

Technology-Mediated Communication and Ego Identity

BETTY C. ABREGANA, MARGARET HELEN F. UDARBE
AND MICHELE JOAN D. VALBUENA
Silliman University

The present study is an attempt to view the concept of identity in the context of the global changes going on in a world of technology. An Ego Identity Scale (Tan, et al., 1977) was administered together with a questionnaire on technology-mediated communication to 322 Psychology students. The results showed that texting and electronic mail are perceived by identity achieved individuals as aids in maintaining relationships, but not as aids in creating relationships nor in self-disclosure. Also, those who were low on ego identity levels (i.e., identity diffused individuals) usually reacted in anger when they did not receive text messages from acquaintances. These and other findings serve to highlight the role that technology mediated communication plays in the search for identity.

The downfall of Philippine President Joseph Estrada is said to illustrate what people can do when they are well armed – in this case, with mobile phones. Opposition organizers used this powerful medium to broadcast details of upcoming rallies, reaching 100 supporters at a time, “getting out the message.”

In a special report of TIME magazine (June, 2001), authors describe the pros and cons of wired-home technology, interactive advertising, wearable computers, online publishing, and cyberdating, among many other changes. The whole world is going interactive, prompting TIME to ask: Is interactive technology uniting the world, or pushing us apart?

With the advent of information technology and the globalization of communication, we are confronted once again with the question that Erik Erikson became absorbed with in the 1940s: Who am I? For Erikson, this is a

question of identity, the individual's attempt to define himself or herself as a unique person. The search for identity is representative of a basic human need that begins to be felt in adolescence.

The present study is an attempt to view the concept of identity in the context of the global changes going on in a world of technology. Specifically, we have investigated such interactive tools as the Internet and the mobile or cellular phone, instruments of such fascination and widespread use among today's Filipino youth and professionals.

Basically, people use the Internet for electronic mail (e-mail), information retrieval, discussion groups, long-distance computing, and file transfers. Widespread use of the Internet has been described as "anarchic," and "fungal," and the possibilities for its future has been referred to as a "multimedia global circus" (Sterling, 1993). As Sterling has said, " 'network literacy,' like 'computer literacy' before it, will be forcing itself into the very texture" of our lives.

The same might be said about other technologies, such as the cellular phone. In writing about "The Text Generation," William Underhill (2001) states: "In defiance of all industry forecasts, today's user seems to want to *write*, not chat." Short Message Service or SMS has been around for a decade, but just recently spread like a virus (just like the fungal spread of the Internet) throughout the globe. They call it the "accidental revolution" and much of society today is now known as the "thumb culture."

The telecom industry adopted SMS as a standard technology in 1991 as a way to sop up extra network capacity, just in case somebody somewhere might find it useful. At first, subscribers were only able to send messages within their own networks. A year or so ago, young adults spotted potential, discovering "an efficient way of communicating that had the powerful charm of novelty" (Underhill, 2001). "Every generation needs its own way of expressing itself," says Simon Buckingham of Mobile Lifestreams consultancy, adding, "this is the text generation."

Technology-Mediated Communication

The widely used term *communication* has been applied to situations ranging from information processing within the individual to large-scale sociocultural systems, such as mass media and computer networks (Deaux, Dane, & Wrightsman, 1993).

The focus in the present study is primarily on the phenomenon of technology-mediated communication, defined as "information sharing that occurs via television or electronic mail" (Smith & Mackie, 1995). The latter authors will not have known that the changes in technology would expand way beyond television and e-mail. Nevertheless, they say "the telephone, fax, electronic mail, and video conferences are displacing face-to-face interaction for brainstorming and resolving conflicts." They add that just like traditional channels of communication, electronic communication is used as much for socializing as for sharing task-related information. They conclude:

Despite some of the advantages of high-tech communication channels, some aspects of communication are still achieved most effectively in face-to-face interaction. The emotional ties that develop from actual interaction seem more likely to encourage the growth of feelings ... The opportunity to read nonverbal cues like approval and disapproval or tension and relief also gives face-to-face interaction an advantage in solving complex interpersonal problems. And face-to-face communication still seems most effective in negotiation and conflict-resolution situations (p. 584).

