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## A Convergence of Information Technology and Psychology: A Behavioral Study

By Jeffrey S. Linney

*Fayetteville Technical Community College*

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**Keywords:** *text-messaging; short message service (SMS); information systems (IS); information technology (IT); academic help-seeking (AHS).*

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A CONVERGENCE OF INFORMATION TECHNOLOGY AND PSYCHOLOGY A BEHAVIORAL STUDY

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# A Convergence of Information Technology and Psychology: A Behavioral Study

Jeffrey S. Linney

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## I. INTRODUCTION

Help-seeking research was conducted fairly extensively by psychology researchers at the start of the 1980's. DePaulo contributed greatly to the body of knowledge in the area of help-seeking during this period (DePaulo & Fisher, 1980; DePaulo & Fisher, 1981; DePaulo, Dull, Greenberg, & Swain, 1989).

According to DePaulo and Fisher (1980), the consideration of two different types of psychological cost creates a state of constant conflict among potential help-seekers. To explain, a help-seeker will weigh the risk of perceived incompetence against the need to seek help for matters that he or she should already be able to competently handle or address. In addition, the help-seeker will also weigh the perceived inconvenience experienced by the person providing this help against his or her individual need for assistance.

In essence, DePaulo and Fisher (1980) suggested that if a potential help-seeker would risk embarrassment due to a perceived incompetence by asking for help, he or she would feel less comfortable about seeking help. As this study attempts to bridge the two worlds of Psychology and Technology, one particular communications technology that warrants

further research is short message service (SMS) text-messaging. SMS text-messaging is an extremely popular low social presence communications technology among American college students (Quan-Haase, 2008). Text-messaging allows users to communicate in an on-screen, text-based format utilizing combinations of alphanumerical characters (Soriano, Raikundalia, & Szajman, 2005). Soriano et al. (2005) iterated that text-messaging offers a means for increased social interaction in addition to an accurate, efficient, and distinct means of communication. Perry, O'Hara, Sellen, Brown, and Harper (2001) acknowledged that research on mobile communications media, such as text-messaging, has emerged as an important field of study within itself.

## II. RELATED WORK

The essence of AHS, as interpreted from definitions in the scholarly literature, suggests that AHS is a set of skills that involves asking for assistance and advice from available help sources (Fallon & Bowles, 1999; Gould, Udry, Bridges, & Beck, 1997).

One important justification for the current problem first stems from the fact that scientific study is currently lacking that could possibly reveal how text-messaging can benefit college students in completing the task of AHS (Kitsantas & Chow, 2007). Second, it should be noted that research involving text-messaging is still relatively new (Soriano, Raikundalia, & Szajman, 2005) which could explain why few if any studies have been done to address its potential as a useful mobile communications method for the completion of interpersonal tasks. The primary goal of this study was to investigate college students' behavioral intention (BI) to use text-messaging to complete the interpersonal task of academic help-seeking (AHS). The contribution that this study makes to the scholarly community is a more in-depth understanding of text-messaging and its usefulness for completing interpersonal tasks in the absence of verbal cues typically present and desirable in human communication. Three research questions were investigated to achieve the primary research goal.

**RQ1:** How does the availability of text-messaging technology impact intention toward completing interpersonal tasks among college students?

The first research question sought to measure behavioral intention (BI) to use text-messaging among college students to complete tasks in an AHS context.

*RQ2:* How was text-messaging technology viewed as a medium for interpersonal task completion, specifically with regard to AHS?

The second research question sought to reveal how the college students' actually felt, and the opinions they formed upon the potential selection of text-messaging and its usefulness towards completing AHS tasks. It is argued that despite its immense popularity, no studies have been found in the scholarly literature to date that have explored text-messaging exclusively for college students as a means for completing the task of AHS. Additionally, previous BI to use IS studies have focused on media selection and choice regarding a variety of communications media, but no studies were found to date that included text-messaging as an option.

*RQ3:* What are the characteristics of college students who prefer text-messaging technology to complete the task of AHS?

