed in Hong Kong, especially in primary education. There are factors that the interviewed Hong Kong teachers would consider when deciding whether or not to adopt flipped learning for a lesson.

“Time” is an essential factor that the teachers would first consider. The interviewed teachers admitted that it is time-consuming to prepare well-structured online materials or to seek suitable online resources for students to

pre-learn at home individually. Aligned with this idea, Herreid & Schiller (2013) stated that creating videos for flipped learning is a time-consuming process. In addition, flipped learning requires a greater upfront investment from teachers to develop the video resources (Davies, Dean, & Ball, 2013). However, Amy stated that the devotion of effort and time is worth because the created resources can be stored and used in future years, requiring less effort and time in the future.

The “topic” of the lesson is another factor that the teachers would consider. In English language, there are different language items for Hong Kong students to acquire as a second language and not every language item is suitable to be used with flipped learning. Stated by the interviewed teachers, grammar items are less likely to be used with flipped learning because complicated concepts are involved, which would easily lead to misunderstanding, such as passive voice and past tense. However, other language items, such as vocabulary and text types, are suitable to use with flipped learning and would be more efficient when flipped learning is adopted. Danielle concluded that straight-forward language items, which would not easily lead to misunderstanding, are suitable, especially for primary students.

The ability of students is also a factor to consider. When students are less familiar with the flipping learning teaching method, teachers should not involve a high intensity of flipped learning into the teaching. Suggested by the interviewed teachers, if students are less efficient when learning with flipped learning, teachers should reduce the intensity and modify the pre-learning resources and

activities to benefit students. The learning performance of students have to be firstly considered because at the end of the day, the education system in Hong Kong is exam-oriented.

6.2.3 A non-complete flipping in the Hong Kong context

As stated, flipped learning is a relatively new learning model to Hong Kong students, as well as teachers. Both parties require time to adapt to flipped learning. In addition, adjustments have to be made to echo with the learning traditions in Hong Kong. The ideal situation of flipped learning is teachers can move directly to the classroom activities without lecturing or instructing inside the classroom because these should be done by students before coming to the class. However, shown from the two observations and admitted by the interviewees, teachers cannot rely completely on the online resources and pre-learning activities which students would complete at home. Instead, time has to be spent inside the classroom, during the lesson, on lecturing and instructing, although the time needed does not need to be long.

The main reason for having the adjustments, which is to spend time on revising or instructing the teaching content, is that the readiness of students for flipped learning is low. Students do not understand the essence, necessity and purpose of completing the pre-learning activities at home. At the same time, Hong Kong students usually have a mindset that teachers should be teaching or transmitting knowledge face-to-face during class time. Hence, students may not complete the pre-learning activities seriously and fail to be fully prepared for the

in-class activities prepared by the teachers. This situation is observed in Class 2 which a few students did not complete the pre-learning activity and were not prepared for the in-class activity.

From the observations, there is a gap between the students' performance in the pre-learning activity and in the in-class activity. Students either failed to complete the pre-learning activity ideally or had forgotten the content during the gap period between the pre-learning activity and the in-class activity. Reflected from the findings, there is a situation that higher number of students had looked up the vocabulary before class, but a lower number of students could produce their acquisition of the vocabulary in class, the vocabulary includes, "dangerous", "dividers", "kerb", "motorists", "pavement", "pedestrian", and "vehicles". In addition, in one of the observations, a few students had not completed the pre-learning task before the lesson. As a whole, teachers in both observations had to spend time on teaching those key vocabulary, which is not an ideal situation for flipped learning.

In addition, some students made mistakes when completing the pre-learning activity of looking up the dictionary for the meaning of some vocabulary. The mistakes include selecting a wrong definition of the vocabulary, a wrong part of speech, and incorrect translations (see appendix 2 for examples). As a result, this lowers the efficiency of adopting flipped learning as the students had failed to understand or get prepared for the upcoming lesson and in-class activities.

The interviewed teachers normally spend 5 to 10 minutes of the class time to revise or instruct the learning content of the pre-learning activities which eventually shorten the time for the in-class activities. Bianca admitted that if the pre-learning activity is to watch a short lecturing video, she might even play it once again during the class time as some of the students may have forgotten the content of the pre-learning activity. Although the time of revising and instructing is needed even when adopting flipped learning, the interviewed teachers agreed that the time needed is indeed shorter than the time needed when adopting the traditional teaching model.