Former Apple advanced research executive Donald Norman has said that people need social interaction. "If you look at technology," he says, "the biggest wins have been in communication" (Levander, 2001). Hence the rise of Internet services like e-mail and on-line chatting, the telephone and the cell phone, and systems like SMS and i-mode. And yet, already in the Philippines, touted as the text capital of the world (Salazar, 2000), Stephen Gornick of NUSMS, a free Web-based SMS service, says, "SMS is a technology that is over a decade old and is due for a replacement." Alarilla (2000) says that the Internet is now also changing the text world, just as it is reinventing practically everything anyone does throughout the globe. One can now do practically everything on the Net, including sending SMS.

Much of the appeal of technology-mediated communication has to do with user-friendliness, the convenience of cheap, easy access, and extra privacy. It is recognized, however, that technology-mediated communication has serious implications for human interpersonal relationships. Underhill (2001) says that SMS is a handy means of ducking those big emotional challenges. A survey in Britain found that 13 percent of users have used text messages to break off relationships. And Ignatius (2001) relates how, at the World Economic Forum in Switzerland, he and a friend sent each other

e-mails, saying they were seated side by side. "Pointless communication, yes," Ignatius says, "but isn't that what we do nowadays? Think how commonly we send e-mails to colleagues at work who might be as near as the end of our cubicle." Think how commonly we text someone seated across from us at the library or at Jollibee.

The assumption is that technology makes it possible for us to do more. But, we have to ask ourselves, is technology enhancing our ability to interact, or blocking it? A consumer laments, "I am deeply concerned that we're somehow lonely in this society" (Wired, but a bit worried, 2001).

The Search for Identity

Many a person will attest to the usefulness of technology. "This is how it goes with technology," says Ignatius (2001). Every invention is accompanied by passionate claims for its sensational applications." And yet we also have to ask the very real question of where the individual is in the midst of all these.

The burgeoning sense of self, along with the capacity to reflect on individual qualities, serves as the nucleus for the construction of an *identity*, a broad, coherent, internalized view of who a person is, what a person wants to be, believes, and values (Bukatko & Daehler, 1995). A sense of identity is said to solidify and give meaning to such fundamental questions about self as, Who am I? Why do I exist? And what am I to become?

A healthy identity, Erik Erikson (1963) pointed out, is fabricated during adolescence and young adulthood but builds on earlier progress in accepting and trusting others, in being encouraged to explore interests and desires, and in acquiring feelings of competence and skill. From bargaining over their choices of friends and activities to use of the telephone or the car, adolescents test new ways of communicating with and relating to parents and others in authority (Powers, Hauser & Kilner, 1989). They do the same thing negotiating for a computer or the use of it and purchasing a cell phone. Our own advertisements are testimony to this need to bargain over the use of the phone and the owning of a cell phone.

Being able to establish a point of view seems to promote a strong sense of personal identity (Hauser, Powers, Noam, & Bowlds, 1987). Erikson (1963) has referred to this concept as *ego identity*. Tan, Kendis, Fine & Porac (1977) reviewed Erikson's concept of ego identity achievement and developed 12 pairs of forced-choice items with one item representing ego identity and one

representing ego diffusion. Ego identity was defined as acceptance of self, a sense of direction. Identity diffusion implies doubts about one's self, lack of a sense of continuity over time, and inability to make decisions and commitments.

Based on a study of students ages 18 to 22 about their occupational choices and religious and political beliefs and values, Marcia (1967) classified students into four categories of identity status: identity achievement, foreclosure, identity diffusion, and moratorium. In *identity achievement*, the adolescent, ideally, establishes his or her own goals and values by abandoning some of those set by parents and society and accepting others. For many young people, however, identity achievement is quite difficult, and even the process of accepting some parental values while rejecting others is problematic. The result often is *foreclosure*, or premature identity formation. In this case, the adolescent accepts earlier roles and parental values wholesale, never exploring alternatives or truly forging a unique personal identity. Other young people experience *identity diffusion*: they typically have few commitments to goals or values – whether those of parents, peers, or the larger society – and are often apathetic about trying to find an identity. Finally, in the process of finding a mature identity, many young people seem to declare a *moratorium*, a kind of time-out during which they experiment with alternative identities without trying to settle on any one.