The third research question sought to identify the characteristics of users who may actually utilize text-messaging for engaging in AHS. The third research question is important as user attitudes, gender, experience with the technology, and competency, expressed as user characteristics, are useful in the human-technology matching component of media selection.

### III. RESEARCH METHODS

This study employed a descriptive approach to assess behavioral intention to use text-messaging for the interpersonal task of AHS among college students. The interpersonal task of AHS was assessed with the aid of a variety of AHS vignettes. This study was conceived based upon previous research reviewed in the scholarly information systems (IS) literature (Hoar and Flint, 2008, Kitsantas and Chow, 2007, Markett, Sánchez, Weber, & Tangney, 2006).

As part of an overview session, the participants were asked to complete an open-ended questionnaire where they answered a series of questions pertaining to their individual opinions with regard to text-messaging. The open-ended questions were analyzed using the process of content analysis to seek any common themes that were tallied to reveal the respondents viewpoints and preferences with regard to text-messaging.

The participants then viewed a series of vignettes depicting hypothetical scenarios that ultimately suggested the need for some type of AHS assistance. Based on the information contained in the vignettes, the participants were then asked to indicate whether text-messaging would be a viable option for that particular

scenario and to provide a brief rationale for their answers. A 6-point Likert-scale survey instrument was administered to measure computer user self-efficacy (CUSE) as it influences behavioral intention (BI) to use. Additionally, an ordinal scale instrument was administered to capture the participant's experience using technology (EUT), in this instance, text-messaging. The participants concluded by completing a survey instrument recording demographic data.

#### a) Descriptive Approach

This study involved descriptive research. Utilizing the survey method, the participants were administered surveys, questionnaires, and open-ended questions in order for the principal researcher to answer the three research questions posed. The observations (data) that were collected were then described in both textual and graphical form. What this study did not attempt to do was draw relationship-based conclusions from the data that was received. Qualitative and quantitative research methods were employed to report the findings.

Qualitative research deals almost exclusively with meanings, expressed either verbally or in writing, while quantitative research deals specifically with numerical distributions and frequencies when collecting and analyzing the data (Spratt, Walker, & Robinson, 2004). The quantitative aspect of this study consisted of a 6-point Likert-scale survey instrument that was utilized to collect data pertaining to the participants' stated comfort and skill levels with regard to text-messaging. The 6-point Likert-scale consisted of a range from (1) "Disagree" to (6) "Agree". The qualitative aspect of this study consisted of an open-ended questionnaire where the participants stated, in their own words, their likes and dislikes and frequency of use with regard to text-messaging that was the focus of this study. Consequently, the written statements from the participants assisted in explaining several items of interest such as if they would in fact utilize text-messaging for AHS, and a content analysis revealed why text-messaging was found to be effective for AHS, or not. Utilizing descriptive research methods, this study sought to meet the research goal to examine BI to use SMS text-messaging to allow college students to engage in a specific interpersonal task. The following sections of this paper will describe in detail how each of the research questions for this study was answered.

#### Research Question One

*RQ1 addressed:* How does the availability of text-messaging technology impact intention toward completing interpersonal tasks among college students?

#### Instrument Selection

An open-ended questionnaire was administered as part of an overview session after the participants read

descriptive passages regarding the features and capabilities of SMS text-messaging. Forman (2009) utilized an open-ended questionnaire to elicit additional responses from the participants with regard to the construct of perceived consequences. This study used a slightly modified version of Foreman's instrument to allow the participants to state their individual likes and dislikes with regard to text-messaging. This data was analyzed and categorized for a detailed qualitative summary of the findings. The open-ended questionnaire also revealed how the participants may or may not elect to use text-messaging for AHS completion.

