Against Abstinence-Only Education Abroad: Viewing Internet Use During Study Abroad as a Possible Experience Enhancement

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Abstract

As the old model of study abroad welcomes a new generation of student, administrators are forced to grapple with how and whether to adapt the old model to new communication technologies. Assumed in the traditional model of study abroad, and in the cultural and language learning theories around which those programs were constructed, is that learning takes place in face-to-face (FTF) encounters with the host culture. Under these assumptions, the Internet is merely a distraction and ought to be avoided during study abroad. However, more recent research on Internet-mediated communication no longer situates Internet-mediated communication as diametrically opposed to FTF communication. Study abroad participants and administrators have long grappled with how to decrease stress and increase integration during study abroad. Literature on Internet-mediated social support, and computer-mediated communication, suggests that the Internet may be an effective means through which to access socially supportive peer networks, and break down barriers to communication—both of which have the potential to reduce stress and increase integration while abroad. The present study is a descriptive analysis of how students are using the Internet to enhance their experience abroad. An original survey instrument constructed from qualitative data was used to determine the ways in which students use the Internet to both access and to create networks of support during study abroad. The results indicate that the Internet bolsters confidence and risk taking by providing students with the perception of available support, valuable informational support, and access to

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a broader social network. These results are then analyzed with respect to students' acculturative stress levels and increased integration.

Keywords

study abroad, Internet-mediated communication, social support

The traditional model of study abroad is based on an assumed separation: students separate from friends and family to enter a new culture that is theoretically separate from their home culture. Study abroad remains rooted in a model characterized by "encountering another world, immersing oneself in the daily practices of other people, sometimes living and speaking in another language and learning how others view the world" (Dolby, 2004, p. 150). Assumed in this model is that learning takes place in face-to-face (FTF) interactions and bicultural relationships.

Over the past decade, administrators have welcome in a new generation of study abroad participants who have grown up "connected." As a new generation of student encounters the old generation of study abroad, administrators are forced to grapple with how and whether to adapt old programs to new communication technologies. Termed the *Millennial Generation*, *Generation Y*, or the *Net Generation*, individuals born between the years of 1977 and 1997 demonstrate a greater ease with, and reliance on Internet technology. Where 77% of adult Americans are online, a full 90% of Millennials have access to and regularly use the Internet, and 62% are able to access the Internet remotely. The numbers are still higher when considering young Millennials aged 18-24, Whites, and Millennials with some college education (PEW Report, 2010). Veterans of cyberspace, young Millennials are more likely to use the Internet to transact business, access information, and to engage in fun and leisure activities (Howard, Raine, & Jones, 2001; Thayer & Ray, 2006). On average, 81% of young Millennials have created social networking site profiles—and 58% report visiting those sites multiple times per day, with those numbers still higher among women (Lenhart et al. 2010).

Such Internet use has often been characterized in popular media as an alluring but deadly siren song, shipwrecking otherwise productive students on an island of narcissistic self-promotion (Buffardi & Campbell, 2008) and poor academic performance (Hamilton, 2009). However, much research (summarized below) has emerged in the field of communication studies and social psychology demonstrating the advantages of Internet-mediated communication. According to these studies, the Internet is an effective tool in breaking down barriers to communication and promoting increased, rather than decreased, social connection (Katz & Rice, 2002; Robinson, Kestnbaum, Neustadtl, & Alvarez, 2000). Regardless of whether the technology primarily facilitates escapism and distraction, or information and support seeking, the question remains: In the traditional study abroad model that theoretically privileges FTF interaction, is there any room for computer mediated communication?

Study abroad administrators and researchers have long grappled with issues of acculturative stress, and poor social integration among students (e.g., Moores & Popadiuk, 2011; Popadiuk & Arthur, 2004; Ryan & Twibell, 2000). Understanding how students are using the Internet while abroad, enables administrators and researchers to learn how contemporary students are applying their technological "edge" to their experiences abroad to promote integration and reduce stress. Using data gathered through an original structured survey instrument this article examines how the Internet is being used to enhance the study abroad experience.

