IM Use for Studying Purposes among College Students in Israel

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Abstract

Instant messaging has become a key tool for students to stay connected with existing ties as well as to create new friendships. IM use among college students is almost ubiquitous: as 89% of U.S. college students and 97% of Canadian college students reporting using I.M regularly (Hu et al. (2004), (Quan-Haase, 2007). Less is known of how students use I.M. for learning purposes. The objective of the current study was to investigate the characteristics of students that use I.M. as a tool that supports learning at universities in Israel. We collected survey data from university students in two institutions of higher education in northern Israel (N = 492) to investigate the effect of individual, skill related variables on the frequency of use of I.M. for studying for tests and to exchange information on classes. It was found that younger university students are more likely to use I.M. for learning purposes. Evidence for a displacement effect was found as frequent I.M. users for social purposes were less likely to use I.M. for learning purposes. The findings support the hypothesis that I.M. use has a potential to support learning activities but needs to be adapted through class social networks.

Keywords: Instant Messaging, Displacement hypothesis, Israeli students.

Introduction

Instant messaging or IM is one of the largest growing Internet applications with an estimated 500 million users worldwide[1] sending nearly 12 billion messages each day (Business Wire 2005). Although all age groups in society use IM, the largest group of adopters is young people (Lenhart, Madden, and Hitlin 2005; Lenhart, Rainie, and Lewis, 2001). What makes it appealing for this group of users is its speed, display of availability information, and support for multiple conversations. IM is also popular among university students. In a study of 138 American university students by Hu et al. (2004), 89 percent reported using IM. A more recent study of 268 Canadian university students showed that 97 percent of students were I.M. users (Quan-Haase, 2007).

The large diffusion of IM among students has sparked great interest among researchers, administrators, and policy makers as to the relevance of IM to academic life (Baron et al., 2005; Baym, Zhang, and Lin 2004; Lenhart, Madden, and Hitlin, 2005). IM could be useful for university students' academic life by providing an alternative form of communication with other students and professors. Recent studies have used IM applications to offer virtual office hours via IM in addition to traditional office hours. This represents an attempt to reach out to students by using a communication mode with which they are familiar, as well as exploiting some of IM's characteristics, such as its immediacy, its interactivity, and its availability display. Roper & Kindred (2005) used IM to communicate with their students during regularly scheduled office

[1] This number is based on estimates from the Radacati Group (2005) and International Data Corporation (as cited in Business Wire 2005).

hours (eight hours a week) for four consecutive semesters. In this study, students contacted them regularly via IM – in total, they engaged in 173 exchanges with 115 students over the course of four semesters. Balayeva and Quan-Haase (2006) also studied virtual office hours via IM and found that while 69 percent of respondents reported in a survey that they liked the idea of professors offering virtual office hours only 19 percent used this service once it was available to them. I.M. can also be helpful for supporting and coordinating schoolwork. Grinter and Palen (2002) conducted an exploratory study and found some evidence that IM is used for some kind of homework support, with younger teenagers valuing companionship while working on homework, and older teenagers (those either preparing for, or already in, university) using IM to discuss assignments with their friends. In a study of university students in Canada, participants reported using IM to ask their classmates simple questions about assignments, convey progress on group assignments, or share resources (e.g., class notes, or reports) (Quan-Haase 2007).

One issue that has not been addressed is the extent that social use supplements or displaces I.M. use for learning purposes. On one hand it can be assumed that given that most social communication is conducted with peers and classmates, social use might increase the use for learning activities. On the other hand, it might be that the use for the arrangement of social activities and the continuation of face-to-face meetings compete with its use for learning activities. This issue will be addressed in the current study.

Methods

Data collection took place between October 2005 and August 2006 in two institutions of higher education. For the purposes of the study, a list of all courses offered in the institutions was compiled and a random sample of courses was selected for participation in the study. Then, course instructors were contacted and asked for permission to administer the questionnaire in their courses. Overall 492 students participated in the study. The average age of participants was 25 (SD = 4.04) and 51 percent were women. Fifty-seven percent were single and not currently dating. Thirty percent were first year students, 36 percent second year, and 33 percent third year. Thirty-two percent were enrolled in the humanities, followed by social sciences (38 percent), and sciences (29.1 percent). Most of the students are experienced computer users. 58 percent reported using the computer more than 11 years, 33 percent reported between 4 and 10 years and only 9 percent reported 3 years or less.

