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11-14-2014

### Technical Quality and Engagement in a Hybrid Communication Course

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#### Recommended Citation

Jones, Brenda L., "Technical Quality and Engagement in a Hybrid Communication Course" (2014).

*Learning Showcase 2014*. 10.

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# Technical Quality and Engagement in a Hybrid Communication Course

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## Introduction

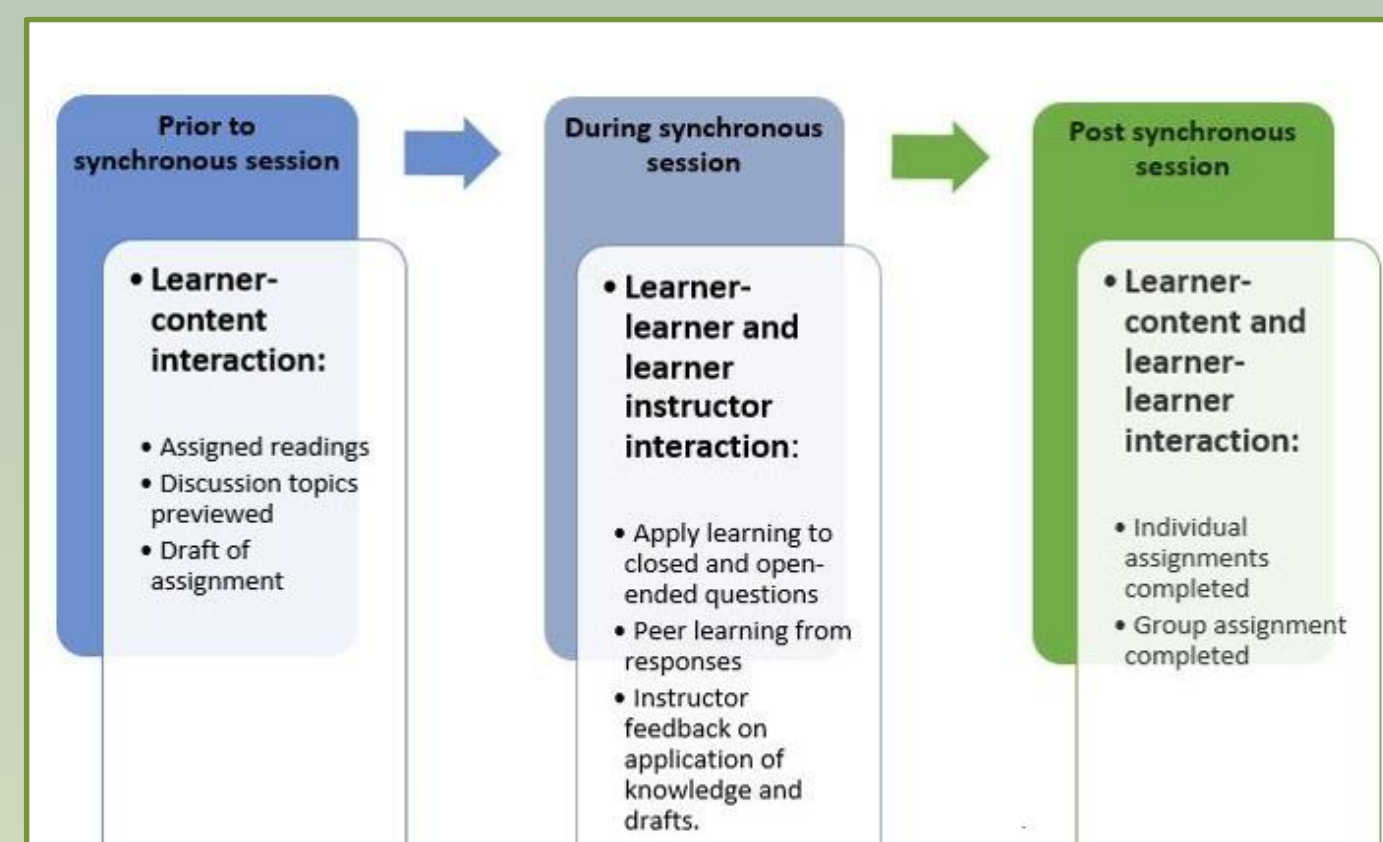
The goal of this project is to determine the most effective learning strategies and the impact of technical quality for Franklin University students in a hybrid or blended format group communication course.