Theoretical Framework

Classic Models of Social Support

Normative models of intercultural adjustment rest on two central tenets: (a) that intercultural adjustment is marked by increased stress; and (b) that stress reduction comes as a result of increased social interaction. One of the first attempts to describe a normative trajectory for intercultural adjustment among short-term sojourners, the popular u-curve hypothesis first featured prominently in a 1955 cross-sectional study designed to describe the adjustment experiences of a group of Norwegian Fulbright scholars in the United States (Lysgaard, 1955). Oberg (1960) adopted and developed the u-curve theory into the popular "culture shock" model. These models and their derivatives prescribe a three- to five-stage process of intercultural adjustment for sojourners—from contact, to crisis, and inevitably, recovery. Catalyzing movement between the stages is increased contact with members of the target culture. The model has been largely debunked due to theoretical shortcomings and empirical counterevidence (see for example: Church, 1982; Gong & Fan, 2006; McKinlay, Pattison, & Gross, 1996), but the assumptions on which the model is based remain an important cornerstone of newer models of intercultural adjustment (e.g., Berry, 1991; Ward & Kennedy, 1994).

According to social psychology literature, increased social interaction (heretofore: social support or social coping) may serve to alleviate stress in one of three ways: (a) *socio-emotional coping* refers to esteem support and social companionship in times of stress; (b) *informational support* refers to the transfer of pertinent information designed to help cope with a particular stressor; and (c) *instrumental support* involves the transfer of goods or services. Other conceptualizations of social support have recognized a fourth category of support stemming from participation in a broader social network, called *embedded support*. However, support need not necessarily consist of the translation of advice, information or materials to be effective. Research on social support has acknowledged benefits stemming simply from the *perception* that support is available. (For a full discussion of the four types of social support, including the distinction between perceived versus received support, see Cohen & Wills, 1985).

Social Support in the Contemporary Context

The advent of communication technology has transformed support-seeking behavior. Where early studies on Internet-mediated social support suggested that the transmission of support online lacked substance and ultimately led to increased isolation, current scholarship is finding the converse to be true. Studies by Katz and Rice (2002), and Robinson et al. (2000) show that broader networks of support online lead to broader networks of support offline. Furthermore, Hamman (1999), Parks and Roberts (1998), and Raacke and Bonds Raacke (2007) show that the Internet is an effective tool for the creation and maintenance of significant and supportive relationships. Similarly, early research on Internet-mediated social support once assumed a quality/ quantity tradeoff in online social interaction—or that as the quantity of interactions increased, the quality of those interactions decreased. However, as researchers move away from conceiving of the Internet as separate and theoretically different from FTF networks of support (Baym, Zhang, & Lin, 2006); a trade-off between quantity and quality can no longer be assumed.

The definition of on and offline communities as a single support network accessed through two distinct channels (FTF or online) means that individuals can access social support with a simple keystroke (see for example, Leung, 2007; and Wright, 2000). Furthermore, the Internet may serve as a portal through which to access a broader social network despite classic barriers to communication—geographic distance, communication difficulties, socioeconomic status, and so on (e.g., Burke, Kraut, & Williams, 2010; Malik & Coulsin, 2008; Mikal, 2010). In this way, the Internet may significantly enhance existing forms of social support (Rice & Hagen, 2010).

Unique Features of Social Support During Study Abroad

There is concern among administrators that increased contact with conationals will allow students to divorce support seeking from linguistic and cultural learning (Roberts, 2010). The concern is grounded in empirical evidence showing that students traveling with large groups of conationals are less integrated than those traveling in smaller groups (Gallois, Giles, Jones, Cargile, & Ota, 1995). In a study on international students in England, McKinlay et al. (1996) also found that all of their respondents reported that their closest friend in England was a conational. Coupled with theories that learning occurs primarily through bicultural encounters (Kleineberg & Hull, 1979; Wilkinson, 1996), evidence demonstrating high intergroup reliance among conationals raises concerns over the potential marginalization of the host culture in study abroad.

By considering the potential advantages of Internet-mediated communication, the present study helps to address the issue of technology in study abroad. Although intuitively, spending time online detracts from time spent engaging in the culture—the question remains: if Millenials are trading in a portion of their experience abroad, what, if anything, are they getting in return? The present study considers the potential

advantages of Internet use during study abroad. Using data gathered in four, in-depth focus group interviews, an original survey instrument was constructed to create an Internet use profile and to examine the ways in which students are using the Internet to enhance their study abroad experience—specifically, how students use the Internet to decrease acculturative stress and promote integration. In the following section, we will discuss methods, hypothesis generation, results, implications, and study conclusions.

