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Technical Quality and Engagement in a Hybrid Communication Course

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Technical Quality and Engagement in a Hybrid Communication Course

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Introduction

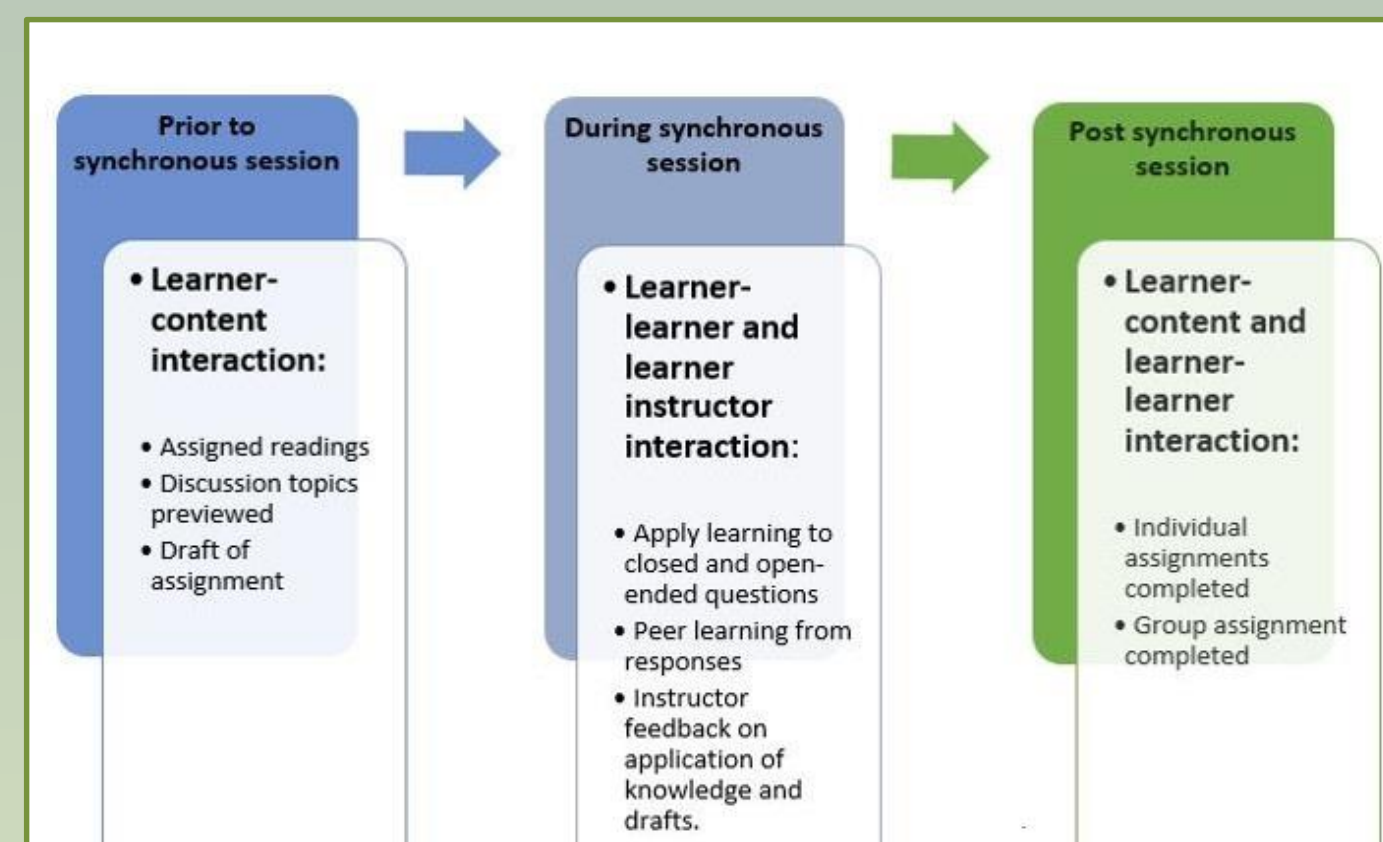
The goal of this project is to determine the most effective learning strategies and the impact of technical quality for Franklin University students in a hybrid or blended format group communication course.

