Hold the Phone! High school students' perceptions of mobile phone integration in the classroom

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Presentation

http://iste2016phones.weebly.com/

Today's Meet (backchannel)

https://todaysmeet.com/ISTEphones

Background

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Mobile phones are perhaps the most divisive technology to enter the classroom in the last 25 years.

Background

When they first appeared in the classroom in the 1990s, they were perceived by teachers as classroom disruptors and banned by schools.

Background

In the ensuing decades, mobile phones have evolved and today can perform most of the tasks performed by a desktop computer—from anywhere.

Background

UNESCO (2012) asserted that mobile devices—because of their ubiquity and portability—were positioned to influence teaching and learning in a way personal computers never did (p. 14).

Background

- 90% of American adults own a mobile phone (Pew Internet Research, 2014)

- Almost two-thirds are now smartphone owners (Lenhart, 2015)

- 78% of teens own a mobile phone (Madden, Lenhart, Duggan, Cortesi & Gasser, 2013)

- Nearly three-quarters have or have access to a smartphone (Lenhart, 2015)

Background

Access to mobile phones provides teachers and students with the opportunity to take advantage of the benefits of mobile learning (M-learning).

Background

For example, the ability to <u>engage</u> in meaningful learning opportunities from *anywhere* (Traxler, 2009).

Background

Other benefits of m-learning provided by mobile phones and other mobile devices are their ability to

- allow teachers to personalize instruction (Steel, 2012),

- collaborate (Corbeil & Valdes-Corbeil, 2007),

- differentiate instruction (Kukulska-Hulme, 2007),

- and give students the opportunity to self-regulate learning (Sha, Looi, Chen, & Zhang, 2012).

Background

Mobile phones have also been linked to a number of instructional applications such as

- assessment

- research

- administrative tasks and data collection (Engel & Green, 2011).

Methodology

Participants

- High school students
- Urban district
- Midwest region of the United States
- *N* = 628
- All attended high schools (N = 10) that had completed the first year of a mobile phone integration initiative.

Participants

307 (48.9%) were female

321 (51.1%) were male

Participants

- 146 (23.2%) 9th graders
- 187 (29.8%) 10th graders
- 151 (24.0%) 11th graders
- 113 (18.0%) 12th graders

Participants

The mean age was **16** (*SD* = 1.38).

571 (90.9%) owned <u>smartphones</u>

57 (9.1%) owned <u>basic mobile phones</u>.

Instrumentation

Survey developed by the authors based on current literature, the researchers' knowledge of mobile phone use, and the context of the school district under study.

- Demographic
- Type of phone owned
- Use of mobile phones
- Support for the use of mobile phones in the classroom
- Perceptions regarding useful mobile phone features
- Barriers to using mobile phones in the classroom.

Instrumentation

- Survey
  - Mix of question types: dichotomous items (yes, no), checklists, and 5-point Likert-type questions (SD = Strongly Disagree, D = Disagree, N = Neutral, A = Agree, and SA = Strongly Agree).

  - Participants linked to the anonymous online survey

  - Approximate time for completion was 10-20 minutes

Instrumentation

- Content validity was established using experts ($n = 5$) in the field of educational technology who reviewed the survey individually and marked information they felt was unclear or inappropriate.

- Additionally, the survey was distributed to preservice teachers ($n = 40$) in a technology course to check for understanding.

- Most questions were retained, and five were revised as suggested by the experts and students to better communicate the questions. None were eliminated.

Findings

Results: Technology Experience

- Participants reported that they were <u>fairly experienced</u> users of technology.

- Using a 5-point scale (1 = novice, 5 = expert), students <u>rated fairly high</u> their expertise with technology (*M* = 4.24, *SD* = .82).

Results: Support for the Use of Mobile Phones in the Classroom

"I support the use of mobile phones in the classroom."

High levels of agreement (M = 3.69, SD = .55)

Results: Support for the Use of Mobile Phones in the Classroom

"I think mobile phones support student learning."

High levels of agreement with this statement (M = 3.53, SD = .66)

Results: Use of Mobile Phone Features for School-Related Work

90.7% of the students reported the <u>use of mobile phones for school-related work</u>.

