

## Capstone for Impact Submission | GY2020

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**Project Title:** Efficacy of Video Lessons in Undergraduate Medical Education Leadership Development Program

**Student Name(s):** Jesse Kelley

**Advisor Names(s):** Dr. Nell Kirst and Dr. Brian Zink

**Branch:** Procedure

**Path of Excellence:** N/A

*If this project can be continued by another UMMS student, please include your contact information or any other details you would like to share here:*

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### Summary:

Leadership development training in undergraduate medical education is a fairly new concept and therefore there is no consensus for what is the best way to develop leaders of tomorrow's healthcare in an effective manner. The research question this study will focus on answering is whether a flipped-classroom approach serves a useful role in leadership training in pre-clinical medical students. As part of the longitudinal Leadership Development Program at the University of Michigan Medical School, we wanted to assess the efficacy in providing preclinical medical students with required short video lectures (less than 15 minutes) focusing on a particular leadership skill/characteristic prior to their in-person classroom session that follows within the next week. Four in-person leadership classroom sessions would be held between August 2019 and December 2019 (three for M1 students and one for M2 students), and students will be required to watch videos as pre-work to these sessions. After watching the videos, they will be given the opportunity to fill out an anonymous, voluntary survey to help us assess whether these videos were helpful in leadership development. The survey would utilize the Likert Agreement Scale of statements that represent Levels 1-3 of Kirkpatrick's training evaluation model. Following the in-person classroom session, students would again be asked to assess the efficacy of the videos with respect to leadership training and the associated classroom session by again using the Likert Agreement Scale. Evidence of this being an effective approach to training pre-clinical medical students in leadership would allow other medical schools to implement this approach with regard to their specific leadership training, resulting in advancement of leadership training within the medical education community.

## Methodology:

Between September 2019 and December 2019 there were three classroom sessions as part of the Leadership Development Program. Two of the classes were for second year medical students and the other class was for first year medical students. An email was sent several days prior to each class, requiring students to watch two short videos (each under 15 minutes) pertaining to a particular leadership skill or characteristic. The videos come from Big Think, an organization that houses many videos pertaining to leadership. The students would then go to their classroom session and partake in the educational values at that time. Afterward, they were given the opportunity to fill out an anonymous, voluntary survey to help us assess whether these videos were helpful in leadership development that followed the Likert Agreement Scale (1-strongly disagree; 2-disagree; 3-neither agree or disagree; 4-agree; 5-strongly agree).

## Results:

48 students responded to the short five-question survey as of December 2, 2019. 26 students (50%) either agreed or strongly agreed that they were satisfied with the video overall, and 9 students (18.75%) disagreed or strongly disagreed with the statement that they were satisfied with the video overall. 23 students (48%) agreed with the statement "The content of the video increased my knowledge of the subject material as it pertains to leadership" whereas 17 students (35%) disagreed or strongly disagreed. 16 students (34%) neither agreed or disagreed with the statement "The content of this video will impact my leadership behaviors moving forward," and 14 students (30%) agreed or strongly agreed. 22 students (46%) agree or strongly agree with the statement "Watching videos pertaining to leadership as pre-work prior to attending live sessions is an effective way to learn about leadership" whereas 21 students (44%) disagree or strongly disagree. 21 students (44%) disagreed or strongly disagreed with the statement "I would recommend this method of watching leadership videos as pre-work to others seeking leadership development" whereas 20 students agreed or strongly agreed (42%).

## Conclusion:

For all of the questions, the mean responses ranged from 2.90 to 3.50 corresponding to the text "neither agree nor disagree," thus the data neither supports nor denies the efficacy a flipped-classroom approach with pertinent videos may play a role in leadership development in undergraduate medical education. More data on the efficacy of videos would be needed to obtain a clearer picture. Limitations to the current study include the delay in survey sendout, the sample size, and the difference in target populations (first year medical students vs second year medical students). There was a miscommunication amongst those involved with the Leadership Development Program and the researchers with regard to when the classroom sessions would be taking place, resulting in the survey being sent out several weeks after. Several students emailed the researcher regarding the inconveniences of this, which may explain part of the low participation and low sample size. The survey also did not account for what year of medical school each student is in. Perhaps this approach to leadership development suites one year over another based on prior experience.

## Reflection/Impact Statement:

*You may use the following questions to guide your reflection:*

1. How did the process of conducting this research confront any limitations of your prior thinking?  
**Conducting this research has showed me that in truly takes a team of individuals to ensure that the project does what it is intended to.**

2. Who could potentially benefit from this CFI project over different timescales and how?  
**Medical schools and other graduate schools could benefit from this CFI project because they would be able to model their leadership development program off of the results of this study, good or bad. Medical students going through program could also benefit from the results of this as it will allow them to better analyze/reflect on what teaching methods work best for leadership development.**
3. What actions will you take afterwards to continue the momentum of this project, and maximise the likelihood of the identified benefits being achieved?  
**Continue implementing videos to obtain more data, and once the data is conclusive one way or another, the curriculum/leadership development program can be adjusted accordingly.**
4. What advice would you give to another student completing their CFI?  
**To think holistically about the project and what obstacles may come up, and plan accordingly while also recognizing that other unforeseen challenges will arise.**