

# **Use of Texting in Teaching and Its Effect on On-Time Homework Submission Rate**

## **Topics: Higher Education / Mathematics Education**

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**ABSTRACT:** *In the present times, students are more comfortable with texting than checking their email. This is because texting is more immediate than the emailing. In this paper, I will examine the use of texting for homework submission and the features that were effective. The experiment on the effects of “texting” was conducted in the spring and fall of 2014 in two courses on Mathematics –one was on Elementary Algebra and other on Calculus I. Throughout the semester, students were constantly reminded about the homework they were required to submit using the texting technology. A separate contact group was created in Microsoft Outlook for each class and the student used their cellphones to send text messages in the form of emails. One section of Elementary Algebra and one section of Calculus I were experiment groups and another section of Elementary Algebra and Calculus I were the control groups. The results showed that the rate of on-time homework submission in the Elementary Algebra class for the experimental group is thrice as that of the control group. In the case of experimental group of Calculus I, it is twice the rate of the control group.*

**KEYWORDS:** *texting, use of cellphone, text for teaching, homework*

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### **I. INTRODUCTION**

The use of smartphones, inside and outside classrooms, as a medium of teaching is not a new phenomenon. It is difficult to find a student who does not own a smartphone and is not eager to use it in the classroom. It is possible to optimize on this tendency for the purpose of teaching. Based on the data compiled by the research firm Nielsen, 58% of American children from the age of 13 to 17-years owned a smartphone as on July 2012. This suggests an increase of more than 60% since the previous year. With over 50% of mobile phone users in America using smartphones, the number seems to be growing (Nielsen, n.d.).

In what manner does this increasing use of cellphones affect teaching and learning? Edward Graham wrote in his paper:

*Not every classroom can get a laptop every day, so [devices like smartphones], even if you have to pair up, become something useful for teachers.*

The following was reported in the US News by Jason Koebler in 2011:

*We think school should be preparing students for real life—and in real life, people use cell phones. If you're making an artificial world inside the school, you're not preparing them for the real world. First, it teaches them that they don't deserve to be empowered with technology the same way adults are. Second, that the tools that adults use all the time in their everyday lives to communicate are not relevant to their own communication needs. [And] third, that they can't be trusted (or taught, for that matter) to use phones appropriately in school.*

Therefore, I have conducted an experiment on using cellphones to remind students about their homework.

### **II. METHODOLOGY**

Two sections of Elementary Algebra and of Calculus I are used in this experiment, and one section from each course is used as an experiment group (where a cellphone is used to remind students about their homework) and the other sections are used as a control group. All other variables are kept constant: the instructor (me), method of teaching (face to face), and the online platform to track the homework submissions (blackboard).

In the experiment group, the students are reminded about their homework three times:

1. Once the homework is submitted, a text is sent saying with the following message: A new homework is posted on the assignment section of the blackboard and is due by xx/xx/xx (date).
2. Two days prior to the due date, a second reminder is sent to their cellphones with the following text message: You only have two days left to submit your homework. Do not delay and leave this for the last minute.
3. The third and final reminder is sent 24 hours before the due date with the following text message: “If you have submitted your homework, then ignore this message. Otherwise, be advised that the homework covers 20% of your final grade and not submitting your homework will drastically affect your final grade in the course.

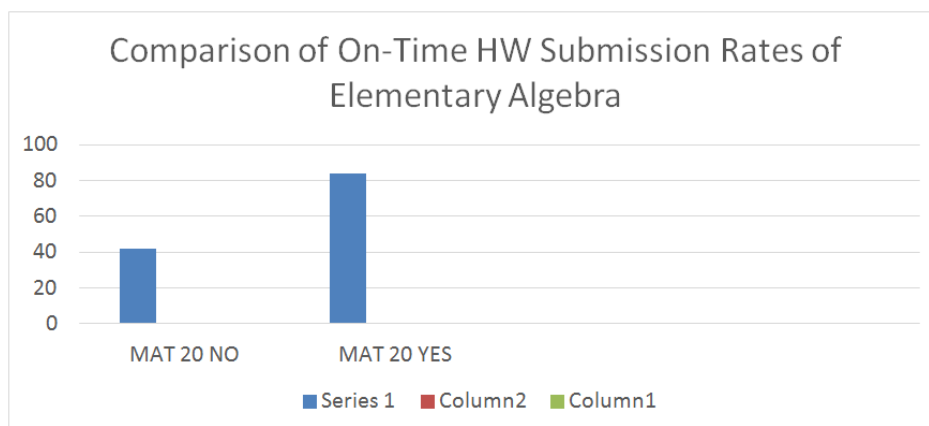
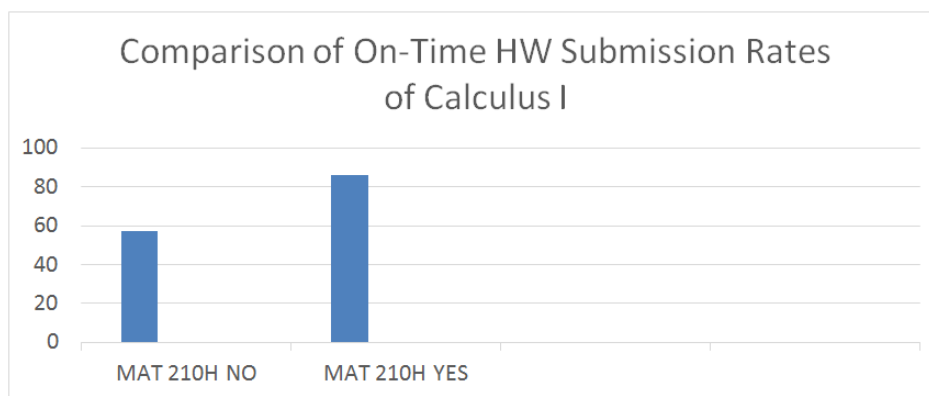
### III. METHOD OF TEXTING

At the start of the semester, cellphone numbers and the names of carriers are collected from the students (this is done on a voluntary basis and students can choose to not share the details). However, about 90% of the students voluntarily shared their contact details. After I had the list of contact numbers, I convert each cellphone number to an email address. For example, a T-Mobile cellphone number 347-123-4567 can be converted to the email address, 3471234567@tmomail.net. The complete procedure is available here: <http://www.tech-faq.com/how-to-send-text-messages-free.html> (Tech-Faq, n.d.)

A group was created comprising all the converted email addresses. Next, I sent text messages from my email server to all the students in the experiment group.

### IV. DATA

In the two bar graphs, the rate of on-time homework submission rates are compared between the experiment and the control groups of the two courses. “MAT210H NO” represents the control group of Calculus I, “MAT210H YES” represents the experimental group of Calculus I, “MAT20 NO” represents the control group of Elementary Algebra, and “MAT20 YES” represents the experimental group of Elementary Algebra.



### V. CONCLUSION

From the above data, it can be concluded that the rate of on-time homework submission in the Elementary Algebra class for the experimental group is thrice the rate of the control group. The rate of the experimental group of Calculus is twice the rate of the control group. Further research needs to be conducted in this field. However, this study suggests that technology, especially cellphones, can be an effective tool in teaching.

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