- 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

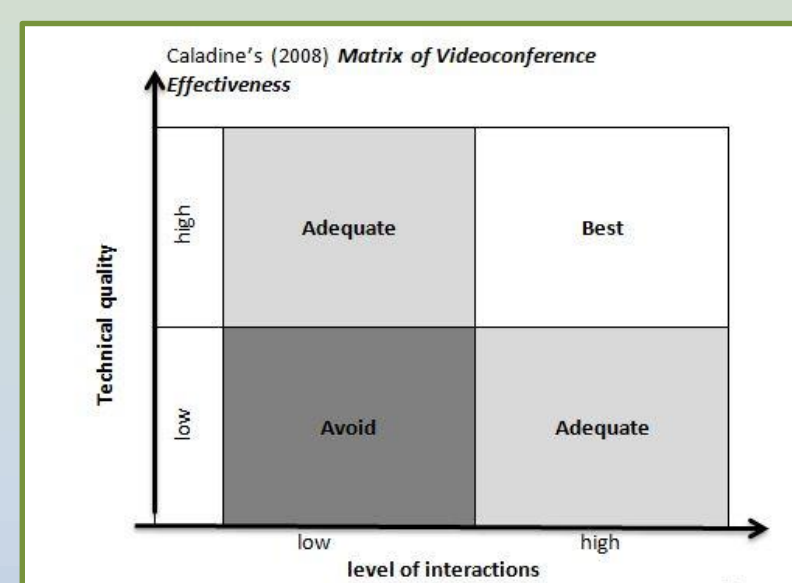


### Hindrances to Effective Instruction in Hybrid Courses

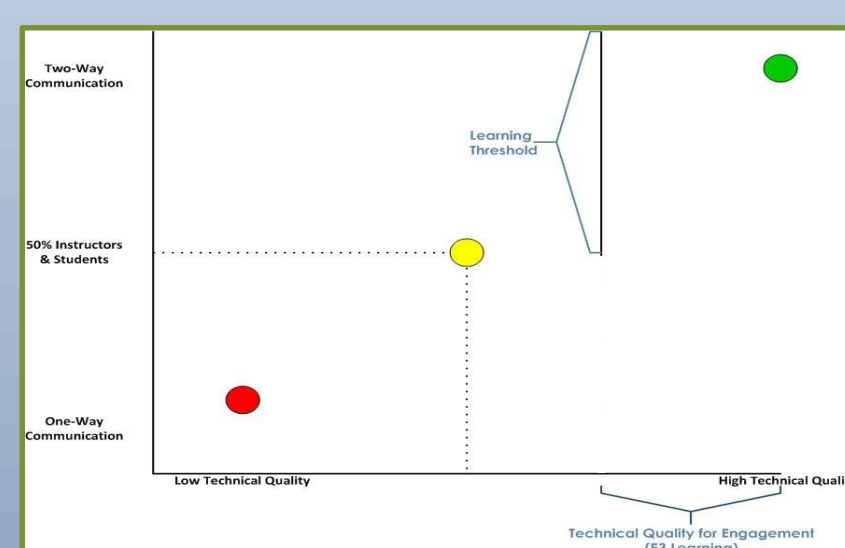
- Technology issues (Millichap & Vogt, 2012)
- Instructor resistance to instructional format (Glazer, 2012)
- Student resistance to responsibility for learning (Karal et al, 2011)

