

***Paducation:
iPad as an Effective Technology for an Online Program***

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Abstract

The emergence of mobile technology has presented extensive opportunities for asynchronous learning and collaboration among students and instructors, particularly in online learning. It allows individuals to access course materials and information virtually any time and any place and provides promising prospects for the future of education and pragmatic instruction. The predominant objective for device employment was to explore online graduate students' perceptions of their utilization of iPad across varying environments (i.e. school/work, home and travel) and activities to evaluate the advantages and obstacles of engaging such innovations. Additional measures assessed for participant usage, collaboration with peers and instructors, engagement and the potential educational value of the device. Identification of which aspects of iPad separate it from comparable technologies currently being employed was also investigated. Participant reception and reaction to the device was predominantly positive. Travel was the predominant domain of use for iPad. Practical implications and future research are discussed.

Methods

In cooperation with the mobile learning initiative (MLI) at Abilene Christian University, iPad was distributed to a cohort of online graduate students in the Leadership of Digital Learning certificate as part of the Master of Education degree. Approximately 18 students received a 3G iPad for the purpose of using the device to read course materials, complete assignments, and implement application in personal and other professional activities. Respondents were comprised of eight females and five males between the ages of 24-55 years. Fifty-four percent of the sample indicated they were not only graduate students, but also employed professionals. Receipt and application of the device varied between two and twenty-eight weeks.

A mixed methods approach was implemented. Surveys gauging participant usage, perception, engagement and collaboration with peers and instructors were administered. Advantages, obstacles and perceived educational benefits of employing iPad in coursework were also assessed. Utilization of iPad for various activities, such as research, professional or recreational reading, social networking and media consumption were evaluated across three primary environments (school or work, home and travel). Participants were asked to indicate the device most often used for each category of activities.

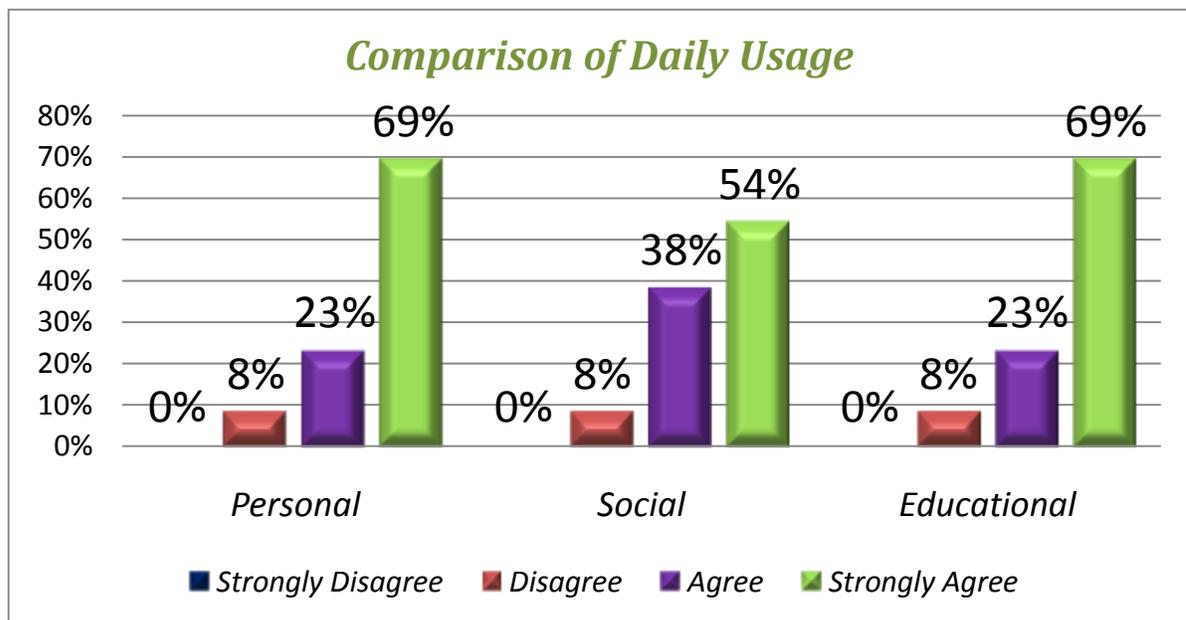
Results

Reception and reaction to the device was predominantly positive. All respondents assented that they could easily operate iPad without assistance, indicating participants feel capable navigating the devices features and applications without the aid of tutorials or technical support (9% agree, 91% strongly agree). However, two participants either neglected to or chose not to answer this item. Additionally, all but one participant, who selected 'not applicable',

indicated that iPad enhanced their overall experience in the course, with over half of participants (54%) strongly agreeing. A majority of participants (92%) also reported finding the experience enjoyable.