When Hong Kong students are not familiar with the teaching model of flipped learning, time has to be spent during the class time to assess or check on students' understanding and readiness. However, mentioned by Amy, time can be shortened if students are more familiar with the teaching model of flipped learning. This relies on how teachers promote this teaching model and how well can students accept it, making flipped learning mature enough and maximize the benefits.

6.2.4 Designing the learning content and materials to cater for different learners

Literatures have proven that flipped learning is efficient in senior education, especially in tertiary education which students have a higher ability of understanding and processing knowledge individually. Flipped learning in primary education is less welcomed because of the lower readiness of primary students. However, stated by the interviewed teachers, flipped learning can also be

efficient in primary education, but modifications are required in order to uplift the efficiency and benefits.

In general, Amy stated that pre-learning resources and materials have to be short. This is because primary students usually have a shorter attention span. A lengthy material would reduce students' interest towards the material, hence, fail to prepare students for the upcoming lesson and in-class activities.

Different natures of materials and pre-learning activities should be designed to cater for learners' differences. Suggested by the interviewed teachers, simpler types of materials and pre-learning activities, such as scanning a QR code for a vocabulary pronunciation or listening to a number song on YouTube, are suitable for younger learners. Students can easily get access to the materials and require less time for students to process. In addition, simple materials and content have less room for students to make mistakes and misunderstand the targeted knowledge. In contrast, more complicated materials and pre-learning activities can be assigned to senior grades, such as watching a lecturing video or looking for information about the targeted knowledge. Despite the age of the learners, the ability of the learners should also be considered. If the materials and pre-learning activities can entertain students' interest, such as some animated videos or interactive videos, the learning performances of students can be raised.

6.2.5 Maximizing the benefits through other means

6.2.5.1 Parental support

Parents are considered as an essential part of students' learning in nowadays educational context. Different degrees of parental support can enhance students' learning performances, including in the flipped learning model. Completing the pre-learning activities are essential as it directly affects students learning in the upcoming lesson. If students fail to complete the pre-learning activities, they would not be able to learn comprehensively and further consolidate the targeted knowledge. Hence, parental support in guiding, monitoring and ensuring students to complete the pre-learning activities is important. In addition, teachers should contact parents closely to enable parents to understand the essence of flipped learning, so as to assist their children at home. Bianca mentioned that parental support is even more important in younger learners' learning as the younger learners have less technological skill and self-management skill for flipped learning.

6.2.5.2 Praising students

The interviewed teachers claimed that praising students is an important strategy in flipped learning to maximize the benefits of the teaching model. After all, self-responsibility is a key in flipped learning that students have to take up part of the responsibility of their learning and complete the pre-learning activities individually at home. In students' perspective, pre-learning activities are not important and less effort can be put into completing the pre-learning activities because the entire process is not monitored by teachers face-to-face.

To ensure students' working hard to complete the pre-learning activities, teachers should make good use of praising and encourage students. In addition, Bianca added that teachers should showcase students' success and praise them with reasons. Appreciating students' effort of learning independently would encourage students to accept and continue with the model of flipped learning. With the sense of accomplishment, students would even put more effort into the pre-learning and in-class activities in the future, maximizing the benefits of flipped learning.

7. Limitation of the research study

7.1 A small-scale study

This study is a small-scale study which data are collected only from one local primary school, Pui Kiu Primary School. It includes only 4 local teachers as interviewees and two class observations with 35 minutes to 40 minutes each. Although in-depth interviews are conducted with experienced teachers and the study is supported with two authentic class observations, the data collected is limited to the situation of the targeted local primary school. The discussion, however, is applicable to the majority of the entire local primary school context in Hong Kong. In addition, due to the limitation of time and avoidance of interruption, the study does not involve any control groups to evaluate the benefits and efficiency of flipped learning.

7.2 Participants' limited experience in flipped learning

Flipped learning is not mature and popular yet in Hong Kong primary school context. Although the targeted school and interviewed teachers have experience in the teaching and learning model of flipped learning, their experience in flipped learning is limited. Hence, interviewees can only express their opinions based on their knowledge, impressions and teaching experiences towards flipped learning.