- The hybrid course format balances asynchronous independent study work with weekly synchronous sessions.
- The weekly sessions combine face-to-face learners with online learners in an instructor led technologically-mediated synchronous class.
- The richness of the planned learning activities and the quality of the technology impact course quality and student engagement.

Elements of Effective Instruction in Blended Courses

- Courses are redesigned for the hybrid or blended instructional context (Dziuban, Hartman, & Moskal, 2004)
- Online and face-to-face learning activities are effectively integrated (Akyol, Garrison, & Ozden, 2009)
- Pedagogical decisions reflect a focus on **student engagement** (Glazer, 2012; Karal, Cebi, & Turgut, 2011; Collopy & Arnold, 2009; Dziuban, Hartman, & Moskal, 2004).

Learning Activities in the Communication Hybrid Course

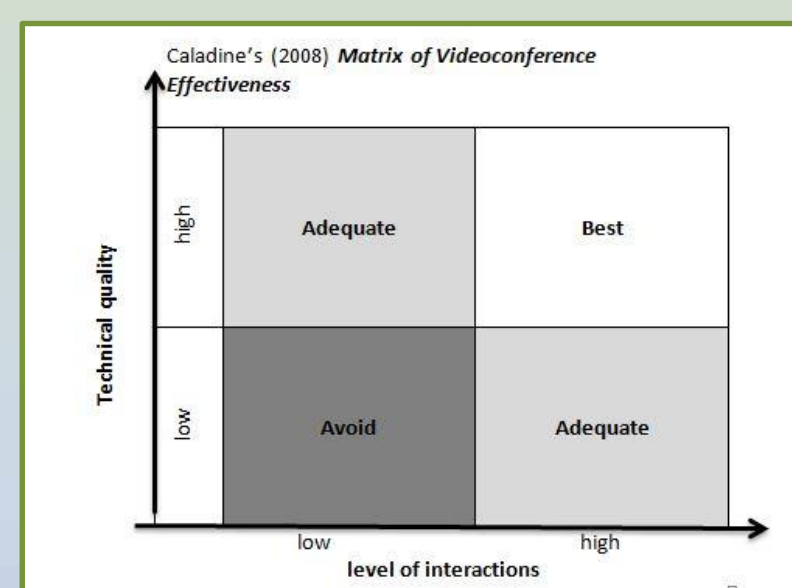


Hindrances to Effective Instruction in Hybrid Courses

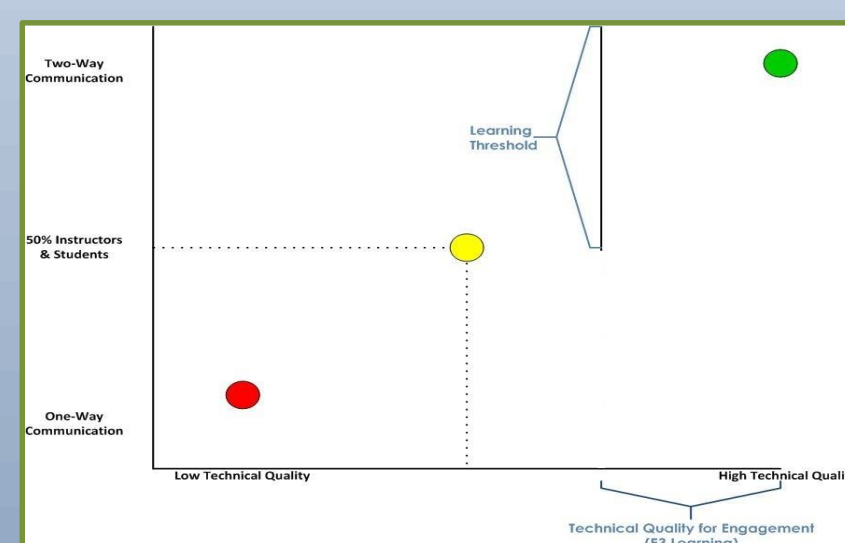
- Technology issues (Millichap & Vogt, 2012)
- Instructor resistance to instructional format (Glazer, 2012)
- Student resistance to responsibility for learning (Karal et al, 2011)

