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Alexander L. Lancaster^a & Alan K. Goodboy^a

^a Department of Communication Studies, West Virginia University

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BRIEF REPORT

An Experimental Examination of Students' Attitudes Toward Classroom Cell Phone Policies

Alexander L. Lancaster & Alan K. Goodboy

This study examined the manipulation of instructors' persuasive messages to introduce classroom cell phone policies to college students. Guided by Chaiken's (1980, 1987) heuristic-systematic model, we predicted significant differences in students' systematic message processing and favorable attitudes held toward a cell phone policy based on the number of arguments presented and involvement (i.e., motivation). Using a 2 (number of arguments: high; low) × 2 (involvement: high; low) experimental design, 101 undergraduate students participated by watching a video-recorded persuasive message about a hypothetical cell phone policy. Results indicated that participants did not differ significantly in systematic or heuristic message processing based on the assigned condition but held more favorable attitudes toward the cell phone policy when assigned to the lower number of arguments condition.

Keywords: Attitudes; Cell Phone Policies; Heuristic-Systematic Model; Message Processing; Persuasion

Recent research (Finn & Ledbetter, 2013; Johnson, 2013; Ledbetter & Finn, 2013) has examined the effect of instructor characteristics and technology policies on instructor credibility and learner empowerment. Finn and Ledbetter (2013) identified three types of instructor technology policies: encouraging, discouraging, and laissez-faire policies. An instructor's policy on student cell phone use in the classroom is important to

Alexander L. Lancaster (MA, California State University, Long Beach, 2012) is a doctoral candidate in the Department of Communication Studies at West Virginia University. Alan K. Goodboy (PhD, West Virginia University, 2007) is an associate professor in the Department of Communication Studies at West Virginia University. Correspondence: Alexander L. Lancaster, Department of Communication Studies, West Virginia University, P.O. Box 6293, Morgantown, WV 26506; E-mail: allancaster@mix.wvu.edu

consider because students who use their mobile devices in class take less-detailed notes, recall less lecture information, and receive lower scores on exams (Kuznekoff & Titsworth, 2013). Additionally, Johnson (2013) found that students' use of cell phones to engage in computer-mediated communication (CMC) during class time (i.e., to text) was a threat to student engagement and called for instructors to find ways to abate such behavior. It is important to examine how instructors communicate these policies in classrooms, as students may respond differently to a policy depending on how it is presented to them. Therefore, this study explores students' perceptions of cell phone policies that instructors present with persuasive messages.

Chaiken's (1980, 1987) heuristic-systematic model of information processing (HSM) is a dual-process model of persuasion that posits that individuals can process a message in one of two ways: systematically or heuristically. Systematic processing occurs when a receiver is motivated to process all argument-relevant pieces of information presented in a message. Heuristic processing relies on a few informational cues to come to a judgment on the message (Todorov, Chaiken, & Henderson, 2002). Consistent with the HSM, two hypotheses are proposed:

- H1: Participants in the (a) fewer-arguments condition will be more likely to process a cell phone policy heuristically than participants in the more-arguments condition, and participants in the (b) more-arguments condition will be more likely to process a cell phone policy systematically than participants in the fewer-arguments condition.*
- H2: Participants in the more-arguments condition will hold more favorable attitudes toward a cell phone policy afterwards than participants in the fewer-arguments condition.*

The HSM also posits that individuals who are motivated to think about a message tend to process persuasive appeals systematically, whereas people who are not as highly motivated engage in heuristic processing (Chaiken, 1980). Therefore, the following hypothesis is proposed:

- H3: Participants in the (a) high-involvement condition will engage in greater systematic processing than participants in the low-involvement condition, and participants in the (b) low-involvement condition will engage in greater heuristic processing than participants in the high-involvement condition.*

Method

Undergraduates ($N = 118$; 47 men and 71 women) participated during class time at a large, mid-Atlantic university. Ages ranged from 18 to 31 ($M = 19.97$), and 89% were White.

The study used a 2 (number of arguments: high; low) \times 2 (involvement: high; low) experimental design. Participants responded to half of the items, viewed one of two video clips (more or fewer arguments), then finished the survey. A pilot test for the manipulation of more or fewer arguments with two groups of participants ($n = 138$) who did not participate in the main study revealed a significant difference between the more-arguments ($M = 2.21$, $SD = .89$) and fewer-arguments ($M = 1.70$, $SD = .74$)

pilot groups, $t(133) = 3.58$, $p < .001$. A manipulation check of involvement was successful, with all but 17 participants, who were excluded from further analyses, responding correctly to the single-item check.

