STUDENT RESPONSE BEHAVIOR TO SIX TYPES OF CALLER/SENDER WHEN SMARTPHONES RECEIVE A CALL OR TEXT MESSAGE DURING UNIVERSITY LECTURES

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ABSTRACT

This study, which targeted students in Japanese universities, used a written questionnaire to examine student response behavior when their smartphones received a call or message during university lectures. Phone and message transmissions were taken as the transmission media and six types of caller/sender were set. Survey results showed differences in response behavior depending on the identity of the caller/sender. Additionally, the results showed a tendency for students to respond more to text messages during lectures.

KEYWORDS

Mobile phone, smartphone, classroom behavior, text messaging, higher education

1. INTRODUCTION

Mobile learning is often taken to mean education at a distance (Berge and Muilenburg, 2013). However, especially in Japan, it is often proposed that mobile phones be integrated as part of a standard course of education. In Japan's universities, almost all students bring smartphones into lectures with them, and the free use of phones in lectures is often observed—students use them to look up unfamiliar terms used by the lecturer, take photographs of important material being shown (Akahori, 2013), and for other such tasks.

However, there are also concerns about the use of smartphones by students during lectures. For example, Kato and Kato (2016) investigated students placing their smartphones on their desks during lectures, and found that more than 60% of students did so, mostly to use the phone for personal communication. Also found was a high tendency for students who placed their phones on their desks during lectures to use the smartphones for both voice call and messaging functions, compared to students who did not place their phones on their desks (Kato and Kato, 2016).

If students' smartphones are to be used in class, they can then become more easily integrated into and employed in mobile learning. However, in this case, we must consider student behavior when the phone receives an incoming call or message. This study was undertaken to place this basic research. According to a previous study that investigated response speed in university student mobile phone communication, responses to receipt of incoming transmissions are generally made quickly, but there are various factors that determine the speed of the response, one of which is the identity of the other party (Kato et al, 2013; Kato and Kato, 2015).

The purpose of this study, which targeted students at Japanese universities, is to investigate student behavior when a smartphone call/message (transmission) is received during university lectures, also taking the other party (the caller/sender) into consideration. The study was implemented as a written questionnaire. Both telephone calls and text messages were included as transmissions, and six types of caller/sender were set.

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2. METHOD

This survey was conducted in October–December 2015. Participants were 70 students (30 men, 40 women, average age 20.75, standard deviation 1.51, aged 18–28 years) enrolled at universities in the Tokyo area. Participants responded to a distributed written questionnaire.

The questionnaire was composed of two sections, one for phone calls received during lectures and one for text messages received during lectures. Three types of behavior were set for each of the two types of transmission received according to the level of immediacy that responses were made; six types of caller/sender were also set. Participants gave responses according to a 5-point scale (1: Absolutely don't do, 5: Absolutely do) established for each of the combinations of the three levels of responses and six types of caller/sender. Table 1 summarizes the experimental method.

Table 1. Incoming transmission, behavior, and caller/sender

Three Types of Response Behavior When a Call or Message is Received	
Receiving a phone call	*Receiving a text message*
A. Immediately (during the lecture) step outside to answer or call back	D. Immediately (during the lecture) read message and respond if necessary
B. Respond immediately (during lecture) to message	E. Read message immediately (during lecture), but don't respond even if a response is necessary
C. Respond after lecture has finished	F. Read and respond to messages after the lecture has finished
Six Caller/Sender Types	
a. Family and relatives	
b. Romantic partners or friends for whom there are romantic feelings	
c. Friends taking the current class but who are not currently in attendance	
d. Friends other than b and c defined above	
e. Elder acquaintances such as a superior at work or upperclassmen	
f. Individuals whose identity is not known beyond the displayed address	

3. RESULTS AND DISCUSSION

The average value of the three behavior types in each of the two transmission types was compared with the six caller/sender types to determine effects due to caller/sender differences. One-way repeated measure ANOVA with the six caller/sender types for each behavior in each situation as elements found significant differences for all situations / behaviors (Phone call, Behavior A: F (5, 345) = 14.08, p<.001; Behavior B: F (5, 345) = 82.39, p<.001, Behavior C: F (5, 345) = 38.93, p<.001; Text message, Behavior D: F (5, 345) = 72.56, p<.001, Behavior E: F (5, 345) = 13.91, p<.001, Behavior F: F (5, 345) = 60.73, p<.001). Significantly different areas were then investigated through multiple comparisons. The average values of each behavior in each situation, for each caller/sender, and the average value of the frequency of that behavior (*<.05, **<.01) are shown in Figures 1 through 6.

When the caller was family, a relative, or an elder acquaintance, the tendency to respond quickly to either a phone or text message transmission was comparatively high. However, the tendency to respond to a friend during lectures was comparatively low. Between youths, friends frequently exchange messages among themselves using mobile phones on a daily basis, and the content is generally casual chatting (Battestini et al, 2010; Scott et al, 2012). It is thought that the frequency of interaction with family and with elder acquaintances is generally lower than that with friends, and that the content of interactions with family consists mainly of notifications about tasks. From the results, it is thought that there is an increased tendency to respond during lectures to more infrequent transmissions from callers/senders from whom the recipient expects business content. However, when the caller/sender is a romantic partner, or a friend for whom there are romantic feelings, the tendency to reply immediately, especially to text messages, was observed. According to a previous study, communication among parties where there is emotion, especially romantic emotion, normally carries with it an expectation of a quick response (Kato and Kato, 2015). Additionally, it was observed that for most transmission where the identity of the caller/sender was not known, no response was given, not only during the lecture but even after the lecture had finished.