## Models of the Hybrid Instructional Context

### Caladine's Model of Video Conferencing

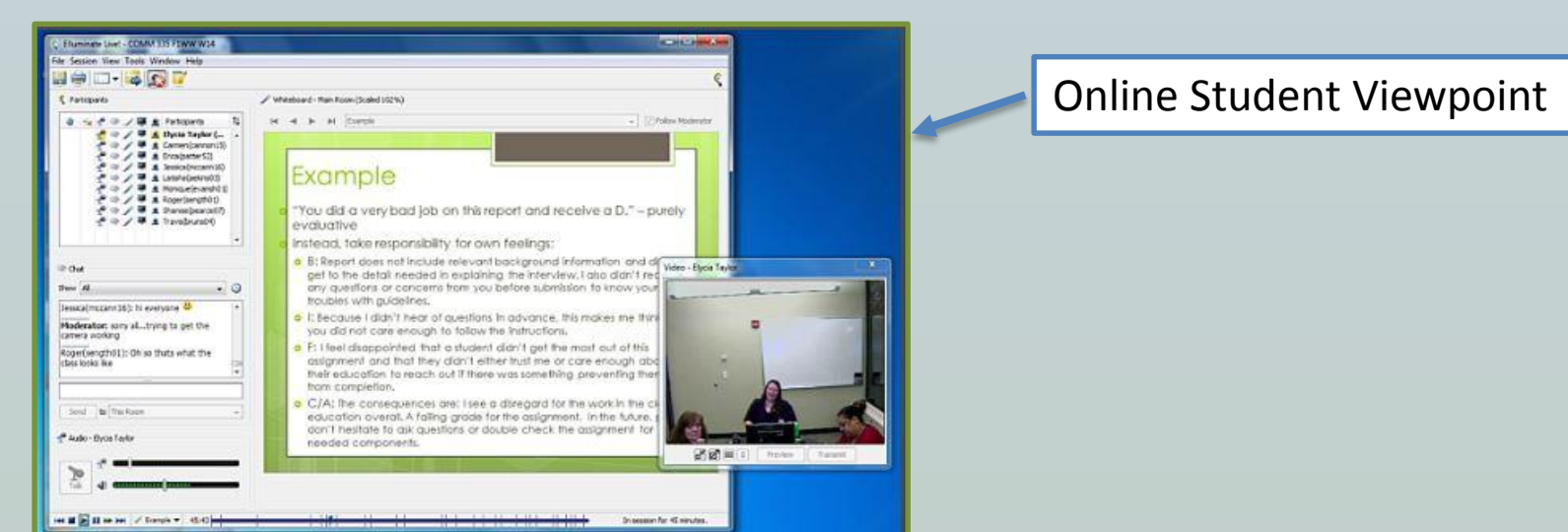


### The Bell-Jones Learning Threshold for E<sup>3</sup> Learning



## Methods

### Research Context



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

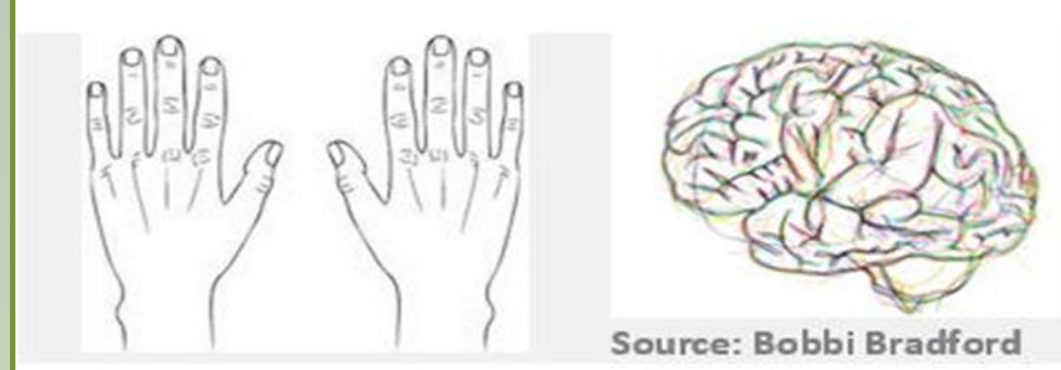
What channels do students choose to use? Are they drawn to richer media like video as well as audio?

### Face-to-face Student Viewpoint



## Student Engagement

Behavioral Cognitive



*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?**

**RQ3: 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/tomorrow 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/tomorrow?