Extensive research, much of it longitudinal, confirms that many adolescents go through a period of foreclosure or diffusion, and then a moratorium, before they finally commit themselves to a mature identity. The process can take ten years or more, with many college students still not clear about who they are or what they want to do (Marcia, 1980; Waterman, 1985). Few differences between males and females have been found on measures of identity (Archer & Waterman, 1988). Both genders are equally represented among the four identity statuses and seem to develop in similar ways.

According to Berger (1994), there is no doubt that the ease or difficulty of finding an identity is very much affected by forces outside the individual. One of the most influential of these is the surrounding society, which can aid identity formation primarily in two ways: by providing values that have stood the test of time and that continue to serve their function, and by providing social structures and customs that ease the transition from childhood to adulthood.

Seifert & Hoffnung (1997) assert: "Being identity achieved in today's society is probably rarer among teens than in previous eras." Their explanation is

twofold. First, today's adolescents have far more options than ever before. Second, technological and social changes are becoming so rapid and complex that identity resolution takes a longer time to achieve.

We need not ask if technology and the search for identity are related. As Berger (1994) has stated: "No matter what the age or identity status of the individual ... it is obvious that answering the question "Who am I?" is an important psychosocial task." Then as now, the Filipino youth is faced with this task. Today, however, the youth's head is also reeling from the sights and sounds of interactive technology. "Who am I?" in the midst of all these.

THE PROBLEM

This study aims to examine the dynamics underlying the use of technology-mediated communication such as text messages and electronic mails, and to determine the possible relationship between the use of technology-mediated communication and the concept of ego identity. The three major areas of investigation and the corresponding specific questions are the following:

A. Profile of users of technology-mediated communication

1. What are their personal characteristics such as sex, age, monthly allowance, type and extent of cellular phone use, type and extent of computer-based communication?
2. How do they perform in the ego identity scale?

B. Attitude towards technology-mediated communication

3. How do they regard technology-mediated communication as to reasons for use and as senders and receivers of messages?
4. What are their perceived advantages and disadvantages of technology-mediated communication?
5. What are their best and worst experiences in the use of technology-mediated communication?
6. To what extent does technology-mediated communication establish and maintain relationships as well as enable them to disclose information about the self?

C. Relationship between ego identity and use of technology-mediated communication

7. How do attitudes of students toward technology-mediated communication relate with ego identity?

METHODOLOGY

The research is non-experimental sample survey. It was aimed at gathering student's profile, and their ideas, thoughts and feelings about technology-mediated communication in relation to their ego-identity scale.

Instrument

The research used two instruments to answer the questions. The first instrument, authored by Allen L. Tan, Randall J. Kendis, Judith Fine, and Joseph Porac, is a standardized test to measure the respondent's ego-identity. It is a 12-item scale measuring Erik Erikson's concept of ego-identity. The second instrument was a questionnaire designed by the researchers to measure respondent's profile, and thoughts and feelings on technology-mediated communication. It contained four parts. The first part was intended to gather demographic information. The second part gathered information about the acquisition and ownership of cellular phones. The third part gathered information about ownership of and access to computers. The fourth part asked the respondent at what instances s/he prefers technology-mediated communication over face-to-face or direct communication. This instrument was pretested among Psychology 12 (Business Psychology) students who are in the first year level in the Accountancy Department of Silliman University.

Sampling

Students enrolled in Psychology 11 (General Psychology) were the respondents (N = 322). General Psychology is a basic subject required of all general education courses. The sample is, therefore, representative of a multiple of disciplines widely distributed throughout the university.

Data collection

General Psychology instructors were oriented on the nature and purpose of the study. One class meeting was assigned for the administration of the instruments by the instructors.

The Ego Identity Scale was administered first. The questionnaire on technology-mediated communication was administered to the respondent upon the completion of the first instrument. It took the respondents an average time of 45 minutes to complete the two questionnaires.

Data analysis

Data-gathered was tabulated through frequencies. Scores of the test on ego-identity was tabulated according to High, Average, Low categories. These categories were set by the researchers. Each item in the second instrument was also tabulated through frequencies.

