School of Professional Education and Executive Development 專業進修學院





Working Paper Series No.10, Issue 4, 2016

Title	Reflecting on the flipped classroom through student feedback
Author(s)	Kang-Lin Peng
Issue Date	2016
Issue Number	4
Paper Number	10
Citation	Peng, K. L. (2016). Reflecting on the flipped classroom through student feedback (Working Paper Series No. 10, Issue 4, 2016). Hong Kong: The Hong Kong Polytechnic University, College of Professional and Continuing Education, School of Professional Education and Executive Development. Retrieved Aug 26, 2016 from http://weblib.cpce-polyu.edu.hk/apps/wps/assets/pdf/w20160410.pdf
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Reflecting on the Flipped Classroom through Student Feedback

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ABSTRACT

The flipped classroom provides an alternative teaching approach for diversified learning. Learning is not only the way of sitting in a classroom and listening to a lecture. This study aims to reflect the teaching process and learning outcomes after conducted the flipped classroom. A population of 29 students were investigate in a subject. Descriptive statistics and qualitative method were applied in this case study to demonstrate teaching reflection through the student feedback of the subject. Results showed that students were more active, involve, and willing to learn through technology in the flipped classroom even some disadvantages can be improved. This study concludes that the pedagogy of the flipped classroom is worth of promoting in tertiary education to bring creative thinking and practical knowledge for students' learning and career development.

KEYWORDS: Flipped Classroom, Teaching and Learning, Innovative Teaching, Learning Outcomes

1 INTRODUCTION

The flipped classroom has been advocated to transform students' learning from passive listening lecture in a classroom to active acquiring for knowledge. Studies showed that flipped classroom have advantages of active learning including collaborative learning, problem-based learning, peer-assisted learning and peer tutoring (Bishop & Verleger, 2013). Disadvantages of the flipped classroom were also listed such as learning might be lazy and fall behind, questions can't be answered immediately, teaching video is boring, and technology issues (Johnson, 2013). We are in a technology era that data, information, and knowledge are very easy to approach. It is about time to reflect what teaching and learning could be conducted in a classroom. Traditional lecture blended with the flipped classroom might be worth to give it a try. This study aims to reflect the pro and cons of the flipped classroom approach that was conducted in a subject for further improvement of teaching and learning.

2 THE FLIPPED CLASSROOM

The flipped classroom is a pedagogical model that involves having students view online lectures prior to class. Students then come to class ready to actively engage in collaborative learning through case scenarios, small group discussion, or other meaningful, interactive activities. The flipped classroom model was an overwhelming success for both students and faculty(Critz & Knight, 2013). The Flipped Classroom is an instructional strategy that can provide educators with a way of minimizing the amount of direct-instruction in their teaching practice while maximizing one-to-one interaction. This strategy leverages technology providing additional supporting instructional material for students that can be accessed online. This frees up classroom time that had previously been used for lecturing (Johnson, 2013).

Advantages of flipped classroom are: (1) students move at their own pace; (2) doing "homework" in class gives teachers better insight into student difficulties and learning styles; (3) teachers can more easily customize and update the curriculum and provide it to students; (4) classroom time can be used more effectively and creatively; (5) teachers using the method report seeing increased levels of student achievement, interest, and engagement; (6) learning theory supports the new approaches; and (7) the use of technology is flexible and appropriate for learning (Fulton, 2012); (8) there is more time to spend with students on authentic research; (9) students get more time working with scientific equipment that is only available in the classroom; (10) students who miss class for debate/sports/etc. can watch the lectures while on the road; (11) the method "promotes thinking inside and outside of the classroom"; (12) students are more actively involved in the learning process (Herreid & Schiller, 2013). Literatures addressed advantages of the flipped classroom a lot as mentioned above. However, disadvantages, and contingencies researches were limited which were addressed equally in this study.

3 METHODOLOGY

The researcher conducted a different teaching pedagogical model, the flipped classroom, to improve students' learning based on the perspective of action research. Methodology of case study and qualitative analysis were applied in this study. The case of a subject was taken because the researcher was the lecturer who intended to flip students' learning during the semester after a midterm student feedback. The subject was difficult to students' comprehension and was hard to arouse students' interest in learning. Thus the flipped classroom was adapted to flip the learning conditions followed to the principle of action research. The population in the subject were 29 students at level 4 of School of

Professional Education and Executive Program (SPEED) at PolyU. The questionnaire was consisted of two parts. The first part was close ended questions to measure students' attitude, and the second part was open ended questions to understand students' perception of the flipped classroom. No multiple variance analysis was conducted in this study because this study is looking for the deep insight of teaching and learning case through student feedback in the subject.

4 RESULTS AND DISCUSSIONS

4.1 Analysis of Descriptive Statistics

According to student feedback in Table 1, students had more interactions with other classmates, got more practices in class time, were more motivated in learning, and were engaged more in the flipped classroom than traditional lecture, results were consistent with studies of Fulton (2012) as well as Herreid and Schiller (2013). However, lesson video was not interested to students' learning in advance. The major disadvantage was consistent with study of Johnson (2013). Detail were revealed in the qualitative analysis discussed below.

Table 1 Student feedback on the flipped classroom

Student feedback on the flipped classroom			Std. Deviation
(1)	The flipped classroom is more engaging than traditional	4.03	.680
	classroom instruction.		
(2)	I would recommend the flipped classroom to a friend.	4.21	.559
(3)	The flipped classroom gives me greater opportunities to	4.28	.649
	communicate with other classmates.		
(4)	I regularly watch the lesson video.	3.48	.829
(5)	I like watching the lessons on video.	3.45	.985
(6)	I would rather have the entire class moving at the same pace in	3.69	.660
	the course.		
(7)	I am spending more time learning on this subject.	3.79	.861
(8)	Social Media is an important part in my learning.	4.07	.884
(9)	I like to learn at my own pace.	4.03	.731
(10)	I like my tests online.	3.62	.820
(11)	I would rather watch a traditional teacher led lesson than a	3.48	.986
	lesson video.		
(12)	I feel that the flipped classroom learning has improved my	4.03	.626
	understanding.		
(13)	I find it easy to pace myself successfully through the course.	3.86	.639
(14)	The flipped classroom gives me more class time to practice.	4.07	.651
(15)	I am more motivated in learning in the flipped classroom.	4.07	.704
(16)	My learning has been improved in the flipped classroom.	3.90	.817

4.2 Qualitative Analysis from Student Feedback

Literatures showed main advantages of the flipped classroom (Fulton, 2012; Herreid & Schiller, 2013) that can enhance teaching and learning. This study conducted qualitative analysis to check the effectiveness of students' learning through an open ended questionnaire. Results of advantages are organized as Table 2. The major advantages of the flipped classroom were: (1) students were more actively involved in their learning process; (2) students liked to learn at their own pace; and; (3) technology played an important role in student's self-study. In addition to the 12 advantages in Table 2, student feedback in open ended questions showed that communication, interaction and collaboration were more among

teacher and classmates for better learning. Learning activity of being a teacher to teach classmates were also beneficial for learning by teaching.

Table 2 Student feedback on the flipped classroom

Student feedback on the flipped classroom	Counts	Ranking
(1) Students learn at their own pace.	20	2
(2) Doing "homework" in class gives teachers better insight into student difficulties and learning styles.	1	8
(3) Teachers can more easily customize and update the curriculum and provide it to students.	5	7
(4) Classroom time can be used more effectively and creatively.	10	5
(5) Teachers using the method report seeing increased levels of student achievement, interest, and engagement.	5	7
(6) Learning theory supports the new approaches.	11	4
(7) The use of technology is flexible and appropriate for learning.	12	3
(8) There is more time to spend with students on authentic research.	0	9
(9) Students get more time working with scientific equipment that is only available in the classroom.	0	9
(10) Students who miss class for debate/sports/etc. can watch the lectures while on the road.	5	7
(11) The method "promotes thinking inside and outside of the classroom.		6
(12) Students are more actively involved in the learning process.	29	1

Disadvantages of the flipped classroom were mentioned in student feedback as follows: (1) Students might not learn/watch video in advance of class; (2) students might not involve in class if they didn't study in advance; (3) class activities might not help to get deep insight of knowledge; (4) students might be distracted during class activities; (5) students cannot ask questions while learning as traditional lecture; (6) watching teaching video too much might hurt eyes; (7) it is difficult to concentrate on learning through watching teaching video; (8) the teacher and students had more workload in spending more time and effort in teaching and learning; (9) some chapters were difficult for self study in advance; (10) there existed challenges of grading on this new teaching and learning approach; (11) learning compression were different among students; and (12) this new pedagogy needed to highly rely on technology.