*b) Data Analysis and Statistical Measures*

The participants initially completed an open-ended questionnaire allowing them to state one advantage or like and one disadvantage or dislike with regard to text-messaging. Utilizing descriptive statistics, the responses were tallied and averaged, expressed as total percentages. The responses from the open-ended questionnaire were also calculated as total percentages and displayed as frequency counts in a distribution table. Part one of a validated survey instrument from Cassidy and Eachus (2002) assisted in measuring CUSE toward text-messaging for completing the task of AHS. This instrument asked the respondents to indicate the strength of their agreement or disagreement with select statements using a numerical rating scale between 1 and 6 that most closely represented how much they agreed or disagreed with each statement. The lower their number, the more they disagreed with the statement. The higher their number, the more they agreed with the statement. Frequency distribution tables were created with data from the 6-point Likert-scale to reveal the distribution and compare how they were viewed by the respondents as a means to complete the interpersonal task of AHS.

*Research Question Two*

*RQ2 addressed:* Out of the available selection of communications media, how was text-messaging technology viewed as a medium for interpersonal task completion, specifically with regard to AHS?

*Instrument Selection*

Vignettes were adopted from Spendelow and Jose (2010), Altschuller and Benbunan-Fich (2009), Gattiker and Kelley (1999), and Hoar and Flint (2008) to aid in revealing the participants BI to use text-messaging for AHS. The vignettes and questionnaire that were utilized were subjected to a validation process for this study. The nominal group technique (NGT) was implemented for this purpose. According to Abdullah and Islam (2011), the NGT is designed to generate a large number of ideas related to an issue resulting in brainstorming and the equal presentation of ideas from within a structured group, while also preventing one single person from dominating the discussion.

Furthermore, the NGT is a useful tool in problem identification and its small group approach promotes shared solutions and the ranking of ideas (van der Waal & Uys, 2009). Vignettes were utilized to provide the contextual hypothetical scenarios that allowed the participants to state their BI to use text-messaging in order to seek academic help (AH). Vignettes are popular clinical assessment methods that have led to many important findings in help-seeking research (Spendelow & Jose, 2010). One type of vignette is referred to as an anchoring vignette that contains a short description of a hypothetical situation measuring a single concept (King, Murray, Salomon, & Tandon, 2004). According to Spendelow and Jose (2010), vignettes can be written in second person reflecting the self or third person looking at a situation through the experience of another. The anchoring vignette approach was adopted for this study to provide AHS scenarios that the study participants reflected upon in an AHS context. A series of open-ended follow-up questions were devised that aligned with each vignette, thus providing the participants with the opportunity to indicate their intention to use text-messaging in each of three AHS scenarios. The open-ended questions were developed based upon the previous work of Foreman (2009) who used a similar instrument in her investigation of perceived consequences with digital piracy.

*c) Data Analysis and Statistical Measures*

The data analyzed and measured to answer RQ2 were collected with two data collection instruments. The first was an instrument containing a series of AHS vignettes. The vignettes were developed depicting subjects in a situation that would prompt the need for AH. Written in second person narrative, the reader placed him or herself into the AHS scenario. Accompanying the vignettes was a series of corresponding questions that dictated brief written responses from the participants allowing them to state whether or not they would utilize text-messaging in that particular situation and also include their rationale to justify their decision.

*Research Question Three*

*RQ3 addressed:* What are the characteristics of college students who prefer text-messaging technology to complete the task of AHS?

*Instrument Selection*

This study captured and measured characteristics of the participants to include experience using technology (EUT), computer user self-efficacy (CUSE) and demographic data. CUSE was measured with a validated forced-choice instrument by Cassidy and Eachus (2002) measuring CUSE and EUT. Demographic data of gender, race, and class rank were collected using a slightly modified version of an instrument validated and utilized by Wynn (2009) who



examined BI relating to the online shopping experience. However, categories from that instrument pertaining to age, salary range, employment status, marital status, and level of education were omitted in the modified instrument to be used in this study.