**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

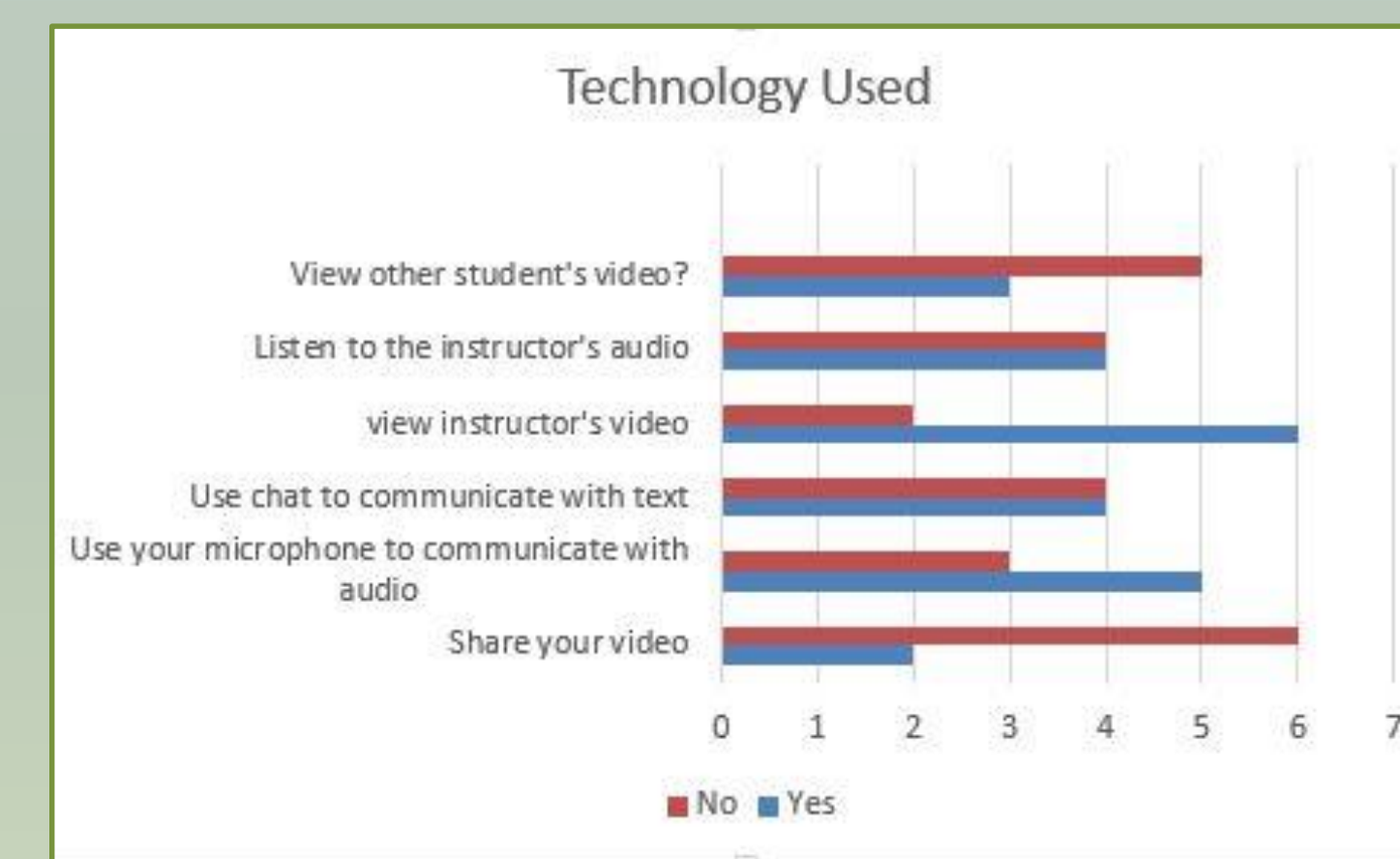
Term & Course ID: Fall 2012/  
Date of Observing/Session:  
Session Link:  
Coder ID: 89/208