Other contingencies of adapting the flipped classroom pedagogical model were illustrated in student feedback. Subjects that need (1) creative and critical thinking, (2) business knowledge and practice, (3) multiple channels to figure out complexity, (4) time for calculation, (5) interesting stimulation, (6) interaction, (7) case study, (8) language practice, (9) learning motivation, and (10) self-study are suggested to use the flipped classroom approach. Some suggestions from students after conducting the flipped classroom are as follows: (1) The teacher can offer more consultations before and after classes, (2) the teacher can offer more guidelines when conducting teaching activities, (3) the teacher can provide take home exercises to practice, (4) recording the teaching activities and posting them online for students' reference, (5) teaching videos can be provided in multiple languages, namely English, Cantonese and Chinese, (6) more games in classes, (7) students can design their own flipped classroom, and (8) blending of the flipped classroom and traditional lecture.

To summarize advantages, disadvantages, and contingencies, blended learning approaches combined traditional face-to face instruction and the flipped classroom are suggested in modern teaching and learning environment (Bonk & Graham, 2006).

5 CONCLUSION

This study concludes that the flipped classroom pedagogical approach is worth of promoting in tertiary education to bring creative thinking and practical knowledge for students' learning and career development according to literatures and student feedback. The advantages outweigh disadvantages in conducting the flipped classroom. The main advantages are students are more actively involved in the learning process at their own pace through technology. The main disadvantages are students' learning might not be as expected if students didn't study in advance. This study has limitation because of data was collected from only one class, however, the data is accumulating for further research after conducting more cases of the flipped classroom. Implications of this study is that students in tertiary education system need creative, innovative and blended teaching to ignite their learning motivation for better learning, the flipped classroom is an interesting approach to let students explore knowledge with heart and enthusiasm.

6 ACKNOWLEDGEMENTS

The flipped classroom is a pedagogical approach for innovative teaching and learning that needs support from senior management. This study would like to thank for the teaching support of the PolyU SPEED. Students' high involvements during the semester and abundant reflections after the classes of the flipped classroom are also highly appreciated.

BIOGRAPHICAL NOTE

Dr. Peng is a visiting scholar at School of Professional Education and Executive Development (SPEED) of The Hong Kong Polytechnic University (PolyU) teaching courses and conducting research in the field of Health Studies. He is also an associate professor at Minghsin University of Science and Technology. He obtained a PhD in business administration from National Taipei University and he is also a PhD (ABD) in the field of computer science at National Chiao-Tung University; his interest in applying knowledge of business administration and computer science led him to a focus on interdisciplinary research of healthcare technology and financial technology. His researches have been published in 13 peer-reviewed international journals, and 29 conferences. Three journal papers and 5 conference papers among publications have been published in 2015-16. He also wrote 5 books and got 5 patents.

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Appendix - Students' Feedback of Flipped Classroom

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(16)

1. Question	nnaire for flipped classroom
2. What ar	e the advantages of the flipped classroom?
3.What ar	e the disadvantages of the flipped classroom?1
4.Would t	the flipped classroom be useful for other subjects? Why or why not?24
5.What in	nprovements would you recommend to improve learning in the flipped classroom
6.Please s	tate any other comments you wish to make about the flipped classroom
1 0	HECTIONNAIDE EOD ELIDDED CLASSDOOM
	UESTIONNAIRE FOR FLIPPED CLASSROOM The Given dellers are increased in the standard and all account in the standard and all accounts and all accounts and all accounts are all accounts and accounts and accounts and accounts and accounts are all accounts and accounts and accounts and accounts are a
(1)	The flipped classroom is more engaging than traditional classroom instruction.
(2)	I would recommend the flipped classroom to a friend.
(3)	The flipped classroom gives me greater opportunities to communicate with other
	classmates.
(4)	I regularly watch the lesson video.
(5)	I like watching the lessons on video.
(6)	I would rather have the entire class moving at the same pace in the course.
(7)	I am spending more time learning on this subject.
(8)	Social Media is an important part in my learning.
(9)	I like to learn at my own pace.
(10)	I like my tests online.
(11)	I would rather watch a traditional teacher led lesson than a lesson video.
(12)	I feel that the flipped classroom learning has improved my understanding.
(13)	I find it easy to pace myself successfully through the course.
(14)	The flipped classroom gives me more class time to practice.
(15)	I am more motivated in learning in the flipped classroom.
(15)	I am more motivated in learning in the flipped classroom.

My learning has been improved in the flipped classroom.

Results:

Descriptive Statistics

	N	Minimum	Maximum	Mean		Std. Deviation
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic
Q1	29	2	5	4.03	.126	.680
Q2	29	3	5	4.21	.104	.559
Q3	29	3	5	4.28	.121	.649
Q4	29	2	5	3.48	.154	.829
Q5	29	2	5	3.45	.183	.985
Q6	29	2	5	3.69	.123	.660
Q7	29	2	5	3.79	.160	.861
Q8	29	2	5	4.07	.164	.884
Q 9	29	2	5	4.03	.136	.731
Q10	29	2	5	3.62	.152	.820
Q11	29	2	5	3.48	.183	.986
Q12	29	3	5	4.03	.116	.626
Q13	29	2	5	3.86	.119	.639
Q14	29	3	5	4.07	.121	.651
Q15	29	2	5	4.07	.131	.704
Q16	29	2	5	3.90	.152	.817

2. WHAT ARE THE ADVANTAGES OF THE FLIPPED CLASSROOM?

Through the flipped classroom, we can have new style to learn in classroom. By go through the topics or knowledge by classmate, we can more easy to discuss or ask questions out of class. As tutor may busy or lack of time to teach or having tutorials with us, by using flipped classroom, the teachers are students, which allows the student have adequate knowledge in the topic they teach. Then, we can share what we learn in the specific topic to each other, which enhance the knowledge by communicate with students. In additions, the flipped classroom increases the relationships between students, which allows communicate and share the academic thoughts to each other.

2016/4/23 17:27

Through the flipped classroom, every classmate can get the chances in being a role of teacher. We all should clearly understand our own topic so that more time was spent on this subject, it is an interesting experience in my university life. By involving in these activities, I have a deeper investigation in the topics and have a higher interest in the operations management. Also, flipped classroom has increased the communication of classmates and built a better relationship between classmates. When we had questions or uncertainty in the flipped

classroom, we could ask our classmates for help; and when we knew the answers of the questions, we had a higher chance to raise up our hands and answer the questions. Therefore, changing the format into flipped classroom as a basis of assignment is more engaging than the traditional classroom and assignment.

2016/4/23 2:15

The flipped classroom allows us to have more time for collaborating with classmates which can produce a great learning experience. It also provides an opportunity to build our teamwork abilities. Besides, we can have more time to brainstorm ideas and questions and thus, have more time to ask the teacher. A flipped classroom with videos also allows us to learn on our own time at the place feeling comfortable. The lecture is free of interruptions to distract the students and can be replayed as often. It is good for us on preparing for the test as we can go back and review previous lectures.

2016/4/21 1:18

The largest advantage of the flipped classroom is convenient. The design of flipped class is to allow us to get access to watch the video online when we are free. Also, it is very suitable to act as a form of modern teaching, making use of technologies to aid in teaching is becoming more popular in nowadays. It does not have constraints on where and when to have lessons. For example, the first lesson I watched was at my relatives' house using a tablet I can even continue to watch while having dinner. Another advantage is it is easier to understand since the video can be stopped when I have problems associated with the topic and I can have more time to think about it.

2016/4/21 1:15

The advantage of flipped classroom is that students can have more control on their own learning. Video lectures are convenient for students to watch it again online before or after class. Flipped classrooms are more flexible. Students can select anytime to watch videos at home. And they can select the most appropriate period for their self-learning. It is also good for absence students to review the missed lectures again. Besides, it promotes students' self-learning and motivation on learning at home, which helps to develop our life-long skill of self-learning. Moreover, the activities and discussions in classes were interesting, which can enhance my motivation on learning and further understanding of that topic.

2016/4/20 23:42

Under traditional lectures, students are bound to the pace that the instructor sets for the course. If a student has difficulty understanding a concept during a lecture, he or she is forced to slow down the rest of the class by interrupting and asking for additional clarification, or do

his or her best to keep up and ask for guidance at the end of class. In contrast, in flipped classrooms, students can review and replay any parts of the lecture that they're having trouble with as many times as they need. It facilitates efficient learning time and student enjoy the lecture without pressure in the classroom. More, it encourages students to teach and learn concepts from each other with the guidance of their teachers. To student, the lecture note is quite boring and complicated so that it always makes students feel difficulties and hate to touch it. However, the flipped class allows us to learn the knowledge by our own learning way which means that we can use own way which suitable for learning. This way enhances our perceptions on everything we need to learn. When we find nothing obstacles in learning one subject, then we feel happy and build confidence in the subject, meanwhile we are willing to study more.