*d) Data Analysis and Statistical Measures*

A demographics survey instrument required the study participants to submit information using forced choice responses. For example, Gender (1 = male, 2 = female), Race (1 = White, 2 = African American, 3 = Hispanic/Latino, 4 = Asian, 5 = Native American, 6 = Other/Mixed Race), and Class (1 = Freshman, 2 = Sophomore). Categories pertaining to class and membership in special student populations were substituted for omitted categories deemed inapplicable to the current study. The demographic data was used to categorize college students who may consider text-messaging to be useful for completing interpersonal tasks such as AHS. A content analysis was conducted where the data was cross-tabulated by gender, class rank, special population, race and ethnicity compared with CUSE and EUT. The responses from the demographics instrument were displayed as frequency counts and percentages displayed in distribution tables. The data collected from the instrument by Cassidy and Eachus (2002) to measure EUT and CUSE was analyzed to reveal the following information:

- A description of the participants' actual hands-on experiences with text-messaging.
- A description of the participants' perceived skill and comfort in the use of text-messaging.
- A cross-sectional view of the participants' actual hands-on experiences and perceived skill and comfort in the use of text-messaging.

Males were compared with females to measure the AHS equivalencies between both genders and the results were displayed graphically in a series of frequency tables. The same comparisons were made between freshmen and sophomores, as well as students in special populations. The ordinal data from the Cassidy and Eachus instrument measuring EUT and CUSE along with the data collected from the forced-choice demographics instrument collectively represent the user characteristics of college students to assist in answering RQ3.

*e) Population and Sample*

The sample was derived from the college student population at a small residential junior college in Northeastern North Carolina with a total enrollment of approximately 600 students. Approximately 43% of the study population is comprised of athletes (C.B. Sloan, personal communication, January 03, 2012). The entire population was sampled in an attempt to reach the highest validity possible. However, the minimum sample size required from a population of 600 is 248

participants based on a 95% confidence level with a margin of error of 5%. At the conclusion of the data collection period over the course of approximately six months, a total of 313 students had completed the survey with 259 completing the survey in its entirety without skipping any questions. A total of 54 incomplete surveys were omitted from the study altogether.

*f) Validity and Reliability*

Vignettes were developed in this study to answer RQ2 that was subjected to an expert NGT panel to undergo the process of establishing validity and reliability. The process of reliability is meant to evaluate a measure for its accuracy. Validity ensures that the process, technique or instrument that aided in measuring an intended concept does in fact measure that intended concept (Sekaran, 2003). Additionally, Sekaran offered that external validity indicates the generalize ability of the results of a study to other people, settings, or events. This generalize ability within a study increases upon using relevant variables examined in previous research and then upon excluding any non-relevant variables (Hair, Anderson, Tatham, & Black, 1998).

*g) Pre-Analysis Data Cleaning*

Pre-analysis data cleaning involves detecting any irregularities in order to preserve accuracy during the data analysis phase. Data needs to be cleaned prior to analysis to detect and cope with response-set, missing data, outliers or extreme cases, and preserving the accuracy of the data (Levy, 2006). According to Hair et al. (2006), response-set occurs when there is a "series of systematic responses by a participant that reflects a bias or consistent pattern" (p. 558).

There was a series of steps that were taken to complete the pre-analysis data cleaning stage of this study. Beginning with the accuracy of the date, the fact that the participants in this study had limited responses to choose from upon answering the survey questions should have resulted in either eliminating or reducing the possibility of invalid responses impacting accuracy of the data. However, there were some responses found to be inapplicable and unusable from the respondents when answering some of the questions within the survey instruments. For example, the abbreviation "idk" (I don't know) appeared numerous times by some of the respondents. "No" or "none" appeared at inappropriate times in the responses for some of the questions, as well as what appeared to be other unrecognizable abbreviations instead of an appropriate response. These unusable responses were separately tallied and reported as uncategorized responses.

Response-sets occur when the participants' responses may not reflect their true intentions, beliefs, opinions, or when the participants only use a portion of the rating scale. Kerlinger and Lee (2000) suggested analyzing the data for possible response-sets and to

consider eliminating them from the study. Upon instances of what was deemed to be valid issues of response-set, the suspect questions were invalidated and disqualified in the data analysis phase. Mertler and Vannatta (2005) also suggested that missing data, or incomplete surveys, should be addressed in similar fashion. Skipped responses were noted in the findings within the distribution tables.