Pearson Correlation statistics was used to determine significance in relationships between ego-identity and the extent of the respondent to create and maintain relationships and disclose the self through texting and calling through cellular phones, and electronic mail and chatting. It was also used to determine significance of relationships between ego-identity and feelings of respondents over the loss and/or damage of cellular phones, and dysfunction of and loss of access to computers. The same statistics was also used to determine significance in relationships between ego-identity and feelings of respondents when they receive and/or not receive messages from specific people through texting and electronic mail.

Chi-Square statistics was used to determine significance in relationships between ego-identity scale and the type of messages received and sent by respondents to specific people.

RESULTS

Profile of Users of Technology-Mediated Communication

Of the 322 students enrolled in General Psychology who participated in the study conducted during the second semester of collegiate year 2000-01, 55 percent were female and 45 percent, male. Eight-six percent of the respondents were below 20 years of age, with 42 percent, 18-19 years old and 44 percent, 16-17 years of age.

More than half (56 percent) received monthly allowance below PhP2500. About 23 percent had allowance between PhP2500-P4999 per month. Only six percent received between PhP5000-6499 monthly allowance.

Cellular phone users. While monthly allowance for most students was below PhP2500, almost 60 percent of the respondents owned a cellular phone. Of the 192 owners of cellular phone, 95 percent were prepaid subscribers. Half of the cellular phone owners (51 percent) spent less than PhP600 for prepaid phonecards. Others (42 percent) spent between PhP600 to more than PhP1200 each month for the use of their personal phones.

Most owners of cellular phone (54 percent) had acquired their unit for less than a year. At least one in four were cellular phone users within a year to less than two years. The rest (19 percent) had been users for two to more than five years.

Text messages dominated the usage of cellular phone (98 percent), closely followed by personal calls (95 percent). Cellular phones were also popularly used for playing games (70 percent). A much lower number (9 percent) used the phone as alarm clock, organizer or scheduler, biocalendar, or for calculating, tone composing, and sending e-mail.

Computer-based communication. While only 31 percent of the respondents owned a computer, about 69 percent had access to computers. Among those who had access, computers were used for electronic mails (85 percent), encoding reports (86 percent), access to internet (77 percent), electronic chat (63 percent), computer games (10 percent) and others (13 percent) such as surfing the web for research and special projects.

Ego identity levels. Acceptance of self and a sense of direction describe ego identity. This is differentiated from ego diffusion which implies doubts about one's self, lack of sense of continuity over time, and inability to make decisions and commitments. Based on ego identity scores which could run from 1 to 12, the 322 respondents had the following results, as shown in Table 1.

Table 1. Ego identity of respondents, N=322

Ego Identity Scale	Count	Percent
1-4 (Low)	34	10.56
5-8 (Average)	233	72.36
9-12 (High)	55	17.08
Total	322	100.00

Majority of the students had average ego identity levels (72 percent). About 11 percent scored low in ego identity and 17 percent had a high score in ego identity scale. On the whole, respondents were average in their acceptance of self and in their sense of direction.

Attitude towards technology-mediated communication

A. Cellular phone

A cellular phone is viewed primarily as a tool of communication for general personal use (84 percent). One in three considered it useful in an emergency situation, still others deemed it a necessity (18 percent), and some used cellular phone for fun and to be in fashion (3 percent).

Text messages received. Text messaging, done by 98 percent of respondents, is the most common form of utilizing a cellular phone. Close friends (97 percent) make up the most number of people from whom respondents received messages, closely followed by family members and relatives (96 percent). A good number of text messages came from acquaintances (77 percent). Interestingly, text messages were also received from senders respondents do not personally know (65 percent).

In a scale of *Seldom-Sometimes-Often-Always*, the biggest number of respondents reported that they received text messages from close friends *Always*. They received messages from family members *Often* to *Always*, from acquaintances *Sometimes*, and from others they do not personally know *Sometimes*.

