An Investigation of Cell Phone Use in College Classrooms

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Research Questions

- How can cell phones be used to enhance learning in college classrooms?
- What are the effects of cell phone use on student learning?
- What are the gaps in cell phone use in college classrooms?
- What are the elements of an ideal cell phone policy? *What should be taken into consideration?
- What are the barriers to constructive student learning in the use of cell phones in the classroom?
- What are the important components or features of a cell phone policy?

Project History: Mobile Millennials

This project started with the idea of assisting faculty in how to make decisions regarding cell phones in the classroom

- Fall Semester: Literature review examining research done on cell phones in the college classroom
  - Not much experimental research done, mostly focusing on cell phones as a distraction
- Spring Semester: Survey of students and professors about cell phones in the classroom at Carthage
  - Mixed attitudes about cell phones in the classroom, little consistency regarding cell-phone policies

SURE Project

- Began with our original research questions
- Incorporated findings from the literature review and surveys of students and professors
- Branched into a series of subprojects:
  - Research survey of existing cell phone policies here at Carthage
  - Creation of an App Bank with resources for interested faculty
  - Descriptive Review

Did the Existing Background Research Answer our Questions?

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Correlation Studies

- Methodologies: Measure relationship between overall cell phone use (texting) and GPA, or use in single class and grade in that class.
- Cell phone use always self-reported; GPA also reported by students.
- Results indicate negative correlation between frequency of texting and GPA or class grade.
- Limitations:
  - Correlation does not indicate a functional relationship -cause.
  - Dependent primarily on self-report.
  - Provides no insight into how cell phones can be used constructively.

Surveys & Interviews

- Methodologies: Surveys included items regarding cell phone use and perceptions of cell phone use in class. Two of eight studies sought students whose instructors had used cell phones for learning activities in class. Only one item among all of the surveys asked about use of phone for learning. Two studies asked students to predict effect of phone use and then assessed actual use on quiz scores.
- One study involved focus group interviews.
- Results: 35-94% of students report using phone in class; students perceive phones as negatively impacting learning, but still use at high rates; students predicted more negative impact than actually occurred
- Limitations: No direct measure of phone use; no insight into how phones might be used constructively.

Quasi-Experimental Research

- Methodologies: Comparing performance of Control Group (no phone) and Experimental Group (phone use). Measured effects of phone use on note taking and quiz scores. Experimenters controlled timing and amount of texting- every 30/60 seconds, intermittently, or instructed students to "play games."
- Results: Relationship between the frequency of texting and the quality of notetaking and quiz scores. Suggests that texting interrupted processing information. When phones were used for learning tasks, students reported positive effects on learning, even when post-test scores did not reveal advantage.
- Limitations: Most studies focus on "simulations," rather than naturally-occurring texting habits. Studies in which phone was used for learning tasks lack rigor.

Potential Constructive Uses

Emerging Uses in the Literature: How Well Do They Work?