#### IV. RESULTS

*Results for Research Question 1: How does the availability of text-messaging impact intention toward completing AHS tasks among college students?*

With regard to RQ1, themes derived from a content analysis of the questionnaires revealed, as far as the most "advantages", 45% (n = 117) considered text-messaging to be "fast" and another 16% (n = 43) considered it to be "easy". Other themes identified from the findings indicated that 16% (n=43) considered it a favorable alternative to actually talking on the telephone, % (n=37) indicated its likability due to the fact that it fosters a sense of privacy, and 08x% (n=22) admired and respected text-messaging for the simple reason

that it is not a communication media meant for formal communication. Since text-messaging is a cell phone technology, the respondents also included cell phone traits in the content analysis. As far as disadvantages, the content analysis revealed that the largest disadvantage listed was "no service/signal" (n = 91) or 35%, "wait time" (n = 62) or 24%, "misinterpretations" (n = 56) or 21%, and "impersonal" (n = 27) or 10%. Uncategorized responses totaled n = 23 or 8% of the disadvantages of using text messaging as a behavioral intention toward completing the interpersonal task of AHS.

To better assess text-message usage and to what extent college students use it to complete interpersonal tasks such as AHS, the survey asked respondents to indicate the strength of their agreement or disagreement with select statements using a rating scale with numbers between 1 and 6 that most closely represented how much they agree or disagree with a statement. The lower their number, the more they disagreed with the statement. The higher their number, the more they agreed with the statement. All responses are reported in Table 1.

*Table 1:* Computer User Self-Efficiency Responses

Question	Disagree (1)	(2)	(3)	(4)	(5)	Agree (6)	Rating Average	Response Count
1. At times I find working with text-messaging very confusing (Q1)	189	27	14	17	9	5	1.64	261
2. Text-messages are good learning aids (Q2)	29	46	44	54	33	55	3.69	261
3. Sometimes, when using text-messaging, things seem to happen and I don't know why (Q3)	99	45	31	42	18	26	2.67	261
4. Text-messaging helps me to save a lot of time (Q4)	8	10	22	36	36	149	5.03	261
5. I find working with text-messaging very frustrating (Q5)	170	32	19	21	7	12	1.85	261

In Table 1, a rating average of 5.03 illustrates that the majority of respondents indicated working with text-messaging saves a lot of time (Q4). Less than 23 respondents selected 3 or less as an option for the question. Stronger support for clarity of using text-messaging was illustrated with a rating average of 1.64, which meant that the respondents disagreed with the idea that text-messaging, was confusing (Q1). The respondents were split on the idea of using text-messaging as an aid to learning, as noted by the rating average of 3.69 of Question 2. Also, as observed in Question 3 (rating average of 2.67), approximately half

of the respondents believe that technological things happen when using text-messaging (and they do not know why). Overall, as referenced in Question 5, with a rating average of 1.85, the respondents do not find issues related to text-messaging to be frustrating to them.

*Results for Research Question 2: Out of the available selections of communications media, how was text-messaging viewed as a medium for interpersonal task completion, specifically with regard to AHS?*

Anchoring vignettes provided contextual hypothetical scenarios that allowed the respondents to

state their preferred source of AH and whether or not they would use text-messaging, expressed as their BI to use, in the context of this study. Three vignettes were developed for this study. The first vignette depicted a student who is struggling in a Biology class and summarily needs AH. The second vignette depicted a student with personal family issues that were beginning to affect the student's grades. The third vignette depicted a student with a problematic roommate whose antics were creating an environment where the student cannot study, thus resulting in a drop in the student's grades.

