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CONSIDERING FUN-ORIENTED BEHAVIORS IN LEARNING WITH MOBILE TECHNOLOGIES OUTSIDE THE CLASSROOM

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Extended Abstract:

A number of studies have reported that many college students own multiple mobile devices, and use them on and off campus (Caverly, 2012).

An increase in mobile device usage among college students has been documented in different countries. Kobusm Rietveld, & van Ommeren (2013) found that over 95% of Dutch students own at least one mobile device, and students bring hand-held mobile devices to campus, rather than laptops or tablets because they are easier to carry around.

In this paper, we explore the challenges of mobile devices for academic purposes outside the classroom. We bring our results from a very specific population from two different countries, with the USA population reflecting students from the education field, and students from Israel the engineering and science fields. This study can contribute to the generalization of the results in terms of the contribution to the education field and information systems designers who need to analyze and design applications for academic purposes.

Research on learning outside the classroom using mobile technologies seems to be sparse, indicating that there is a gap in the research between learning within and beyond the classroom using mobile technologies.

The purpose of this paper is to examine different mobile devices usages, including phone calls, e-mailing, listening to music, taking pictures, recording videos, searching for information and reading online, developed to reflect media usage items on a smartphone. It further considers how different mobile devices influence the use for academic purpose outside the school by the individual to complete class assignments outside school, and for collaboration with classmates on group projects.

Learning outside the classroom

In order to examine the students specific usage pattern behaviors with mobile device for academic purpose outside the classroom, we collected various patterns of behavior that are used as normal in daily life with the mobile device, and examined the adoption of these similar patterns for academic purpose which take place outside class. We believe that understanding the potential contributions has the opportunity to shed light on future IT application features that can be developed for using academic purposes outside the classroom. This is very important since learning may be achieved anywhere.

With the term fun-oriented IS usage, we refer to predominantly pleasure-oriented or hedonic IS usage, closely related to home and leisure activities. The main purpose of fun-oriented IS usage is not so much to enhance productivity or task performance as to enable users to have a good time, a pleasant and valuable experience, and to pass time (Deng, Turner, & Gehling et al., 2010).

Fun-oriented IS usage often happens in a way that is less planned ahead of time. In contrast to work related IS usage, fun-oriented IS usage provides users with discretion on selection and use. Thus, outside class learning can be characterized more as unplanned, and a selection of different type of behaviors may be preferred for individual or collaborative learning.

Two sets of hypotheses are presented, one that focuses on the usage patterns of mobile devices to seek their influence on academic purposes outside the classroom and the second to explore the relationships of attitudes towards technology and their impact on individual and collaborative learning for academic purpose outside class.   Listed are the hypotheses examined in this research study:

Mobile device usage

H1: A positive relationship will be obtained between sending /receiving text messages on a mobile device and the use of mobile device for academic purpose outside class.

H2: A positive relationship will be obtained between making/receiving mobile phone calls on a mobile device and the use of mobile device for academic purpose outside class.

H3: A positive relationship will be obtained between sending/receiving email on a mobile device and the use of mobile device for academic purpose outside class.

H4: A positive relationship will be obtained between listening to music on a mobile device and the use of mobile device for academic purpose outside class.

H5: A positive relationship will be obtained between taking pictures using a mobile device and the use of the mobile device for academic purpose outside class.

H6: A positive relationship will be obtained between recording a video on a mobile device and the use of the mobile device for academic purpose outside class.

H7: A positive relationship will be obtained between searching for information on a mobile device and the use of the mobile device for academic purpose outside class.

Mobile device usage for academic purpose learning outside class individually or collaboratively

H8: A positive relationships will be obtained between mobile device use and learning individually for academic purposes.

H9: A positive relationships will be obtained between mobile device use and learning collaboratively for academic purposes.

The study group for this research consisted of 251 respondents, 139 (55.4%) from Israel and 112 (44.6%) from USA.

The survey was produced using google docs, and distributed in Israel to students across the campus, using the promotion sites of the university in which student attend to gain information on courses, events in the campus. In the USA, the respondents were students from the education center, and they received payment for participation in the study during their course. In Israel, data collection was voluntary, promotion was advertised on several students' sites where students were encouraged to join the research and lead the change in higher education.

Data analysis results indicated that there was no significant difference between Israel and USA in terms of individual learning for academic purpose outside the classroom and collaborative learning for academic purpose outside class. Likewise, the type of mobile device and gender were consistent between the countries on the dependent variables. However, age differed between the countries: there were no difference in USA, but there was a significant difference in Israel. In particular, age affected individual learning for academic purpose outside class, so that 21-23 age group got higher scores (M=5, SD=.55) on individual learning for academic purpose outside class than the 27-29 age group (M=2.48, SD=1.40). There were no further differences between age groups. Table 1 shows the summarized results of the hypothesis testing.

Table 1: Results of Hypothesis Testing

Hypotheses	Result
Mobile device usage	
H1 on a mobile device and the use of mobile device for academic purpose outside class.	Supported
H2 calls on a mobile device and the use of mobile device for academic purpose outside class.	Not Supported
H3 A positive relationship will be obtained between sending/receiving email on a mobile device and the use of mobile device for academic purpose outside class.	Supported
H4 A positive relationship will be obtained between listening to music on a mobile device and the use of mobile device for academic purpose outside class.	Not Supported
H5 A positive relationship will be obtained between taking pictures using a mobile device and the use of the mobile device for academic purpose outside class.	Supported
H6 A positive relationship will be obtained between recording a video on a mobile device and the use of the mobile device for academic purpose outside class.	Supported
H7 A positive relationship will be obtained between searching for information on a mobile device and use of the mobile device for academic purpose outside class.	Supported
Mobile device usage for academic purpose learning outside class individually or collaboratively	
H8 A positive relationships will be obtained between mobile device use and learning individually for academic purposes.	Supported

This paper presents a challenge for higher education to address m-learning for outside the classroom. We suggest greater attention to the context of fun-oriented IS usage behavior as a potential for promoting learning outside the classroom at an individual and collaborative level. In order to measure this type of learning for academic purpose outside class we provide a new scale to measure individual and collaborative learning.

In this paper, we examine the use of different mobile devices, including phone calls, e- mailing, listening to music, taking pictures, recording video, searching for information, and reading online, developed to reflect media usage items on smartphone. We also consider the use of mobile devices for academic purpose outside the classroom by the individual to complete class assignment and for collaboration with students on group projects. We find that the use of various mobile devices contributes to facilitating attitudes to mobile technology, with individual and

collaborative learning varying between USA and Israel. The predictive value of the aim of mobile technology beyond mobile device usage was confirmed across the Israeli and total sample.

This new type of learning may enhance students' engagement in and outside the classroom.

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