7.3 Limited to the subject of English language

This data collected for this research study is limited to the subject of English language. This is because flipped learning in the subject of English language is more mature in the targeted school. In addition, the English teachers in the targeted school have more experience in flipped learning, hence they are invited to participate in this research study. Further studies can be conducted on flipped classroom in different subjects to provide a more comprehensive point of view.

7.4 Relationships between the researcher and the participants

The selected school is the practicum school of the researcher, hence, relationships are involved between the researcher and the participants, including both the interviewees and the students participated in the observations. The interviewees are the former-colleagues of the researcher, while the students participated in the observations are the former students of the researcher. Although the relationships have not affected the reliability and the authenticity of the research study, the relationships are addressed as a requisite.

8. Conclusion

Flipped classroom is a beneficial pedagogy in the international context, as well as to Hong Kong students and teachers. Although related studies on primary education context are scarce, this research study has proven that flipped classroom can benefit Hong Kong primary students and teachers. However, adjustments have to be made to cater for Hong Kong students and to maximize the efficiency. In Hong Kong, when flipped classroom is not mature, a non-complete flipping is suitable for Hong Kong students. In addition, local teachers have to decide on when and how to conduct a flipped classroom according to different factors, including students' ability, readiness and age. At the same time, local teachers have to consider the necessary modifications when designing the learning materials to maximize the efficiency and benefits of flipped classroom. Further studies can be conducted to evaluate the academic performances when flipped classroom is adopted in the Hong Kong primary context, in different subjects and in a larger scale. After all, flipped classroom allows students to learn more and teachers to better understand students' learning progress and difficulties. However, different stakeholders in Hong Kong require more time to develop and get well-prepared for flipped classroom.

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10. Appendix

Appendix 1: The revised text used in the observed lessons

Primary 5 Revised Text

Unit 10 Road Safety

Name: _____ () Class: P.5___ Date: _____

It was Road Safety Week at school. A police officer came and showed the pupils a poster on road accidents.

Children in Road Accidents

Every year, many children are injured or killed in road accidents. Among pedestrians, children between five and nine years old are main road-accident victims.

The main reason is that they forget that roads are dangerous places. Here are some **UNSAFE THINGS** that children carelessly do on the road which cause road accidents.

- ❖ Children choose a dangerous place to cross the road. They cross from between parked vehicles where motorists cannot see them. Sometimes, they jaywalk or climb over road dividers to cross the road.
- ❖ They are too fast when they dash across the road without looking out for oncoming traffic. They do not watch out for traffic until it is too late.
- ❖ They forget to pay attention while they are moving along the road. Instead, they chat and laugh with their friends. On one hand, they may speed up and fall on the kerb. On the other hand, they may slow down and take too long to cross.
- ❖ They play games along the pavement and sometimes fall or go onto the road in the path of oncoming vehicles.

To avoid road accidents, everyone should remember to “**Stop, Look and Listen**” before they cross the road. Here are some **ROAD SAFETY RULES**.

- ❖ Children should cross the road from a safe place where they can properly look out for traffic. They should always use the footbridge and zebra crossing when it is possible
- ❖ They should look out for traffic on both sides of the road before they step out onto the pedestrian crossing. They should hurry up and cross the road where the road is clear.
- ❖ They should walk briskly and carefully as they cross the road.
- ❖ The road is a dangerous place, so they should not play along the roadside.

Appendix 2: Mistakes made by the observed students during the pre-learning activity

Mistakes	Examples of students' work
Incorrect definitions or translations	dividers (n) 除法器
	divider 分步百器
	lk briskly at 除知
	briskly (adj) 多刺的
	d, they chat he kerb (kerb) On
Incorrect parts of speech	briskly (adj) 輕快
	possible 可能 (adv)
	briskly 輕快 (v)
Other (spelling mistakes)	angerous (adj) 危險

Appendix 3: Interview transcripts

Appendix 3a: Amy's interview

Interviewer: I'm doing a research on flipped learning.

Interviewee: Yes.

Interviewer: Beside the pre-learning task included in the SLR, do you have any other experiences in conducting flipped learning?

Interviewee: Yes. I do it whenever possible but it requires a lot of preparation. It depends on whether we have enough support to do flipped learning. If students can easily understand the content by themselves at home, such as by watching a video or reading a text, I will then do it. Also, if the materials are explicit to allow students to learn individually, I will do it. It's all about the difficulties.