Models of the Hybrid Instructional Context

Caladine's Model of Video Conferencing

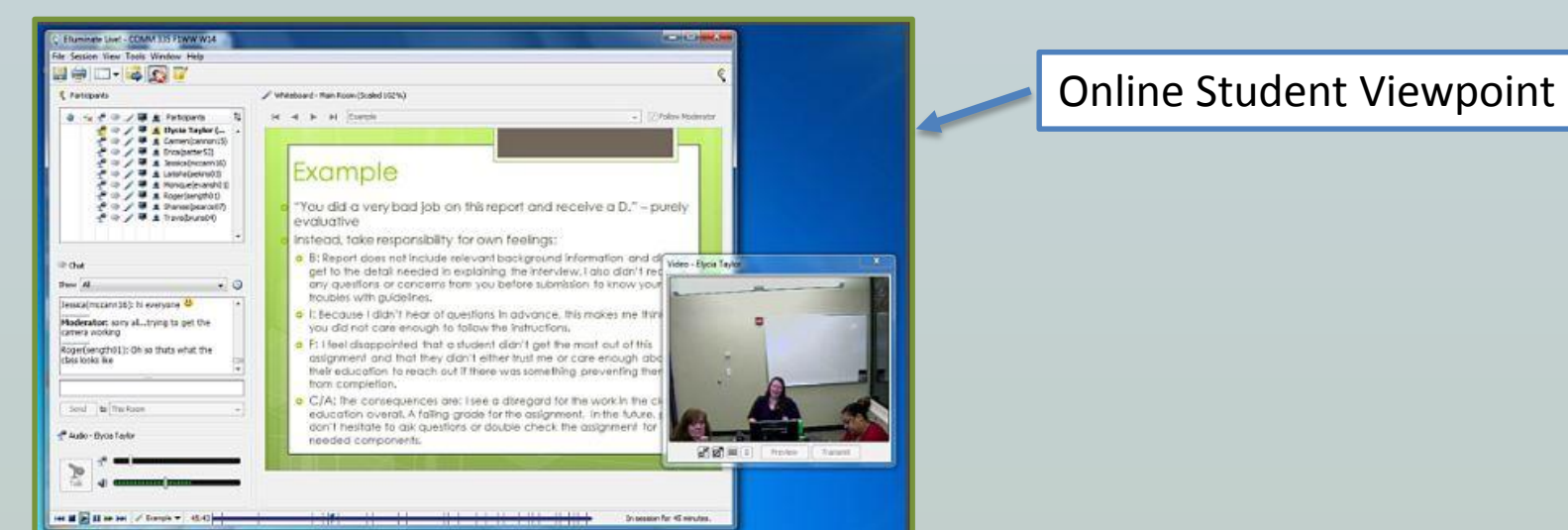


The Bell-Jones Learning Threshold for E³ Learning



Methods

Research Context



Online Student Viewpoint

What is needed to achieve quality learning in a hybrid instructional context?