Daily Usage

Several items were designed to assess frequency of usage in three primary domains, personal, social and educational. Personal activities may include activities such as checking email, recreational reading or playing games. Social activities refers to pursuits external to required academic endeavors involving collaboration with peers, such as social networking sites or other user-generated content, while educational activities are those revolving around scholastic pursuits. A majority of participants reported using iPad on a daily basis for these activities.



Collaboration

One area of growing importance in education is collaboration; therefore, the extent to which students perceived iPad affected collaboration with professors, peers and colleagues was a variable of interest. Perception of interaction with course instructors was diverse. According to 38%, interaction with professors reportedly did not increase as a result of device implementation; however, 31% and 15% agreed and strongly agreed respectively. A “not applicable” option was presented. Though this response was made available with another group in mind, fifteen percent endorsed this option. Though many participants did not perceive and increased interaction with professors, a majority (83%) reported increased interaction with peers or colleagues (50% agree, 33% strongly agree, 17% disagree).

Engagement

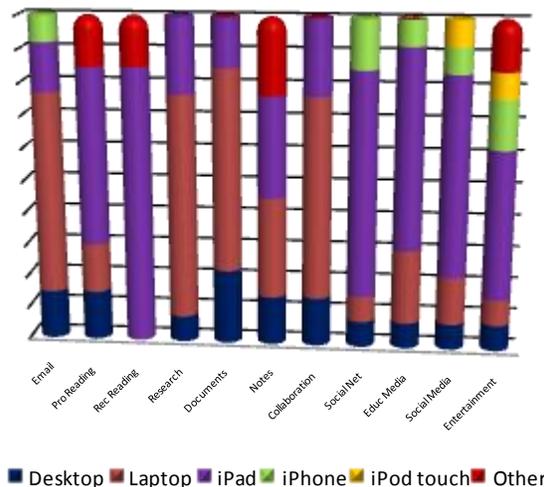
Several items assessed users' perception of the effects iPad had on their engagement in the course, including performance, involvement, interest and active learning. Responses regarding performance were more diversified than previous items. Nearly half of all participants (46%) agreed that there was an increase in the performance, which they attributed to iPad. Additionally, twenty-three percent, strongly agreed that iPad contributed to enhanced performance. Thirty-one percent of participants, however, did not observe a performance increase. Since iPad offers increased mobility and nearly anytime, anywhere access to course work, there is the potential for increased involvement by students. Many of the participants of this study also indicated that iPad usage did indeed increase their involvement (38% agree, 46% strongly agree). Around half of all participants (54%) strongly agreed that using iPad in the course increased interest, and another 15% also endorsed this. Though, one participant indicated that iPad did not increase their interest.

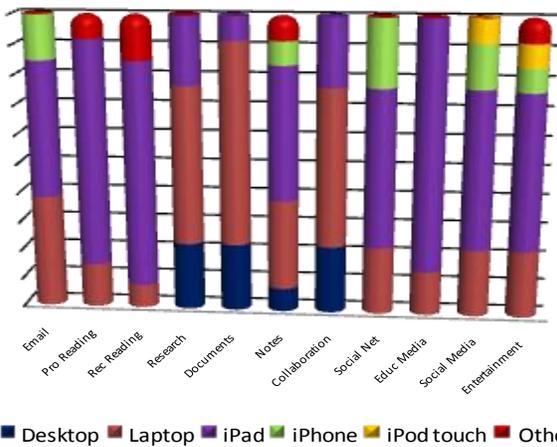
Twenty-first century skills require that students learn in a more active and self-directed manner. "The portability and versatility of mobile devices has significant potential [to promote] a pedagogical shift from didactic teacher-centered to participatory student-centered learning" (Looi et. al., 2010). A vast majority (84%) of respondents reported iPad utilization in the course facilitates more active contribution to the learning process; though, 15% dissented.