Measures

Dependent variable: *I.M use for study purposes* is a scale that was created by the sum to the responses to four items that requested the study participants to indicate the extent that they use I.M. to conduct research, to communicate with teaching assistants and lecturers, to prepare for exams and to discuss with peers class assignments and class preparation. Responses were in a 8 point scale when high scores indicate higher frequency of use. The scale alpha cronbach was .62 (M=13.11; sd=5.89)[2]. The lower average of the scale indicates few students used I.M. for learning purposes.

Independent variables

Age was measured as a continuous variable and gender as a dummy variable coded 1 for males and 0 for females. *Computer skills* were measured, using three items. Participants were asked to

[2] Alpha Cronbach is a measure of internal validity and its value is higher the higher the number of items and the higher the similarity of the items one to the other. In exploratory research, based on secondary data analysis, a value of at least .60 is accepted. When the study is directed at scale development higher values are required (Garson, 2007). The current study is exploratory and based on secondary data analysis. Under this conditions, in Sociology a value of .60 is acceptable.

indicate the number of years that they used the Internet. Responses were in a 6 point Likert scale with higher values indicating more years of Internet use. Length of I.M use was measured with an item that asked to indicate how long I.M. software is used. Responses where in 6 point Likert scale with higher values indicating more years of use. Finally, respondents were asked to indicate on average how much they spend in a typical I.M. session. Responses were in a 7 point likert scale from "do not use I.M." to 15 hours a day.

The extent that social use displaces the use of I.M. for school purposes was measured using two items that inquired the students on the frequency that they use I.M. to communicate with family and friends and the frequency of I.M. with a romantic partner. Higher values indicated higher use and to extent that there is a discplacement effect a negative relationship between the independent variables and the dependent variable is expected. Social integration was measured with two different measures. A measure of integration in online communities was created summing the responses to 5 items that asked the extent that the participant "has a sense of community with people met online", "the internet facilitates communication with others that share my interests", "the Internet enables to communicate with interesting people", "I met people online" and "I feel part of an online community". Alpha cronbach for the scale was .90 The second scale measured class integration and it combines the responses to five items that asked the extent of agreement that " I feel comfortable participating in class", "If I do not come to class I know students that will help me to make up the material", "I have good personal relationships with others in class" and "I met classmates for social activities and for study". Alpha cronbach was .74.

Findings

In the study was found that 81.2 % of the students report using an I.M. software regularly. As to the type of software MSN IM is the most used as 87.5 percent of the users reporting using it. Icq was used by 28 percent, Yahoo messenger by 4.8 percent and Google talk by 8 percent (note that percentages do not add to 100 to account for multiple software use).

Table 1 present difference in demographic characteristics, technological experience and social integration between IM users and non users. According to the findings students that are IM users are younger. Gender and marital status are not statistically significant indicating that there is no difference in the proportion of males and females that are IM users and between married and non married students.

Table 1. T-test comparing IM users and non I.M. users

	I.M. Users	I.M. Non Users
Age	24.69 (3.29)	26.50** (6.13)
Gender (male)	.48 (.50)	.51 (.50)
Marital Status (1=single)	.57 (.49)	.51 (.50)
Length of computer use	5.24 (1.22)	4.94* (1.48)
Daily use of Internet	3.80 (.98)	3.47** (1.02)
Class integration	9.63 (3.53)	10.17 (3.92)
Online community integration	28.51** (6.77)	22.77 (7.98)

*p<.05; **p<.001

Computer experience is higher among I.M. users and they report using computer for a longer time and more during the day than students that do not use I.M. Finally there are no statistically significant differences in the extent of feeling member of a class between IM users and non users. On the other side, I.M. users are active participants of online communities and they report a strong sense of integration in these communities.

In the next step of the analysis our goal was to identify the characteristics of students that are internet users and to test the social displacement/integration hypothesis. For this reason we conducted an OLS regression analysis in which measures of the three concepts were introduced. Age is statistically significant indicating that the use of IM for learning purposes is more frequent among younger than older students. Gender and marital status were statistically non significant indicating that there are no gender differences in the frequency of IM use for learning purposes. The lack of association of gender with IM use might be an artifact of the gender distribution according to faculty of studies. We explored the relationship between field of studies (humanities, social science and exact sciences) but did not found an association between field of studies and IM use for learning purposes.