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

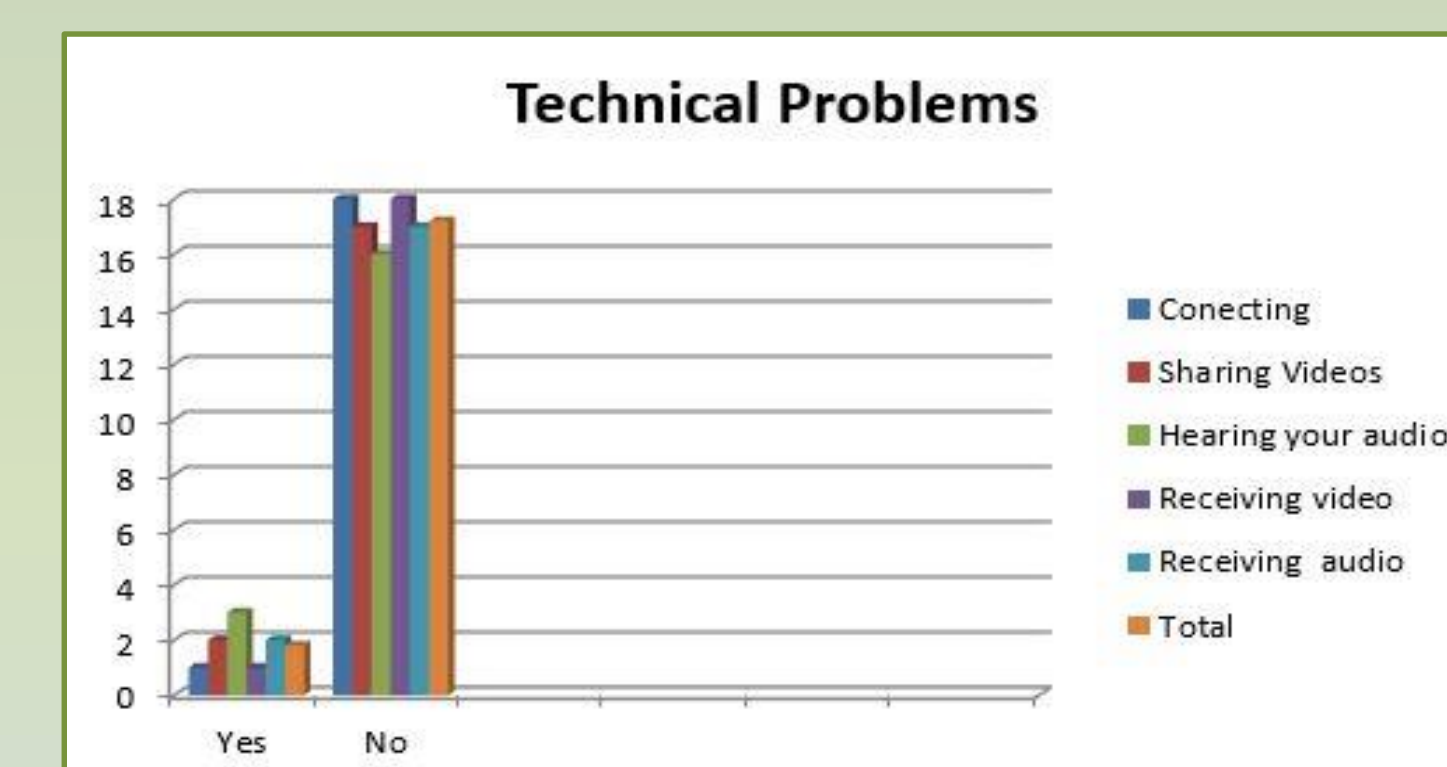
\*Another session with two coders (B1 & B2) conducted 4/9/13 (coding to distinguish low, fair and high)