#### Scenario 1:

*"Your Biology Professor has announced a final exam worth 75% of your grade that will be given at your next class meeting. You are struggling with the course and desperately need to pass this upcoming exam. Your professor has given you several options if you need help preparing for the exam. First, the professor recommends reporting to the Biology lab for FtF peer learning and tutoring with other Biology students outside of class. The professor also will be available for a one-hour virtual review session of the material covered in class where you can contact him/her by instant messaging (IM). You also are given the option to send the professor an e-mail where you can ask questions and seek additional study tips. Your professor also provided a cell phone number where you can call or send a text-message with any questions prior to the exam. You also have friends who are serious Biology students that you could solicit for help."*

Text-messaging was found to be a very popular based on the respondents' data that was received previously from the open-ended questionnaire. Surprisingly, only a total of (n = 15) 5.5% of the respondents stated that they would use text-messaging to seek AH in this scenario. However, the majority of the respondents (n = 257) 93.7% indicated that they would not use text-messaging for AHS and a negligible total of respondents (n = 2) 0.8% stated they would not seek AH at all in scenario one. Table 2 summarizes the full distribution of BI to Use text-messaging in this context.

**Table 2:** Behavioral Intention to Use Text-Messaging for Seeking Academic Help (Scenario 1)

In this scenario		
Answer Options	Response Percent	Response Count
I would utilize text-messaging	5.5%	15
I would not use text-messaging	93.7%	257
I would not seek any help at all	0.8%	2
Answered question		274
Skipped question		39

#### Scenario 2:

*"Due to personal issues involving your family, your grades have suffered since you have not been spending enough time on your studies. You could e-mail the school counselor and speak with her about these issues that are affecting your grades, or you could visit her in person to seek help. You could text or instant message (IM) your friends to seek help or advice. You have friends in your classes that you could study with in person so you can get caught up and improve your grades. There are others you may be able to call on the phone who would be willing to help you during this difficult period as well."*

As with vignette one, a large percentage of the respondents (n = 234) 88.0% indicated that they would not use text-messaging in this AHS scenario, while (n = 8) 3.0% revealed that they would not seek help at all for scenario two as illustrated in table 3. Only a total of (n = 24) 9.0% of the respondents stated that they would use text-messaging for AHS purposes in this scenario as illustrated in table 3.

**Table 3:** Behavioral Intention to Use Text-Messaging for Seeking Academic Help (Scenario 2)

In this scenario		
Answer Options	Response Percent	Response Count
I would utilize text-messaging	9.0%	24
I would not use text-messaging	88.0%	234
I would not seek any help at all	3.0%	8
Answered question		266
Skipped question		47

#### Scenario 3:

*"Your roommate seems to repeatedly make irresponsible decisions and then calls on you to bail him/her out of these situations. You frequently lose sleep and are fatigued as a result of being a nursemaid to your roommate, thus causing your grades to slip. You are on a full academic scholarship and you must maintain a certain grade point average to maintain your eligibility. You need to speak with someone to get advice on how to deal with your roommate and preserve your academic scholarship. You could seek online help from a college official by e-mail, contact your residence community coordinator (RCC) by IM, visit the school counselor in person, call a parent by phone, or text a friend for advice."*

The results from the third vignette yielded that text-messaging again slightly increased in frequency as it was selected by (n = 24) 9.2% of the respondents. But again, it did not meet or surpass the level of respondents (n = 222) 84.7% who indicated that they

would not use it in this scenario to seek AH. A total of (n = 16) 6.1% revealed that they would not seek AH at all for scenario three as revealed in table 4.

**Table 4:** Behavioral Intention to Use Text-Messaging for Seeking Academic Help (Scenario 3)

In this scenario		
Answer Options	Response Percent	Response Count
I would utilize text-messaging	9.2%	24
I would not use text-messaging	84.7%	222
I would not seek any help at all	6.1%	16
Answered question		262
Skipped question		51

*Results for Research Question 3: What are the characteristics of college students who prefer text-messaging to complete the task of AHS?*

The data were derived from part one of the CUSE instrument by Cassidy and Eachus (2002) that also measured EUT for the five communications technologies utilized in this study was cross-tabulated with data from a demographic collection instrument in the following categories: gender, race/ethnicity, class rank, and membership in special populations. The following discussion of RQ3 offers conclusions of the cross-tabulated data results for each category.