Method

Data for the present study were gathered using a sequential, mixed-methods research design (Brewer & Hunter, 1989; Creswell & Plano-Clark, 2007). Qualitative data was gathered in four, in-depth focus groups with study abroad participants. The data was then categorized into themes to generate hypotheses. These hypotheses formed the basis for an original, structured survey instrument (more details of the qualitative component of this study can be found in Mikal, 2010 and Mikal, 2010). This section describes the instrument construction, validation, study population, and methods of analysis used in this research.

Instrument Construction

As part of developing a survey to test for the generalizability of the above-mentioned hypotheses, we included questions designed to construct a student profile. Students were asked to provide standard demographic information (age, sex, and ethnicity) known to affect integration, acculturative stress, social support seeking and Internet-use patterns. The student profile section also included educational and program information such as university major, prior language study, program location, and program duration.

   To contextualize students' perceived benefits from Internet use, the survey instrument began with three objective questions to measure students' Internet-use habits. Rather than treating Internet use/time online as a single variable, time online was divided into four categories: (a) online communication (e.g., Skype, email, chat, Facebook); (b) information seeking (e.g., newspapers, Google Maps, search engines); (c) entertainment seeking (e.g., television, YouTube, movies, music); and finally, (d) logged on/available to others. In the second question, students provided a breakdown of their online networks of support. Specifically, students were asked to report the percentage of online correspondents who were American residing in the United States, American residing abroad, host nationals, other foreigners, and other. Finally, students were provided a list of commonly used Internet services and programs, generated from focus group data. The list included search engines, maps, email, social networking sites, Skype, chat, discussion forums, newspapers, classified ads, YouTube, shopping, and travel sites. Students were asked to state whether they used the program multiple

times per day, daily, multiple times per week (but not daily), weekly, multiple times per month (but not weekly), monthly or never.

Multiitem scales were constructed to test each of the five hypotheses uncovered through qualitative data coding. Each scale corresponds to one of the hypothesized Internet uses mentioned above. The five hypotheses and their corresponding scales will heretofore be referred to as follows: Embedded support, perceived support, received support, informational support, and creating new relationships, respectively. Likert-type items were generated using specific examples from the focus groups. Each scale consists of six to eight individual items expressed as statements. Respondents could select whether they (a) strongly agreed, (b) agreed, (c) somewhat agreed, (d) somewhat disagreed, (e) disagreed, or (f) strongly disagreed with the statements provided.

Finally, two outcome variables were included to measure the degree to which student Internet use had a bearing on (a) stress coping and (b) integration. Students were asked to report their overall level of stress during study abroad. Students provided a single average stress score ranging between 1, representing *low or no stress*, and 10 representing *constant, elevated stress*. Students were then asked to select their primary stressors from a list of common stressors based on focus group data. Students could select multiple items from among a list, including the following: Language difficulties, cultural differences/unsure how to act, academic performance, homesickness, financial problems, family problems, or other.

Students were also asked to state the degree to which they felt that their goals were achieved during study abroad. Students could select a single overall score ranging from 0% to 100% goal achievement, at 10% intervals. Next, students were provided with a list of commonly reported goals for study abroad. The list was derived from King and Young (1994) and included the following: Experience being in another culture, travel and adventure, personal growth, learning about a new culture, learning a new language, career prospects, reconnecting with cultural/family background and other. In this study, goal achievement was used as a proxy for integration. This is based on Searle and Ward's theory (1990) of sociocultural adaptation which suggests that integration requires linguistic, cultural, and interpersonal competencies—largely considered the standard outcomes of study abroad.

Pilot Survey

A preliminary version of the survey instrument was piloted to a group of International researchers at the Max Planck Institute for Demographic Research. Respondents were asked to review the survey for clarity and overall design—both structure and content. The survey was hosted online through www.SurveyMonkey.com, and the link was distributed through the institute list serve. In all, 62 international researchers began the survey, and 54 surveys were complete and retained for preliminary analysis. Scales were evaluated for internal consistency, and six of eight scales had alpha scores in the acceptable range between 0.70 and 0.90. Only the perceived support scale, and

received support scales had reliability below 0.70. Both scales were revised in accordance with preexisting scales: the received support scale was supplemented using modified items from the Berlin Social Support Scale (Schwarzer & Schulz, 2000), and the perceived support scale was modified using the Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet, & Farley, 1988). Wording and minor structural changes recommended by researchers from the Institute were also incorporated into the survey. Table 1 presents a list of survey hypotheses including sample items from each scale.