Interviewer: Are there any factors that you will consider?

Interviewee: The time. Whether I have the time to prepare the things they need to learn at home individually. Also, the efficiency. Whether it is more efficient when students learn individually at home or when I directly teach them in lesson, face-to-face. For example, I'm now teaching past continuous tense. In such case, I would prefer not doing flipped learning because the concept is a bit complicated. Teaching them in person, explaining according to their problems, and providing more information if necessary are preferred. However, if students are learning abstract nouns. There's not much room for students to misunderstand. Hence, flipped learning is highly effective in helping my teaching and students' learning. If flipped learning is adopted, I do not need to go through all the vocabulary when they come back. I can directly move on to the application stage, showing students how to use those words in context. Or maybe when teaching reading, a text, flipped learning can definitely help. This is because when students come back, you do not need to spend time going through those boring but essential stages, such as teaching the pronunciation of the words.

To a certain extent, flipped learning is a good pedagogy as it allows students to learn in their own pace. A weaker student can watch the video 10 times if he/she needs. It doesn't mean that after watching the video 10 times, he/she can catch up with the most capable student in the class. So, sometimes, group work is required for consolidation.

Students can also have plenty of time to process the content or knowledge and ask questions in the following lesson. Hong Kong students are generally passive and afraid of questioning, especially when they are unsure with the learning content. However, if you give them time, they would definitely come

up with some very good questions which can benefit themselves and other classmates as well.

Interviewer: After students have finished their pre-learning, how do you assess them?

Interviewee: I'm a bad person. At the beginning of the lesson, I won't do any recap or revision. I would directly question them, for example, what is the meaning of this word? It's a checking. It's essential. You also have to make it as a homework.

But sometimes, you don't really need to assess them through questioning. This is because flipped learning allows teachers to have time to observe students through activities. By then, you can observe and understand their learning process, or how much have they done during the pre-learning stage. If they fail to contribute or finish the in-class activities, normally, they haven't done their work well before the lesson. Building up on this point, teachers can really understand students' individual needs as you have more time to observe them. Teachers can sometimes correct misunderstandings or provide additional help individually.

Interviewer: Are there any drawbacks?

Interviewee: Firstly, it cannot deal with some complicated concept. Secondly, sometimes teachers teaching the knowledge directly can be more effective. Maybe this is also related to the difficulty. For example, when P.3 students are learning -ed -ing adjectives, I prefer teachers explaining directly so that students will not misunderstand any of the content. It's the effectiveness. The ultimate goal of flipped learning is to enhance the efficiency. It allows students to personalize their own learning pace. Weaker students can spend more time if needed. There are some learning items that are not suitable for flipped learning. -ed -ing adjectives, students may mix up -ed adjectives, like interested, with past tense, mix up -ing adjectives with gerund. In this case, flipped learning is not suitable. I went through quite some time to realize this problem, to understand whether a certain topic is suitable or not.

Interviewer: Do you think flipped learning is more suitable for a certain grade? Maybe more suitable for junior grades or more suitable for senior grades in primary schools?

Interviewee: I think it is more suitable for senior grades because junior grades require a lot of support, such as from teachers and parents. If you are flipping a junior classroom, most of the responsibility will shift to the parents which is meaningless to students' learning. Also, teachers need to do so much work for flipping a junior classroom. For example, in P.1 curriculum, we need to make a lot of QR codes for students to learn the pronunciation of the vocabulary. If you have the time to make it this user-friendly, then it is

suitable for junior grades. It requires a lot of resources and support when flipping a junior classroom.

In overall, flipped learning in primary schools is a bit different. You cannot prepare a 30-minute lecturing video and ask students to watch it at home. This is impossible. I can say that none of the students can sit still and finish the 30-minute video. By that, we should make those learning materials simple, short and interesting, such as a song for them to listen to, an animated lesson or even asking them to look up and learn some related information.

Appendix 3b: Bianca's interview

Interviewer: I'm doing a research on flipped learning.

Interviewee: Yes

Interviewer: Flipped learning means students would pre-learn some knowledge at home, such as reading some information or watching some video clips which are related to the teaching content of the upcoming lesson. It shifts the teaching part to home, and students can directly move on to the activities or discussions during the lesson, after pre-learning.

Beside the pre-learning task included in the SLR, do you have any other experiences in conducting flipped learning?

