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Impact of the COVID-19 pandemic on the usage of ECHO360 in pre-clinical medical education

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Background

- The COVID-19 pandemic dramatically affected medical education as it disrupted traditional teaching methods and challenged usage of new and innovative approaches
- ECHO360 is an online learning platform that allows for instructors to post recordings of in-person or previously recorded lectures
- ECHO360 has been utilized by UNMC's College of Medicine for many years as a secondary resource allowing students to review lectures

Purpose

The purpose of the project was to evaluate the impact the COVID-19 pandemic had on the usage of ECHO360 during the pre-clinical years within the College of Medicine (COM) at UNMC

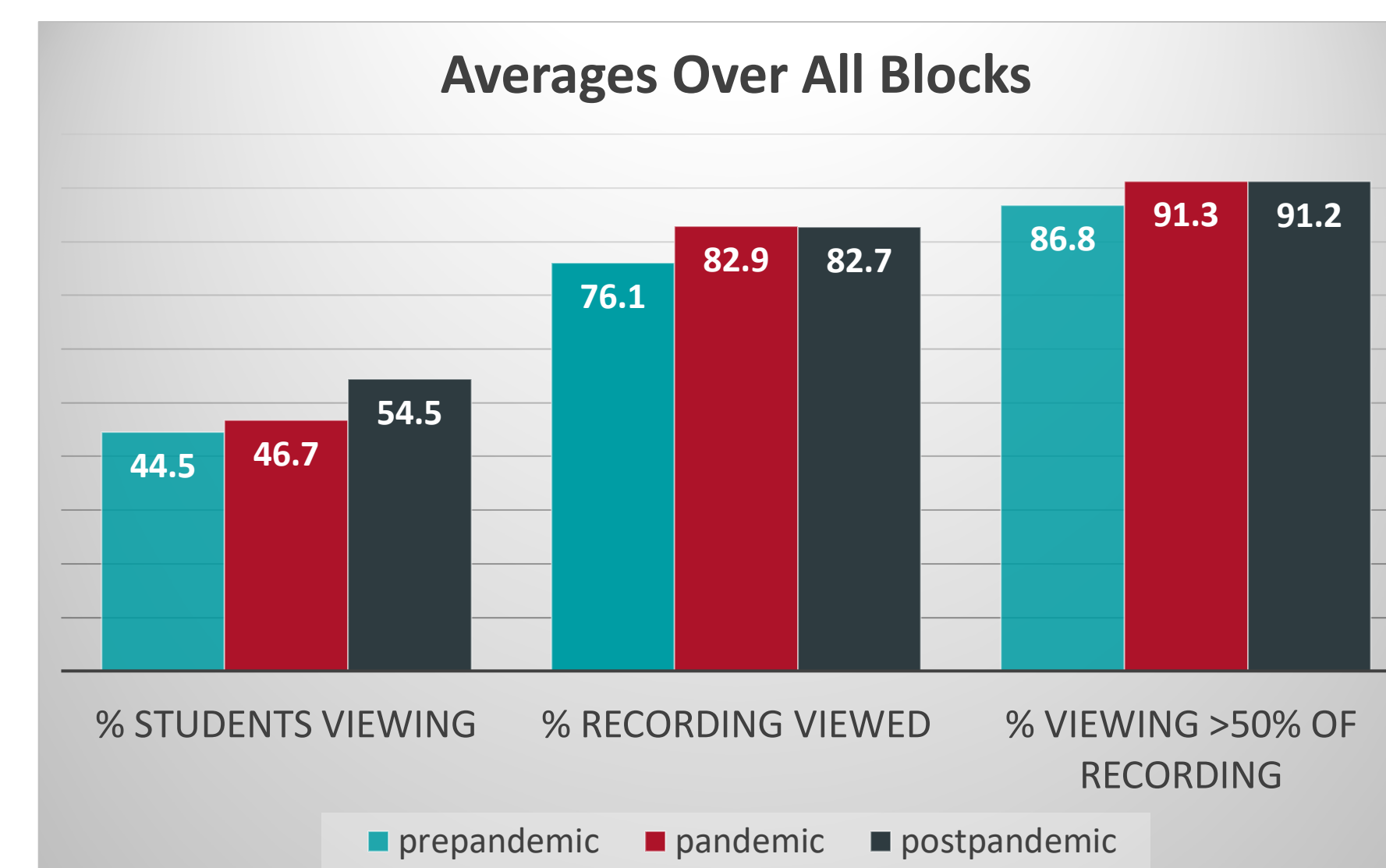
Methods

- We reviewed ECHO360 usage data from before, during and after pandemic restrictions within Phase 1 of the COM Curriculum at UNMC
- Phase 1 involves majority didactics and minimal clinical events
- Pandemic restrictions involved lectures being done virtually, whereas pre-pandemic and post-pandemic were in-person lectures
- Data was evaluated from 4 different Blocks within Phase 1 of the COM curriculum
- Within each Block, data was assessed across one faculty member's lectures
- We assessed the % of students viewing the ECHO360 recording; overall % of the recording that was viewed; and the % of students who viewed greater than 50% of the recording
- We also observed trends that appeared across all the Blocks and within each individual faculty's lectures