2016/4/20 22:04

Interesting

2016/4/20 20:48

The advantages of flipped classroom include encouragement of students to study the topic by themselves and give students the opportunity to ask questions in regarding to the subject matter that they find confusing or difficult. Besides, flipped classroom encourage the students to collaborate with other classmates while the process of discussion and it establish a greater learning experiences as it can train the teamwork abilities of the group. Moreover, the element of flipped classroom consists of video, the video is free for the students to review and it can replay as often as the student would like so as to allows students prepare exam and review the previous lecture.

2016/4/20 19:38

Student got the opportunities to the specific topic which they are going to introduce in the class, they would have the deep understanding to the topic, also can enhance the interaction between the classmate because they will not be shy of asking any question if they do not understand. Moreover, the student who is responsible of that topic, they are more likely to put more effort to make a better presentation, and make any activities to draw the audience's attention.

2016/4/20 15:17

Flipped classroom provides video lectures to students through e-learning system. Time for video lectures is usually shorter than in-class lecture. Students can watch video with precise words to elaborate the theories or concepts, where professors can well process for the content by cutting the video and re-record the unsatisfied scenes. Students can access the video in

everywhere and any time during their free time, which is flexible for their effective learning. More importantly, students can replay the video when they have misunderstanding to the information. Students can have deeper understanding through the repeated play. Activities during the lessons, such as doing exercise and playing games, etc. can give deeper inspiration to students and they can have better memory. It is interesting to have such activities in school and stimulate students' thinking, instead of only listening in the classroom. Students can also have more communication and interaction with their classroom.

2016/4/20 12:00

The flipped classroom provides some benefits to us, it allows students to learn on our own time and at our own pace. Besides, students can review and replay any parts of the lecture that we are having trouble with as many times as they need. If students continue to have issues, we are able come to class prepared to ask specific questions about the concepts that give us pause. On the other hand, in a flipped classroom, it is possible for students to have increased input and control over their own learning. By providing short lectures at home, students are given the freedom to learn at their own pace. Students may pause or rewind the lectures, write down questions we may have, and discuss them with our teachers and peers in class. This also allows students who need more time to understand certain concepts to take our time reviewing the material without getting left behind, and receive immediate assistance from teachers and classmates. As a result, this can not only improve student achievement, but improves student behavior in class as well.

2016/4/19 23:32

More interesting

2016/4/19 17:34

It allows us to have more time for collaborating with classmates to have a great learning experience and to build our teamwork abilities.

2016/4/19 15:10

Personally, there are three advantages to both lecturer and students of the flipped classroom. First, the chance to organize a "flipped classroom" allows students to study the upcoming chapter of the teaching schedule before the lecture. By preparing for teaching materials to their classmates, students can acquire the key points and learning outcomes more easily and effectively. It is because you have to learn something before you can teach something. Second, the way of teaching of the flipped classroom on the other hand offers students to have at least two perspectives to study one chapter, as they have to study both the notes and finish learning materials from their classmates and lecturer. This at the same time allows students to

have one more time to study. Last but not least, the third advantage is that lecturer can find out the weakness and blind spot of students during lectures. He can immediately add extra information and explain the topics in details. This facilitate the learning progress of students of this subject.

2016/4/19 1:24

The flipped classroom is an advantageous method to provide education through a more interesting and interactive way. Students and teachers can have more interaction in class and the activities can make the students become more involved in the lecture so as to make them feel interested in study. Also, as the teacher will upload some videos to give more detailed explanations and information to the class, students who cannot catch up in the flipped classroom can refer to the videos and understand more.

2016/4/18 3:57

Flipper classroom provides an opportunity for students to learn to be different role, learning to be a teacher is useful for their work in the future. Moreover, students can have a self-study first at home first, and this can enhance the understanding of different theories and we can have a deeply impressions towards the chapter. When we study the final test, we can easy to call the memory out and increase the speed of revision. Furthermore, flipped classroom can help us to interact with classmates through playing games, asking questions, and presenting the prizes. Being a teacher in flipped classroom is more interesting than being a student. Finally, we can understand teachers' jobs and stress when teaching classmates. Flipped classroom help us to have the collaborative work, and it promotes peer to peer learning, we can learn from the others and be better.

2016/4/18 0:50

In my opinion, the greater advantage of the flipped classroom is the interaction between teachers (i.e. present group) and students, because the interaction activates students' interest in participating the class and facilitates the teamwork during the group exercise competition. Driven by the desire of winning the present and the competition, students were willing to pay more attention on the lesson. Another advantage is that the understanding of the present chapter would be deeper since it is a must for a 'teacher' to understand that chapter the deepest so as to provide a clear explanation on the abstract part of the chapter. Students would put more effort on the preparation due to the responsibilities. It can therefore advance the students' time of study and revision. One of the advantages is that lecturer would give extra explanations about the important part during the presentation. Students would pay more attention on that part and have a more impressive memory since the lecturer's reminder gives a clearer concept. The last advantage is its replacement of the group project. This kind of

group project is more meaningful as students involve more during the presentation, or so-called teaching rather than just sitting for the presentation without any gain eventually. 2016/4/17 22:56

We can control the learning speed of the lectures and we can better understand the concepts and theories learnt from the lectures because we may not catch up the speaker's explanation of some teaching and students only can search it on the internet. However, flipped classroom can provide a mean for student to watch and rewind the video taken by the speaker. Therefore, students are easier to learn the new concepts. Apart from watching video, lecturer can give some exercises for the students to practice. It can facilitate student to know the detail of some concept since there were some difficult calculations in the particular chapter and students are not fully understand how to effectively calculate the answer. Providing exercises for students can help the lecturer to know the difficulties of the students and therefore lecturer can teach once more to help student to have a better understanding. The flipped classroom is also creative for student to learn. Likewise, the video divide to different parts about the PowerPoint note and student can easily find the chapter they want to watch.

2016/4/17 22:41

There are a lot of advantages in the flipped classroom. First, students will learn more and remember more about the presenting topic. Students need to present their topic, therefore, they need to be fully understand about the current topic. As the result, students will find more information and talk about the topic in a more in-depth way. Second, it can improve our presentation skills. The presentation lasted for about one hour. It is not easy and also a big challenge for student. After this presentation, presentation skills will be improved. Last one is to understand how hard the job is for a lecturer (empathy).

2016/4/17 19:06

The advantages of the flipped classroom can be discussed in student's role. When I was listening other classmates' teaching, I feel more concentrate. They had well prepared about their presentation. They offered different kinds of activities in order to enhance audiences' participation. Bingo game in the conclusion helps audiences to refresh the highlight of presentation. And the reward enhances audiences' incentive on answering the questions. This teaching method establishes mutual communicate between teachers and students and it increases students' absorption of new knowledge. When I was conducting a presentation, I learn more about that topic. I need to read the book's chapter before presentation. This helps me acquire basic concepts about the topic. And the understanding about the topic is increasing during preparation. Also, the flipped class makes my presentation skills have improvement. The presentation skills are different with general presentation and there are many things you

need to consider. As a teacher, it is important to teach the materials in clear and attractive way. So, I should consider presenting the materials in adequate voice and clear explanation. And, asking question helps to attract audiences' attention.

2016/4/17 12:10

The advantages include it can push us to have early preparation on the related topics and have a brief understanding before lecture. It also increases the communication between classmates, we have more time to stay together and discuss for the topics and questions. Each group is trying their best to give a presentation to the whole class and the PowerPoints are clearer and more detailed. We would also have a deeper understanding on the topic that we are presenting, especially the part each person holds. Time used in this subject has gently increased. Moreover, more time has to be spent on searching the internet for topics in order to have a right presentation in front of the whole class as not to give wrong information since the topics will be included in final test which affecting our grades.

2016/4/17 2:09

The one of advantages flipped classroom can allow us to learn and study the course on our own time everywhere. Also it allows my teacher to provide more one on one instruction. After learning we can mark down which part of the lecture that we don't understand, thus we can have a greater opportunity to ask my teacher at the real class. Secondly, sometimes, I can have more rime to collaborate with my classmates and thus we can share knowledge and experience with each other and also it provides a good way for our students to build up teamwork abilities. Then, flipped classroom allows us to learn individually. Since we can watch the video lecture at home, we can avoid any interruptions and distraction from the other student. As you know, students in the class would like to chat with the other students, and the noise would affect the process of learning. At the same time, he flipped classroom allow us to review the pervious lecture and prepare for our examination, it would be better for us to have a better academic result. And we will not be worried that we will miss the class and we cannot follow the process of learning when we get sick. With a flipped classroom, we ca engage with the lesson on our own time and an absent will no longer detract us from learning the material. 2016/4/17 1:42

Attractive, can be accessed any time 2016/4/17 0:27

After I have attempted the flipped classroom of Operations Management for Health Care, I think it has some benefits to students. At first, student can increase attention and control over their own learning while watching lectures at home feel free to learn at different own pace. If

students cannot hear or understand instantly, we can pause or back track the lectures of video for hearing one more time. We also can write down questions those make us feel confused. Then, discuss them with their teachers and classmates in class. Moreover, it makes me remember deeply the concepts of lecture before I need to present and teach in classroom.