Interviewee: Yes. I recently did one with a P.4 class. It was more than just pre-learning, it included self-learning as well. They were learning about hobbies and the students had already known some really common hobbies, such as badminton and soccer. I asked them to look for some special hobbies at home. I didn't give them too much instructions, the only requirement was to find some hobbies that are special which could catch other's attention while doing a presentation in class.

Students flicked through the internet to look for some information at home. I had introduced some simple tools to students, such as simple Wikipedia, to ensure that they could finish the task. Or maybe look for some video clips on YouTube. The students were able to find a lot of information for activities in the upcoming lesson. It doesn't need to be long, sometimes a briefing session of 2 to 3 minutes is enough.

Interviewer: So instead of giving students a direct content to study, you introduced them some tools, such as simple Wikipedia and YouTube, for them to complete the pre-learning stage.

Interviewee: Exactly. This is because students are not used to this new learning way. Force-feeding is a typical way teachers use in Hong Kong because it is efficient and it benefits the exam-oriented atmosphere. So we need to prepare students for a new learning methodology. I even demonstrated the way of using those tools. Then I didn't need to spend time on teaching some special hobbies. I could move directly to a sharing session which students can learn from each other.

Interviewer: I would like to know what would you consider before deciding to do flipped learning.

Interviewee: What would I consider... Let me think...

Firstly, based on my experience, “time” is a really important factor. Referring back to the previous example I mentioned, I spent almost 2 lessons to tell students what to do and teach them how to do, including demonstrating how to use those tools. I even brought them to the IT room, allowing them to have a try before really doing the task at home by themselves. I wanted to know whether they were capable to do it at home individually. So “time” is really important because the teaching syllabus is so tight. It doesn’t always allow us to spend time on doing so.

Beside the time, “students’ interests” is another factor that I would consider. Most of the pre-learning tasks, because English is their second language, so most of the time, students are bounded to understand some texts as the tasks, such as by looking up from the dictionary. Students sometimes would come to me and complain about the pre-learning task of looking up the dictionary for meanings of the words. They really don’t like it. So I would try to make the pre-learning task interesting for them to complete at home.

“Topic” is also a very important factor, whether that topic provides students with an opportunity to do some pre-learning tasks at home. Students like something that are funny and they enjoy having choices for them to choose from. So, based on the topic, I would usually fulfill their wants.

Interviewer: So you have just mentioned “time”, “students’ interests” and “topic”.

Interviewee: I would like to add something more, which is “students’ capability”. We have to understand students’ ability, whether they are capable of completing the tasks by themselves. There are more capable students and less capable students in a class. Just like when I brought them to the IT room, I could ensure whether they could complete the task, at the same time, the more capable students can help those less capable ones. You have to ensure their ability before sending them back home to learn.

Interviewer: Then what are the benefits to students or teachers when adopting flipped learning?

Interviewee: First of all, students would at least have some related-knowledge before coming to class so I do not need to spend much time on teaching. Secondly, students would have a strong incentive because they would have already learned some related knowledge and are longing and ready to show other their learning outcome. Students like competing with each other, and there is limited time in one lesson, this motivates them to spend more time at home learning. It would also create a positive learning environment, because students would have the sense of accomplishment and success as they have already learned the content at home. They would have the confidence to answer questions and work on different activities during the lesson.

Also, the teaching content can sometimes be a bit tedious. If they can finish the tedious part at home, students and I can spend time on some more interesting activities during the lesson. Oh, thrilling means very exciting... You might have spent already 15 minutes explaining and reading the vocabulary. Then your lesson will be very boring without some interesting activities or games.

Students enjoy having this kind of homework, like watching video clips. They prefer this to those traditional homework, like workbook or grammar exercises. It makes learning more enjoyable to students.

Interviewer: Then how can you assess students' performance on the pre-learning tasks?

Interviewee: We usually assess them with a worksheet and you can tell how much effort students have put on completing the pre-learning task. For example, if you ask students to look up the Chinese meaning of some vocabulary, you can tell from how many words did they look up. If it is a more complicated task, more than just watching a video or looking the dictionary, you can assess students' work by the quality and quantity of the work. But you must take students' individual ability into consideration. You can't expect too much from a less capable student.