#### a) Gender and Technology

Results observed when examining the various demographic groups and which preferred text-messaging to complete the interpersonal task of AHS were revealed using cross-tabulation. The sample consisted of a nearly equal distribution of females (n = 133) 50.7% and males (n = 126) 48.0% respectively. With regard to gender and technology, females respondents indicated more experience using technology overall than the male respondents. However, the levels of competence varied by gender. In an examination of text-messaging, both males and females were very close to equal in their level of experience, specifically as males reported "Quite a lot" of experience with text-messaging (n = 26) 10% and females (n = 27) 10.4%. Text-messaging was highly popular among the respondents 70%. This high response rate seems justifiable as the respondents reported that more than 98% of them owned cell phones.

#### b) Race/Ethnicity and Technology

Results observed when examining the demographic "race/ethnicity" when cross-tabulated yielded interesting observations. Cumulatively, each of the racial/ethnic groups responded at a rate of 80% or

more that they had "quite a lot" or "extensive" experience using text-messaging.

#### c) Special Campus Populations and Technology

An examination of text-messaging yielded a high response across all special categories and the belief that they have a great deal of experience using it 94%. Although text-messaging was extremely across all groups popular, it was not deemed preferable for the purpose of seeking AH.

## V. DISCUSSION

Pertaining to CUSE and EUT, this generation of young adults is extremely comfortable with technology. This is evident from the data obtained from the 6-point Likert-scale instrument and the forced-choice ordinal scale instrument by Cassidy and Eachus (2002) for measuring CUSE and EUT. The mean scores from the 6-point Likert-scale instrument for measuring CUSE indicated that the majority of the respondents described themselves as skilled, competent, and comfortable with text-messaging.

Three scenarios (vignettes) were administered to the respondents that ultimately prompted a need to seek AH. Upon viewing each vignette the respondents were then asked to state whether or not they would utilize text-messaging to seek AH in the given scenario.

#### Scenario One

Vignette one dealt with the respondents reacting as a student on the verge of failing a difficult course. Text-messaging was viewed as popular and favorable as a form of communication among practically all of the respondents; however, they did not find it to be an ideal mechanism to facilitate the AHS task. Although extremely popular as a social networking communications method, text-messaging was believed to allow for misinterpretation in communication and it was also identified as an impersonal method of communication for more serious and formal encounters. In sum, the respondents stated that text-messaging was too informal and impersonal to be an effective AHS choice for scenario one.

#### Scenario Two

Upon viewing vignette two, the respondents reacted as another student who was also struggling to maintain his/her grades, but there was an additional underlying root cause of personal family problems that attributed to the student's academic peril. It is possible that the additional personal family problems element prompted a number of the respondents to favor the applicability of text-messaging, as a help-seeking mechanism, more favorably in this situation than in the previous scenario. If informal contact with friends or family would be the preferred means to seek help in this instance then text-messaging would have perhaps been a sensible choice.

### Scenario Three

Upon viewing vignette three, the respondents were viewed as a student who was living with an irresponsible roommate whose antics ultimately began to take its toll on the respondent's grades. The responses from the open-ended questionnaire and vignette for scenario three seemed to suggest that text-messaging appeared to be favored for brief, informal communications among close friends, family members, and endeared inner texting circles, while being discouraged for use within more structured, formal communications. Furthermore, conclusions of the findings suggest that text-messaging doesn't appear to offer the same value for completing the interpersonal task of AHS as a high social presence communications media might such as face-to-face (FtF) and the telephone.

Conclusions drawn from cross-tabulated demographic data and EUT indicate that the majority of the respondents have a great deal of experience with text-messaging making them proficient and comfortable with the use of it. Overall, females reporting in this study appear to have more experience with text-messaging and as such, would conceivably use it more than males. Across racial boundaries, over 80% of the respondents reported a great deal of experience with text-messaging and in the case of the present study, blacks indicated higher frequency for experience than whites.