- Augmented Reality
- Adaptive Learning & Competency Based Education
- Student Response Systems
- Video Collaboration Tools
- Social Learning in Online Courses
- 3D Printing
- Interactive Collaboration Tools
- Tools to Embed Questions in Videos
- Open Educational Resources
- "Mobile First or Mobile Only"
- Google Apps for Education
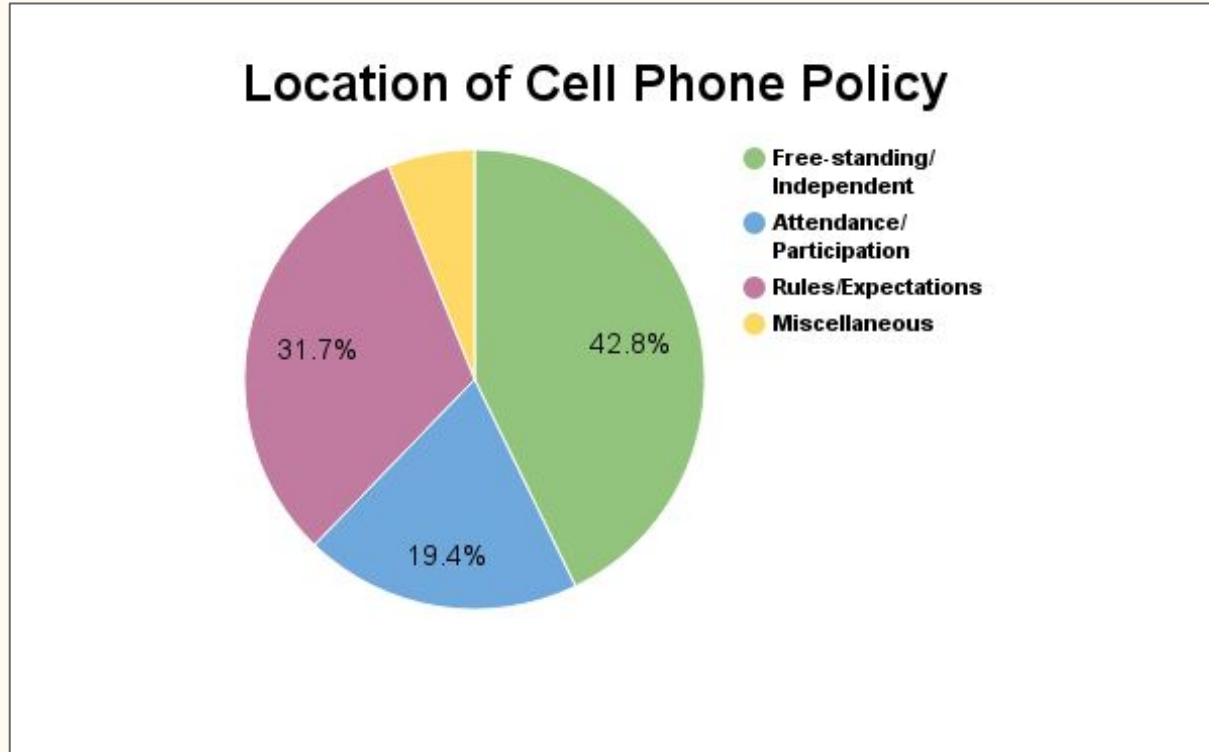
Cell Phone Policies at Carthage

Our Process

- Update IRB proposal
  - Syllabi considered institutional documents, approval granted
- Sample- 50% departments per division (19 departments total)
- Contacted department chairs regarding access to 2015/2016 syllabi
  - Received syllabi from 15 departments
- Reviewed 374 unique syllabi
  - 180 cell phone policies (48.1% of syllabi)
- Coded for six variables: existence, location, rationale, penalties, length, acceptable use
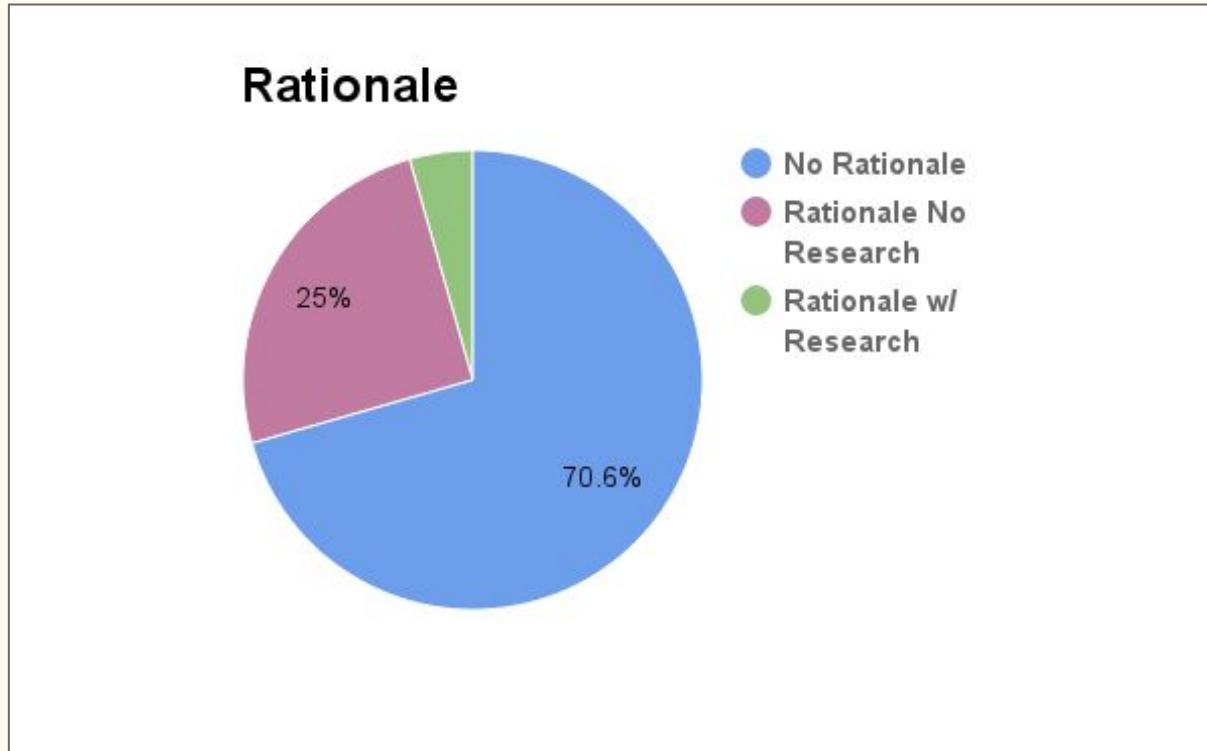
Coding Variables