Study Sample

The final survey was also hosted online at www.SurveyMonkey.com. The link went active on July 24, 2009 and was online through August 14, 2009. Given the goal of studying Internet use and acculturative stress among Americans, email solicitations were sent to administrators in the five largest study abroad programs in the United States: the University of California, University of Texas, University of Arizona, University of Michigan, and University of Colorado, Boulder. Solicitations were also sent to several liberal arts colleges featured in a recent article for considering policies that would mandate study abroad as a prerequisite for graduation. The solicitations sent to administrators included a brief introduction of the researcher and research goals, as well as sample text for the email to students. Several of the universities had blanket policies forbidding participation in study abroad research. In the end, one public university and one liberal arts college agreed to distribute the survey to the previous year's participants. Based on the universities' total number of students abroad for the previous academic year, it is estimated that the survey was distributed to approximately 1,000 students.

Analysis

Descriptive statistics were calculated for all single-item (i.e., nonscale) variables including demographic variables, program characteristics, educational background, Internet use, online correspondents, and self-reported stress level and goal achievement. Item theory analysis was used to evaluate scale scores. To test whether the six to eight scale items were indeed measuring a single concept, scales were evaluated using Cronbach's alpha. A standard score range between .70 and .90 was used to indicate the presence of a latent variable, without scale item redundancy. The scales were also evaluated using Item Response Theory to determine whether alphas could be improved through item deletion. After reconfiguring the scales based on pilot survey results, no additional items were deleted and no scales were rewritten.

Once internal reliability had been established, mean scale scores were calculated for each of the five themes: embedded support, informational support, creating new relationships, perceived support, and received support. A composite score was also calculated for the scales measuring *benefit* of select measures. Specifically, benefit

Table 1. Survey Hypotheses and Sample Items

Scale name	Hypothesis	Sample items
Reconnection with the home culture		
1. Embedded support	The Internet links students to embedded support networks: comments revealed that students benefit from ritualized participation in broader social networks through which they derive identity affirmation.	I feel confident interacting online. I have a group of friends maintained online through Facebook or another social networking site, or discussion forum
2. Perceived support	Internet provides the perception of available support: the availability and accessibility of the Internet provided a sense of security and well-being to students while abroad—independent of actual contact with the host or home culture through the Internet.	While abroad, I could share my joys and sorrows with friends online. When I needed to make an important decision while abroad, I had friends online who could help.
3. Received support	Internet allows students to receive support in times of stress: Students also reported using the Internet to activate networks of support in the home country during times of stress.	I Skyped with a friend or family member who I thought could offer support. I emailed or chatted online with a friend who I thought could help or offer support.
Forming new relationships in the host culture		
4. Informational support	The Internet serves as a link to informational support: respondents reported using the Internet to access information about the target culture. Specifically, students reported using online information to locate destinations of interest, cultural events, clubs or activities.	During my time abroad, I used the Internet to locate a sports or other club. During my time abroad, I frequently used the Internet to find a museum, concert, fair or other cultural event.
5. Creating new relationships	The Internet helps students to create new relationships: according to the qualitative data, students were likely to exchange email address, or use group e-vites (electronic invitations) to initiate contact with the host culture in a low risk manner.	While abroad, I used the Internet to coordinate or plan events with friends. At a social gathering or in a course abroad, I gave a new acquaintance my email address or asked someone to look me up on Facebook.
Stress reduction from reconnecting with the home culture		
1a. Embedded support benefit	Online embedded support contributed to an overall sense of well-being, promoted stress reduction, and facilitated risk-taking and integration.	Being a part of a social-networking site (e.g., Facebook) or another online community helped me to feel less isolated abroad.

