GOOD Flipped Classroom CASE

Flipped Learning and Teaching Initiative

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Instructor
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Department
Department of Management and Marketing (MM)

MM4772
Product Management

Class size
130 students in 2025/26 Sem 1

Students
Year 3 or 4 students in BBA (Hons) in Marketing

Details of Flipped Classroom IMPLEMENTATION

Why did the instructor use the flipped classroom approach?

Winslet has been teaching "Product Management" for over a decade, and she was eager to enhance her teaching methods to improve student learning effectiveness and experience.

While PolyU is renovating its classrooms by equipping them with new features and technologies (e.g., flexible-style layout, informal and collaborative learning space, Apple TV for wireless presentations, semi-transparent glass wall, extensive whiteboards, and immersive technologies) to foster better interaction between teachers and students, Winslet saw this as a perfect opportunity to innovate her pedagogical approach to her subject. She successfully applied for a project grant to incorporate new technologies into her curriculum and is experimenting with a flipped classroom approach. By moving lectures and content delivery to before class and using class time for interactive activities, problem-solving tasks, and deeper teacher-guided application of Product Management knowledge, the flipped classroom approach increases student engagement, prompts active learning, and allows for personalised support during complex tasks.

How was the flipped teaching approach implemented?

Preparation of materials

Two hours of lecture videos have been recorded using Panopto and subsequently divided into three separate short clips. Also, curated articles have been prepared to help students develop a well-rounded view of a topic. In addition, PowerPoint that summarise theories and important concepts are supplemented to students for a deeper understanding of a topic. These clips and articles have been uploaded to Blackboard and the Metaverse, making them accessible for students to watch and read at their own pace and convenience.

Pre-class activity

Every week, Winslet assigns short lecture videos and curated articles before class. Students are required to watch the lecture videos and read articles before attending class to ensure they have a basic understanding of the topic for the group discussions and hands-on activities held during class. At the same time, Winslet has decided not to assign any homework or grade this requirement, allowing students to focus solely on understanding the material presented in the videos and articles. Students can review difficult content as many times as needed before class and become active participants in their learning.

In-class activity

In-class activities include short quizzes and polls, group discussions and presentations, simulations, and collaborative problem-solving tasks.

1. Short quizzes or polls

Winslet starts each session by outlining the class's learning objectives and recapping key points from the pre-class lecture videos. To ensure comprehension and retention, she occasionally employs multiple-choice or short quizzes on Blackboard or the Metaverse, serving as a knowledge check without impacting grades. Winslet utilises educational technologies and classroom facilities to design various collaborative learning activities. She uses Slido to allow students to raise questions, provide feedback, participate in polls, and create word clouds using their electronic devices.

2. Group discussions and presentations

Every other week, Winslet sets up discussion topics for student groups to brainstorm and write down their ideas on the classroom whiteboards and glass wall. Each group selects a representative to stand in front of their whiteboard and glass wall and present their ideas to the rest of the class. Meanwhile, the other group members circulate around the room, visiting other groups' whiteboards or glass walls to listen to the presentations. This allows 7-8 group presentations to happen concurrently in class time.

3. Simulations

The Metaverse is incorporated to provide students with opportunities for engaging, interactive, and personalised educational experiences. Specifically, the immersive virtual environment allows students to explore complex and practical concepts in visually stimulating ways and to exchange ideas with students in overseas universities in virtual classrooms without travel. Winslet takes class time to instruct students to create their own avatar and guide students to utilise the functions offered by the Metaverse for completing the online tasks.

4. Problem-solving tasks

Winslet designs problem-solving tasks that allow students to gain hands-on experience by going through every step of the product design and development process, from product idea generation, screening, business analysis, product prototyping and testing, market testing, and commercialisation. Students spend class time brainstorming ideas together, make use of 3D printer to create a prototype, utilise AI software to generate product illustrations and TV commercials for promotion, etc.

Post-class activity

Each week after class, students are required to write a review or reflection, either individually or in groups, on Blackboard or in the metaverse, for Winslet to assess their understanding.

What are the good practices that can be learnt from this case?