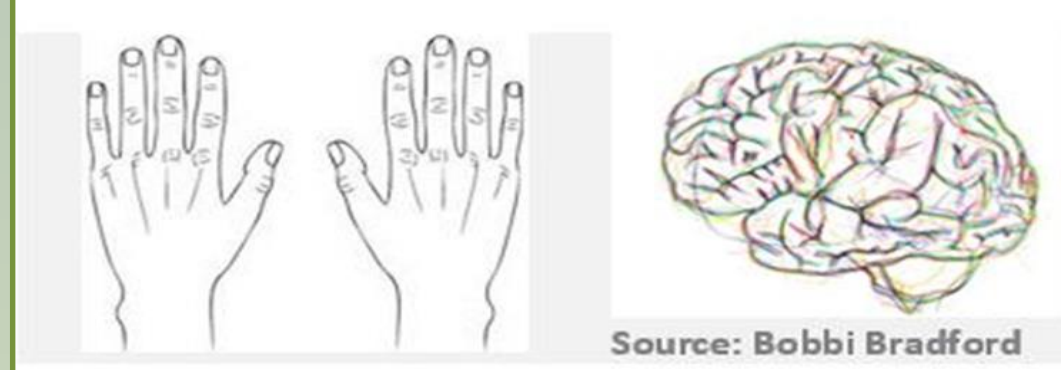
What channels do students choose to use? Are they drawn to richer media like video as well as audio?

Face-to-face Student Viewpoint



Student Engagement

Behavioral Cognitive



Source: Bobbi Bradford

Behavioral engagement is "any overt action a learner takes during an instructional episode" (Clark & Mayer, 2011, p. 16-17)

Psychological engagement is defined as "cognitive processing of content in ways that lead to acquisition of new knowledge and skills" (Clark & Mayer, 2011, p. 17).

Research Questions

RQ1: Does video quality affect the level of learner engagement in a hybrid classroom?

RQ2: Does audio quality affect the level of learner engagement in a hybrid classroom?

RQ 3: What channels do students use to engage with the instructor and other students in a real-time web-based class session?

Student Survey

Student Hybrid Survey

Technology

1) During class today/tonight did you...

- share your video? Y/N
- use your microphone to communicate with audio? Y/N
- use chat to communicate with text? Y/N
- view the instructor's video? Y/N
- view instructor's audio? Y/N
- view other student's video? Y/N

2) Did you have technical problems with...

- connecting? Y/N fixed Y/N
- sharing your video? Y/N fixed Y/N
- sharing your audio? Y/N fixed Y/N
- receiving video? Y/N fixed Y/N
- receiving audio? Y/N fixed Y/N

3) Please describe any other technology issues you experienced in class today/tonight?

Engagement

1) Did you feel you were engaged with your professor in this class? Please rate from 1 to 4

1 Not at all 2 Somewhat 3 Mostly 4 Fully

2) Did you feel that you were engaged with your classmates in this class? Please rate from 1 to 4

