TABLETS IN BUSINESS EDUCATION: STUDENT EXPERIENCES AND EXPECTATIONS

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ABSTRACT

In business education, as well in other disciplines, educators have always sought opportunities to enhance the student's learning experience. In most instances new developments in technology have been positively and quickly penetrated the educational arena. However, because of the complexities and diversity of different educational areas and their unique requirements, the adoption and usage rate of the new developments in technology are relatively slower and vary significantly among disciplines and also institutions of higher education. The purpose of this paper is to evaluate student's usage of electronic tablets and to explore potential student applications of tablet technology. A questionnaire was designed to measure student's interest in tablet applications as well as their perceptions on the future areas of use in business education. The intention is to provide a better understanding of how technological advances are going to change and enhance the educational experience of the future. This understanding will help e-text service organizations, textbook publishers, educators, and students to prepare and adapt for changes in this new phase of the business educational process.

INTRODUCTION AND LITERATURE REVIEW

Computer innovation and other technological advances have always lead to significant improvements in business education and many other disciplines. The road for implementation of these new technologies, in most instances, has not always been an easy one. That continues to be the case for the relatively new tablets and their implementation in the educational environment. Because of the complexities and diversity of different educational areas and their unique requirements, the adoption and usage rate of this new technological development has been challenging and vary significantly among disciplines and also institutions of higher education.

In 2009, five universities participated in a pilot launching of Amazon's Kindle DX with results lower than expected. The market then developed great expectations for the Apple iPad. Still, uncertainty and a limited market exist for e- textbooks when at this time less than 3% of books sold in college stores are digital—National Association of College Stores. (Anonymous 2010)

Initially, when Apple was steering the market for electronic textbooks, not many e-text service organizations or textbook publishers were eager to enter the market. Since the much anticipated introduction of the Apple's iPad tablet in April 2010, a race to participate in this potentially very lucrative market is on. Service companies as well as textbook publishers are quickly taking positions in a highly competitive arena. Inkling, an e-text service organization in San Francisco, launched their e-textbook delivery platform for the Apple iPad. This was followed quickly by the launch of four textbooks for McGraw-Hill, a New York publisher. Inkling is now approaching Cengage Learning, John Wiley & Sons, and Wolters Kluwer. (Anonymous 2010)

Some universities and schools are distributing iPads to faculty and students. This will without a doubt open the path to accelerate the adoption process. George Fox University is offering students a choice of MacBook or iPad—which will become the only option in the near future. With a digital textbook from McGraw Hill, an Economics' professor intends to promote classroom discussions through the use of the technology available. Even K-12 schools are experimenting with iPads. One of the initial uses was for homework assignments delivered via e-mail. (Mathis 2010)

According to the Pearson Foundation more than two-thirds of college students believe that tablet computers will have an impact on the way students learn. However, only 7 percent of the students actually owned a tablet. The study also indicates that approximately 48% of the students believe that tablets will replace textbooks over the next 5 years. Of the students who owned tablets, 73% liked the digital format over the traditional textbook. (Anonymous 2011)

According to Vineet Madan, Vice President of McGraw-Hill Higher Education elabs, there are six reasons why tablets are ready for the classroom. Madan's six reasons are (1) tablets are the best way to show textbooks, (2) classrooms are ready for tablets, (3) tablets fit students' lifestyles, (4) tablets have the software to be competitive, (5) tablets integrate with education IT tends, and (6) tablets are becoming more available. (Madan 2011)

Many colleges and universities issue tablets to their students. Schools such as George Fox University and Seton Hill are distributing tablets to their students, while other schools such as Oklahoma State, Duke, and Southern Mississippi are deploying tablets to specific colleges or segments of students. These colleges mentioned similar reason for giving tablets to students such as mobility, innovative ideas to teaching, and e-textbooks. (Taylor 2011)

Student assignments such as internet research, video requirements, and reading are better suited for tablets than a personal computer. The next generation of e-textbooks may be specifically designed for tablets, which would make tablets a primary study device for students. (Reynolds 2011)

Hundreds of thousands of iPads are being ordered by universities and high schools across the nation. The iPad can be used to replace textbooks, communicate with teachers, turn in assignments, and record digital portfolios of student work. The public schools in New York City ordered more than two thousand iPads. Over time, they believe schools would save money by reducing printing and textbook costs. (OP-Editor, Anonymous 2011)

METHODOLOGY

The population of interest was represented by business students from a small public university in a southeastern state. A non probability convenience sample of eight business courses was selected. From a captive population of 187 students, 129 questionnaires were collected, two of which were rejected for lack of completion or other concerns. This provided an effective response

rate of 68.0%. Students were properly informed about the purpose of the study, and the voluntary nature of their participation. Proper research procedures were applied to assure the students' anonymity, to maintain the privacy of the information, and to avoid duplications in participation. Classificatory questions were used to be able to evaluate potential differences between the participants.

