

PROJECT PROPOSAL
CS 5651: STATISTICAL INFERENCE

**Predicting Satisfaction Among the
Students On E-Learning Under the
Pandemic Situation**

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Predicting Satisfaction Among the Students On E-Learning Under the Pandemic Situation

Research question

During the COVID-19 pandemic, educational institutions around the world were closed, affecting a large number of students and causing a massive disruption in the education system. Prior to the COVID-19 pandemic, E-learning was growing at a rate of about 15.4 percent per year in educational institutions all over the world, with no uncertainty or pressure on those institutions or students [1]. However, because this research was conducted during COVID-19, the situation has drastically changed. Due to global restrictions aimed at limiting the spread of COVID-19, educational institutions began providing the majority of their services online, including lecturers and various assessments, via various platforms for students all over the world. As a result, online learning has become the new normal in all learning disciplines such as engineering, medicine, and management.

Satisfaction with online learning is an important factor in promoting effective educational processes. Despite widespread use of emergency remote learning (ERL) in higher education during the COVID-19 pandemic, there is a lack of understanding of the factors that influence student satisfaction in this novel learning environment in crisis. The purpose of this study was to identify factors influencing student and faculty satisfaction with online learning in the new normal.

Expected Sample Size and Sample Collection Method

The study will be conducted on approximately 300 undergraduate students studying Technology and Engineering in Sri Lankan universities (government universities). If at all possible, data from other learning disciplines, especially medical students, will be gathered.

Data is being collected via an electronic questionnaire with a validated Technology Acceptance Model in order to investigate factors that influence student satisfaction and use of e-learning as a teaching tool. The questionnaires contained both closed-ended and open-ended questions and were divided into two sections: socio-demographic information and satisfaction with online learning. The art of a student survey is the creation of an instrument that addresses the target while taking the least amount of time to complete. The current instrument is presented in a 5-point Likert scale format, ranging from strongly agree to strongly disagree, and focuses specifically on the dynamics of student satisfaction with online learning. It is expected that all questions be entered into a Google form and distributed to students via online platforms such as vi email, WhatsApp groups, or posting on interactive platforms such as Facebook.

Analysis Plan

We intend to investigate two major questions for this research project:

1. Which type of classroom learning environment did students prefer: online, face-to-face, or blended?
2. What specific course-design factors might have an impact on student satisfaction?

To answer these questions, a survey of student satisfaction levels must be developed based on an existing survey instrument that employs a five-point Likert scale to assess three types of learning support: instructional, peer, and technical.

First, student satisfaction levels can be compared across learning modes: online only, face-to-face only, or blended. Then, using regression analysis, determine which aspects of course design and implementation

best predicted student satisfaction. Descriptive statistics can also be used to analyze satisfaction scale responses. Thematic analysis can be used to analyze students' responses to open-ended questions.

References

- [1] Sara Toth Stub. (2020-04-02). Countries Face an Online Education Learning Curve. U.S. News & World Report. <https://www.usnews.com/news/best-countries/articles/2020-04-02/coronavirus-pandemic-tests-countries-abilities-to-create-effective-online-education>