(continued)

Table 1. (continued)

Scale name	Hypothesis	Sample items
		While abroad, I found I liked to go online because I experienced less communication difficulties.
2a. Perceived support benefit	The perception of available support contributed to an overall sense of well-being, promoted stress reduction and facilitated risk-taking and integration.	Thanks to support or information I found online, I felt more confident interacting with the host culture.
		Thanks to support or information I found online, I performed better in my courses.
3a. Received support benefit	Support received from online peer networks contributed to an overall sense of well-being, promoted stress reduction and facilitated risk taking and integration.	The support I received online helped me to feel accepted or comforted.
		Thanks to support I received online, this problem interfered less with my school performance.

derived from embedded support, benefit derived from perceived support, and benefit derived from received support. Composite scores ranged from 1, indicating *strong agreement on all items*, to 6, indicating *strong disagreement on all items*. Mean scores were used to confirm or deny hypothesized benefits of Internet use during study abroad, relative to the meanings of the response choices.

We also examine the variation in the two outcome variables—stress and goal achievement—using regression analysis. The five hypothesized Internet uses (embedded support, informational support, creation of new relationships, perceived support, and received support) are employed as independent variables. One model is constructed for each outcome variable—to determine whether the Internet helps to reduce stress, and another is constructed to test whether the Internet serves to promote goal achievement. Regression analysis is conducted using R version 2.6.2.

Results

Demographic, Educational, and Program Characteristics

In total, 216 students began the survey, and 181 complete surveys were used for analysis. Incomplete surveys are defined as surveys for which all items for at least one scale were unanswered. For partially completed survey scales, mean scores were

Table 2. Sample and National Characteristics of Students who Study Abroad

		Study sample (%)	National estimate (%)
Demographics	Women	75.0	64.9
	White	75.0	82.9
Area of Study	Social sciences	30.0	24.7
	Humanities	35.0	18.4
Region of study	Europe	69.0	54.9
Length of study	< Semester	12.2	54.6
	Semester	47.0	41.1
	Academic year	43.0	41.0

calculated as an average of the remaining scale items. The study population captured the major demographic, educational, and program student characteristics present in the national population as reported in the 2010 Open Doors report (Table 2).

Hours Online/Online Correspondents/Common Programs

Internet use profile questions show that Americans have ready access to support systems online. All respondents reported having access to the Internet while abroad, and 165 of the 181 students reported having access to the Internet through a home Internet or wireless laptop connection. Only 16 students reported having "destination" access—or having to leave their home to access the Internet through a Cybercafe or university computer lab. Students reported spending an average of 4.49 h online per day: 1.49 h engaged in online communication, 1.22 h engaged in information seeking, and 1.04 h entertainment seeking. Results indicated that students use the Internet primarily to overcome geographic boundaries, with Americans residing in the United States comprising the majority of students' online correspondents (59%). In sum, Americans residing in the United States and Americans residing abroad accounted for 83% of students' online correspondents. Given the additional 7% of online correspondents comprised of other foreign nationals, only 10% of students' online peer networks were formed with members of the target culture. Table 3 shows results for most commonly used programs. Results indicate a strong favoring of social communication with "communication" programs accounting for three of the top four most commonly used programs. 168 respondents reported using email daily, or multiple times per day, 153 respondents reported at least daily use of social networking sites, and Skype was used on average multiple times per week.

Social Support Seeking Behavior

Table 4 shows descriptive statistics and alpha scores for each of the original survey scales. Alpha scores all fell within the range of .69 and .90, indicating that each scale

Table 3. Most Commonly Used Programs During Study Abroad

Program	Average	SD	Median	Mode
Email	1.5	0.72	1	1
SNS	1.8	1.21	1	1
Search engines	2.5	1.74	2	1
Skype	3.1	1.56	3	3
Chat	3.7	1.9	3	6
Newspapers	3.7	1.51	4	3
YouTube	3.7	1.35	4	3
Maps	3.9	1.19	4	3
Travel sites	4.2	1.09	4	5
Classified ads	5.3	1.01	6	6
Shopping	5.4	0.82	6	6
Discussion forums	5.6	0.95	6	6

Scores: (1) *multiple uses daily*, (2) *daily use*, (3) *multiple uses weekly (but not daily)*, (4) *weekly use*, (5) *multiple uses monthly (but not weekly)*, and (6) *monthly use*.