Students were asked to classify text messages received into *inspirational-religious*, *inspirational-relational*, *humor-political*, *humor-green jokes*, *giving/seeking information*, *giving/seeking advice*. Inspirational messages together with humor and messages seeking or giving information and/or advice were commonly received (39 percent, 29 percent, and 29 percent, respectively). The most common category of text messages received from close friends was *inspirational-relational*, followed by *humor-green jokes*, and *inspirational religious*. From family members, the most common text messages were *inspirational-religious*, followed by *giving/seeking information*, and *inspirational-relational*. The top three types of messages received from acquaintances were *inspirational-relational*, *humor-green jokes*, and *giving/seeking information*. Others not personally known to respondents commonly sent *humor-green jokes*, *inspirational-relational*, and *inspirational-religious*.

Text messages are so popular, recipients do not seem to mind (77 percent) if these messages are “canned” or “forwarded.” In fact, 16 percent expressed preference for forwarded messages and only seven percent expressed outright dislike for these canned messages. When asked if they preferred messages made or composed by the sender, four said *No*, and an equal number replied *Yes* (49 percent) and *Does not matter* (49 percent).

Respondents wished to receive messages on a regular basis from close friends (91 percent), family members (78 percent), acquaintances (32 percent), others not personally known (11 percent), and from a special set of friends (11 percent). On a continuum *Angry-Frustrated-Ok lang-Happy-Ecstatic*, messages from close friends and family members generally made respondents *Happy* while those from acquaintances and others not personally known *Ok lang*. Messages received from a special set of friends like a crush or special someone generally make recipients *Ecstatic*.

When messages are not received from family members or from close friends, recipients generally expressed being frustrated or simply said *Ok lang*. Not receiving messages from acquaintances and those not personally known would more definitely evoke a response of *Ok lang* while non-receipt of messages from a crush or special someone would stir feelings of anger and frustration.

Text messages sent. Respondents sent messages to family members *Sometimes* to *Often*, to close friends *Often* to *Always*, to acquaintances *Sometimes* to *Often*, to others not personally known, *Seldom* to *Never*. Among those who had special set of friends, they would send messages to a special someone *Always* but would tend to *Never* send to a crush.

Inspirational messages, either religious or relational, were common types of messages sent by respondents (41 percent). Messages giving or seeking information or advice (31 percent) were the next commonly sent category of messages. Humor, whether political or “green” were sent by at least one in four respondents (26 percent). To family members and relatives, the most common types of messages sent, in descending order, were inspirational-religious, inspirational-relational, and giving/seeking information. To close friends, inspirational-relational was most commonly sent, followed by inspirational-religious and giving/seeking information. To acquaintances are usually sent inspirational-relational, followed by inspirational-religious and humor-political messages. To special persons like a special someone or a crush, inspirational-relational messages are commonly sent.

Perceived advantages and disadvantages of cellular phones. It is advantageous to have a cellular phone according to the students since it is a tool for personal communication (74 percent). This mode of communication provides convenience (16 percent) and is handy in cases of emergency (9 percent). To six respondents, cellular phone offers fun. Fewer counts of disadvantages compared to advantages (196 vs. 689) were listed. Expense is identified as the top disadvantage (49 percent). Others found use of cellular phones distracting and time consuming (21 percent). Some considered cell communication to have physiological and psychological effects (14 percent) such as inattentiveness to social stimuli and anxiety of waiting for messages from a special set of friends. Lack of signal in some places is found to be disadvantageous (6 percent). Still others (3 percent) mentioned lack of privacy as a disadvantage of this kind of communication. Fifteen students found no disadvantage at all in this kind of communication.

Loss or damage of a cellular phone generally evoked negative feelings among the students, as shown in Table 2 below:

Table 2. Reported feelings when cellular phone is lost or destroyed, N=192

Feelings Evoked	Loss of cell phone		Damaged cell phone	
1 - Angry	87	45.31	74	38.54
2 - Frustrated	94	48.96	97	50.52
3 - <i>OK lang</i>	9	4.69	20	10.42
4 - Happy	1	0.52		
5 - Ecstatic	1	0.52	1	0.52
Total responses	192	100%	192	100%