One good thing about flipped learning is that students can spend as much time as they want at home to complete the pre-learning activities. For example, if the pre-learning task is to watch a lesson-related video. Less capable students can watch 10 times or even more in order to get ready for the lesson.

Interviewer: What you mean is flipped learning allows students to adjust their time of learning according to their individual needs.

Interviewee: Yes!

Interviewer: But what would you do if students coming back with a huge gap of understanding, meaning some students are able to fully understand the content, but some do not. What would you do?

Interviewee: Well, usually, even though they have pre-learned the content. However, I would spend some time on recapping. If the task is to watch a video clip, I would play the video once again in class. However, after playing the video clip in the lesson, I won't do the talking. Instead, I would invite students to tell me what they have learned from the video clip. I usually question them and put down some important ideas mentioned by the students on the blackboard. By that, the more capable students can have a chance to show off a bit and the less capable students can learn immediately, so as to narrow down the gap.

Interviewer: So you would still spend a little time on revising.

Interviewee: It's a must! You must go through some of the pre-learning content, if not... I once tried to not revising, the students were a bit lost. So I must spend about 5 minutes, 5 to 8 minutes on revising, well, personally.

Interviewer: Do you think flipped learning is more suitable for a certain grade? Maybe more suitable for junior grades or more suitable for senior grades in primary schools?

Interviewee: It all depends on the topic, but not the age of students. We can also do flipped classroom in P.1 classes but the ways may be different. Simpler tasks can be designed for younger grades, such as looking up the dictionary. I do think, for younger grades, teaching them the responsibility of self-learning is more important. However, for higher grades, as they have the responsibility of self-learning. Their effort on the pre-learning tasks can definitely help speeding up the pace of the lessons.

Interviewer: Last question. What can you do to maximize the benefit of flipped learning?

Interviewee: Carefully design the pre-learning activities and tasks to cater for the students. For example, if I am doing a flipped learning with P.1 students. I would simply ask them to watch a video clip, maybe on YouTube, instead of really looking for some information.

“Parental support” is also an essential element when maximizing the benefit of flipped learning. I have created a Watsapp group and parents are invited to join the group. I usually invite parents to assist their children if the task is a bit challenging, especially for younger grades, like P.1 and P.2, when they are using the computer.

“Praising students” is one of the most important element. You must point out and praise their effort of learning independently in lesson and encourage them to continue. If you do so, you will notice that the students will be more willing to do flipped learning, self-learn at home. Also, they will continue to put more effort to complete the given tasks. They will be proud of themselves and they do care about their own accomplishment. You must showcase their success.

Appendix 3c: Caroline's interview

Interviewer: I'm doing a research on flipped learning. Do you have any experience in conducting a flipped lesson?

Interviewee: Well, for example, when students are learning a text, there may be a lot of vocabulary. If students can pre-learn those vocabulary, maybe by listening to an audio, it helps greatly with their understanding of the text. Also, if students can pre-learn the basic knowledge of a certain topic at home, when they come back, teachers can move on to the more advanced knowledge directly. This can extend students' learning.

Also, in some writing lessons, students can pre-learn some related knowledge or even some related-vocabulary to assist their writing. This can enrich students' writing. At the same time, this can boost students' confidence.

Flipped learning can be applied in different topics, especially when it comes to some challenging or difficult ones. If students can pre-learn part of the content, teachers do not need to spend too much or extra time on the textbook or for explanation. In this way, I think it helps students with their learning, and teachers' teaching can be smoother.

Interviewer: So flipped learning can minimize teachers' teaching time.

Interviewee: Yes. And more time can be spent on different activities, such as learning some more advanced knowledge or allowing students to apply their knowledge instead of sitting inside the classroom and listen. Teachers do not have to spend time on repeating the pronunciation of the vocabulary, explaining the vocabulary. We can move up to a higher level of how to apply those vocabulary in context. I can even make use of their pre-learned knowledge to teach synonyms, which students can learn more.

Interviewer: After students have finished their pre-learning, how do you assess them? For example, if you ask them to look up the dictionary at home, some of them may not do so. So how can you assess them?