Table 4. Social Support Types, Means, and Alpha Scores

	Total mean	SD	Mode	Alpha scores	Minimum	Maximum
Support scales						
Embedded support (ES)	1.55*	0.49	1.5	0.69	1.0	2.8
Perceived support	1.97*	0.83	1	0.89	1.0	5.8
Informational support	2.82*	1.09	3	0.80	1.0	5.7
Creating new networks	3.03	1.02	3	0.76	1.0	6.0
Received support	3.19	1	3	0.69	1.0	6.0
Benefit scales						
Benefits perceived support	2.67*	1	2.4	0.83	1.0	5.6
Benefits from ES	2.84*	1.05	3	0.73	1.0	6.0
Benefits received support	3.37	1.11	3	0.86	1.0	6.0

Note: Total mean scores calculated as an average of all scale item scores. Scores marked with an asterisk indicate "agreement with hypothesis."

Table 5. Primary Reasons for Studying Abroad

Goals for study abroad	No. of Students
Experience being in another culture	174
Travel and adventure	168
Personal growth	154
Learning more about the country	138
Learning a foreign language	108
Advancing future career	79
Reconnecting with cultural/family background	28

Note: Multiple responses allowed.

was measuring a single latent variable. Mean scores were therefore calculated for all original scales. Scale scores between 1 and 3 were interpreted to indicate *agreement*, scores between 3 and 4 were interpreted as *neutral*, and scores between 4 and 6 were interpreted as indicative of *disagreement*. Results indicated that students most strongly agreed with Hypotheses 1 and 2, suggesting that the Internet provides embedded support, and increases the perception that support is available if needed. Students also reported more modest agreement with Hypothesis 4, which states that the Internet provides access to informational support. Composite scores measuring Hypothesis 3: Internet use to activate social support networks in times of stress, and Hypothesis 4: Internet use to create networks of support within the host culture, fell within the neutral range. Scales measuring the extent to which students believe they benefited from embedded, perceived, and received support (Hypotheses 1a, 2a, and 3a) showed that students felt as though they benefited from both embedded and perceived support, but were inconclusive with regards to received support.

Stress and Goal Achievement

Table 5 represents the most popular reasons to study abroad, in decreasing frequency of mention. Top reasons for study abroad tended to center on personal growth, experience, and adventure with students most commonly reporting going abroad for the experience of being in another culture, for travel and adventure, and for personal growth. Learning-centered goals such as learning more about a country, and learning a foreign language were less popular in fourth and fifth position, respectively. When asked to state the degree to which the stated goals were accomplished during study abroad, students were generally positive. Only 11 students reported between 40% and 60% goal achievement, whereas 47 reported between 70% and 80%, leaving 123 students with 90% to 100% goal achievement. These scores would seem to indicate that students are integrating into the target culture to the extent desired.

The mean stress level during study abroad was 4.69/10, with a standard deviation of 2.02. A score of 3 (mid-low) represents the modal score, reported by 37

Table 6. Principal Causes of Stress During Study Abroad

Principal causes of stress	No. of students
Language difficulties	89
Cultural differences/unsure how to act	75
Academic performance abroad	62
Homesickness	61
Financial problems	65
Family problems in the States	19
Academic problems in the States	2

Note: Multiple responses allowed.

respondents. Nevertheless, 38 respondents (21%) reported an average stress level of 7 or higher. Table 6 shows the principal causes of stress during study abroad, in decreasing frequency of mention. 89 students reported language difficulties, whereas 75 reported that cultural differences were a principal stressor. Academic Performance, Homesickness, and Financial Problems were reported as problems by roughly one third of participants.

Regression Analysis

Regression analysis was used to determine the degree to which social support mediated through the Internet translated into decreased stress increased goal achievement. Using the five original scales: embedded, informational, creation of new networks, perceived, and received support, only received support emerged as significantly correlated to average stress level (estimated coefficient = –0.49, $p < .01$). However, contrary to our expectation, received support was negatively correlated with students' self-reported stress level.

Using the five scales to predict goal achievement, embedded, informational and creation emerged as significant (estimated coefficient = –0.04, $p < .10$, estimated coefficient = 0.02, $p < 0.05$ and estimated coefficient = –0.03, $p < .05$, respectively). The relationship between goal achievement and informational support is in the expected positive direction. However, the relationships with embedded support and the "creation" scale were both negative, indicating that using the Internet for embedded support, and using the Internet to create new networks of support in the target culture, have negative effects on students' self-reported goal achievement (integration) during study abroad.