FINDINGS OF THE STUDY

Table I shows the sample characteristics.

Table I
Sample Characteristics

Description	Gender	Classification	Concentration	Race	Work	Age
Male	42%					
Female	58%					
Freshman		0%				
Sophomore		1%				
Junior		26%				
Senior		73%				
Accounting			19%			
Econ./Finance			5%			
Health Care Mgmt			24%			
Mgmt./Mktg.			52%			
White				65%		
Black				29%		
Other				6%		
Working					69%	
Not working					31%	
17-19						2%
20-22						73%
23 or more						25%

Based on Table I, approximately 58% of the students surveyed were female and 42% were male. The vast majority of the students were upper classmen (99%). Nearly three quarters of the students surveyed were between the ages of twenty and twenty-two. The Management/Marketing emphasis area attributed for over 50% of the students, while Health Care Management accounted for 24% of the students. The other two emphasis areas, Accounting and Economics/Finance, accounted for 19% and 5% respectively. Nearly two/thirds of the students surveyed were white, and 29% of the students were black. Approximately 69% of the students surveyed worked.

According to Table II below, over 50% of the students surveyed are currently using a Tablet. This percentage is much higher than similar studies conducted among college age students. This may be a result of the requirement of all incoming freshmen to own a laptop. It appears that many of our students are either purchasing or have access to tablets, and are using the tablets in place of PCs.

Approximately 56% of the students surveyed plan on purchasing a tablet in the future. Thirty-four percent of the students do not plan on purchasing a tablet. Even though most of the students are interested in tablets, over one-third of the students are not convinced that tablets are taking over the world. Of the students who own a tablet, the iPad is the most popular followed by the Blackberry.

Table II
Summary Results

Questions		Responses
		Yes
Are you currently using a Tablet?		52%
Do you plan to get/use a tablet?		
	In the very near future	34%
	Sometime in the future	22%
	Not at all	34%
What brand of tablet do you have?		
	iPad	47%
	Sony	10%
	Blackberry	33%
	Other	10%

What applications would you be more interested in using?

	Responses				
Main Software					
	MI	**SI**	**N**	**SU**	**LI**
Word Processing	60%	20%	12%	4%	4%
Spread Sheet	43%	29%	22%	4%	2%
PowerPoint	52%	26%	18%	2%	2%
Data Base	23%	34%	30%	10%	3%
General Organizer					
	MI	**SI**	**N**	**SU**	**LI**
Calendar/Appointment book	73%	19%	8%	0%	0%
Memo Pad	42%	36%	16%	2%	2%
To-Do-List	58%	26%	12%	2%	2%
Address/Phone book	44%	26%	19%	6%	5%
Communication					
	MI	**SI**	**N**	**SU**	**LI**
Internet	91%	7%	1%	0%	1%
E-mail	83%	15%	1%	0%	1%
Voice mail	29%	25%	27%	12%	7%
Personal					
	MI	**SI**	**N**	**SU**	**LI**
Book Reader	37%	32%	16%	9%	6%
Video Player	59%	30%	6%	5%	0%
TV Player	49%	26%	12%	11%	2%
Games	44%	18%	26%	8%	4%
Alarm Clock	48%	19%	17%	8%	8%

- MI=Most Interest, SI=Slightly Interested, N=Neutral, SU=Slightly Uninterested, LI=Least Interested

Table II also shows the student's preferences toward tablet software applications. In the "Main Software" area, Word Processing received the highest interest. This was followed by PowerPoint

and spreadsheets. Data Base received the least interest among the students, but still showed a 57% favorable response in the two "interest" categories.

In the "general organizer" category, at least 70% of the respondents were interested in each of the four areas. The "calendar/appointment book" area led the way with 92% of the students indicating they were either "most" or "very" interested in using tablets for this purpose.