1 Not at all 2 Somewhat 3 Mostly 4 Fully

Methods Continued

Observational Coding of Technical Quality

Coding scheme for synchronous hybrid course technical quality

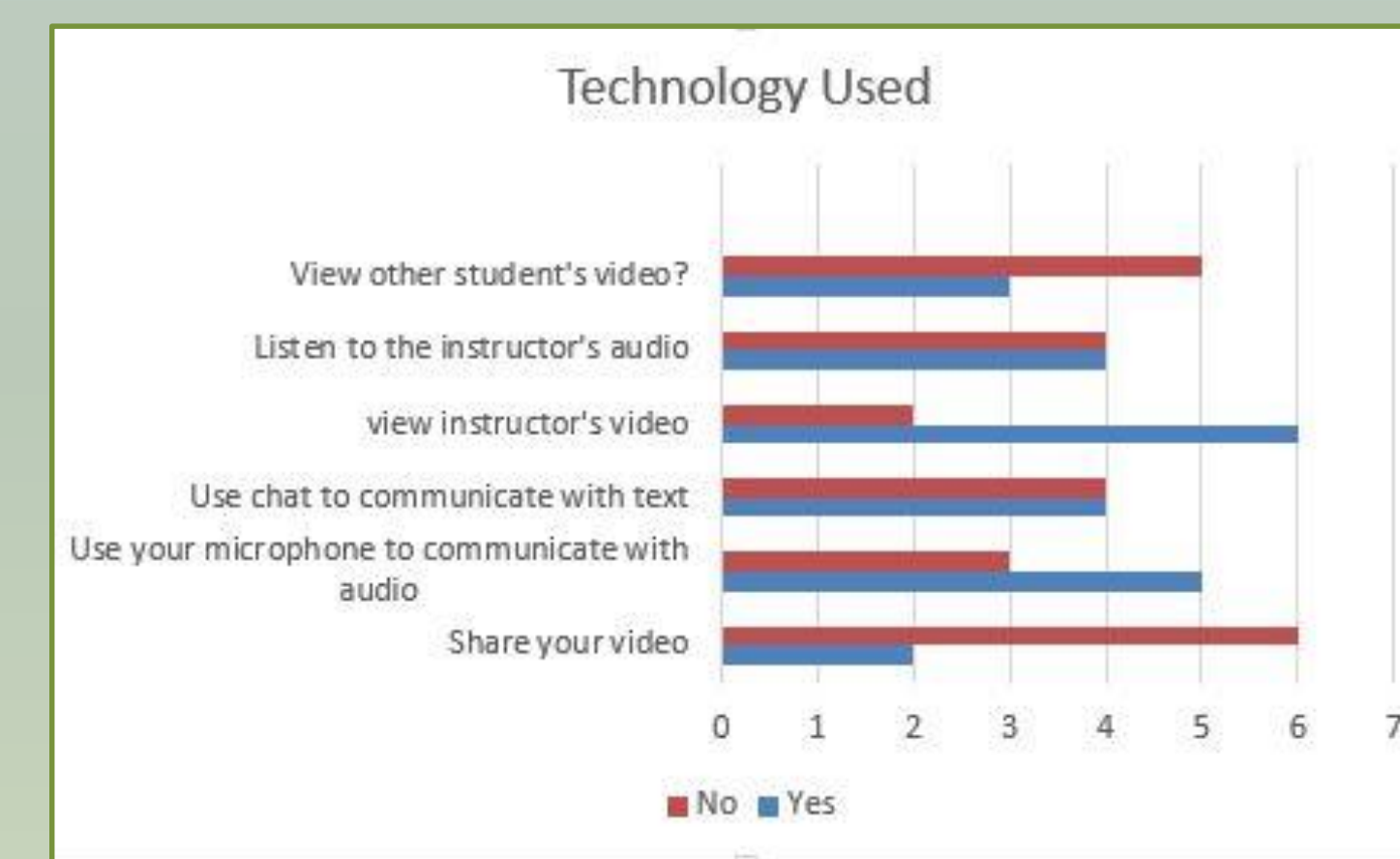
Term & Course ID: Fall 2012/
Date of Recording/Session:
Session link:
Coder ID: BJ/DB
Coding for Technical Quality: low quality = 0, fair quality = 1, high quality = 2

Instructor(s)	0	1	2	Students	0	1	2
Instructor/ Classroom Video				Students' Video			
# of problems with video				# of problems with video			
Instructor/ Classroom Audio				Students' Audio			
# of problems with audio				# of problems with audio			
Text in chat or whiteboard				Text in chat or whiteboard			
Connecting				Connecting			