Discussion

Results confirm that while study abroad programs continue to focus on learning opportunities located within students' physical contexts, students' virtual environments

constitute an increasingly important portion of the study abroad experience. Survey results show that 100% of students had access to the Internet during study abroad, and that 91% of students abroad maintained a home Internet or wireless laptop connection. With such ready access to Internet technology, it is of little wonder that students report spending an average of 4.5 h online per day engaged in communication, information seeking or entertainment seeking. Whether this time is spent seeking culturally relevant information, social support from online networks of support, or simply escaping the high pressure of cross-cultural interaction, 4.5 h online represents a 25% reduction in the number of hours spent engaging with students' physical surroundings. The goal of the present research is to determine whether students obtained a positive or negative payoff in return for the hours spent using the Internet. The results of the study simultaneously tell a cautionary tale, while demonstrating untapped potential for the Internet to serve as a tool for experience enhancement.

Support

By providing a sense of continuity during what was once a tumultuous transition into a foreign culture, the Internet has the potential to permit students to transition more smoothly. According to findings, the Internet provides continuity in two ways: (a) by allowing students to maintain contact with members of the home culture; and (b) by serving as a transitional device, providing a broader sense of community and the perception of available support. With fellow Americans comprising 83% of students' online correspondents, and a strong preference for correspondence-enabling programs such as email, social networking sites, and Skype, findings indicate a strong preference among students for using the Internet to maintain continued contact with support networks in the home country. Furthermore, although students' physical community changes when they go abroad, students' virtual communities remain largely the same. Like a security blanket, the Internet functions as a transitional device—a space or artifact that remains constant in an environment of change. Evidence showed that the Internet provided students with a broader social network that provided identity affirming embedded support—and increased the perception that support was available if needed. According to survey results, the continuity provided by a sense of connectedness and the consistency of online communities enhanced students' experience by facilitating integration and decreasing stress. According to scales measuring the benefits of embedded and perceived support, students reported an increased willingness to take risks, initiated more contact with members of the target culture, and experienced less stress as a result of their interactions online.

Where concerns that the Internet represents a distraction to students are endemic to any study of the Internet and education, regression analysis shows that there are some concerns over Internet use that is unique to study abroad. Consistent with Bolger, Zuckerman, and Kessier (2000), our analysis revealed that received support was associated with higher stress levels. The relationship suggests that students who exhibit

an undue reliance on support received through the Internet are less successful at alleviating their stress than students who rely on networks of support comprised of FTF relationships and co-copers.

Integration/Goal Achievement

While results from this study suggest that the Internet provides access to resources to help students integrate and combat stress—stronger evidence emerged for informational support seeking than for the creation of new relationships within the host culture. Like other studies in Internet mediated social support (Burke et al., 2010; Malik & Coulsin, 2008), students reported that the Internet provided access to informational support. By using the Internet to locate a club or other activity, find a cultural event or monument, or to assist with transacting business, students created opportunities to interact with members of the target culture and to integrate more effectively. However, evidence failed to support the hypothesis that students use Internet technology to create new relationships with members of the target culture. Taken together, the two results seem to indicate that students are creating opportunities to interact with members of the target culture, without seizing those opportunities to initiate contact and form relationships. Rather than using the Internet to connect with *individuals* within a culture, students are primarily using the Internet to learn about and connect with the *culture at large*.

Despite the strong potential of the Internet to provide access to home networks of support, a sense of community, and important informational support, a cautionary tale emerges from the findings, as well. Online social networks comprised almost entirely of Americans suggest that increased access to Internet technology may increase reliance on home networks of support—supplanting the need for support stemming from cross-cultural relationships. Moreover, free and frequent access to the Internet can serve as a distraction for students. According to a recent *New York Times* article, students with home Internet connections were more likely to spend time entertainment seeking, and 8- to 18-year-old students with home Internet access were likely to report spending "most" or "some" of their reported homework time watching television (Richtel, 2010).

