

# Challenges of Teaching-Learning in Higher Education During the COVID-19 Pandemic



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## Background



Figure 1: COVID-19 protocols in practice

In March of 2019, the COVID-19 pandemic forced many institutions to begin teaching courses online. As time has progressed, and efforts to return to a more normal academic environment have resulted in the implementation of a hybrid model of learning/teaching in recent semesters. The hybrid model consists of a combination of both in-person and online learning with the students being divided into each population based on preference. It is estimated that over 50% of TAMU courses in the Spring 2021 semester are being taught under this model.



Figure 2: Conducting a course through Zoom  
 Main Challenges Encountered

In previous studies conducted at both TAMU and other universities, it has been observed that students and teachers alike suffer from technological difficulties, struggle to maintain communication, a lack of motivation and engagement from students, and difficulties finding a suitable workspace for classwork. Whilst most observations are overwhelmingly negative, a bright spot referenced is the flexibility offered through this model [1].

## The hybrid model has proven to create a plethora of obstacles for faculty and students to ensure a high quality of education

### Research Aims

**Aim 1:** The first goal of this study is to gauge teacher experiences in the ISEN department whilst teaching under the hybrid model in order to determine their viewpoint regarding the efficacy of this learning method. Through their opinions of the pitfalls, and effective aspects of this method a more thorough plan on how to properly implement hybrid models in the future may be curated.

### Methods

A follow-up survey study of students within the TAMU ISEN department administered through qualtrics, and recruited through bulk\_email/listserv.

### Faculty Questionnaire (Previous Study)

Faculty of the Industrial Engineering Department (ISEN) at TAMU were interviewed to discuss their experiences and lessons learned while teaching under the hybrid model in the previous semester in comparison to prior semesters. Such questions asked included how they believed their efficiency in delivering knowledge was altered, levels of participation and attendance, and did they find any positive aspects in using the hybrid model over previously used conventional education models.

### Results

#### Previous studies' findings:

- Two main difficulties encountered by faculty was the lack of feedback obtained from students throughout the lectures, and allocation of attention between their online and in-person students
- Overall experiences by the professors were determined to be overwhelmingly negative in comparison to previous semesters and a grand majority indicated there was no positive aspect when teaching under the hybrid model
- Majority of professors indicated there was less participation when using the hybrid model than previous semesters
- Majority of professors indicated they felt less efficient when delivering knowledge

#### The main findings of the previous study and example questions that will be used when performing the follow-up study with students from the TAMU ISEN department.

#### Student Questionnaire:

- According to statements from the previous study, professors indicated they believed students suffered from a lack of motivation and engagement with their courses
- In almost all cases professors indicated a drop in attendance expected when surveying students
- Other questions to be asked include a description of their overall experience under the hybrid model, aspects of this education model they enjoyed, alterations to participation and performance under this model, etc.

### Implications/Significance

The findings of these study are pertinent as the global pandemic, although an end is in sight, may continue through further semesters. These findings will allow for the hybrid model to be implemented in a more beneficial manner in future semesters. Also, many universities throughout the country, and even globally, are experiencing these same hardships. Therefore, the findings of this study will be generalizable and applicable to other institutions of higher education that are suffering from the same difficulties related to the hybrid model of education.



### Future Work

Firstly, a greater focus on the challenges that affect faculty and students alike can be applied to these studies once a larger sample size has been generated. Since the hybrid model has only been in widespread usage for approximately 1-2 semesters, since the COVID-19 protocols have been placed at universities. The larger emphasis on challenges faced over time will allow for a greater understanding on how to properly change different aspects of the hybrid model to be more professor and student friendly.

Secondly, new methods and aspects of teaching could be introduced in the hybrid model, and its effects observed to see if these changes made a positive impact on the experiences of teachers and students under this educational model. This would allow for definitive observations to be made on how this method of education can be improved in the future.

Finally, the sample population can be expanded to include students and faculty from various different departments and levels of education in order to determine if similar hardships are experienced between different parties.