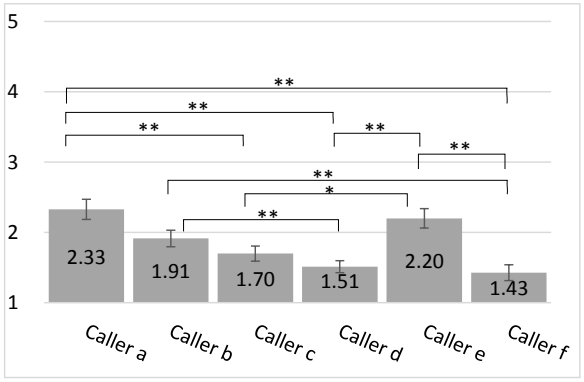

Figure 1. Behavior A, receiving a phone call

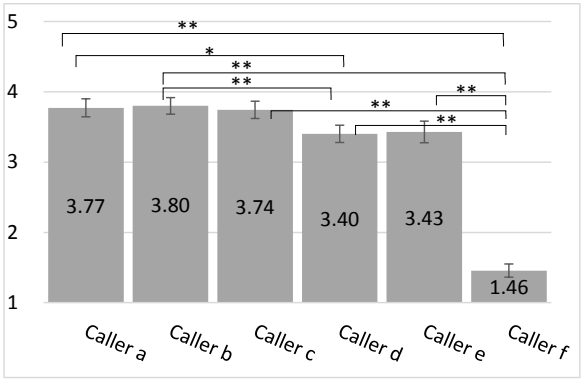

Figure 2. Behavior B, receiving a phone call

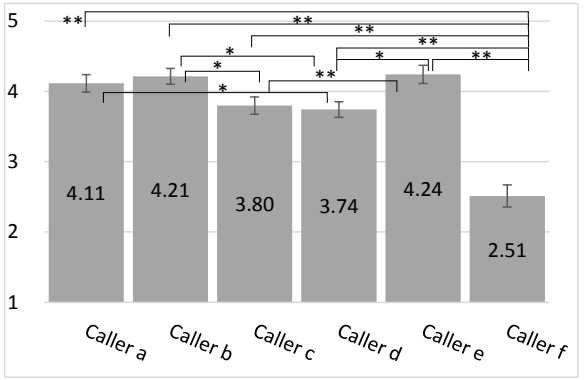

Figure 3. Behavior C, receiving a phone call

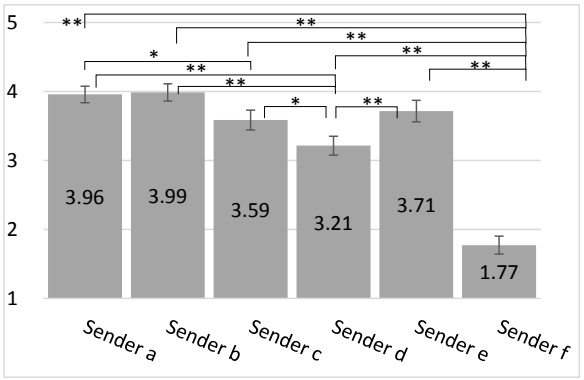

Figure 4. Behavior D, receiving a text message

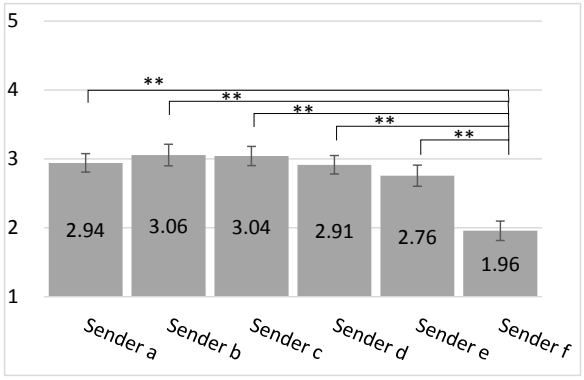

Figure 5. Behavior E, receiving a text message

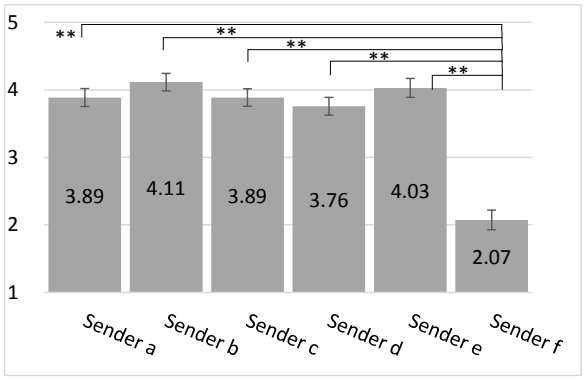

Figure 6. Behavior F, receiving a text message

Looking at Figures 1 through 6, the average value of giving responses after lectures have finished (Figures 3 and 6) is high, but the value for using text messaging to respond during lectures is also high (Figures 2 and 4). It is thought that the threshold for answering phone calls is higher compared to responding by text message (Figure 1) because when voice communication is desired, one would leave the classroom to respond. It follows that when there is an incoming phone call the medium changes to text messaging to enable an immediate response. For university students, having a mobile phone on their person means that they respond the moment that they receive a call or message, and it is thought that if they are able to respond with just their fingertips, they will go ahead and respond during lectures. It was also observed that students seemed to find it difficult to separate reading a received message with writing a response to it (Figure 5), and there was a tendency to respond immediately after reading.

4. CONCLUSION

The results of this study showed that, beyond the observed differences in response behavior to a received transmission depending on the identity of the caller/sender, there was a tendency for most students to respond by message during lectures. When implementing mobile learning in education in general, it is important to make students strongly aware of rules and manners when it comes to the differences in using smartphones for education and for personal use.

In the future, an international survey will be conducted on the personal use of mobile phones and smartphones during lectures, focused on considering cultural factors in detail.

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