

# Should we Spend Classroom Time Together? A Comparison of Synchronous and Asynchronous Remote Delivery Modalities in an Introductory Biostatistics Course

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# Motivation

One consideration when offering online courses is the choice to offer the course synchronously or asynchronously.



# The Course

**BST 230: Statistical Thinking in Public Health** is an introductory biostatistics course taught at the University of Kentucky with a primary audience of students enrolled in the Bachelor of Public Health program.



# Study Design

Students' attitudes towards the discipline of statistics will be measured and compared using a pre-survey and post-survey.



# Survey Results



- **Affect** – students’ feelings concerning statistics
- **Cognitive Competence** – students’ attitudes about their intellectual knowledge and skills when applied to statistics
- **Difficulty** – students’ attitudes about the difficulty of statistics as a subject

# Survey Results



<b>Delivery Method</b>	<b>Affect</b>	<b>C.C.</b>	<b>Difficulty</b>
<b>Synchronous (n=33)</b>	<b>-0.62 (0.95)</b>	<b>-0.30 (0.96)</b>	<b>-0.38 (1.16)</b>
<b>Asynchronous (n=31)</b>	<b>-0.38 (1.10)</b>	<b>-0.19 (0.96)</b>	<b>-0.30 (1.36)</b>

# Survey Results



- **Value** – students’ attitudes about the usefulness, relevance, and worth of statistics in personal and professional life
- **Interest** – students’ level of individual interest in statistics
- **Effort** – amount of work the student expends to learn statistics

# Survey Results



<b>Delivery Method</b>	<b>Value</b>	<b>Interest</b>	<b>Effort</b>
<b>Synchronous (n=33)</b>	<b>0.19 (0.83)</b>	<b>0.34 (1.16)</b>	<b>0.18 (0.93)</b>
<b>Asynchronous (n=31)</b>	<b>0.18 (1.19)</b>	<b>0.58 (1.36)</b>	<b>0.44(1.04)</b>



# Final Project Results



## **Delivery Method**

**Mean**

**Median**

**SD**

**Synchronous (n=27)**

**85**

**91.2**

**19.2**

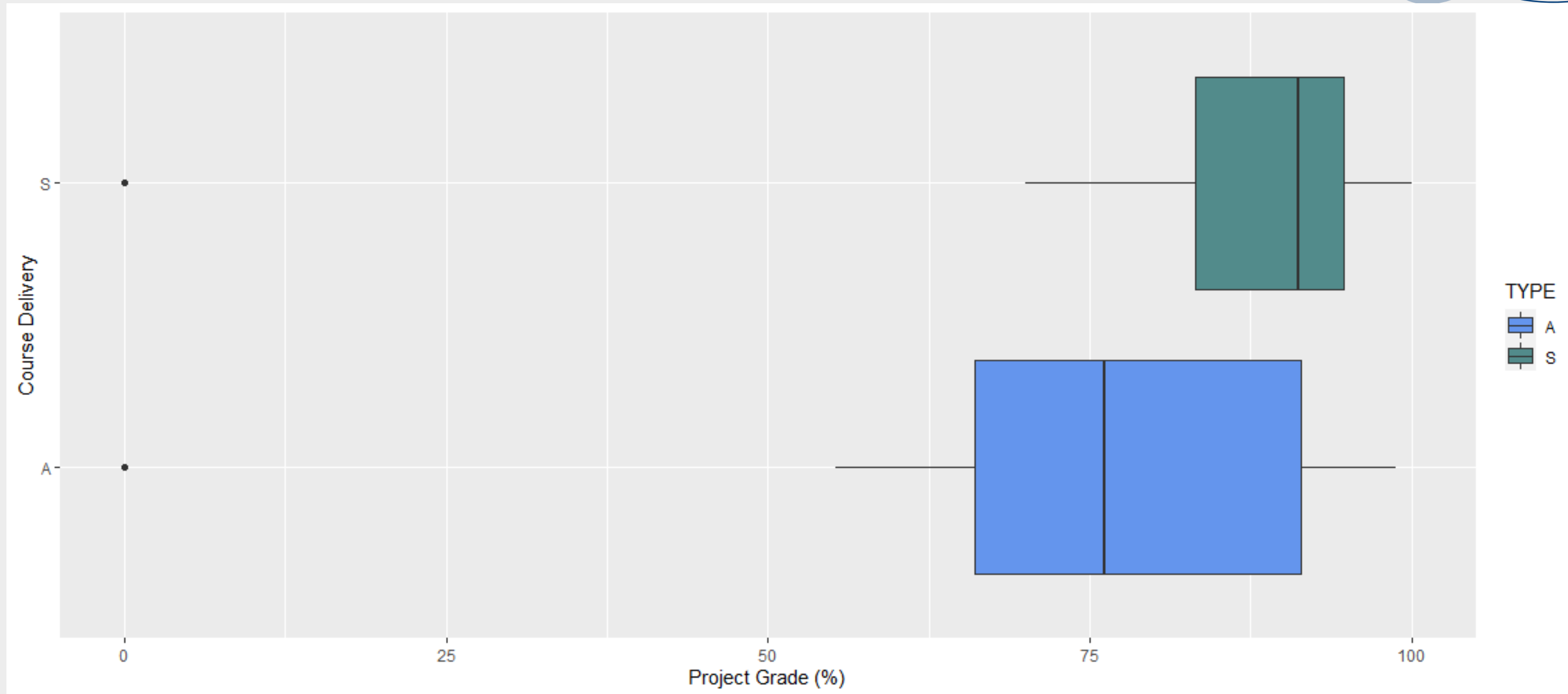
**Asynchronous (n=28)**

**75.2**

**76.2**

**21.1**

# Final Project Results



# Thank You

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