Domains: Work/School, Home & Travel

Extent of user employment of the device is another area of importance. The researchers hypothesized iPad would be most frequently implemented while traveling. To assess this phenomenon, participants were asked to endorse which device they most commonly used to for specific activities in each domain (work or school, home and travel). Devices included desktop computer, laptop computer, iPad, iPhone, iPod touch or other.

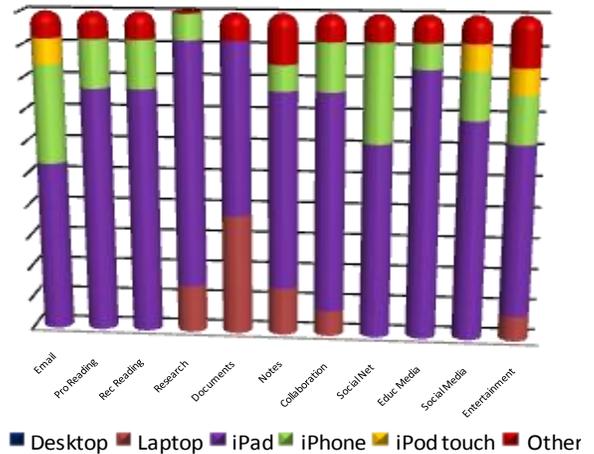
For work and/or school, iPad was the most frequently used device for professional and recreational reading, social networking, educational and social media and entertainment, while the laptop remained the most utilized for activities such as, research, editing documents, checking email and collaboration. Note taking and sketching were split evenly between these two devices. Recreational reading received the most endorsements (85%) for activities performed on iPad.





For home, iPad was utilized most often for all activities excluding research, document creation and editing and collaboration. These were still executed most often on a laptop. Eighty-five percent of participants chose iPad for educational media and 77% chose iPad for both professional and recreational reading.

However, travel emerged as the most prominent domain for the implementation of iPad. It was endorsed far above all other devices in every activity for this domain. Only the use of the laptop for creating and editing documents rivaled iPad, 38% to 54% respectively. See appendices (A-C) for additional charts and tables regarding this data.



Discussion

Online learning introduced the notion of synchronous and asynchronous learning; now mobile technologies, such as iPad, are taking scholarship to the next level. The accessibility and portability afforded by such innovations caters to nontraditional and traditional students' active lifestyle, breaking down the borders of learning defined by a specific time and space. Steve Jobs once remarked "if there is going to be a third category of device, then it has to be better at certain tasks than laptop or a smart phone, otherwise it has no reason for being." (Furfie, 2010). Travel is likely this third category, the niche for iPad. Future research should incorporate a larger and more diverse sample size to evaluate the generalizability of these findings.

By the year 2013, all textbooks in the state of Texas are predicted to be digital. Technological advancements like Apple's iPad may be valuable resources for this new era of education through interactive texts. Studies in annotation and student textbook creation are already being conducted. This allows for the possibility graduate value of a purchased text and transfer of learning via collaboration. Enhancement of learning via apps purchased on iPad also offers pedagogical potential.