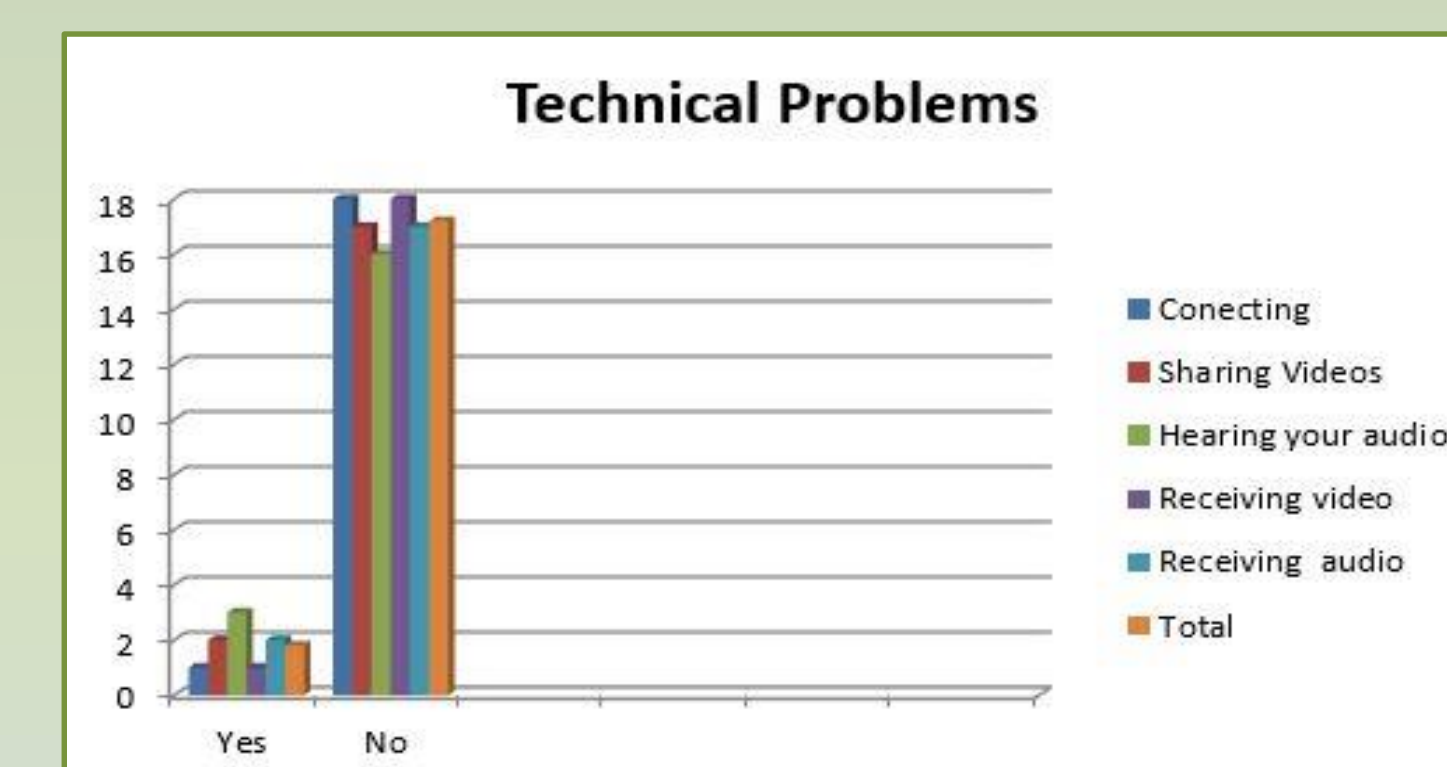
*Anchor session with two coders (BJ & DB) conducted 4/2/13 (coding to distinguish low, fair and high)