Results: Use of Mobile Phone Features for School-Related Work

Features used the __most__:
(a) calculator (91.4%)
(b) access the Internet (91.0%)
(c) calendar (84.1%)
(d) clock, timer (80.1%)
(e) use educational apps (74.0%)
(f) play music (71.6%)
(g) send/receive texts (70.0%)
(h) watch video (63.5%)
(i) app download (60.9%)
(j) e-mail (60.3%)

Results: Use of Mobile Phone Features for School-Related Work

Features used the <u>least</u>:
(a) record video (46.2%)
(b) post pictures on-line (42.0%)
(c) create survey (41.5%)
(d) record audio (41.0%)
(e) tweet (38.4%)
(f) post video on-line (33.9%)
(g) scan QR codes (33.5%)
(h) post audio online (30.5%)
(i) play a podcast (28.5%)
(j) create QR codes (24.6%)

Results: Barriers to Mobile Phone Use in the Classroom

Barriers to using mobile phones in the classroom:

(a) ringing of mobile phones in the classroom (54.0%)

(b) cheating (40.0%)

(c) disruption of class (39.3%)

(d) cyberbullying (36.5%)

(e) access to inappropriate information on the Internet (34.2%)

(f) sexting (27.9%)

(g) negative impact of texting on student writing (23.4%)

Results: Benefits to Mobile Phone Use in the Classroom

<u>Benefits</u> identified by students:

- reducing the digital gap (89.2%)

- providing learning opportunities (88.2%)

- increasing digital fluency (88.0%)

- creativity (82.1%)

- differentiation of instruction (82.1%)

- increasing productivity (81.3%)
- student motivation for learning (79.0%)
- increasing communication (78.8%)
- student motivation for attendance (76.7%)
- increase collaboration (75.6%)
- increase student engagement (70.4%)

Discussion

Discussion

Mobile Phones are…

Discussion

- **9 out of 10** used their mobile phones for school work
- **7 out of 10** phones should be allowed in the classroom
- **7 out of 10** mobile phones supported learning

Why the disparity?

Discussion: Benefit- Use of Mobile Phone Features for School-Related Work

- High percentage of participants reporting the use of their phones for school work.

- Majority of students reported using 12 of the 20 features listed.

- A closer look at these features reveals students' preference for basic technologies like the calculator, Internet, calendar and clock/timer

Discussion: Use of Mobile Phone Features for School-Related Work

Support research today's students often prefer basic, core technologies (e.g., the Internet) over more advanced, specialized technologies (e.g., recording audio) (Lei, 2009; Kennedy, Judd, Churchward, Gray and Krause, 2008; Bennett, Maton and Kervin, 2008).

Students' selection of mobile phone features for school-related use could have been impacted by the technologies used in class by their teachers.

Discussion: Use of Mobile Phone Features for School-Related Work

A 2014 survey (Thomas & O'Bannon) of **1,121 middle and high school teachers** found that the mobile phone features teachers believed were **most beneficial** to classroom use were the ability to:

- access the Internet,
- use educational apps,
- use the calculator,
- use the calendar,
- play a podcast
- and use the clock/alarm/timer.

These are **5 of the top 6** features identified by students in this study.

Discussion: Use of Mobile Phone Features for School-Related Work

Ertmer and Otterbein-Leftwich (2010) assert that teachers are continuing to use what they refer to as "low level" applications of technologies.

Discussion: Use of Mobile Phone Features for School-Related Work

- The **primary benefit** students identified was the potential of mobile phones to **reduce the digital divide**.

- New Digital Divide (Hudson, 2011)

- Potential for schools can achieve a previously unattainable level of technological integration.

Discussion: Use of Mobile Phone Features for School-Related Work

- 30% of students felt the negative impact on the classroom was sufficient enough to warrant banning them.

- Students were most concerned about ringing phones in the classroom.

- Research on barriers to mobile phone integration supports the concerns of students in this study. Ringing phones are a disruption (Burns & Lohenry, 2010; Lenhart et al., 2010; Baker et al., 2012).

- Shelton et al. (2011) found the classroom distractions caused by mobile phones negatively impact student performance.

Discussion: Use of Mobile Phone Features for School-Related Work

Students were concerned about the use of mobile phones to cheat.

Research supports their concerns.

- CommonSense Media (2009) found that 35% of students admitting using their mobile phones for this purpose.

- Students in a 2011 study expressed concern that mobile phones can potentially give students an unfair advantage during exams (Tindell & Bohlander).

Implications for Practice

Implications for Practice

- **Students Voice**: Almost all are using their phones for school work

- **Access**: The functionality and ubiquity of mobile phones provides schools, teachers and students with access to technology for classroom use.

- **Ban**: Many schools reconsidering the ban on mobile phones and considering a BYOD model of integration.

- **Training needed**: Based on student feedback about the features they are (and are not) using, schools and teachers should continue to explore ways to utilize all of the instructional features of mobile phones to support the development of digital fluencies and 21st century skills.

Implications for Practice

- What about students who don't want them in class?

- As students noted, mobile phones can disrupt the classroom and be used for inappropriate purposes.

- To address these issues, schools must develop clear classroom policy on appropriate mobile phones use and consequences for their misuse.

Recommendations for Future Research

- How are teachers utilizing mobile phones in their classrooms?

- How does teacher use impact student use?

- How are schools and teachers addressing the negative consequences (e.g., ringing phones, cheating, etc.) that accompany allowing mobile phones in the classroom?

- How has lifting of ban impacted discipline problems?

- To what degree are secondary school students are using their phones to engage in these behaviors?

Questions?

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