The Effect of Technology Ban on Engagement in the College Classroom

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Introduction

- Students who use their laptops perform worse on immediate measures of memory for the lecture material (Mueller et al., 2014; Hembrooke & Gay, 2003).
- Students who take notes in electronic devices fall victims to "Shallow processing" (Mueller et al, 2014).
- Student engagement and interest may be influenced by the use of electronic devices.

Hypotheses

Hypothesis 1

Students who do not use electronic devices will exhibit increased levels of engagement and increased levels of interest in the class.

Hypothesis 2

Students who do not use electronic devices will retain more information and earn higher grades in the class

Participants

Technology Ban Condition

- 17 participants (8 males, 11 females)
- Average age: 19 years old

Technology Permitted Condition

- 21 participants (8 males, 13 females
- Average age: 19 years old

Methods

In order to measure how electronic devices affect student engagement, interest, and academic performance, we examined two Introductory level Psychology classes at Bard College.

One of the classes has been denied the ability to use technology in the classroom, while the other has been allowed full access to all of their devices. The students' engagement in class will be examined by self-reported scores from questionnaires using a seven-point scale (Handelsman et al., 2005).

Results

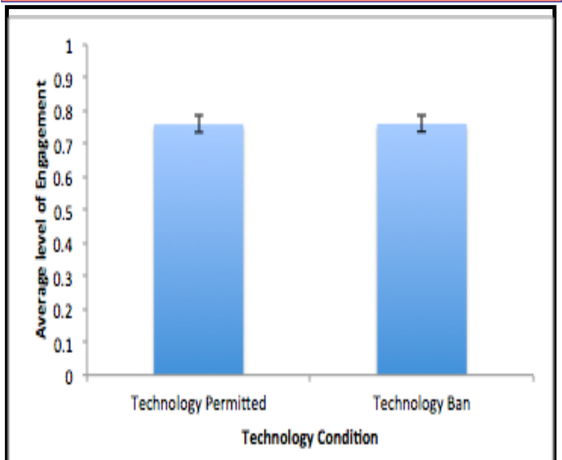

Fig.1. There was no significant difference in the average level of engagement between the technology-ban condition and the technology-permitted condition, $t(36)=-0.288$, $p=0.777$.

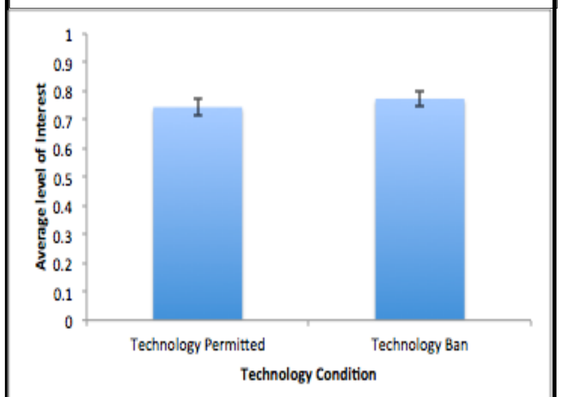

Fig.2. There was no significant difference in the average level of interest between the two conditions, $t(36)=-0.473$, $p=0.725$.

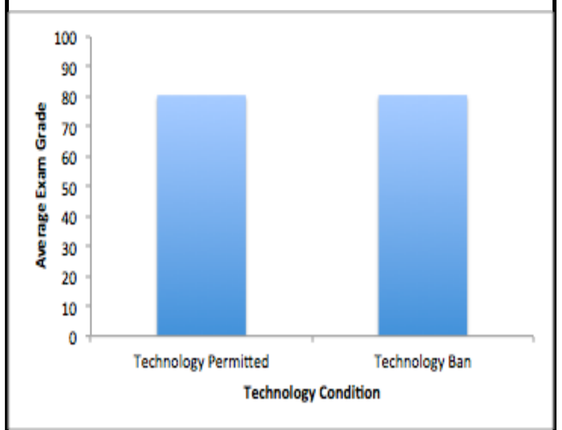

Fig. 3. There was no difference in exam grades between the two conditions

Conclusions/Limitations

No significant difference was found for level of engagement, interest, or performance across conditions.

The implementation of a technology ban appears to have no statistically significant effect on student interest, engagement, or academic performance.

One reason for this lack of significance may lie in the fact that few students took advantage of the opportunity to use technology.

References

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Hembrooke, H., & Gay, G. (2003). The laptop and the lecture: The effects of multitasking in learning environments. *Journal of Computing in Higher Education, 15(1)*, 46-64.

Mueller, P. A., & Oppenheimer, D. M (2014). The pen is mightier than the keyboard: Advantages of longhand over laptop note taking. *Psychological Science, 25*(6), 1159-1168.

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