2016/4/16 22:13

During the flipped classroom, we can have a chance to teach others classmates and they can do it too. It can enhance my understanding of the topic that I teach, and give the motivation to me to learn more deeply in that topic. It is because I must understand the topic that I teach in order to teach others more clearly. Apart from this, I will more willing to ask questions in the flipped classroom due to the "teachers" are my friends and I will not hesitate to ask them a question. The activities that created by the classmates are also can more easily to push other to participate with it.

2016/4/16 17:26

In the flipped classroom, students have more control. It allows us to learn on our own time, own way and at our own pace. We have more time for collaborating with other students which is a great learning experience and memory for us. It is also a way for us to build up the teamwork or leadership abilities. Additionally, it gives us an opportunity to try to be a teacher. On the other hand, the video lectures are helpful when we are preparing for exam. This is because we can play back, watch many times, free to interrupt and review previous lectures. It is good for our study as we are coming to class with preparations and ideas, and can share ideas to our classmate. The most important point is part time job or sick will no longer interrupt students' ability to learn. With a flipped classroom, we engage with a lecture on our own time and an absence will not affect us on learning the material.

2016/4/16 14:55

1. Student can read and consume the lecture materials at the pwn speed. For the traditional lectures, student should follow the pace of instructor. If student has any question or difficulties for understanding the concept, the class will be slow down. On the contrast, in the flipped classrooms, student can repeat read and learn any part of lecture at any time. Students need to completely understand the issue; it is because they need to ready for solving the questions asked by students. 2. Some new technique used in the flipped classroom Student may apply some new IT techniques in the flipped classroom that is more effectively teach the knowledge to students.

2016/4/15 17:03

Easy to understand the entire topics and students are put more attention to the class

2016/4/15 16:47

In a flipped classroom, it is possible for students to have increased input and control over their own learning. By providing short lectures at home, students are given the freedom to learn at their own pace. Students may pause or rewind the lectures, write down questions they may have, and discuss them with their teachers and peers in class. This also allows students who need more time to understand certain concepts to take their time reviewing the material without getting left behind, and receive immediate assistance from teachers and classmates. As a result, this can not only improve student achievement, but improves student behavior in class as well. Besides, flipped classrooms allows class time be used to master skills through collaborative projects and discussions. This encourages students to teach and learn concepts from each other with the guidance of their teachers. By allowing students to partake in their own learning, they are able to own the knowledge they achieve, which in turn builds confidence. Furthermore, teachers are given the ability to identify errors in thinking or concept application, and are more available for one-on-one interaction. Moreover, by making video lectures available at all times online, students who are forced to miss class due to illness, sports, vacations or emergencies, can catch up quickly. This also gives teachers more flexibility when they themselves are sick and also eliminates make-up assignments.

3. WHAT ARE THE DISADVANTAGES OF THE FLIPPED CLASSROOM?

Technic and knowledge are two main concern of flipped classroom. In technics, as a student, we have not enough experience or standard to teach others. As we also know, there are specific technic of each teacher to introduce the difficult concepts, terms or definition to students, which allows them to know the difficult things easily, not only teach by reading books. However, student may have poor presentation skills, or depth explanation methods to introduce knowledge to classmates, or even read from books without any explain. This may cause worse teaching than teacher. On the other hand, knowledge also a main concern to flipped classroom. In each subjects of university, teacher must be the professional tutor in specific subject, which allow to answer the depth question from student. However, in flipped classroom, the students are not professional enough to teach to their classmate when someone under stage ask depth question or the question out of their topic or learns.

2016/4/23 17:27

There is one disadvantage in flipped classroom. Unlike the traditional classroom, flipped classroom is taught by our classmates so that some of the classmate may not concentrated in the lesson. Classmates should respect to their classmates and should not keeping talking in flipped classroom, this may affect others. It is difficult for us to criticize them or get their attention.

2016/4/23 2:15

The flipped classroom puts heavy reliance on student motivation. If some students are not as motivated as others, this method of teaching may allow those less motivated students cannot learn from the lesson. Different from the traditional lesson, the flipped classroom also relies on student's preparation and trust. If students do not prepare themselves before the lesson, they may be less interested in the class. Moreover, since there are heavy workloads (e.g. group presentation and final year project) during the last few weeks of the semester, students may not have enough time to watch the videos prepared by the lecturer.

2016/4/21 1:18

There are disadvantages of using flipped classroom including not enough illustrations. When there are problems that I don't understand, I do not have a channel to ask questions immediately. During regular lessons at school, I can immediately ask my classmates who sit next to me if I have any contents that I don't understand. Besides, examples are very important for me to understand some topics since some of them are difficult to understand. And for some topics associated with mathematics, it takes quite a long time for me to find the

correct answer which is also my weakest part. Luckily, the presentations of our classmates have enough illustration and examples which can compensate the weakness of the flipped classroom.

2016/4/21 1:15

The disadvantage of flipped classroom is that the effectiveness of it is based on students' learning motivation. It will hamper students' learning if they will not watch the videos at home. That means students cannot have at least two hours formal learning in class. Besides, students cannot ask questions directly when are having video lecture at home. It may elicit the problem of not having the answer timely. For health aspect, having video lecture is not good for students' eyes. It is because students have to spend longer time to stay in front of the screen. Besides, it is hard for me to stay concentrate in front of computer.

2016/4/20 23:42

Even though the lecture becomes interesting, but some may not be suitable or they just want to have a regular learning format. More, the content of new format of presentation may not include all materials that we need to learn, some may miss out or have misconception of the theory.

2016/4/20 22:04

None

2016/4/20 20:48

The disadvantages of flipped classroom rely on student participation, the teachers need to assume all of the students review the video and lecture at home. However, the teachers cannot ensure students will oblige or cooperate with the flipped model. In addition to the dependent of student involvement, implementing a flipped classroom require additional effort on teachers, since there are numerous components that must be integrated in order to allow students to use. The responsibility of the teachers include taping and uploading condensed lectures, which adds an extra time, ability and additional effort from teachers.

2016/4/20 19:38

There are many disadvantages in the flipped classroom. Firstly, though student needed to learn by themselves, but honestly student may not have the concept which specific point is significant, and the teacher knows, hence the audience may have missed out the important concept in the chapter, or the presenter may not introduce clearly of the topic. Secondly, lecturer should not arrange the flipped classroom as a project, because the topic is included in our final test, and lecturer should explain clearly after our presentation, not just the

presentation skills. Thirdly, I was confused that the lecturer just very unfair to limit our presentation time, but the other group is run with unlimited. Also, the contents in different chapters are very different, we cannot control the content of our presentation is boring or not, and it is unfair that why our grade would be decreased if our presentation is boring that the previous group if we are in the same marking criteria. Moreover, most of the student said that you have mentioned that we just can present with English, and I do not understand why the presentation format can be changed so suddenly.... I am not using any excuses of I am not preparing well of the presentation, but honestly, we have prepared in a LIMITED TIME, but if we change our language, it will be affected our presentation process, and may be result in overrun under we were already asked to the time reduction.

2016/4/20 15:17

Students with self- regulation may not watch the video at home before having the in class lecture. They may lose their motivation in attending the in class lecture because they know nothing and cannot participate well in the classroom. Students cannot ask question to the professors face to face immediately. They may need to send email to or book appointment with professors. Through communication in email, information may have higher chance of misunderstanding to the words. Professors may need to deliver more time to structure the teaching plan for each lesson. Workloads of professors will increase.

2016/4/20 12:00

In addition to the advantages, there are some disadvantages for the flipped classroom. There is the concern that since flipped classrooms are dependent on student participation, one must trust students to watch the lectures at home. Unfortunately, there is no way to guarantee students will oblige or cooperate with the flipped model. Besides, there is a concern that implementing a flipped classroom adds an extra workload on teachers, as there are several elements that must be integrated carefully to allow the class to flourish. Responsibilities include taping and uploading condensed lectures, which take time and skill, and introducing activities in the classroom that will enhance the subject matter as well as motivate students to participate and prepare for class. Though teachers can gradually integrated flipped elements into their classrooms, it will still require additional time and effort from teachers.

2016/4/19 23:32

Unfair because the degree of the depth of each chapter is not the same $2016/4/19\ 17:34$

The flipped classroom puts heavy reliance on student motivation. If some students are not as motivated as others, this method of teaching may allow those less motivated students cannot learn from the lesson.