Results

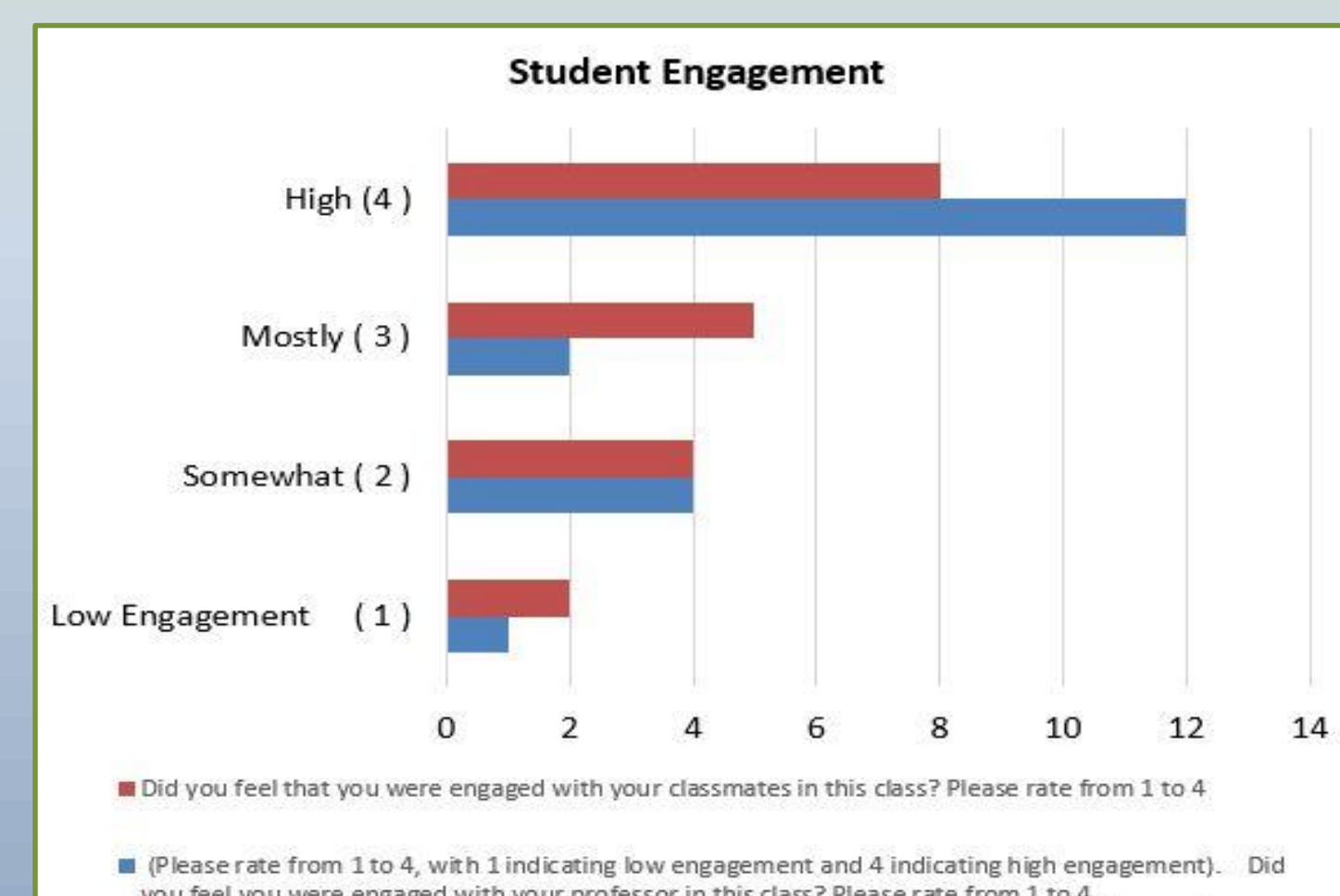
Technology Channels Used by Students



Technical Quality Experienced by Students

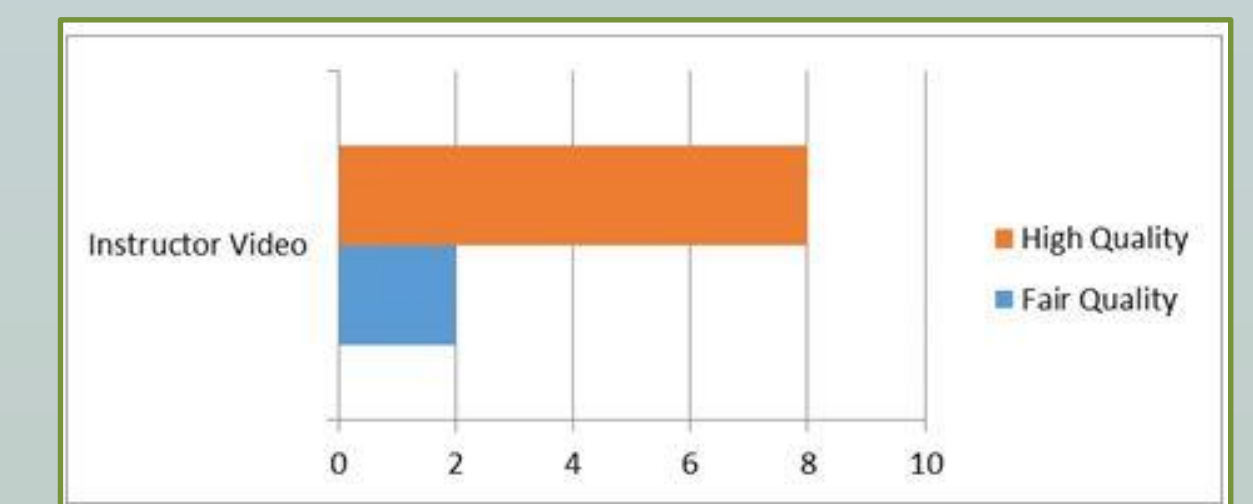


Level of Student Engagement

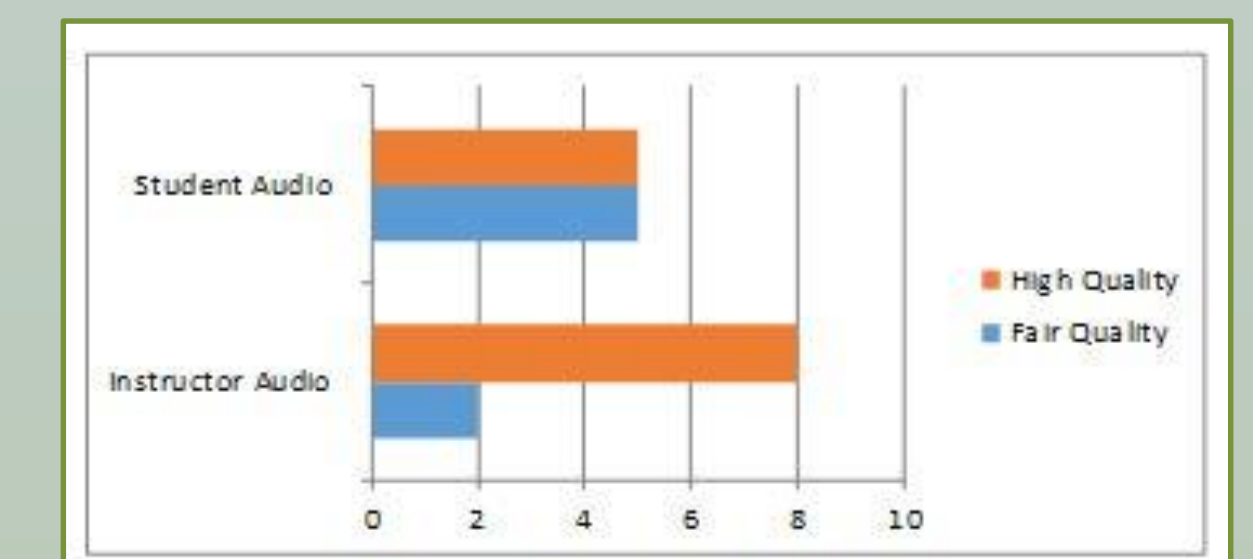


Results Continued

Observed Video Quality



Observed Audio Quality



Conclusions

- Technical quality was acceptable overall.
- Students choose to use multiple technology channels.
- Channels most frequently used were audio and chat (text).
- Students are "mostly" engaged with classmates.
- Students are "highly" engaged with instructors.
- Using technology to facilitate responses improves student engagement.

Future Research Directions

- The role of choice vs. prescribed means of interacting in synchronous sessions.
- Student satisfaction with the learning in the synchronous sessions as well as overall satisfaction with the course.
- Instructor skill with technology related to student satisfaction with hybrid format.

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