Table 2. OLS predicting use of I.M. for study purposes

Variable Name	Parameter Estimate	Standard Parameter
Age	-.407 (.159)	-.179**
Gender	.404 (.802)	.035
Length of Internet use	1.071 (.503)	.151*
Length of I.M. use	.504 (.4234)	.089
I.M. daily use	.691 (.264)	.184**
IM communication with family and friends	-.360 (.182)	-.131*
I.M. communication with romantic partner	-.279 (.148)	-.130*
Propinquity	1.742 (.747)	.152*
Sense of virtual community	1.228 (.428)	.208**
Sense of class community	.271 (.393)	.046
Constant	29.346** (4.118)	
Adj R square	.171	

*p<.05; **p<.001

Technological skills seem to be an important factor in the frequency of use of IM for learning purposes. The longer the respondent has been an Internet user and the more hours a day is using IM then the more frequent is its use for study purposes.

There is some evidence of a displacement effect that qualifies the previous findings. The more IM is used for social communication with parents, friends and romantic partners the less is the use for learning purposes. In other words, the finding of frequency of IM use is qualified. While frequency of IM use is positively associated with Im use for learning purposes, the use for communication purposes reduce this positive effect apparently because social communication

displaces the use for learning activities. The negative relationship between perceived integration in online communities and the use of IM for learning purposes support this general displacement effect.

One salient finding is that there is no association between perceived class integration and use of I.M. for learning purposes. There are various explanations for this finding. First, the use of I.M. is a socially constructed activity. IM use can be an important factor for class integration if the use is widespread in the class, and not using it is being isolated. It seems that I.M. use is widespread but more for social purposes than learning purposes and its lack of use for learning purposes is not a factor isolating students from their classmates.

Summary

This study shows that the use of I.M. as a tool for learning purposes has a great potential. Israeli students frequently use I.M. and are familiar with the applications and its potential. The use of I.M. for learning purposes is more common among the younger students that belong to a generation of early adopters of the Internet and related technologies. The more technological experience the more is IM part of the social everyday life of students. Yet, it seems that users have adopted it for social purposes, to sustain and develop existing relationships. Furthermore, this type of adaptation was found to be competing with it use for learning purposes requiring an extra effort of academic institutions to convert its use from social oriented to learning oriented.

References list

Balayeva, J., & A. Quan-Haase. (2006). Virtual office hours: Students perceptions on communicating with their professors. Paper presented at the *Canadian Communications Association*, Toronto, Canada. October, 2006

Baron, N. S., L., Squires, S. T., & Thompson, M. (2005). Tethered or mobile? Use of away messages in instant messaging by American college students. In *Mobile communications: Re-negotiation of the social sphere*,. R. Ling and P. E. Pedersen (eds), pp. 293-311. New York: Springer-Verlag.

Baym, N. K., Zhang, Y.B., &Lin, M.C. (2004). Social interactions across media: interpersonal communication on the Internet, telephone and face-to-face. *New Media and Society* 6(3):299-318.

Garson, D.(2007). Reliability Analysis. Available at http://www2.chass.ncsu.edu/garson/pa765/reliab.htm downloaded on November 27 2007.

Hu, Y., Wood, J.F., Smith, V., & Westbrook, N. (2004). Friendships through IM: Examining the relationship between instant messaging and intimacy. *Journal of Computer Mediated Communication* 10(1).

Lenhart, A., Madden, M., & Hitlin, P. (2005). Teens and technology: Youth are leading the transition to a fully wired and mobile nation. *PEW Internet and American Life*, July 27, 2005. http://www.pewInternet.org/PPF/r/162/report_display.asp (accessed July 3, 2007).

Lenhart, A., Rainie, L. & Lewis, O. (2001). Teenage life online: The rise of the instant-message generation and the Internet's impact on friendships and family relationships. *PEW Internet and American Life*, June 21, 2001. http://www.pewInternet.org/pdfs/PIP_Teens_Report.pdf (accessed July 3, 2007).

Quan-Haase, A. (2007). University Students' Local and Distant Social Ties: Using and Integrating Modes of Communication on Campus. *Information, Communication & Society*.

Roper, S. L., &. Kindred, J. (2005). “IM here” Reflections on virtual office hours. *First Monday* 10(11). http://www.firstmonday.org/issues/issue10_11/roper/index.html#author (accessed April 13, 2006).