2016/4/19 15:10

To me, there are not any obvious disadvantages of the flipped classroom. To my group, I think the biggest disadvantage of the flipped classroom was that we only had one week to prepare for our presentation (teaching). It was because we were the first group to start the flipped classroom, which was the new idea given out during the middle of the semester.

2016/4/19 1:24

The disadvantage of the flipped classroom is that this technique highly relies on students' motivations. Even though videos are uploaded, not all students watch the videos. If a student does not refer to the videos, he or she may not understand and get the information in which the teachers have provided. Moreover, this may create an increased workload for both teachers and students. For teachers, they have to spend more time to prepare the lecture and take the videos. For students, they also need to spend extra time to watch the videos and if they do not understand, they have to watch the videos for many times or even have to find the teachers for gaining more explanations.

2016/4/18 3:57

The flipped classroom method may not be suitable for everyone, some classmates may be shy or embarrassed when teaching, they may afraid to say something loudly and look at others, this will eliminate their passion about learning and teaching. Some students may be lazy when preparing the materials; they cannot learn something through teaching. If students are bashful easily, they may lower the confidence and they are difficult to present something to others in the future.

2016/4/18 0:50

One disadvantage notified during the lessons is the present group may sometimes overlook if the classmates are really keeping up with them. It is understandable that the presentation should be followed the schedule and not be overtime too much. However, it is more important to know if all classmates primarily figure out what is teaching because this is the goal of the flipped classroom I believe. The second disadvantage of the flipped classroom is the shaped sensation of presentation. Some students might teach just like they were presenting with a long prepared script, making the teaching too official. While the presenter focuses on his/her script too much, he/she may overlook if the classmates are with them or not.

2016/4/17 22:56

Students need to have self-regulation to watch the videos of the flipped classroom because there are some students that are lack of motivation to watch video online so it is difficult for those students to learn. Therefore, flipped classroom cannot achieve the most effectiveness to the students to learn. Also, student may think they will lose the face to face lectures and it affects their learning because student need to ask questions immediately when they do not understand the new concept.

2016/4/17 22:41

There are disadvantages in the flipped classroom. First, the workload of the student will increase. The other subject only need to present about 20 to 30 minutes. In addition, the topic usually covered in the lecture. However, in the flipped classroom, the presentation time is about one hour and the topic maybe new for some of the students. Therefore, the workload of the student will increase in flipped classroom. Thus, if the student presentation is not good, it will affect the other student's absorption of that topic. Other student maybe confused because of the unclear presentation.

2016/4/17 19:06

The disadvantage of flipped classroom is cannot consider student's learning pace. The flipped classroom requires students to be initiative on preparation. Students need to watch the relevant video before the lecture. However, it is hard to ensure all students will watch that video before lecture. Even all students are watching that video, the efficiency of flipped classroom is affected by students' learning pace. Different student has different learning pace. It is important to apply some measures in order to synchronize all students' learning pace. 2016/4/17 12:10

The disadvantages include wasting too much time on a single topic and a very long lasting presentation. The project that require each team to present a lecture is a very heavy burden for the class. Lots of preparation has to be done before class and the time is in limit as the presentation format has changed suddenly, all our classmates have lost our plan on the workload. Also, as we do not have a deep understand on this subject, I do not think presenting a whole lecture in front of the class with only a week for preparation is a responsible manner. We are self-learning but not having a clear and responsible explanation.

2016/4/17 2:09

There is a concern that the flipped classroom relies on preparation and trust. Since the flipped classroom are dependent on student participation, the teacher need to trust their students to watch the digital lecture on the Internet. However, there is no method the guarantee our

student will cooperate with it, especially for the lazy students. Additionally, in order to create the flipped classrooms, extra works would be done by our teachers. As you know, flipped classroom is a new technology that help to teach the students effectively. However, it is necessary for the teacher to learn a new method. Thus teachers might waste their time on it. Also, teacher may have no time to prepare for the real class material or something good for the students, therefore, it would be a potential risk for teaching.

2016/4/17 1:42

No question is allowed to ask during online learning.

2016/4/17 0:27

Flipped classroom also has disadvantages to the students. It relies on self-discipline of every student to prepare lectures at home by themselves. It is because flipped classroom are dependent on student participation to watch the lectures and preparation adequately at home. Therefore, there is no way to assure students will force or cooperate with the flipped model. In addition, students are the first time to learn and recognize the knowledge form lectures. They may not professionally and comprehensibly teach the classmate about the chapters compared with teaching by teachers. So, the other classmate would study inefficiently and learn inadequate knowledge.

2016/4/16 22:13

2016/4/16 17:26

Sometimes the classmate might not teach well because of the misunderstanding about the topic or not totally understand about it. It may cause the misleading of all the classmates about the topic. The other disadvantages are that we might not have a well time management during teaching, and it will cause two results. The first result is overrun of the lecture. I believe that this result is not satisfied by all of us. The second result is the topic cannot finish well or that will have a lot of questions about this topic and we cannot solve it. To conclude, the major disadvantage is not enough experience for us to teach others during the lecture.

The flipped classroom too relies on our self-control ability. There is the concern that it is too relies on our preparation and the mutual trust between teacher and students. It depends on student self-control and participation, and teacher must trust students will watch the lectures video at home. Moreover, the flipped classroom seems increased the workload from teachers. This is because they need to do more works and preparations to imply the flipped classroom, including recording and preparing the lecture video which takes extra time, and designing activities in class as to motivate students to participate and get preparation. It definitely requires additional time and extra effort from teachers.

2016/4/16 14:55

Different learning style Everyone have different speed to learn. Students may use own specific own-pace- style education that student may not accept it. Sometimes, students may lack of communication to students and understanding for the issue. As a result, the lesson may be wasted and students cannot learn anything.

2016/4/15 17:03

Needs more time to prepare the teaching materials which lead to a great workload along with other subject's assessment

2016/4/15 16:47

One of the most prominent issues is the necessity for students to have access to a computer and Internet in order to view the lectures. This is particularly hard on students from low-income districts who already have limited access to resources. Additionally, there is a concern that implementing a flipped classroom adds an extra workload on teachers, as there are several elements that must be integrated carefully to allow the class to flourish. Responsibilities include taping and uploading condensed lectures, which take time and skill, and introducing activities in the classroom that will enhance the subject matter as well as motivate students to participate and prepare for class. Though teachers can gradually integrated flipped elements into their classrooms, it will still require additional time and effort from teachers.

4. WOULD THE FLIPPED CLASSROOM BE USEFUL FOR OTHER SUBJECTS? WHY OR WHY NOT?

Indeed, I partly agree on using the flipped classroom into the other subject. In case of operation management, our classroom, the concern I agree to use the flipped classroom in operation management is because the nature of our objective learning is to introduce the basic knowledge to us, which not necessary to teach depth concepts to us. As a result, using flipped classroom can achieve to the advantage I stated previously with no disadvantage I mentioned. In opposite, some calculations or application are hard to know, which may not suitable for introduce by student. So, in conclude, the availability on applicate flipped classroom to other subject is depending on the depth of learning outcome and nature, some depth subjects with logical thinking or problem solve skill I think is not suitable. However, the subjects are "introduction" feature, or straight introduce of function or system, is available to introduce the flipped on them.

2016/4/23 17:27

Flipped classroom in other subjects may also be useful than the traditional basis. Nowadays, social media is an important part of life. It is easy for students to watch the video by our own first then have a real involvement in the flipped class. Though calculating and answering the questions, we can easily remember what we have learnt. This format of learning is also popular in the western countries.

2016/4/23 2:15

The flipped classroom would be useful for other subjects, especially subjects which need creative and critical thinking, because students can easy to present their standpoints about the topic and ask the fellow classmates to get involved in the flipped classroom by holding some activities, for instance, BINGO game and Multiple Choice Questions. The technique of flipped classroom may also applicable for business related subjects. It is because business subjects emphasize the creativity in the society. For example, how to sell a particular product to the target group. The flipped classroom provides the chance for students to learn about the theory first, and they can share their opinion with classmates in the lesson.

2016/4/21 1:18

I think the flipped classroom can be also applicable to other subjects. Actually, this format of learning in Hong Kong had already used for quite a long time. In 2003, the year of SARS, I remember there is a similar system like the flipped classroom which is the school provided the link for the students to learn at home due to of class suspension caused by the disease.

And in secondary school, there are tutorial schools using the same format which is video, PowerPoint, and notes to teach lessons. With these examples, I believed that this teaching format is suitable for Hong Kong students no matter what subject it is.

2016/4/21 1:15

Overall, it is good to have experiences of flipped classroom. It can help me to have better understanding and memory. However, it is better to have a combination of flipped and traditional classroom for me. I love to having flipped classroom, but personally I prefer traditional one. The activities of flipped classrooms are interesting and can raise my awareness of details. However, I love having face-to-face lectures more than video lecture. It is because I can have more interaction with lecturers and classmates during lectures.