Cell phone use was measured using four forced dichotomy (i.e., *yes/no*) items that were developed for this study. Participants used their cell phones to send or receive text messages ($n = 114$), surf the Internet ($n = 99$), make calls ($n = 9$), and watch media ($n = 13$).

Campbell's (2006) Attitudes toward Mobile Phones scale was used to assess *cell phone policy attitudes*. Measurements were conducted for attitudes preexposure ($M = 4.08$, $SD = 1.35$, $\alpha = .76$) and postexposure ($M = 3.79$, $SD = 1.35$, $\alpha = .72$).

Griffin, Neuwirth, Giese, and Dunwoody's (2002) *systematic and heuristic risk information processing* items were modified to address cell phone policies. For systematic processing, measurements were conducted for premessage exposure ($M = 3.63$, $SD = 1.17$, $\alpha = .59$) and postmessage exposure ($M = 4.50$, $SD = 1.29$, $\alpha = .61$). For heuristic processing, measurements were conducted for premessage exposure ($M = 4.78$, $SD = 1.05$, $\alpha = .53$) and postmessage exposure ($M = 4.08$, $SD = 1.26$, $\alpha = .58$).

Participants rated *message quality* using three 7-point semantic differential items modified from the 9-point semantic differential items used in Petty, Cacioppo, and Schumann's (1983) study. Measurements were conducted for the more-arguments ($M = 3.00$, $SD = 1.41$, $\alpha = .88$) and fewer-arguments ($M = 3.91$, $SD = 1.45$, $\alpha = .86$) conditions.

Four 7-point Likert-type items (1 = *completely unlikely*; 7 = *completely likely*) were developed for this study to measure propensity to comply with cell phone policies. Measurements were conducted for the more-arguments ($M = 2.96$, $SD = 1.43$, $\alpha = .83$) and the fewer-arguments ($M = 2.37$, $SD = 1.12$, $\alpha = .77$) conditions.

Results

Before testing the hypotheses, all data were included in a manipulation check for the number of arguments conditions. The manipulation was successful, $t(113) = 2.098$, $p < .05$. Participants in the more-arguments group ($M = 1.92$) reported that the speaker used more arguments than participants in the fewer-arguments group ($M = 1.63$).

For H1, results of *t*-tests revealed no significant differences in systematic, $t(99) = .114$, $p > .05$, or heuristic, $t(99) = .447$, $p > .05$, processing based on the condition to which participants' were assigned. Thus, H1a and H1b were not supported. For H2, results of a *t*-test revealed that a significant difference between the groups existed, $t(99) = -2.941$, $p < .01$, but in the direction *opposite* the prediction. Participants in the fewer-arguments condition ($M = 4.21$) had more favorable attitudes toward the cell phone policy than individuals in the more-arguments condition ($M = 3.45$). Hypothesis 2 was not supported. For H3, results of two *t*-tests revealed no significant differences between participants in different conditions for either systematic processing, $t(99) = 1.813$, $p > .05$, or heuristic processing, $t(99) = -1.868$, $p > .05$. Thus, Hypotheses 3a and 3b were not supported.

Table 1 Pearson Correlations Among Variables

| Variables | 1 | 2 | 3 | 4 | 5 | 6 |
|---------------------------------|-------|-------|--------|-------|--------|---|
| 1. Policy attitudes in general | – | – | – | – | – | – |
| 2. Advocated policy attitudes | .72** | – | – | – | – | – |
| 3. Argument quality perceptions | .48* | .60** | – | – | – | – |
| 4. Cell phone use likelihood | –.22* | –.28* | –.48** | – | – | – |
| 5. Heuristic processing | .02 | –.03 | –.06 | –.03 | – | – |
| 6. Systematic processing | .16 | .07 | .28* | –.20* | –.28** | – |

* $p < .05$; ** $p < .01$ (two-tailed).

Given the unexpected findings contrary to the HSM, two post hoc tests were conducted. The first revealed a positive relationship between participants' attitudes toward cell phone policies and their attitudes toward the cell phone policy in the experiment ($r = .72$, $p < .001$). Participants who had unfavorable attitudes toward cell phone policies in general also held negative attitudes toward the cell phone policy in this study. See Table 1 for all correlations.

The second post hoc test revealed a negative relationship between participants' attitudes toward the cell phone policy and participants' likelihood to use their cell phones during class time ($r = -.28$, $p < .01$). Thus, participants who had less-favorable attitudes toward a cell phone policy also were likely to use their cell phones in classes that have such policies in place.

