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Session Title: High School Teachers' Views of Cellular Devices as Teaching Tools
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High School Teachers' Views of Cellular Devices as Teaching Tools

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Background

Cellular devices (e.g., mobile phones) are an ever present part of our world today. Developing a workforce that can compete in a global economy can be realized by making these tools accessible to students. Current literature on the use of cellphones indicates that demographics and training of teachers in general may influence perceptions pertaining to the use of mobile phones in the classroom. Studies seem inconclusive and limited on the use of mobile phones in a classroom for instructional purposes. It is clear however, that successful implementation of any instructional technology in the classroom is incumbent upon teachers' knowledge, skills, attitude, and experiences in having students use these tools in the classroom. How prepared are our high school teachers to incorporate cellular devices in their classrooms?

Research Questions

Three questions were addressed in this study and they are ___

1. What are teachers' perceptions about using cellular devices in the classroom for educational purposes?
2. What prompt teachers to be more or less supportive of using cellular devices in the classroom for educational purposes?
3. What are teachers' needs, barriers, and challenges in using cellular devices in their classroom?

Method

Subjects. The participants included 22 teachers at one 5A high school in east Texas. Subjects were selected by content area using clustered sampling and random name drawing. From this pool, 13 participants volunteered for one-one interviews using a set of structured interview questions. The other nine teachers were asked to answer the same questions in writing, without a one-one interview.

Instrument. The structured interview was based on eight open-ended and two demographics items. These questions were pre-determined. The same order of the questions was consistently followed.

Procedure. A voice recorder was used to record subjects' responses. Subjects who did not use cellular devices in their classrooms were prompted to elaborate why they chose not to incorporate these devices. Subjects who claimed they were "users" of cellular devices in their classroom were asked how often they used them, what

issues they had with students using the devices, training/s they had on the use of cellular phones in teaching the content, student engagement, and computer programs or applications they were using. Each interview took about 15 minutes.

Data analysis. Using an "audit trail", open-ended responses were tallied and transformed into descriptive data comparing factors such as, content area, teaching experience, frequency of use, and digital natives versus immigrants. Qualitative data were analyzed for trends and themes, and to triangulate responses.

Summary of Findings

Issues surrounding the use of cellular devices in secondary classrooms evoked personal beliefs and attitudes from teacher respondents. Some felt excited about having yet another learning tool available to them while other respondents found this tool a nuisance or distraction in the classroom. Among the non-users, many have strict rules about "putting away" cellular devices during instruction. Teachers also alluded to student behavior problems resulting from misuse of cell phones. Nevertheless, many of the teacher respondents viewed cellular devices as learning tools and endorsed their use in classrooms. They perceived these tools as "valuable" and did not experience any discipline problems in their classes. Furthermore, 27% of the teachers did not use cellular devices in their classrooms while 73% of the sample have indicated using cellular devices "regularly" for instructional purposes, mostly when students are researching information. The teachers who used cellular devices for educational purposes reported that, with clear procedures and parameters in place, students did not have any major misuse incidents.

The teacher respondents who did not use or support cellular devices in their classrooms, did not "see" the use for the device in their content area. The teacher respondents who did use cellular devices did not have any problems incorporating this technology. However, they felt they did not have the "skill and knowledge" for integrating cellular devices during instruction as they would like to be. None of the teachers in the sample receive technology training specific to their content area.

Overall, many teachers are utilizing cellular devices in their classrooms to the best of their knowledge. The use of cellular devices are more prevalent in content areas like mathematics than in others (e.g., Language Arts). Most teachers allowed students to use mobile devices for researching information, taking photographs, and recording audio or downloading music.

Implications and Future Research

The need for continuous professional development was evident in teachers' responses. None of the respondents had been trained on the use of cellular devices specific to their content area. Changing perceptions and improving their technological skills are key to better classroom implementation. Simply infusing technology in current curriculum is not sufficient. The high school curriculum needs re-designing to fully support the state technology standards. Teacher leaders are needed to model and support peers in integrating cellular devices in the content areas. Continued research is needed in measuring the impact of technology tools on student behavior, attitude, content knowledge, project quality, and 21st century skills. Another important research to pursue would be about teacher change. How is instructional technology changing teachers' teaching methodology, assessment, classroom management, and peer collaboration?