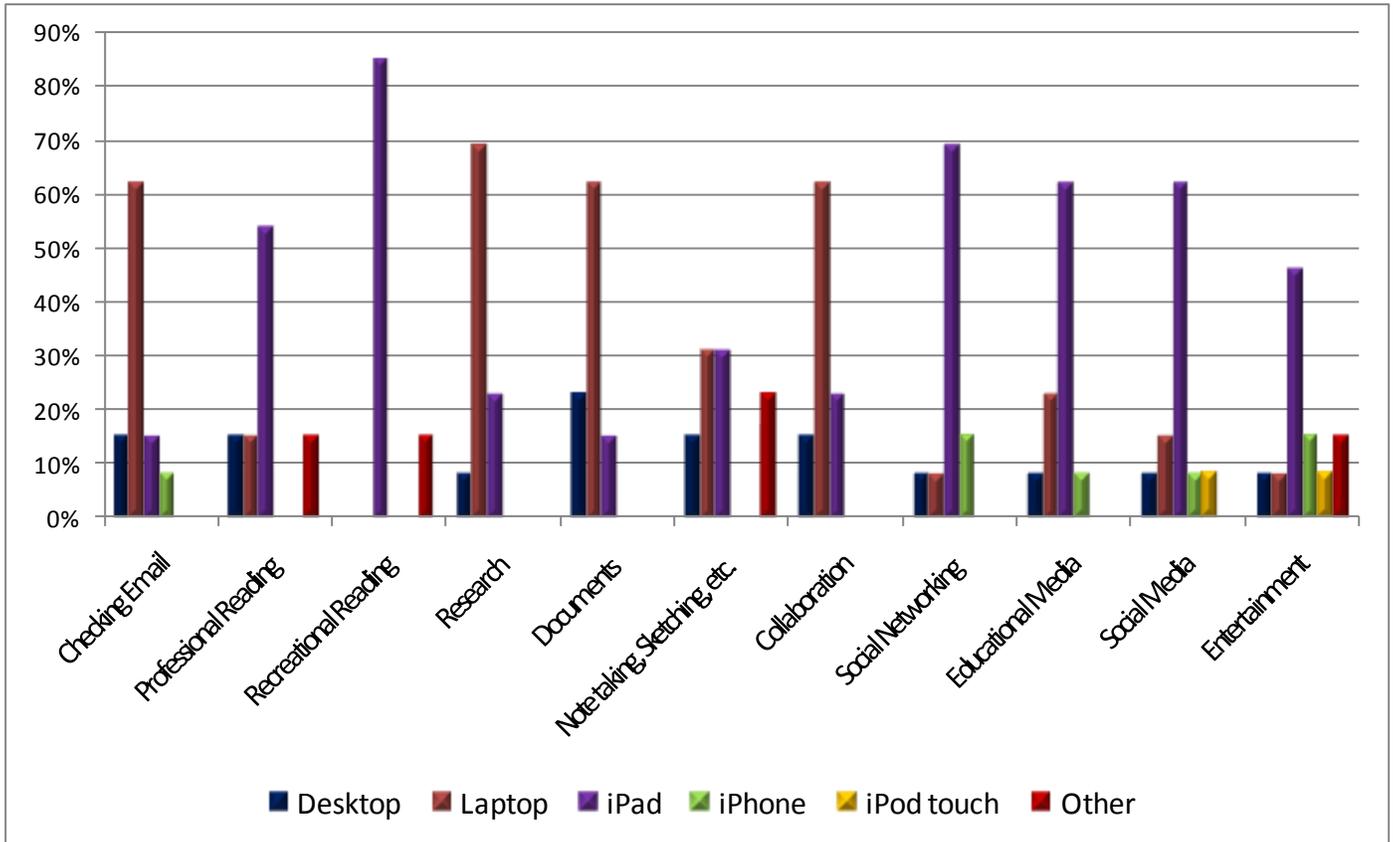
A significant issue in conventional instruction and academia is the amount of decontextualized information offered in the context of the classroom. Students receive instruction abstract information and encounters (Barab, 2002). Mobile learning technologies afford the learner spontaneous, informal learning first-hand. Studies suggest students learn better when they have personal experience with the course material, a concrete encounter outside the classroom with which to associate information (Looi, Seow Zhang, So, Chen & Wong, 2010; Skiba, 2010). Experiential learning can be more effortlessly and effectively integrated. Mobile

technology may also allow for increased productivity once an individual returns to their primary workspace after collecting data, like a research notebook on steroids.

Another practical implication is the ability for more active participation and self-directed learning. Our results showed that participants believed iPad increased active learning. However, the focus of learning now transforms from learners as consumers of content, as was the case with traditional learning, to learners as idea generators, producers of information and collaborators and disseminators of knowledge (Koszalka & Ntloedibe-Kuswani, 2010). Future research should assess the extent to which active learning occurs both externally and within the course.