- Existence
  - Whether or not the syllabus mentioned cell phones in any context
- Independence
  - Did the policy have its own titled section or was it wrapped into another section
- Rationale
  - Did the policy contain any explanation for its contents
- Penalties
  - Did the policy contain punishments/guidelines for enforcement
- Length
  - How long was the policy
- Acceptable Use
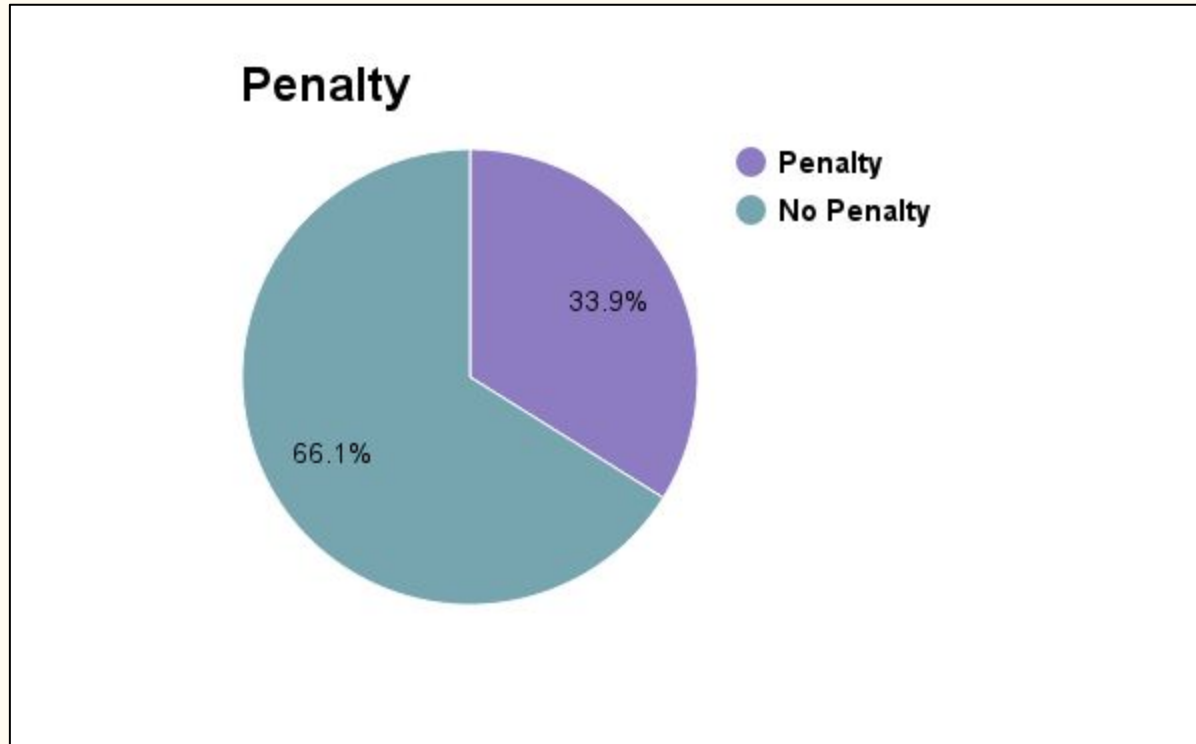 - Did the policy reference any possible examples for permissible cell phone use during class
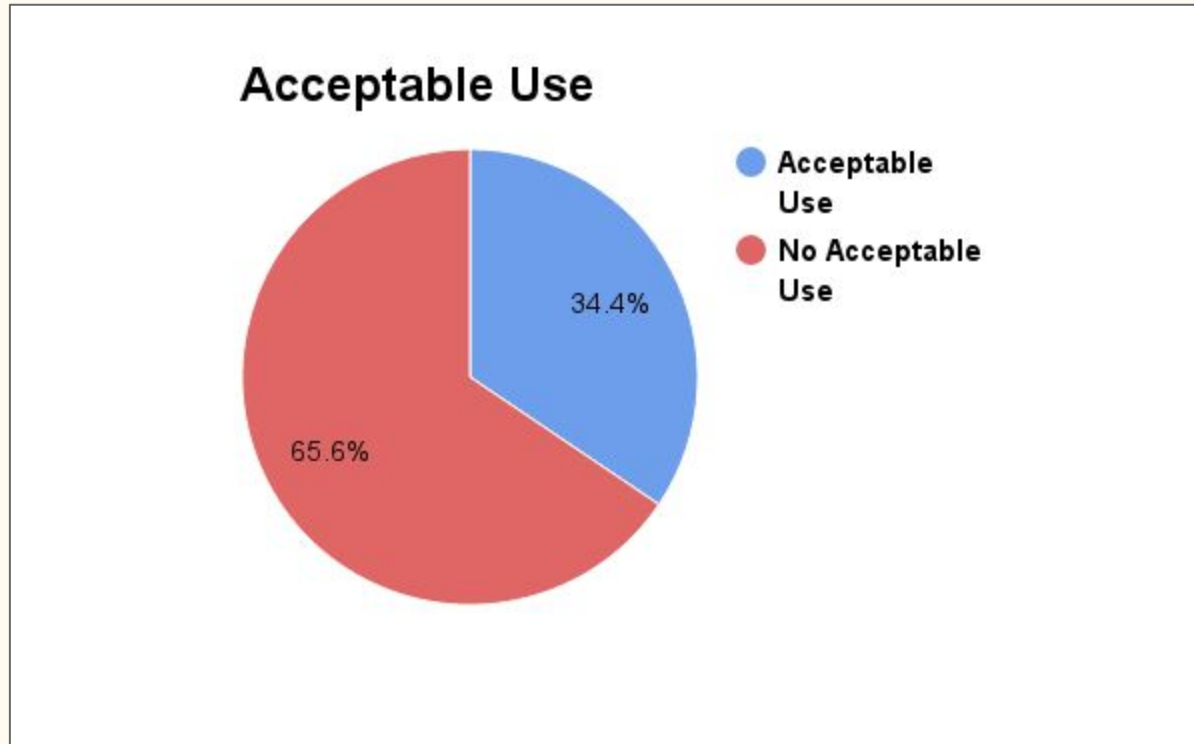
Independence

Location of Cell Phone Policy

- Free-standing/Independent
- Attendance/Participation
- Rules/Expectations
- Miscellaneous

42.8%
31.7%
19.4%

Rationale

Penalties

Acceptable Use

Acceptable Use

- Acceptable Use
- No Acceptable Use

34.4%

65.6%

Impressions

- Significant variability in the content of the policies
- Varied most significantly by instructor, but also by discipline & course level
- Focused primarily on controlling use of cell phones for non-class related activities
- Minimal content focused on appropriate use for learning
- Faculty provide different rationales for not allowing phone use

Recommendations for Development of Policy

- Involve students in the process
- Consider how cell phones might be incorporated into classroom instruction
- Provide a way for students to explain how they would like to use their phone
- Choose respectful language - be careful with humor
- Clearly articulate when students should not be using their phones and what consequences will be administered for not following your policy
- Make sure every student clearly understands when they can and cannot use their phone
- Revisit policy every semester - keep updated

Ideas and Questions

Thank you!