The regression analysis demonstrates that while informational support is positively correlated with self-reported goal achievement, using the Internet to access embedded support and to create new relationships was associated with lower goal achievement. Both relationships seem counterintuitive: the Internet provides a low-risk medium through which to initiate contact with members of the target culture, and therefore should, by extension increase integration and goal achievement. Taken alone, the negative correlation between goal achievement and Internet use to create new relationships seems to suggest that relationships formed online are deficient—failing to blossom into long-term supportive relationships. However, taken together, the two variables suggest an entirely different interpretation: that active Internet users who use

the Internet to increase their integration, may have higher goals for integration than those who do not. As discussed earlier, Katz and Rice (2002), and Robinson et al. (2000) show that individuals with active online networks of support tend to benefit from larger offline networks of support. These extroverted people may search online for opportunities to engage with the host culture—yet may require more bicultural relationships to feel satisfied with their level of integration.

Practical and Theoretical Implications

Normative models of intercultural adjustment have all relied on assumptions of an abrupt transition abroad (Adler, 1975; Berry, 1991; Gullahorn & Gullahorn, 1963; Lysgaard, 1955; Oberg, 1960). Models such as the u-curve and Berry's acculturation attitudes, discussed above, assumed that during the transition abroad, sojourners would be required to sever all but the most intimate home culture ties, and that recreation of peer networks within the host country would be the only way of recreating and accessing networks of support. In each model, the assumption is that geographic distance necessarily constitutes a barrier to communication that gives rise to an increased risk of "isolation." After abandoning home networks of support, students who are unsuccessful in recreating networks of support abroad students become isolated and are more likely to become victims of the deleterious effects of acculturative stress.

Findings from the present study suggest, however, that students are no longer without recourse during times of heightened stress. By maintaining contact with the home culture, as evidence suggests, students are able to access support from preexisting networks of support. This continued access to friends and family back home suggests that if there is a normative intercultural adjustment experience, that experience can no longer be founded uniquely upon a dichotomous home/host culture FTF peer networks—but must account for the continued virtual presence of networks of support back in the home country.

Study abroad has traditionally relied on change in cultural context as a catalyst for learning (Dolby, 2004). However, increases in communication technology have created virtuously continuous access to networks of support within the home culture. This continued access raises concerns as to whether a "recontextualization" ever occurs during study abroad—or whether a change uniquely to *physical* context constitutes enough of a change for recontextualization to occur. Students who retain close ties with their home cultures beyond the initial transition abroad may fail to ever engage fully enough in the target culture to lose their own cultural referents. The Internet may serve to reinforce American notions of "normal" such that learning, or at least learning to the same degree, never occurs—and students never reach a stage of biculturalism, always seeing the target culture as "other" and exaggerating cultural differences.

To encourage recontextualization among students during study abroad, it is important that administrators make recommendations to encourage effective uses to enhance their experiences abroad. Perceived support was an important aspect of Internet use,

therefore limiting students' Internet access while abroad might only serve to increase acculturative stress and isolation. Rather, shifting the focus of students' online networks of support from a composition that favors other Americans, to a more equal composition of home, host, and other foreign nationals can promote both stress reduction and goal achievement. To do this, administrators can encourage students to keep a regular web log ("blog") for friends and family back home. By updating their blogs, students avoid spending time on individual emails to all members of their support networks back home. This can help significantly reduce time spent online—and specifically reduces the time spent online engaged in communication with home culture networks of support. Administrators might also encourage students to act as agents in their own stress reduction and integration by encouraging them to seek information online about cultural events, clubs, and other events in which to meet host nationals. Students may further realize the Internet's full potential by exchanging email addresses, joining local list serves, and befriending host nationals on Facebook, but must avoid living parallel to, and encourage integration with, the host culture by using those interactions as a springboard for offline interaction and engagement. Finally, when facing a specific stressor, students should be encouraged to tap into offline resources of support before attempting to resolve the problems with online resources.

Conclusion

Study abroad is serving a new generation of student—one accustomed to free and frequent communication, information, and entertainment. Once limited to fellow Americans abroad, the home culture is now present in countless ways online: email, newspaper, social networking, and entertainment. Asking students to simply refrain from Internet use fails to recognize the unique characteristics of the Net Generation. This generation is characterized by a dual, on and offline, existence, and their friendships reflect this duality. Recommending a subtle shift of students' online peer networks from Amerocentric, to multinational—and providing suggestions on how to do so—will allow study abroad administrators to better serve the Net Generation. Study abroad will no longer consist solely of a change to students' physical contexts, but will include a change in virtual context, as well. And by changing their virtual contexts, students will be able to take agency in their own stress reduction, cultural integration, and eventually, learning.

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