## Results

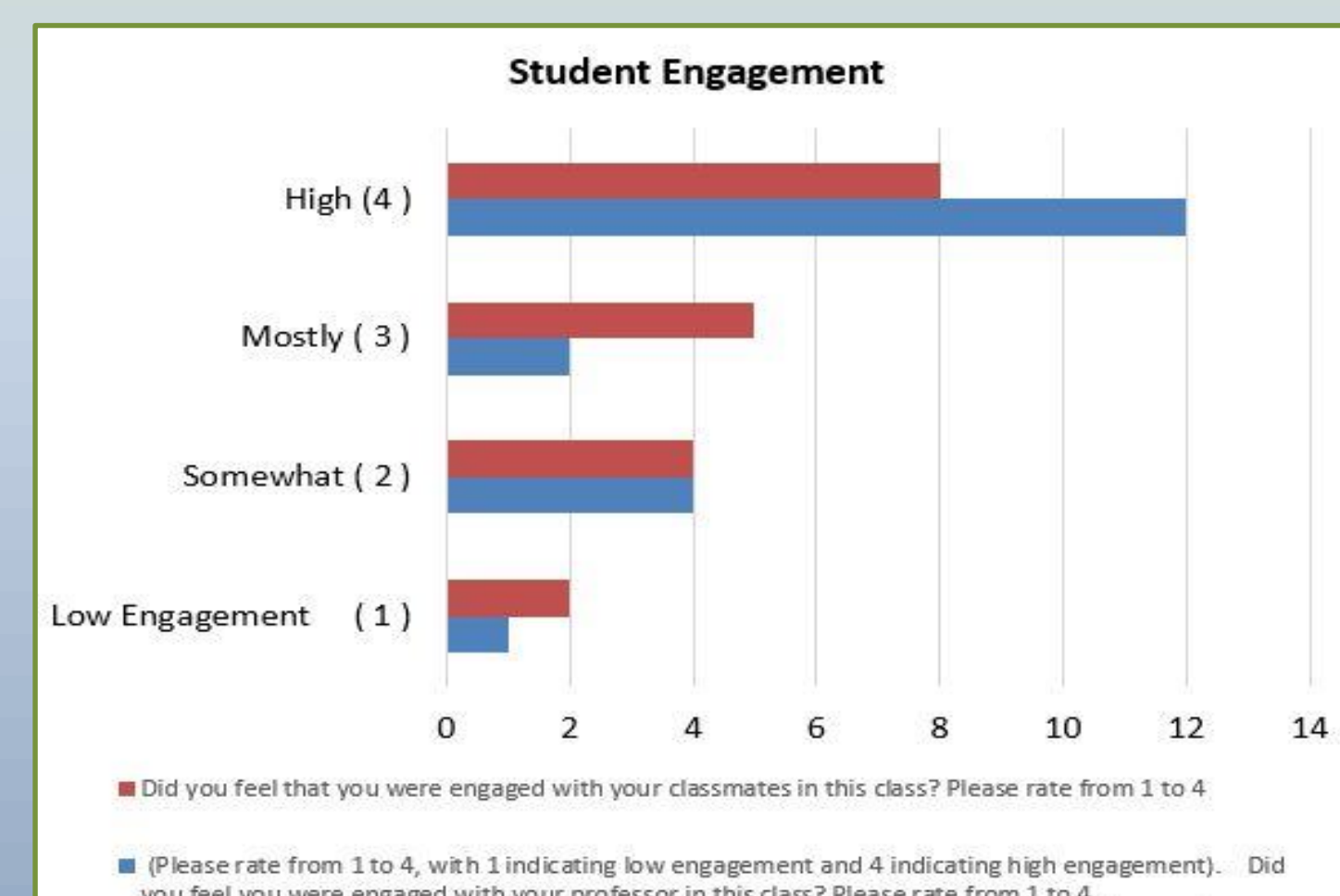
### Technology Channels Used by Students