Appendix A

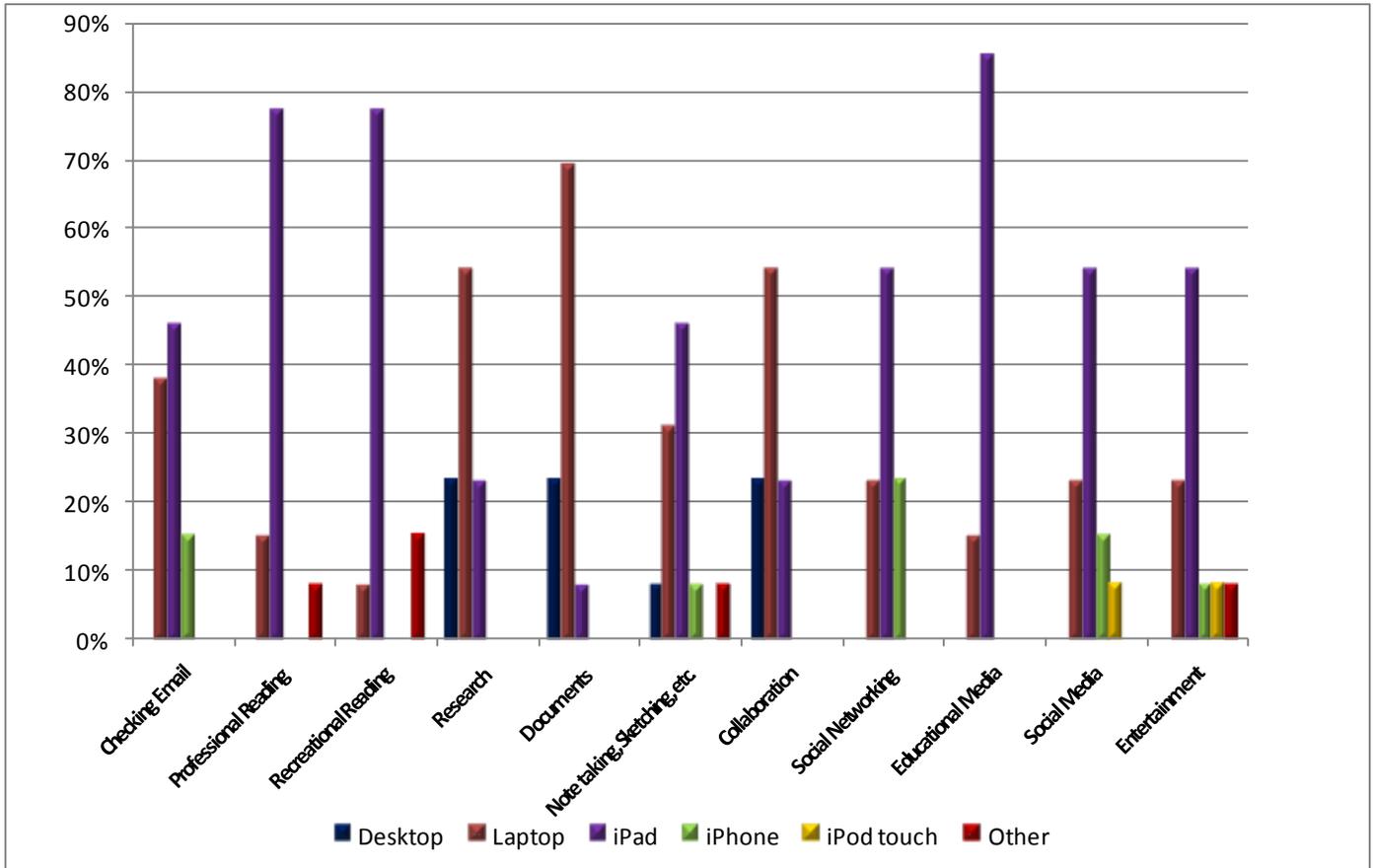
Work/School



	Desktop	Laptop	iPad	iPhone	iPod touch	Other
Checking Email	2 (15 %)	8 (62 %)	2 (15 %)	1 (8 %)	0 (0 %)	0 (0 %)
Professional Reading	2 (15 %)	2 (15 %)	7 (54 %)	0 (0 %)	0 (0 %)	2 (15 %)
Recreational Reading	0 (0 %)	0 (0 %)	11 (85 %)	0 (0 %)	0 (0 %)	2 (15 %)
Research	1 (8 %)	9 (69 %)	3 (23 %)	0 (0 %)	0 (0 %)	0 (0 %)
Documents	3 (23 %)	8 (62 %)	2 (15 %)	0 (0 %)	0 (0 %)	0 (0 %)
Note taking, Sketching, etc.	2 (15 %)	4 (31 %)	4 (31 %)	0 (0 %)	0 (0 %)	3 (23 %)
Collaboration	2 (15 %)	8 (62 %)	3 (23 %)	0 (0 %)	0 (0 %)	0 (0 %)
Social Networking	1 (8 %)	1 (8 %)	9 (69 %)	2 (15 %)	0 (0 %)	0 (0 %)
Educational Media	1 (8 %)	3 (23 %)	8 (62 %)	1 (8 %)	0 (0 %)	0 (0 %)
Social Media	1 (8 %)	2 (15 %)	8 (62 %)	1 (8 %)	1 (8 %)	0 (0 %)
Entertainment	1 (8 %)	1 (8 %)	6 (46 %)	2 (15 %)	1 (8 %)	2 (15 %)