Utilising the classroom setting for effective collaborative learning

- One of the core principles of the flipped classroom approach is to reduce direct instruction in the lesson so that teachers can focus more on group work and interactive learning activities. Winslet makes use of the newly renovated classroom setting and facilities to support her cooperative learning activities. The flexible arrangement of movable desks and chairs allows for a seamless transition between different learning activities, such as lectures, group discussions, and quizzes. This adaptability ensures that the classroom environment can be tailored to the specific needs of each lesson, fostering a more engaging and dynamic learning experience.

  Additionally, Winslet effectively utilises the wall-mounted whiteboard and glass wall, encouraging student groups to rotate and share their ideas. This practice not only promotes active participation but also enhances interaction between the teacher and students, as well as among the students themselves. Through collaborative learning, Winslet creates an environment where students can actively engage and collaborate, enhancing their overall learning experience.

Using AV-IT and technologies to enhance learning effectiveness

- By recording her lectures with Panopto and uploading them to Blackboard, she provided students with the flexibility to review the material at their own pace before class, leading to better preparation and understanding. Additionally, her use of Slido in the classroom allowed students to actively engage by asking questions, giving feedback, participating in polls, and creating word clouds using their devices. This interactive use of IT not only fostered greater student participation but also enriched the overall learning experience, making it more dynamic and effective.

Using a learning management system to manage, track and improve student learning outcomes

- Learning management systems, e.g., Blackboard, are used to create, organise, and categorise course materials and assignments with rich media support, including text, video, and quizzes. Winslet uses Blackboard to create, review, and grade assignments by using a direct feedback system. With the built-in Q&A forum, students can ask questions, interact with her, and receive feedback about their assignments and performance in real time. Further, Winslet can track student performance with in-depth analysis and get detailed insights on course completion, quiz scores, and student participation, thus refining the course delivery and curriculum development.

What were the challenges encountered during the implementation and what solutions were used?

Unfamiliarity with teaching technologies and software

> Winslet was passionate about leveraging technology to enhance learning effectiveness in this subject. However, she encountered a significant challenge due to her limited familiarity with teaching technologies and software. Determined to overcome this obstacle, Winslet embarked on a journey of self-improvement. She began by extensively searching the web for relevant resources and studying various online materials. Recognising the need for structured learning, she also enrolled in courses at PolyU to systematically increase her digital capacity. Through these persistent efforts, she successfully used software such as Panopto and Slido in her class, thereby enriching the educational experience for her students, thereby enriching the educational experience for her students.

Students are not prepared to adapt to the new learning model

> Winslet's flipped learning approach requires students to engage with two hours of lecture videos outside of class and then apply their knowledge through interactive activities during class time. Many students struggle with this shift in responsibility, as it demands greater self-discipline and time management skills, leading to some not dedicating enough time to watch the videos. Consequently, at the beginning of each class, Winslet has to review and reinforce the key points from the videos for the students. Winslet mentioned that if she were to implement the flipped classroom again, she would provide more guidelines to help students better prepare. Additionally, she might incorporate questions or quizzes within the videos to encourage more active engagement from the students.

What was the impact on student learning?

Pre-class lecture videos enable students to learn at their own pace before attending class, thereby freeing up in-class time for deeper exploration of topics through collaborative learning activities. The classroom setting and facilities further enhance the effectiveness of these activities, providing a conducive environment that supports more efficient teaching and learning. Additionally, the questionnaire results indicate that students appreciate the innovative classroom environment, which facilitates smooth and effective discussion, presentation, and interaction. This combination of pre-class preparation and an engaging in-class environment helps to maximise student learning outcomes and overall satisfaction.

Overall, the performance of students in different assessments has increased by 5-10%, compared with the performance of students who took the same course in the last academic year. The attendance rate is also the highest over the decade. By the end of the semester, students are asked to fill in the survey and provide feedback on their experience with the flipped classroom. Data from 130 undergraduate business students showed that learners with an open attitude to an innovative learning approach and experience metaverse perceived more usefulness during the class activities. Specifically, the incorporation of the Metaverse in the flipped classrooms significantly enhances student creativity, collaboration, and critical-thinking skills.