2016/4/20 23:42

It depends on what types of the subjects are. If the subject is very complicated and abstract that simple wordings cannot make a concrete explanation, then flipped classroom is accepted to utilized. For example, science, Chemistry. Sometime when talking about how one molecule to produce another molecule or some structures, we can use some figures or some activities to make an act and explain how it work. Or like Universe, how a star or plant be formed? it is quite difficult for creating an idea of that, so ignore the words in textbook, and go outside to act a plant evolution, then it is more interesting and attractive, and I think it is easy for students to remember.

2016/4/20 22:04

It will be useful for other subject. Because it is easily to apply on other one 2016/4/20 20:48

The flipped classroom can be useful for other subjects as sickness may interrupt student's learning process, and flipped classroom encourage students to engage more time on their study. Absence will not detract from them learning the material. Meanwhile, when some of the students absent from college, students will not suffer from a substitute's inability from the class you teach. The substitute only needs to monitor students working on their assignments in the classroom and be able to answer questions rather than introducing new content. Flipped classroom also gives teachers more flexibility when they feel sick and eliminates make up classes.

2016/4/20 19:38

I don't think so. As the knowledge in a chapter is extensive and comprehensive, student may not able to introduce all the topics with very clear of their analytic skills. If yes, I think it can

just for those subject which is no test or exam. because it can act as a little experience for the student to learn through practices. I think assign student with a project with a specific topic would be better for student to have the understanding about the subject.

2016/4/20 15:17

I think flipped classroom is useful for all subjects, especially for subjects involve calculation and difficult concepts. Having calculation practice in classroom is compulsory but interesting. Without practicing the calculation when necessary, students do not have much memory on it. They may need longer time to calculate by themselves. The practical applying concepts that mentioned in the classroom through speech, image, motion, activities can make students have easier understanding to the concepts. Therefore, flipped classroom can be useful in the knowledge delivery with effectively and efficiently.

2016/4/20 12:00

The flipped classroom may be useful for other subjects, by making video lectures available at all times online, students who are forced to miss class due to illness, sports, vacations or emergencies, can catch up quickly. This also gives teachers more flexibility when they themselves are sick and also eliminates make-up assignments.

2016/4/19 23:32

Yes, because it provides more detail for me.

2016/4/19 17:34

The flipped classroom would be useful for other subjects, especially subjects which need creative and critical thinking, because students can easy to present their X about the chapter and ask the fellow classmates to get involved in the flipped classroom by holding some activities, e.g. BINGO game.

2016/4/19 15:10

I believe the flipped classroom is useful for subjects which are less familiar by students. For example, "operation management" and "legal and ethics on health care" are subjects which are almost completely new to students. By organizing learning activity like the flipped classroom, students can explore more on these relatively new subjects and the learning outcomes are surely more in quantity and quality. While that this activity may not be effective in subjects like "Nutrition" which are quite familiar by the students. Students expect something more specialized and complicated on subjects which they have studied for years (/semesters).

2016/4/19 1:24

The flipped classroom would be useful for other subjects because it is a good way to let the students understand the contents of the lecture more. Also, sometimes some lecture may be boring and students may not be interested in listening to the teachers through the traditional teaching methods. Therefore, since flipped classroom is more interesting and focuses on interaction among the teachers and the students, it would be useful for other subjects.

2016/4/18 3:57

Actually, I do not think flipped classroom will be useful for every subject, flipped classroom is only suitable for the subject that include calculation or practical demonstrations, if there are only theoretical concepts, it is too difficult to explain them to students. However, calculation or practical demonstrations can be shown by the examples to classmates and they can easy to understand. Therefore, flipped classroom can be implemented on other subjects with special requirements.

2016/4/18 0:50

The flipped classroom may not be useful for other subjects since the operations management is a straightforward subject that the present group can present the chapter by following the flow in the textbook after understanding. But some subjects, especially in the program of health studies, require other up-to-date extra information and knowledge. Students may not have enough knowledge on the subjects, which make the lesson or the knowledge taught not fit in with the reality. Creative think may not be inspired if there is just a presentation of the textbook. If the subjects require more on the understanding on calculation and application, flipped classroom would be a good try.

2016/4/17 22:56

The flipped classroom would be useful for other subjects because it can also provide adequate information and learning materials for the student to learn. Other than teaching theories and concepts, flipped classroom is also useful in teaching some practical case, particularly studying in nursing program, because it is important for the nursing student to learn the detail of some procedures for better understanding and more revision. It can facilitate the learning of the students.

2016/4/17 22:41

As mentioned before, there are a lot of advantages and also disadvantages in the flipped classroom. When we are talking about using flipped classroom in other subject, it should depend on the specific situation. Some subject is not very difficult. For example, some subjects that ranged in one or two levels. These subjects can be easy for student to handle.

Therefore, it is available for flipped classroom. However, for those higher levels subjects such as in the three or four levels subject, in maybe difficult for students and should be teach by the lecturer.

2016/4/17 19:06

I think the usefulness of flipped classroom is depending on subject's property. Some subject is suitable to conduct flipped classroom while some are not. I think some language or informative subjects are not suitable to use flipped classroom. There are many uncertain variables in these kinds of subject. The video before lecture should be well prepared and have clear explanation of concepts. Good quality video helps students establishing useful concepts before lecture. And the teaching method in the lecture is very important. Since teacher do not know the concept level of students, it is important to have clear and effective organization in lecture. If teacher is failed to provide good organization, the learning pace of whole class will definitely delay. On the other hand, I think flipped classroom is suitable for some practical subject. Since practical subject is more rely on practice, it is easier to control the learning pace of different students.

2016/4/17 12:10

I do not think it works for other subjects unless the subject is related to language or skills like leadership, these subjects require more interaction in order to let classmates to learn some skills that need practice in reality and useful in the whole life. Other theoretical subjects are not suitable to use this method as the theories are not easy to understand and they are not skills that equipped earlier in life. Somehow subjects that relate to creativity would be a better choice for flipped classroom, these subjects can have more interaction after introducing theories. They can have brain storm discussion or activity that require creativity. For this subject, it is definitely not a good choice for flipped classroom as it involves many calculation and accounting. They should be explained clear by teacher in class.

2016/4/17 2:09

In this course, a lots of mathematical questions were needed to be calculated. And those question that we need to spend much time to digest. The flipped classroom allows to stop the class, and let us adjust our learning process. It would be better for effective learning. Also, we don't need to be worried about disturbing the other student or interrupting their learning process.

2016/4/17 1:42

Yes, it is. coz it can help to understand more about the content.

2016/4/17 0:27

Yes. In my opinion, flipped classroom also can apply in language classes. Currently, student is lack of time to actually speak the language conversationally. It is because student can increase the chance to speak the language through presentation or communication in class. Practice more perfect, which is the most important principle for learning. Therefore, push more of the rote material such as vocabulary grammar and tenses out of the class in the form of content that lead student can be accessed and reviewed any time.

2016/4/16 22:13

2016/4/16 17:26

In my point of view, the flipped classroom is not useful for most of the other subjects. The flipped classroom is only acceptable for the subjects that have a little bit or not including the professional knowledge, otherwise most of the classmates will have the possibility that being misled or not completely understand about the professional terms or theories. Also, the classmates (we) might not have enough experience to teach others. Although the lecturers may give some suggestions to us, it is not enough to cover the gap of experience between lecturer and students. However, some of the topics that are easily to understand or need to understand via participants with it are able to use flipped classroom. It is because flipped classroom can increase the motivation of students to participate in the class activities.

The flipped classroom would be useful for other subjects as well. Through the self-learning, students can learn by own pace, enhance learning and achievement by reversing the traditional classroom, put more focus on student and teacher interaction. Additionally, flipping the classroom helps me learn by allowing me to take everything slowly. I can take my time and absorb the material to the fullest extent. It makes our learning more efficient and easier. In a flipped classroom, students can have more time to be themselves, that means more free time and more academic practice. Not like the traditional way, we spend a huge amount of time on doing homework outside the classroom, probably more than few hours a day. This took out the time of not only students, but of teachers as well. As the flipped classrooms limit the homework workload by watching a lecture video, gives us and teachers more time to focus on other interests like self-learning, friends, families, and hobbies. If the flipped classroom could apply in our main subjects, such as nutrition, and health system. It is believed that the lecture could be more interesting than now. We can spend the lecture time on interacting with teacher and students, and have more time to in-depth study on some topic that we are interested in. However, it is good for our learning, but may be not a test-prep form of learning.

2016/4/16 14:55

I think that the flipped classroom is suitable and useful for other subject. In this flipped classroom, the issue include concept understanding and calculating. Thus, it is also suitable and useful to other subject.

