The Impact of Smartphone Use in Teaching Evaluation Survey: Can Type of Device Change Lecturer's Evaluation? (Short paper)

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Abstract

This study examines whether answering a survey using either smartphone or laptop leads to different patterns of judgments among respondents. Specifically, we examined 342 replies to a teaching evaluation survey. Results indicate that answering via smartphones was related to lower assessments of the course, and to lower assessments of the lecturer, as compared with answering using laptops. These findings constitute initial evidence for the idea that different technological devices can impact social judgments and assessments.

Keywords: Technological devices, Smartphone, Human – computer interaction, Teaching assessment, Judgment and decision making

Introduction

Smartphone use in classrooms has become pervasive. The smartphone is used constantly as a learning tool (O'Bannon & Thomas, 2015; Thomas, O'Bannon & Bolton, 2013). Teachers are using smartphone in surveys that aim to facilitate class learning, sometimes via specifically designed applications like Kahoot or EdPuzzle (see Alvarado, Coelho & Dougherty, 2016). In addition, academic institutions have also adopting it for different needs, such as to run surveys to their students.

The use of smartphone in the classroom arouses the question of whether smartphone use leads to similar answer pattern of response as that through the use of the computer. Evidence suggests that the answer is no. For example, answers to open questions using smartphones were shorter as compared with answers via laptop (Mavletova, 2013). Moreover, participants who completed surveys with their smartphones were more motivated to finish the survey quickly, gave it less attention, and found the questions more difficult and less clear compared to PC users (Peytchev & Hill, 2010), and even tend to abandon the survey more often than those who filled the same survey using their computers (Lambert & Miller, 2015).

However, two issues remain unclear across these studies: First, in these studies, participants were used their computers or smartphones wherever and whenever they chose. Can such difference between devices occur when participants are placed in similar conditions, as happens when using smartphones at the classroom? Second, the implications of these findings need further understanding, since simply experiencing greater difficulty or finishing the survey quickly is not a problem. The problem begins if these differences also impact on the answers or lead to different answer patterns. Surprisingly, this critical issue has not yet been examined.

This study aims to explore whether completing a survey using different devices will impact judgments and evaluations. To investigate this, we used data from a teaching evaluation survey. Respondents could answer this survey using either laptops or smartphones. With regard to our first issue, it should be noted that taking this survey was possible only for students who were in class while the survey conducted.

Method

Research population. Three hundred and forty- two responses to a Teaching Evaluation Survey were examined. All responses were from the same Teaching Evaluation Survey, collected at the end of the spring semester (March- June 2017), at one of the larger colleges in Israel. All of them were related to courses from the same undergraduate school, and only to classes taught by tenured lecturers.

Research tools and procedure. For each response, some data was recorded:

Device type. Whether the student answered using smartphone or laptop.

Item completion rate. Response's completion rate, in percentages, running from 0% (did not filled anything) to 100% (filled the whole survey).

Word count. The survey contains an open question, in which students been asked to write their thoughts about the course. We counted the number of words in each response.

Assessments. Course and lecturer's assessments are based upon four items: (1) To what extant did you find this course difficult? (2) To what extent was this course well planned? (3) How would you rate the lecturer's attitude towards students? (4) Overall assessment of the lecturer. Scale range from 1= lower assessment, to 5= higher assessment. The average of these items created a general assessment score.

Results

Frequencies. Two hundred and frothy responses answered using smartphone (70%), while the rest, hundred and two responses, answered using laptops (30%).

Item completion rate. Item completion was lower when students filled the survey using their smartphone (M = 95%, SD = .03) compared to when they filled it using their laptop (M = 97%, SD = .03), $F(1, 340) = 21.05$, $p < .001$.

Word count. Answering via smartphone was related to lower amount of words in the open question (M = 3.97, SD = 7.61), in compared to answering via laptop (M = 7.61, SD = 9.37), $F(1, 340) = 15.04$, $p < .001$.

Assessments. General assessment score was lower at the replies who were given using smartphone (M = 3.89, SD = 0.65), in compared to those who were given using laptop (M = 4.11, SD = 0.48), $F(1, 340) = 10.87$, $p < .001$. Interestingly, this tendency occurred across all items, accept course difficulty, in which no difference was found between filling the survey using smartphone or laptops ($M_{smartphone} = 2.71$, $SD_{smartphone} = 1.026$, $M_{laptop} = 2.75$, $SD_{laptop} = .909$, $F< 1$). For course planning, using smartphone was related to lower assessments (M = 3.95, SD = 1.25) in compared with using laptop (M = 4.36, SD = .79), $F(1, 340) = 9.70$, $p < .01$. For lecturer's attitude, using smartphone (M = 4.29, SD = 1.18) was related to lower assessments in compared with using laptop (M = 4.61, SD = .77), $F(1, 340) = 6.35$, $p < .05$. And for overall lecturer assessment, using smartphone (M = 4.26, SD = 1.12) was also related to lower assessments in compared to using laptops (M = 4.59, SD = .79), $F(1, 340) = 7.07$, $p < .01$.

Discussion

These findings provide initial evidence for the idea that judgments and assessments can change as a function of different technological devices. As our results showed, the general course assessment, as well as the course and lecturer's assessments, tend to decrease when the survey was answered using a smartphone, as compared with when the same survey was answered using a laptop. Like previous studies, we also found that using smartphones led to greater abandonment of the survey and to less written content on the open question.

It should be noted, however, that our participants were not randomly assigned into different device conditions. In other words, there might be a confound, that influences both the student's decision to use one of the devices, and his/her assessment of the course and the lecturer. Further studies

should examine the influence of device type on judgments and assessments under controlled conditions.

This study is the first to expose the impact of the use of different devices on judgments and assessments. As such, this initial research is an important step in highlighting and explaining the influences of smartphone on our judgment and decision making processes. As the use of smartphones for learning and evaluating purposes is increases, understanding its influence is a crucial step towards its full integration in the education system, as well as in our daily lives.

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