Interviewee: This is a good question. Most of the time, teachers can hardly ensure that students are on the same level after doing their pre-learning task, maybe because of their learning ability. This is a difficulty for us. For my own practice, at the beginning of a lesson, after they have finished the pre-learning task, I would ask them form groups and spend some time on going through or discussing their own pre-learning content. In this way, those weaker students can learn from the more capable students. However, there are pros and cons in doing so. Students may over-rely on each other and choose not to complete the pre-learning tasks. Teachers have to be aware of this and avoid adopting this method too often. Sometimes, I would randomly select students and question them to check on the pre-learning performance,

such as asking them to pronounce some vocabulary of the parts of speech of some vocabulary.

Interviewer: Does it mean time even though students have pre-learned the knowledge at home, you still need to spend some time on recapping or going through the content of the pre-learning task?

Interviewee: Yes. You need to spend some time on testing them, checking on their learning. I usually spend 5 to 10 minutes for that, depending on how I am doing that. It can be a quick recap or a worksheet for them to complete. It depends. Also, I would spend time praising them explicitly with reasons if they complete their pre-learning well. Some follow-up work may be needed as students may have problems when completing the pre-learning tasks, such as not knowing how to use certain tools. Sometimes I need to teaching them how to, for example, using those tools. Or I may contact their parents to see whether they can assist their children.

Interviewer: What other benefits do you think flipped learning has?

Interviewee: I think there is a great benefit for those weaker students. As they can have their own pace in learning. With a better sense of accomplishment, their confidence can be boosted. If teachers can make use of this opportunity to praise those students, it can improve those students' relationship with others. This is from my own experience that a student in my class was not welcome by his classmates because of his bad behavior and poor academic performance. After spending some effort on pre-learning, having more time for him to learn, he was able to improve and was praised by teachers. He is now welcome by his classmates and has a better sense of accomplishment.

Another benefit is what I have mentioned earlier. Using a limited time to maximize and expand students' learning and knowledge.

Interviewer: What factors will you consider when you are deciding whether or not to adopt flipped learning in this lesson?

Interviewee: Well, the expectation from me towards my students. As well as the ability of the students. If it is a weaker class, I would reduce the amount of content of the pre-learning tasks. However, if the class is more capable, I would require more, let them do more for the pre-learning tasks. I might push them to do more if possible.

Interviewer: Are there any drawbacks?

Interviewee: You need to spend so much time to teach them the ways and methods at the beginning. It is quite time consuming. For example, if you are asking your students to get familiar with the text type of recipe. If you do not give them the tools and teach them how to find some suitable recipes to study, how can

they do so? You also need to demonstrate once during the lesson, especially for the younger learners as they might know nothing. But things get better after a period of time.

There might be some exceptional cases, such as not having a computer at home. But definitely not many.

Sometimes, there might be too much parental involvement as students are learning at home. Teachers have to monitor those cases and contact the parents, allowing students to learn by themselves.

Interviewer: Do you think flipped learning is more suitable for a certain grade? Maybe more suitable for junior grades or more suitable for senior grades in primary schools?

Interviewee: Not really. It is suitable for all grades. However, I think things can be simpler for junior grades.

Interviewer: What do you mean by simpler, can you give some examples?

Interviewee: Well, for example if they are learning about numbers. I would give them a link of a number song. They students can go home and listen to the song followed by a quiz or some games during the lesson. Things are not too challenging, more direct. Singing songs, looking up the dictionary.

Things should be a bit more challenging for senior grades, can't be just looking up the dictionary. Maybe they should learn also the application and usage of the vocabulary. But of course, we are not asking them to learn everything, or else why is there a need of teachers. A bit more challenging, but can't be too much. You still need to give them some guidelines, giving them enough time.

Appendix 3d: Danielle's interview

Interviewer: I'm doing a research on flipped learning.

Interviewee: Yes

Interviewer: Beside the pre-learning task included in the SLR, do you have any other experiences in conducting flipped learning?

Interviewee: Can you elaborate a little bit more?

Interviewer: Flipped learning means students would complete the learning stage at home, such as through watching some videos or lectures. Then when they come back to the lesson, teachers can directly move on to activities or discussion to allow practices or consolidations.

Interviewee: We usually make use of the online resources, such as one time when I was teaching fables. I asked the students to learn what a fable is at home, by clicking into the links that we provided. Those were some short lecturing videos. Then when students came back, I could move on to activities to consolidate students' knowledge. Even if I needed to simply go through the ideas of a fable, I needed less time to do so as students had already had the knowledge.