### Technical Quality Experienced by Students

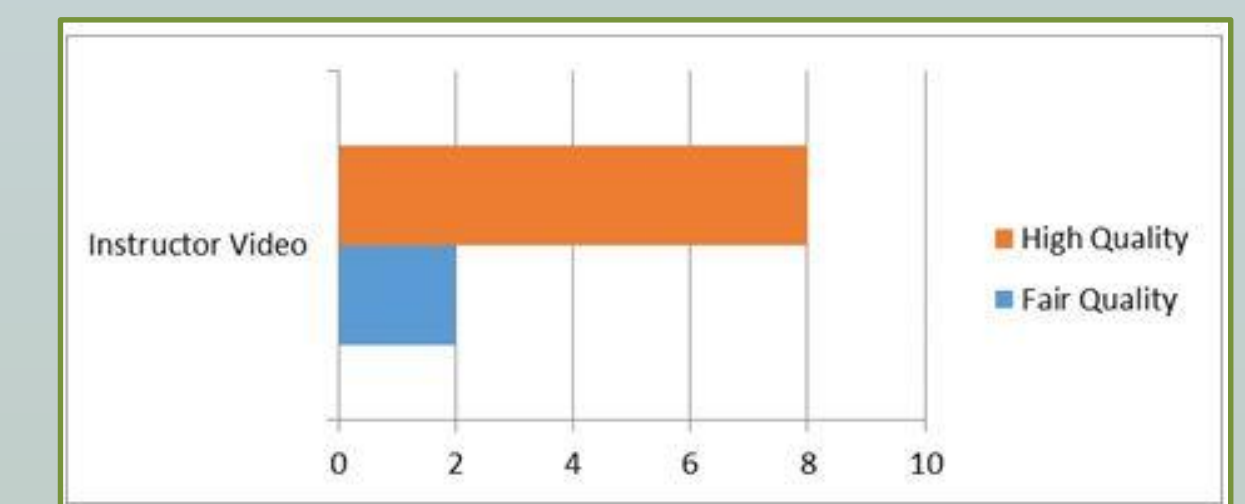


### Level of Student Engagement

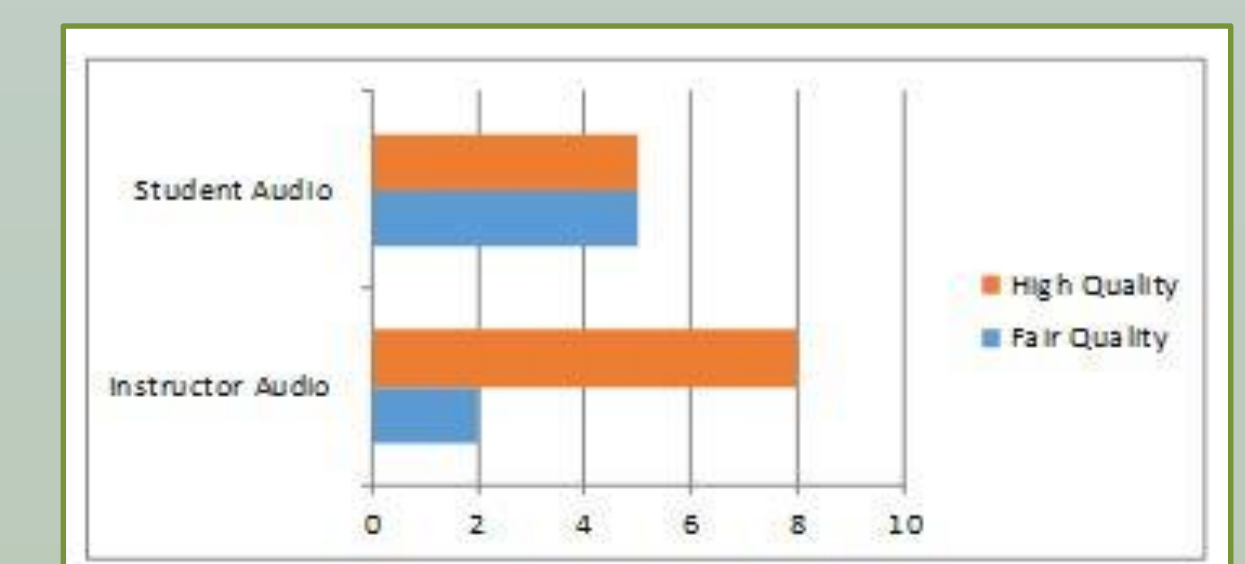


## Results Continued

### 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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