This is attributable to the fact that the student population of the target institution has a disproportionate black to white ratio in favor of black students. Only 13 respondents self-identified as Hispanic and reported either "quite a lot" or "extensive experience" with text-messaging. This study was not conceived to be ethnographic and therefore race and ethnicity concerns are actually beyond its scope. However, since the target institution had a high racial demographic in favor of African Americans, the data was additionally cross-tabulated by race/ethnicity and it is felt that this data was worthy of at least brief mention in this conclusion section.

More freshmen responded to the surveys than sophomores in this study. However, freshmen and sophomores expressed similar beliefs in their experiences with text-messaging. The age difference between traditional college freshmen and sophomores is small, typically with no more than a two year difference which could explain their similarly stated experience with text-messaging.

Across special campus populations, student athletes were the largest group represented followed by extracurricular groups. At the target institution, student athletes comprise approximately 60% of the entire student body. This disproportionate ratio explains the high student athlete response rate for this study. All groups surveyed, including student athletes, expressed that they had a great deal of experience with text-

messaging. Since well over 90% of all respondents indicated ownership of a cell phone, this would explain the high rates of experience and comfort-level reported for text-messaging across all demographic groups. Text-messaging was used extensively among all groups surveyed in this study, however, the findings revealed that it was not the most favored communications media for the interpersonal task of seeking AH. Even though the popularity of text-messaging has superseded all other popular communications media commonly used today as the preferred means of communication among college students, the age demographic of traditional college students reinforces the conclusion that technology that is perceived to be outdated and not "hip" will typically be shunned in favor of newer, trendier technology.

DePaulo and Fisher (1980) looked specifically at female college students in their study and found that the female participants were reluctant to seek help during that period. However, taking into consideration that DePaulo and Fisher conducted their study over 30 years ago, current literature has shifted the reluctance to seek help to collegiate males, as females have now been found to be more receptive to seeking formal help (Tsan & Day, 2007; Vogel, Wester, & Larson, 2007). Summarily, the findings of the current study provide ongoing support for the conclusion from DePaulo that potential help-seekers take into consideration the psychological cost of seeking assistance.

## VI. CONCLUSION

This study has several implications across the fields of information systems (IS), education, and psychology. From an IS perspective, this study endeavored to ascertain if text-messaging could possibly be used in an unconventional way to achieve the task of AHS. This study also identified a gap in the scholarly research on text-messaging as a relatively new technology, despite its immense world-wide popularity. The results of this study also attempted to reveal any gaps among a variety of groups with regard to access to technology, ownership of technology, and skill and experience level with technology.

The findings of the current study are significant in the fact that despite its popularity among college students the world over, the college students who participated in this study were reluctant to use text-messaging for the important self-initiating interpersonal task of AHS. Although this study sought to contribute to the scholarly body of knowledge (BoK) within information systems, a main component of this research has an overarching help-seeking element within it and help-seeking is a behavioral condition that is firmly rooted in psychology. Therefore, the results and conclusions drawn from this work should also benefit teachers, learning specialists, and school psychologists.



## VII. FUTURE WORK

Ample opportunities for continuing research are revealed as a result of this work. Of course, generalize ability is an important factor as older age groups should be examined with regard to communications technology usage. Future research could also include replicating this work in a business related unit where text-messaging is heavily utilized in a team environment. Situating the study or conducting a similar study in another interpersonal context other than AHS would be highly informative as well. As with older age groups, individuals who fall outside the ages of traditional college students such as adolescents and senior citizens would offer a different perspective on BI to use text-messaging. Because the sample size for the current study was relatively small, this study should be conducted again in a larger environment with a more sizable population to see if the results and conclusions drawn are similar, the same, or vastly different than the results and conclusions attained here. And finally, more research is needed on text-messaging in particular, due to the fact that it is a fairly new technology and hence, there is a vast amount of unexplored territory to be addressed in the scholarly literature.

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