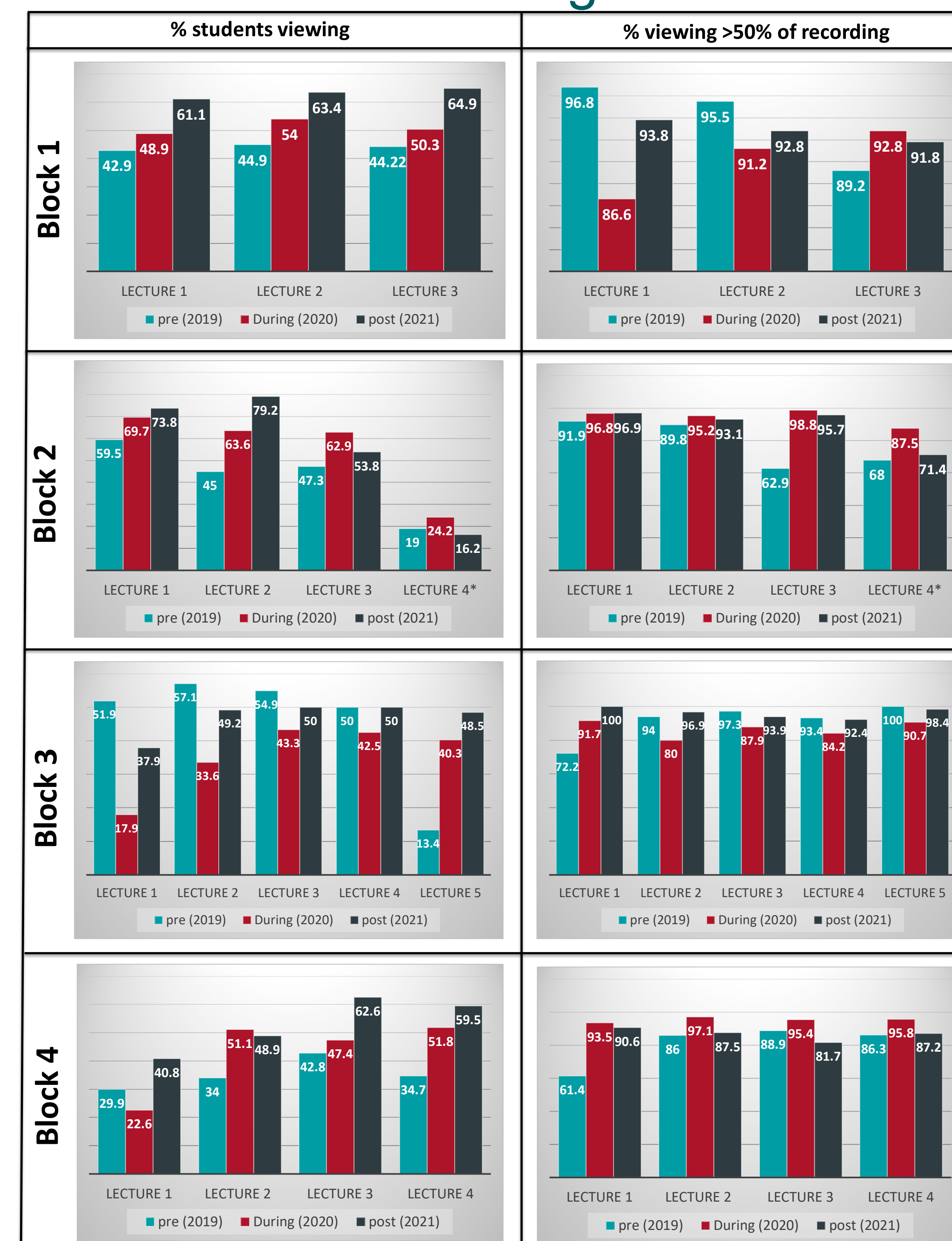
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Results: Figure 1



Results: Figure 2



Results

- Results were organized by Blocks, with data from each individual lecture, as demonstrated in Figure 2
- Blocks were assigned 1 to 4 by how early they occurred during the pandemic restrictions, i.e., Block 1 occurred very early in the pandemic whereas Block 4 occurred nearly 10 months into the pandemic
- A trend seen through most Blocks and lectures was that the % of students viewing ECHO360 increased during and post-pandemic restrictions, compared to pre-pandemic restrictions
 - This trend was seen when all Blocks were averaged as well (Figure 1)
- While usage patterns were not consistent among all Blocks, often patterns were seen amongst the individual faculty member's lectures

*Lecture 4 in Block 2 (Figure 2) was a case-based discussion, and this could explain the lower ECHO360 utilization overall, as well as lower utilization before and after pandemic restrictions

Discussion & Future Directions

- A possible reason that the usage of ECHO360 continued to increase after pandemic restrictions is that students are better acquainted with virtual resources and have learned how to utilize them to enhance their learning
- Another possible reason for increased ECHO360 utilization could simply be that students prefer a more virtual-based lecture setting for learning within medical school
 - The preference for ECHO360 may be related to the quick pace of learning within medical school and/or the ability to increase speed, fast-forward, rewind and pause ECHO360 in the actual moment of learning
- The differences in ECHO360 utilization between faculty and within each individual faculty's lecture series could be due to several factors including teaching style, lecture material, and lecture timing
 - This individual faculty data may help guide development of lecture and other study materials, recognizing how frequently virtual learning is being utilized
- Future directions could include:
 - Evaluating trends across all the faculty and their lectures within a Block and then across all Blocks
 - Evaluating other virtual resources and the impact that the COVID-19 pandemic had on their utilization during and after pandemic restrictions

Conclusion

The usage of ECHO360 amongst medical students during their Phase 1 education was shown to increase during and after pandemic restrictions. This aligns with data showing increasing utilization of virtual applications during medical education, a phenomenon which may have been further accelerated by pandemic restrictions.