A Case Study on the Hybrid Teaching and Learning Environment in AUSMAT, Sunway College (KL)

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The teaching and learning environment have evolved from the traditional instructional design method to a hybrid learning model. Inclusivity and accessibility of education has become a primary concern for educators. AUSMAT has taken the initiative to provide a mechanism to reduce the impact of Covid-19 on the teaching pedagogy.

BACKGROUND

OBJECTIVE

To evaluate & review the implementation of technology to support teaching and learning for hybrid classroom.

TEACHING STRATEGIES ADOPTED

Strategies adopted during pandemic starting from March 2020 and fine-tuned for hybrid learning in the endemic phase.
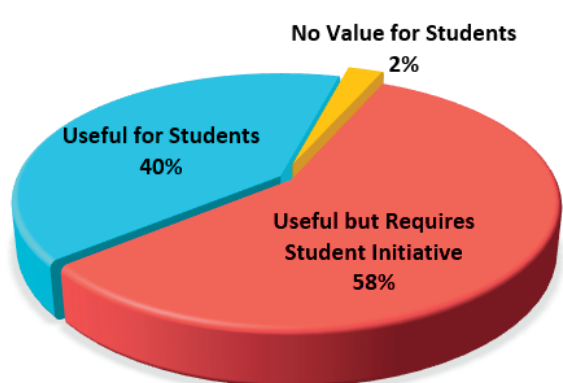
1. The digitalisation of course materials such as notes, homework material, etc, through Microsoft OneNote
2. Collaborative work through OneNote and Microsoft Teams' Breakout Room
3. Continuing live-streaming and recording of class sessions.

METHODOLOGY

A survey was conducted on all the 40 AUSMAT academic staff to evaluate the teaching strategies.

RESULTS & ANALYSIS

LIVE STREAMING AND RECORDING

- No Value for Students 2%
- Useful for Students 40%
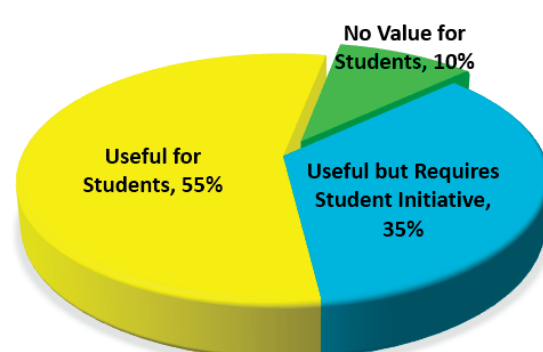- Useful but Requires Student Initiative 58%

While 98% of the lecturers believe that continuing the live-streaming is to the student's advantage, 58% of those lecturers are of the opinion that in order for it to be effective, students' initiative is required.

90% of our lecturers view using educational technology tools such as the Collaboration Space in Microsoft OneNote and Microsoft Teams' Breakout Room adds value to achieving the learning outcome.

COLLABORATION BETWEEN STUDENTS

- No Value for Students, 10%
- Useful for Students, 55%
- Useful but Requires Student Initiative, 35%

ACCESSIBILITY OF MATERIALS

- No Value for Students 5%
- Useful for Students 73%
- Useful but Requires Student Initiative 22%

95% of our lecturers, of which 73% of them agree regardless of the student's initiative, having a digital copy of materials in a standardised format has its benefits for student learning.

To further analyse, we categorized our survey results for the hybrid classroom and compared it to some literature* as applied to AUSMAT classes from the pre-pandemic and pandemic times.

Metrics	Pre-Pandemic	Pandemic	Endemic
Accessibility of materials	Limited to physical copies	High due to availability of materials online	High due to availability of materials online
Self-paced Learning	Moderate due to limited accessability	High due to implementation of flipped classroom	Moderate due to lack of student initiative
Collaboration in-class	Moderate due to lecture based teaching style	Limited due to physical isolation	High due to usage of technological apps
Inclusivity of Distance Learners	Limited due to lack of technological usage	High due to online classes	High due to live-streaming of classes

* Alenezi, A. (2020). The Role of e-Learning Materials in Enhancing Teaching and Learning Behaviors. International Journal of Information and Education Technology. 10. 48-56. 10.18178/ijiet.2020.10.1.1338.