Discussion

The results of this study suggest that the number of arguments does not significantly affect systematic or heuristic message processing and that a greater number of supporting arguments in the persuasive message led to participants holding less-favorable attitudes toward the message. Furthermore, the results suggest that there is no significant difference in systematic or heuristic message processing based on where the cell phone policy will be implemented. This finding should be interpreted with caution, considering the low reliability of the HSM measure.

Two explanations for these results are discussed. First, from a social judgment (Sherif, Sherif, & Nebergall, 1965) and cognitive miser (Fiske & Taylor, 1991) perspective, individuals tend to maintain consistent attitudes and will not change their opinion without sufficient reason to do so. Thus, because participants held negative attitudes toward cell phone policies in general, it is logical that they would hold negative attitudes toward the cell phone policies in this study as well. Second, in this study, nearly all participants reported using their cell phones to send text messages during class time, which likely influenced their attitudes toward cell phone policies that ban the use of these devices during class time. Thus, because participants were already behaving in a manner that was counter to the advocated policy, it follows that they also would be likely to hold negative attitudes toward the policy.

This study complements previous research on instructor technology policies (Finn & Ledbetter, 2013; Ledbetter & Finn, 2013) by looking at students' attitudinal reactions to a type of technology policy in the wake of an instructor's attempt to implement the policy in a classroom. On a practical level, instructors should avoid the use of threats because students appear to be unlikely to respond favorably to this type of communication. According to psychological reactance theory (Brehm, 1966), individuals may perform the very behavior that a persuasive message attempts to induce them to stop. Thus, classroom technology policies may be more successful when they include an encouraging aspect, as well as discouraging aspect (Finn & Ledbetter, 2013; Ledbetter & Finn, 2013). For instructors, who are charged with maintaining an orderly, productive classroom environment, the challenge remains to find a classroom policy that discourages the nonacademic use of cell phones in class, and one that students will follow.

References

- Brehm, J. W. (1966). *A theory of psychological reactance*. New York, NY: Academic Press.
- Campbell, S. W. (2006). Perceptions of mobile phones in college classrooms: Ringing, cheating, and classroom policies. *Communication Education, 55*, 280–294. doi:10.1080/03634520600748573
- Chaiken, S. (1980). Heuristic versus systematic information processing and the use of source versus message cues in persuasion. *Journal of Personality and Social Psychology, 39*, 752–766. doi:10.1037//0022-3514.39.5.752
- Chaiken, S. (1987). The heuristic model of persuasion. In M. P. Zanna, J. M. Olson & C. P. Herman (Eds.), *Social influence: The Ontario symposium* (Vol. 5, pp. 3–39). Hillsdale, NJ: Lawrence Erlbaum.
- Finn, A. N., & Ledbetter, A. M. (2013). Teacher power mediates the effects of technology policies on teacher credibility. *Communication Education, 62*, 26–47. doi:10.1080/03634523.2012.725132
- Fiske, S. T., & Taylor, S. E. (1991). *Social cognition* (2nd ed.). New York, NY: McGraw-Hill.
- Griffin, R. J., Neuwirth, K., Giese, J., & Dunwoody, S. (2002). Linking the heuristic-systematic model and depth of processing. *Communication Research, 29*, 705–732. doi:10.1177/009365002237833
- Johnson, D. I. (2013). Student in-class texting behavior: Associations with instructor clarity and classroom relationships. *Communication Research Reports, 30*, 57–62. doi:10.1080/08824096.2012.723645
- Kuznekoff, J. H., & Titsworth, S. (2013). The impact of mobile phone usage on student learning. *Communication Education, 62*, 233–252. doi:10.1080/03634523.2013.767917
- Ledbetter, A. M., & Finn, A. N. (2013). Instructor technology policies and online communication apprehension as predictors of learner empowerment. *Communication Education, 62*, 301–317. doi:10.1080/03634523.2013.794386
- Petty, R. E., Cacioppo, J. T., & Schumann, D. (1983). Central and peripheral routes to advertising effectiveness: The moderating role of involvement. *Journal of Consumer Research, 10*, 135–146. doi:10.1086/208954
- Sherif, C. W., Sherif, M., & Nebergall, R. E. (1965). *Attitude and attitude change: The social judgment-involvement approach*. Philadelphia, PA: Saunders.
- Todorov, A., Chaiken, S., & Henderson, M. D. (2002). The heuristic-systematic model of social information processing. In J. P. Dillard & M. Pfau (Eds.), *The persuasion handbook: Developments in theory and practice* (pp. 195–211). Thousand Oaks, CA: Sage.