When students come back, we still need to spend some time to ensure students have done their pre-learning tasks well, so as are able to move on. This is because some students, the weaker ones, may not be able to learn comprehensively through watching videos at home. Although they have watched the videos, they might not fully understand.

However, flipped learning only allows students to acquire some basic knowledge at home, but not the complicated ones.

Interviewer: After students have finished their pre-learning, how do you assess them?

Interviewee: We, teachers, usually come along with a worksheet to assess students. Students have to complete the worksheet at home after finishing the pre-learning tasks. From what students have written, we can assess students' understanding, and sometimes the effort they have put into the tasks.

As a whole, we do not only shift the lectures from classroom to home, but to prepare students for the lessons. It's also about the readiness. Students, at home, can get prepared and know what will be the context, learning objectives or items, theme or topic of the following lesson. If they prepare something at home, when they come back, they won't be so thick throughout the lessons. If you ask them, "did you watch the video at home

last night?" They would shout "yes". They will be more engaging because they are prepared.

Interviewer: What are the benefits to students and teachers of flipped learning?

Interviewee: The pace of the lesson is significantly faster. Also, students would have a greater sense of ownership. Students know what is going on, happening in the lesson. Even if the weaker students cannot provide some concrete answers during the lesson, I can notice that they know what is happening, what they are learning. Better than nothing.

It can also minimize the gap between more capable students and less capable ones. Well, it doesn't mean they can have the same result at the exams, but at least the gap is narrowed down. This is because, let's say watching videos. Those less capable students can watch as many times as they want until they understand the content because they have more time at home. They can personalize their learning at home. I can't play a video ten times during a lesson.

Moving directly to activities is also a good thing, such as discussions. Having the time to do discussions, students can learn more, especially from each other because they can get inspired by other brains.

Interviewer: Are there any drawbacks?

Interviewee: There's no doubt that the workload is heavier.

Interviewer: For students or teachers?

Interviewee: Both. But maybe it's a one-off instead of forever. This is because you have to prepare a lot of materials for students to learn at home, especially at the beginning years of having flipped learning. You need to put a lot of effort to select videos, or make the videos, or design the learning materials, from nothing. However, it benefits the teachers and students in later years. It's worth-doing in terms of the outcomes and benefits.

But the workload is definitely heavier. We need to design something that students can understand individually at home without the immediate help from teachers. When thing is a bit challenging, the workload of students will be heavier because they need more time to absorb and understand, especially when they are learning English as a second language. Also, the pre-learning tasks are more abstract than completing a page of a workbook or a few fill-in-the-blanks on a worksheet. Like watching a video, how much should I understand? So as a whole, there's some pressure. We all need time to adjust and get use to a new pedagogy.

Interviewer: How would you start your lesson if they have pre-learned? Can you move directly to activities?

Interviewee: Absolutely not. I still need to spend some time on recapping or to briefly go through the content that they have watched at home. Kind of like revising. Maybe 3 to 5 minutes. You need that time to check whether all the students are ready. There might be someone who is not ready to move on. He or she maybe haven't watched the video at all.

Interviewer: What factors will you consider when you are deciding whether or not to adopt flipped learning in this lesson?

Interviewee: The nature and student's ability.

Interviewer: What do you mean by nature?

Interviewee: The topic. For example, passive voice. You can't expect students to understand everything about passive voice by just watching a video. Language items that are more straight-forward are preferred. However, by watching a 2 to 3-minute video, they can at least know the structure or the meaning of passive voice. Even if they can't, they at least know what they are going to learn. Their readiness. It's all about the degree. How much do you want your students to learn at home and how much can they learn individually at home?

Interviewer: Do you think flipped learning is more suitable for a certain grade? Maybe more suitable for junior grades or more suitable for senior grades in primary schools?

Interviewee: I think it's more suitable for senior grades. It doesn't mean it is not suitable for junior grades at all, but somehow it may be too challenging for them. If you ask them to read something from Wikipedia, how can a P.1 student do that? They might spend already 5 minutes to get to that site. If there is a strong parental support, it is more feasible for junior grades. But this is not the ideal situation because at the end, we don't want parents to help them learn. We want students to learn individually. Things and materials need to be very direct for junior grades.

For senior grades, they can easily do it because they are more capable. However, you still need to give them more guidelines at the beginning, guiding them what to do. After a period of time, they can easily do it by themselves.