Dhawan, S. (2020). Online Learning: A Panacea in the Time of COVID-19 Crisis. Journal of Educational Technology Systems, 49(1), 5–22. https://doi.org/10.1177/0047239520934018

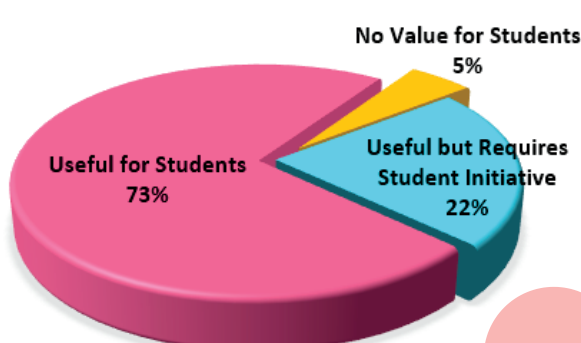Nouri, J. The flipped classroom: for active, effective and increased learning – especially for low achievers. Int J Educ Technol High Educ 13, 33 (2016). https://doi.org/10.1186/s41239–016–0032-z
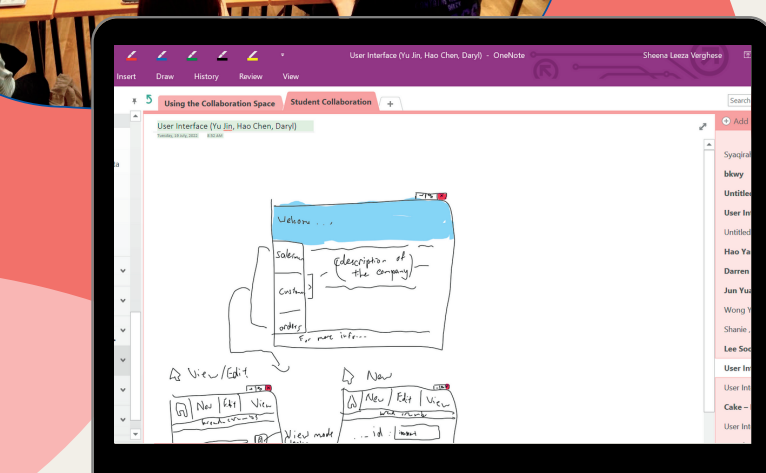
HYBRID CLASSROOM IMPLEMENTATION

Live-Streaming & Recording Classes through Microsoft Teams.

- An increase in inclusivity of distance students into the classroom experience through the live-streaming during class sessions.
- Recordings are available to be reviewed by students for further synthesis.

Collaboration through Microsoft OneNote

- Distance learners are able to participate in group work during class with the increase in accessibility of materials.
- Changes made during the groupwork can be tracked and previewed to allow students to self-regulate their work.

CONCLUSION

The current strategies in the usage of technology seem to have positive benefits for the students from the perspective of educators. Further, the endemic practices take into consideration the pedagogies that were in place pre-pandemic and during the pandemic season. Hence, the combination of strengths of the strategies during two phases can be utilised to create a better learning environment with the aid of technology.

CHALLENGES

Along with changes in the instructional design in classrooms, challenges such as the stability of the internet connection, the durability of the laptops provided and the quality of the projectors in classrooms have arisen. Although these problems occur, we believe that the current practices are the beginning of a step into the right direction for the future of education.

OPEN PROBLEM & FUTURE WORK

- An open problem we are facing is the complete adaptation of effective hybrid classroom pedagogies based on our endemic education needs.
- Some future work include:
  - Increasing the role of educators as facilitators of learning through the use of technology
  - Personalisation of student learning experiences with the help of technology.