Regarding communication, students are overwhelmingly interested in using tablets for the Internet and E-mail. This would certainly make sense considering the amount of time students spend surfing the web as well as sending and receiving e-mails. However, even though the majority of the students are interested in voice mail, their interest was nowhere near their interest in web surfing and e-mail. .

In the area of personnel usage, students indicate a solid interest in using tablets. Approximately 89% of the students have an interest in using tablets as a video player. This is closely followed by "TV player" (75%), "book reader" (69%), "alarm clock", (67%), and "games" (64%).

Table III
Student's Perception of Usage

What do you perceive to be the future of tablets in business education?

	Responses			
Students' Usage				
	VL	**L**	**U**	**VU**
Textbooks	68%	25%	4%	3%
Class Notes	69%	27%	3%	1%
Homework Assignments	70%	27%	2%	1%
PowerPoint Presentations	74%	21%	4%	1%
Internet Assignment/research	85%	13%	2%	0%
Exams	55%	26%	14%	5%

- VL=Very Likely, L=Likely, U=Unlikely, VU=Very Unlikely

Table III reflects the students' perception in the future usage of tablets in business education. The vast majority of the students indicate a strong likelihood in using tablets for textbooks, taking class notes, doing homework assignments, making PowerPoint presentations, doing Internet assignment and research, and taking exams. A least 90% of the students see potential of using tablets in each of the categories with the exception of exams. Approximately 81% of the students believe there is a "very likely" or "likely" use of tablets in taking exams.

CONCLUSIONS & RECOMMENDATIONS

While most studies have focused on the general idea of tablet benefits for education and other areas, this paper examines the specifics of ownership, usage, and the potential software applications in business education, communication, personal use, and entertainment as perceived and expected by students in business. Finding that more than half of the students already own or have used a tablet provides insight on how the diffusion of innovation process have influenced the new technological development of tablets and their impact in education. It also makes us think about potential atypical results because the population of interest comes from a university that in recent years

have implemented a mandatory policy on laptop ownership for the students it serves. Consequently, it is important then to exercise caution when interpreting the results of the study. On the other hand, more than half of those that do not own a tablet at this time indicate that they plan to purchase one in the future. This represents an important indicator of how, in a relatively short time, a large segment of the student population has increased their interest in the use of a powerful and flexible tool that have multiple applications not only in the educational environment but also as a personal device that offers numerous advantages in areas of personal communication—social media—as well as entertainment, personal organizer, work center, etc.

The market for tablets is getting crowded, and competition is fierce. However, there appears to be some early leaders. For the present study, iPad and Blackberry seem to be the most popular, but others are quickly positioning themselves in two fronts. One is focusing on price competition and the other in terms of non price competition by emphasizing quality, features, support, and other important consumer benefits. Companies focusing on competing in the educational markets are very quickly dealing with issues of compatibility, adaptability, support, and training issues not only due to the diversity of systems in place at different educational institutions, but also the challenges provided by publishing organizations that supply those institutions.

Companies competing in the educational arena should pay close attention to the student interests and effectively provide solutions and choices. Student's interests remain solid when it comes to the main software and word processing, spread sheet, and power point continue to lead. Almost three quarters are interested in the use of tablets as a general organizer in all categories (i.e., calendar, address /phone book). In this respect the highest interest level was received by the calendar/appointment book. In today's complex social world structure, where social interaction levels continue to reach unheard levels, there were no surprises in the communications area with internet and e-mail leading the student's interests. In this area of communications companies need to exploit the richness of audiovisual technology and processes and adapt promptly to the demands required. Also of relevance consideration must be given by competitors in this field to versatility in entertainment alternatives. Video player and TV capabilities were the most relevant to the population of interest.

In business education, the student's likelihood of usage for options or potential options provided by tablets reached the highest levels. With the exception of exams at a low *"eighty percent"* all other areas of textbook use, class notes, homework assignments, presentations, and internet assignments received a very strong support. This requires a major undertaken by tablet producers and publishing companies to offer viable ways to offer effective, deliverable, and well supported systems to educational institutions. The challenge for these organizations will mainly relate to issues of compatibility, support, and attractive service packages to serve the needs of such a diverse set of institutions of higher education. Nothing can be certain in the dynamic world of new technological developments, but in business education, the authors believe that the best is yet to come.

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