2016/4/15 17:03

If the flipped classroom is used for theoretical subjects, then it would be useful due to the student can think of some creative method to classmate on how to understand that topic or theory.

2016/4/15 16:47

Yes, because n a flipped classroom, more free time, or more academic practice. Since flipped classrooms limit the outside workload to watching an online lecture that is usually less than 10 minutes long, this gives students and teachers more time outside of class to focus on other interests like friends, families, and hobbies.

2016/4/15 16:35

5. WHAT IMPROVEMENTS WOULD YOU RECOMMEND TO IMPROVE LEARNING IN THE FLIPPED CLASSROOM?

To improve the effectiveness of flipped classroom, there are teacher side improvement and student side improvement involved. On teacher side, teacher should discuss with presenter several time before real presentation, or even held rehearsal to ensure the quality of presentation. Hence, during presentation, teacher must watch under the stage, which allows to correct the mistakes or avoid wrong knowledge from presenter. To make sure run smoothly, I think teacher should not distribute the presentation. Even they have mistaken on some concept, or forget to introduce important parts, teacher should remain and comment after presentation but not necessary to distribute during present. On student side, presenter should go through the knowledge more beside the present contents, which allows to present smoothly when explain some difficult concepts. The listener under stage should also prepare the topic they heard before classroom, which allows to have basic concept to know the present information.

2016/4/23 17:27

Presentation for each group may be too long or too short due to the topic variations, classmates may feel bored. Therefore, the session of questions answering need to be more interesting. For students who answered the question, marks will be given into the midterm paper directly as same as the format of taking attendance. This may enhance their participation in flipped classroom.

2016/4/23 2:15

Since students are required to teach a chapter which is assigned by the teacher, they may have a chance to meet a boring topic and thus, they may have difficulties to make the lesson interesting. Thus, it will be better for the teacher not assigning those topics to students and teach by himself. If not possible, the teacher should adjust the marking standard for the particular group so that it is fair to all students. Moreover, the overview of grading on flipped classroom can be provided to students, so that they can have a better direction towards the objective of flipped classroom.

2016/4/21 1:18

I think the flipped classroom is ok but follow up work such as consultation time in classes or encouraging students to have a group discussion in exchanging the ideas to have a better understanding as well as helping everyone in the class to catch up the teaching schedule. Also, once again about examples on topics related to mathematics is not enough. Maybe other

than the flipped classroom, exercises based on these topics should distribute to students since doing exercises is the most effective way which requires the application of the learnt knowledge. Teachers can also know the students' understanding of the exercises and provide help to them.

2016/4/21 1:15

I love to have face-to-face lectures and have different activities and exercise during tutorials. The activities, discussions, and projects can be related to the previous lectures. It would enhance my motivations to revise the lecture before attending the new one. And the activities in tutorials can strength and reinforce my knowledge and memory of previous lecture. It is awesome to learn and experience through playing games and practicing. It helps me to have better memory and deep impression of those concepts. After the tutorial, it is good to have a take home exercise. It can help to self-check the concepts of class. If it is possible, instructors can film the lectures and post it on Moodle. It is difficult for student to be fully concentrated in classes. Students can watch the lecture video again at home to review the parts that missed out and have a better understanding of it.

2016/4/20 23:42

Not just presentation one by one, but add some interesting parts that enhance an interaction between the presenter and audience, otherwise it is no different from the traditional lesson. Sometime, the flipped classroom may not be good for students, so teacher can add some ideas or further explanation when there is something missing or not clear.

2016/4/20 22:04

None

2016/4/20 20:48

For the purpose of improving learning outcome from the flipped classroom, the teachers can record a video from the flipped classroom hold by the students. It is beneficial for the students and other classmates to review different versions of the same lecture. It also can allow students to reflect their own performance of being a teacher and familiarize the efforts putted by the teacher. Also, teachers can offer more materials about the lesson such as other literature regarding to the same topic, it is useful for the students to understand the presented topic and involve more in the class.

2016/4/20 19:38

Firstly, I think the teacher should draw up a certain marking criteria to the students. So, the student will have a clear mind to what they should do, such as what language they can choose to present.

2016/4/20 15:17

In the flipped classroom, I suggest to have more interaction between classmates. It may be good for students to have initiative on the activities. Each student should involve in leading the activities in order to have deep impression in some of the topics. Teachers are responsible for assisting the flow of the activities, to ensure the knowledge providing by students are correct and no misunderstanding to others students.

2016/4/20 12:00

In order to be more interesting, the teachers can design some questions for the students to think about. Besides, since there is no method to know whether the students have watched the video or not, it can set up a system to see how many students have engaged in it. As a result, we can know whether the flipped classroom is attractive to them.

2016/4/19 23:32

Should increase the preparation time and shorten the presentation time 2016/4/19 17:34

Since students are required to teach a chapter which is assigned by the teacher, they may meet a boring topic and have difficulties to make it interesting. Thus, it will be better for the teacher not assigning those topics to students and teach by himself. If not possible, the teacher should adjust the marking standard for particular group so that it is fair to all students. Moreover, the overview of grading on flipped classroom can be provided to students, so that they can have a better direction towards the objective of flipped classroom.

2016/4/19 15:10

For improvement, I suggest that students can choose their chapters of lectures in the next semester (year 1 students). At the start of the semester, students have to form group and choose their chapter of topics which they are responsible to hold the flipped classroom.

2016/4/19 1:24

In order to make the flipped classroom more effective and smooth, it is necessary for the students who act as teacher to comprehend the contents of the lecture first. Hence, I think the teacher should provide more assistance for the students who have to make a flipped classroom for others. I suggest that the teacher can have an one-to-two-hour meeting with the group first

to discuss about the lecture. It is favorable that the teacher mentions some key points of the lecture to those students first to allow the students remind themselves and their classmates as well.

2016/4/18 3:57

I think we should be more active when asking questions, if classmates do not answer the questions, we should give them some hints and encourage them to have a try. Also, we should have a double check on the materials, such as the worksheets and the PowerPoint, some minor mistakes will lead to the wrong answers. After that, we should provide more support and illustrations for classmates, more examples should be provided for them, then they can easily understand how to calculate. On the other hand, the concepts and theories should be introduced separately, do not put too many formula or concepts in one slide, classmates may be confused.

2016/4/18 0:50

It is better to upload the presentation handout on Moodle before the lesson start as it is hard to follow the presentation with a different handout, even the flow of the lecturer's handout is the same as the present group's one. There may contain some self-tests and in class exercise during the presentation. The presentation group may make another student version without the self-tests and exercise, so as to keep the questions and answers unwrapped as well as the competitiveness for the little presents.

2016/4/17 22:56

The flipped classroom provides two different languages for students to listen are very useful and helpful since some of the students may want to listen Mandarin to learn. However, there are some improvements should be applied to the learning in flipped classroom. Since the lecturer of flipped classroom will provide some exercises for students to follow, but the procedures of some calculations were not demonstrate enough and I cannot follow really well. Thus, I need to watch the video more times. More than that, there are five lectures used flipped classroom but only three of them provided Chinese version for us and the last two lectures, which are more difficult, did not have Chinese version. Hence, it is better to provide Chinese version of the other lectures for keeping the consistency.

2016/4/17 22:41

As mentioned before, one of the disadvantage of the flipped classroom is that if the students' presentation is not good, it will affect the other students learning. They will be confused in that current topic. To improve this problem, the lecturer should pay extra attention on the presentation. The lecturer should mark down the key point of the topic. Also the lecturer

should do a summary after the presentation. This can be a big improve for the flipped classroom as the students will have a chance to prepare and do the presentation, also, the lecturer will do the summary for other students learning. Which is a win + win solution.

2016/4/17 19:06

Considering learning pace of students is major improvement in flipped classroom. As mentioned before, students have various learning pace and it is important to ensure all students are in same pace. It is recommended to provide more discussion time in the lecture. Discussion time helps students to clear their concepts and provide chance of asking. This helps some students who are slow learning pace to catch up the pace of teaching. Also, clear explanation of some complex concepts can enhance students' understanding. It is better to use some examples form daily life.

2016/4/17 12:10

I think the flipped classroom should be shorten and should not be presenting for the whole lecture and the whole topic. A small part of the whole lecture can be selected to give a presentation for the class as to lower the workload and pressure of classmates. More preparation time should be given and inform the class earlier but not a week before. Also, it is a time consuming activity as we have to first watch the video online and find information on internet and books, then to conduct a presentation.

2016/4/17 2:09

As we known, sometime the course is teaching by multiple teacher. If the flipped classroom can be created by different lecturers, then we can access to different teachers' opinions and digital content in order to increase or comprehension of the subject matter.