Appendix B

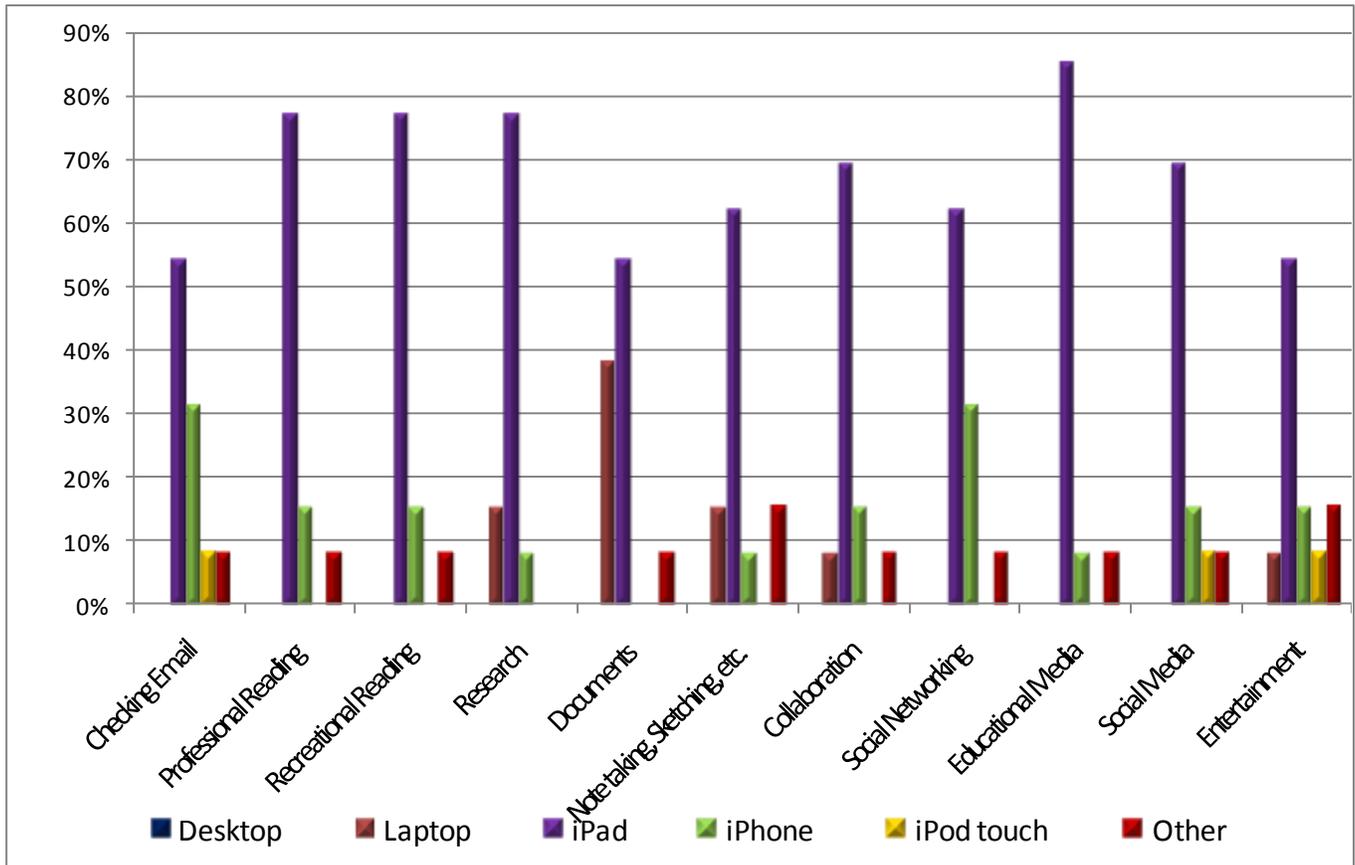
Home



	Desktop	Laptop	iPad	iPhone	iPod touch	Other
Checking Email	0 (0 %)	5 (38 %)	6 (46 %)	2 (15 %)	0 (0 %)	0 (0 %)
Professional Reading	0 (0 %)	2 (15 %)	10 (77 %)	0 (0 %)	0 (0 %)	1 (8 %)
Recreational Reading	0 (0 %)	1 (8 %)	10 (77 %)	0 (0 %)	0 (0 %)	2 (15 %)
Research	3 (23 %)	7 (54 %)	3 (23 %)	0 (0 %)	0 (0 %)	0 (0 %)
Documents	3 (23 %)	9 (69 %)	1 (8 %)	0 (0 %)	0 (0 %)	0 (0 %)
Note taking, Sketching, etc.	1 (8 %)	4 (31 %)	6 (46 %)	1 (8 %)	0 (0 %)	1 (8 %)
Collaboration	3 (23 %)	7 (54 %)	3 (23 %)	0 (0 %)	0 (0 %)	0 (0 %)
Social Networking	0 (0 %)	3 (23 %)	7 (54 %)	3 (23 %)	0 (0 %)	0 (0 %)
Educational Media	0 (0 %)	2 (15 %)	11 (85 %)	0 (0 %)	0 (0 %)	0 (0 %)
Social Media	0 (0 %)	3 (23 %)	7 (54 %)	2 (15 %)	1 (8 %)	0 (0 %)
Entertainment	0 (0 %)	3 (23 %)	7 (54 %)	1 (8 %)	1 (8 %)	1 (8 %)

Appendix C