Best and worst experiences. The students' best experiences with cellular phones are generally associated with its use as a tool of communication (36 percent) followed by its usefulness in cases of emergency (20 percent). Thirty three (13 percent) respondents' best experiences fall in the category of inspiration. Twenty (8 percent) students had their best experience related to having received good news and being updated with current issues. While fifteen (6 percent) said they have not had any best experience yet with cellular phones, a similar number of students indicated that having bought or acquired a card after being on zero credit for a time is in itself a best experience. Eleven (4 percent) expressed that receiving messages that give them fun and joy is also a best experience. To nine students receiving advice from people to help them solve their problems was to them their best experience. Five students

said that they have had a combination of best experiences since the acquisition of their cellular phones. To illustrate, students' best experiences include: a) "My crush asked for my number, and I told him it's for him to find out. The following day, he texted me!", b) "I reconciled with my boyfriend.", c) "My textmate became my girlfriend.", d) "Falling in love with textmate.", and e) "I had a textmate for sometime not knowing that he was just our neighbor."

Fifty students (25 percent) considered as their worst experience the loss or damage of cellular phones, closely followed by receiving bad news (20 percent). Thirty four (17 percent) have not had any worst experience yet with cellular phones, while twenty five (12 percent) students complained that spending so much of their allowance on their cellular phones was their worst experience. Sixteen students (8 percent) had for their worst experience their fights with people and/or break up in relationships through the cellular phone. To 15 students (7 percent) they regarded as their worst experience their parents' knowing where they are all the time. To the same number, their studies getting distracted was their worst experience. Five (2 percent) indicated they have had a combination of worst experiences, and one student's meeting an accident was his/her worst experience. To quote some of the students' worst experiences: a) "Somebody borrowed my cellphone, and that number called me and told me to back-off her father. A woman also texted me and said I should stop calling her husband", b) "I fell down the stairs", c) "When I again lost my phone and still haven't found it until today", d) "I broke up with my boyfriend with my first 3210 and lost the unit afterwards", and e) "Somebody borrowed my cellphone and returned it with zero balance."

Establishing and maintaining relationships, self disclosure. Student respondents tend to use text messaging as a way of maintaining relationships, rather than creating relationships (42 percent and 36 percent, respectively). Fewer tended to disclose information about self through texting (23 percent).

The same pattern is found in making calls through cellular phone. Calling is aimed more at maintaining rather than establishing relationships (45 percent and 35 percent, respectively). Calls are less considered as an opportunity to disclose information about self (21 percent).

B. Computer-based communication

While computers are generally used by respondents for encoding reports, these computers are also used for communication, primarily for electronic mails and chats. Electronic mails are resorted to *Sometimes* to *Often* while chats are usually *Sometimes* done, or even *Seldom*.

Among the 221 respondents who had access to computers, they generally received emails from close friends (78 percent), family members (59 percent), and from acquaintances (42 percent). From them, mails are generally received *Sometimes* to *Often*. A fewer number of students received emails even from those not personally known to them (19 percent), and from a special set of friends (9 percent). From this group of senders, however, messages are received *Often* to *Always*.

Students usually send email messages to close friends (78 percent) as well as family members and relatives (60 percent). Some also sent mails to acquaintances (41 percent), others not personally known to them (9 percent), and those who belong to a special set of friends (5 percent). Mails sent to special friends tend to be *Often* while those to other categories are sent *Sometimes* to *Often*.

Computer chats are more common among close friends (48 percent). They also engage in chats with others not personally known to them (43 percent), acquaintances (37 percent), family members (20 percent), and special persons like a boyfriend/girlfriend (2 percent). With family members, chats are generally *Seldom* to *Sometimes*; to other groups or categories, chats are done *Sometimes* to *Often*.

Perceived advantages and disadvantages of computer-based communication. Of the 221 respondents that had access to computers, 51 percent found computer-based communication fast and convenient. Computers were also found to be sources of information for research and technological studies. (49 percent). As a tool of communication, computers made respondents happy due to internet resources and games (46 percent).

The psychological and physical impact on computer users is an identified disadvantage (26 percent). Electronic mails can be time consuming (23 percent) and expensive (22 percent).