2016/4/17 1:42

If subtitle is provided, it will be better 2016/4/17 0:27

The motivation of student studying in flipped classroom is the main improvement. So, the convenience may affect the student accept the flipped class and watch the lecture video consciously. And it can be recorded who has watched the lecture video. Furthermore, the study design is significant for student by lecturer who should choose the proper chapter to student during flipped classroom. In addition, it allows the students to explore the content and construct their own understanding before introducing any terminology. Therefore, students actively engaged with materials to discover patterns, make hypotheses, and build conceptual understanding.

2016/4/16 22:13

The lecturer should give some guideline for the audience and also the speakers in some complicate topic or the topics that are not easily understand, it will be useful for improve the comprehensive of the topic. On the other hand, the lecturer should teach the presenter first before they start teaching others, it can help the presenter understanding the topic well and also the lecturer will know that which part of the topic is the most difficult to understand. After that the lecturer can remind or teach one more time after the presenter finished their teaching. Finally, the lecturer should provide some suggestions/recommendations to the speakers that what they can improve or should improve.

2016/4/16 17:26

It would be better if Cantonese can be used as an auxiliary language when we present or asking question. This is because Cantonese is our mother language, it is helpful for us to have a better understanding on some complex concepts or theories. Moreover, a reflective activity would be helpful as well. Every time we watch a video or video lecture, building in some reflective activities or discussion to let us think about what we have learned in the lecture, how it will help, and its relevance.

2016/4/16 14:55

Students may not have experience, they cannot provide some actual examples to the issue, so, teachers can assist the student to complete the flipped classroom. Techer should limit the time of flipped classroom. It is because students may not clear and completely teach the all concept and calculation to students, so some time need for teacher to teach the concept and calculation again. Also some time need to use for Q&A in order to make sure that all student understand the issue.

2016/4/15 17:03

6. PLEASE STATE ANY OTHER COMMENTS YOU WISH TO MAKE ABOUT THE FLIPPED CLASSROOM.

Actually I think flipped classroom is brand new method to increase the motivation of students. However, the procedure or applications of flipped classroom should prepare well before. Or otherwise, the flipped classroom will be ruined because of bored and weak persuasive.

2016/4/23 17:27

As majority of the classmates are concerned about the midterm tests, teachers may give a briefly hints of the topic to the group during the consultation period of the flipped classroom, so that the group can more focus on that part within 50minutes and prevent out of focus.

2016/4/23 2:15

It is good for the teacher to have involvement in between the group presentation, by providing more detailed information for supplementary. This helps the classmates to have a better understanding of what the speakers said and thus follow the lecture. In addition, I think the assessment process can be changed. For example, having more computerized assessments rather than paper-and-pencil assessments. This allows students can do their assignment everywhere by using personal computers or mobile phones. Besides, compared to the group discussion, I would prefer having activities more. For example, the LEGO game is interesting and attractive and allows my groupmates to actively join.

2016/4/21 1:18

Actually, I am quite happy that before the end of my university life there is a teacher willing to make use of the advantage brought by the technology and put effors in recording videos. The flipped classroom is a convenient tool to help students to learn and allow students to make slight adjustments according to their ability to learn.

2016/4/21 1:15

It would be perfect for me if we can combine the concepts of flipped classroom and traditional together.

2016/4/20 23:42

More activities and games that related to lectures, so that it is easy for students to remember. The main goal of flipped classroom is to convert the complicated ideas to simple things. 2016/4/20 22:04

No

2016/4/20 20:48

After having the flipped classroom, it is useful for me to have more understanding about the teaching materials and it is a new method for us to learn from the internet, internet is an effective tools for us to access and we can review the video all the time. Also, flipped classroom let me understand the roles of teacher and teachers need to work extremely hard or incessantly. Students are independent. Besides, students do not need to rely on teachers to teach the material, but can teach it to themselves with material provided by the teacher. As a result of this, they could adjust the pace of their work, do the material at their own level.

2016/4/20 19:38

To conclude, the objectives of flipped classroom is good for student. But more comment and advice of this activity is needed and necessary. Lastly, I feel happy that most student are enjoyed in our group's presentation and very active to answer the question.

2016/4/20 15:17

Providing Chinese and English versions of video lecture are clear for students' understanding, including the mother language and main language. In currently, it is an effective learning for students through flipped classroom. The main concern is to ensure the teacher-students relationship will not be affected, as this is also an important achievement in a college environment. It is also suggested some topics can make flipped classroom, while some topics can still have traditional classroom.

2016/4/20 12:00

During this flipped classroom, it is more effective than the traditional class because we can replay the video when we listened something that are unclear. Besides, it is very useful during revision, as it can remind us about what the teachers had taught during the lessons.

2016/4/19 23:32

As we have not learned the knowledge of the textbook before, so that the rating requirement should be lower

2016/4/19 17:34

It is good for the teacher to have involvement in between the group presentation, by providing more detailed information for supplementary. This helps the classmates to have a better understanding of what the speakers said.

2016/4/19 15:10

The flipped classroom is quite successful so far. At least I have learnt a lot from these five lectures. And it is a good replacement for the group project since it offers us more learning outcomes. In the last semester, students are exhausted of completing assignment, midterm tests and final tests. The activity of flipped classroom gives a solution to the demanding workload of students. It offers a solution to ease the difficulty in balancing workload and learning progress. Students can finish their "group assignment" by holding the flipped classroom and continue their learning from lectures at the same time. I think it is a mutual beneficial activity to both students and lecturer. Please continue this meaningful idea and may the program develop better and in bigger scale.

2016/4/19 1:24

I think it is good to allow the students to use Cantonese for explaining some difficult points because Cantonese is our mother language and the level of English of each student are different. It is more effective for the present group to explain the information and for other classmates to understand easily, especially for those who do not understand in English.

2016/4/18 3:57

To conclude, I strongly recommended the flipped classroom on others subjects which include calculation and practical demonstrations. There are more advantages than disadvantages on flipped classroom. Flipped classroom help us to learn something new and experience more about different things. Besides, I think it can help us to establish a better relationship with classmates, be closer with them and understand them more. When I see they are satisfied with our gifts, I am happy too. I am really thankful to have this new experience and I believe this is a great experience to learn more from our teacher. Therefore, I think flipped classroom is a good practice for us.

2016/4/18 0:50

No offense, traditional learning is boring, especially for this kind of subjects. Flipped classroom is definitely a fresh idea to learn, at least I enjoyed participating in those lessons as it was much more interesting than the traditional classroom. I would highly recommend adopting this learning method for this subject.

2016/4/17 22:56

I think the flipped classroom can be used continuously for the future because it provides different approach for us to learn. Also, we can have an opportunity to present the topic of the lectures. Although the teaching materials are well prepared, we also can have a different experience of presenting a lecture like a teacher.

2016/4/17 22:41 檢

As the flipped classroom are held by students, the performance of the presentation is really important. If the presentation is very boring, it is really hard for the other student to listen the presentation. Although listening to the presenter is a kind of respect and also the duty that a student should preform, this problem will bring a huge impact to other students' learning. Id the flipped classroom can solve this problem; this can be really perfect. I hope that the lecturer can do more in the quality control about the presentation, help them and give them more advices in order to have a better presentation.

2016/4/17 19:06

I hope to stick with the traditional teaching method rather than having flipped classroom if we have to present for a topic. It is a heavy responsibility for classmates.

2016/4/17 2:09

Actually, it is the first time that I use the flipped classroom to learn and study. It is very interesting to me because it would not that boring. Maybe this is because I would like to using computer to handle my work in my daily life,

2016/4/17 1:42

It is very interesting thing I have never used before for learning.

2016/4/17 0:27

The time of flipped classroom in the video is shorter than the common lecture in the classroom. It is recommended that it can be given more examples for some of lectures. I think my lecturer done well before I have prepared the flipped classroom to classmate. He can explain the detailed and focal point that made me understand and apply the valuation methods of knowledge in the chapter. Because explain is the significant phase at which the lecturer before introducing any terminology and introduces terminology that students can link to their own constructions to facilitate concept building.

2016/4/16 22:13

Provide more guidelines for the speakers who are ready to present. The flipped classroom should be more flexible about the teaching methods, and the rules of flipped classroom should be told to whole class before it starts. The lecturer should empower the speakers to set up

their own rules during they are present. It is because a part of the classmates may not want to listen during the class if the presenter is not the lecturer.

2016/4/16 17:26

More images, diagrams, or charts that add to our presentation and the lecture notes.

2016/4/16 14:55

Students can add more alternative methods in the flipped classroom. For example, they can add more games in the class. It can learn the concept through the games, it can more easy to understand the concepts. Moreover, some issue may be very difficult, it is difficult to use the secondary language (English) to teach the issue. Thus, teachers can allow using Cantonese to teach it. Although, teacher allow them to use Cantonese, other students think that using Cantonese is not professional, thus students may have a lower score when having a peer evaluation.

2016/4/15 17:03