Travel



	Desktop	Laptop	iPad	iPhone	iPod touch	Other
Checking Email	0 (0 %)	0 (0 %)	7 (54 %)	4 (31 %)	1 (8 %)	1 (8 %)
Professional Reading	0 (0 %)	0 (0 %)	10 (77 %)	2 (15 %)	0 (0 %)	1 (8 %)
Recreational Reading	0 (0 %)	0 (0 %)	10 (77 %)	2 (15 %)	0 (0 %)	1 (8 %)
Research	0 (0 %)	2 (15 %)	10 (77 %)	1 (8 %)	0 (0 %)	0 (0 %)
Documents	0 (0 %)	5 (38 %)	7 (54 %)	0 (0 %)	0 (0 %)	1 (8 %)
Note taking, Sketching, etc.	0 (0 %)	2 (15 %)	8 (62 %)	1 (8 %)	0 (0 %)	2 (15 %)
Collaboration	0 (0 %)	1 (8 %)	9 (69 %)	2 (15 %)	0 (0 %)	1 (8 %)
Social Networking	0 (0 %)	0 (0 %)	8 (62 %)	4 (31 %)	0 (0 %)	1 (8 %)
Educational Media	0 (0 %)	0 (0 %)	11 (85 %)	1 (8 %)	0 (0 %)	1 (8 %)
Social Media	0 (0 %)	0 (0 %)	9 (69 %)	2 (15 %)	1 (8 %)	1 (8 %)
Entertainment	0 (0 %)	1 (8 %)	7 (54 %)	2 (15 %)	1 (8 %)	2 (15 %)

References

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