Best and worst experiences. Seventy six students (32 percent) indicated that their best experience with computers had to do with ease and speed in communication. To 50 students (21 percent), their best experience is in meeting people. While 34 (14 percent) expressed not having any best experience with computers, 28 (12 percent) said that acquiring all types of information from all over the world was considered their best experience. Seventeen (7 percent) students expressed that having the convenience to engage in something at whatever time (e.g. contacting people, doing research and other school projects, playing, etc.) was best experience for them. A group of 15 (6 percent) students said that merely being before a computer for whatever reason was already their best experience. Ten (4 percent) expressed that getting good news from

people and from the web was also a best experience. Only five students associated their best experience with games. Examples of best experiences with computers as told by students are: a) "My sister and I made amends through email.", b) "My brother emailed me my oration speech I needed.", c) "Awesome! I get to communicate with people worldwide.", d) "I met someone in chatroom and decided we meet in person. He was gorgeous!", and e) "I chatted with a girl and later she was just beside me, and she was beautiful!"

Fifty six students (18 percent), expressed they have not had any worst experience yet with computers. Fifty three (17 percent), however, said their worst experience was when their computers malfunctioned especially while encoding a report. Related to computer malfunction are time lags/off-line and losing internet access considered by 49 (16 percent) students as their worst experience. Receiving bad language or disrespect from chatters or e-mailers was a common worst experience to 36 students (12 percent). Twenty four students (8 percent) reported as their worst experience creating enemies and misunderstandings with people through computers. Aside from spending a great amount of money as a worst experience to 22 (7 percent) students, 17 students (6 percent) said computers have at many times distracted them from their studies. Ten (3 percent) said that their worst experience was when they experienced receiving pornographic messages/pictures through email and internet and got invited to participate in cybersex. A similar number of students reported as their worst experience the psychophysical effects of eye strain, headaches, and psychological obsession/addiction to computers. Nine students' experience of power failure while encoding reports, doing research in the web and accessing for internet resources was their worst time with the computer. Eight students (3 percent) said their worst experience was when they were deceived and lied to by electronic chatters and mailers. Five students equated their worst experience with failure to save files especially when they were meeting a deadline for school reports. The same number of students indicated that their worst experience was when they received emails from strangers. A couple of students expressed an indescribable feeling of being overwhelmed as their worst experience. Examples of students' worst experiences, in their own words, are: a) "I was almost done with my work when the computer had hung.", b) "*Maraming nambabastos sa chatroom.*", c) "When someone in the chatroom invited me to have cybersex.", d) "I got electrocuted.", and e) "I was in the middle of asking a friend how she was when the computer had hung."

Establishing and maintaining relationships, disclosing information about the self. Respondents generally used electronic mails as a way of maintaining relationships, rather than creating relationships (45 percent and 33 percent,

respectively). A fewer number reported using e-mail as a way of disclosing information about self (22 percent).

Electronic chats are resorted to by a good number of people for creating relationships (37 percent) and maintaining relationships (39 percent). E-chats are also considered as an opportunity to disclose information about self (24 percent).

Technology-Mediated Communication and Ego Identity

A test of correlation was run between ego identity scores (EIS) and feelings evoked (using a 5-point scale) when messages are received or not received from family members, close friends, and acquaintances (see Table 3). Level of significance was set at 0.05.

Ego identity scores had a maximum value of 12. Feelings were measured in a scale of 1 to 5, with 1-Angry, 2-Frustrated, 3-OK lang, 4-Happy and 5-Ecstatic.

Table 3. Correlation between EIS and feelings evoked when messages are received, N=322

Feelings (5-point scale)	Correlation with EIS	Level of significance
<i>When messages are received from:</i>		
Family members	0.002	.983
Close friends	0.030	.679
Acquaintances	-0.045	.566
<i>When messages are not received from:</i>		
Family members	-0.031	.670
Close friends	0.025	.731
Acquaintances	0.162	.038

Positive correlation was established between EIS and feelings evoked when messages are not received from acquaintances. An examination of the spread of scores and ratings showed that low EIS scorers are significantly associated with feelings of frustration and anger when messages are not received from acquaintances. Among high EIS scorers, not receiving messages from acquaintances evoke more feelings of being happy.

A test of correlation was also run between ego identity scores (EIS) and perceived influence (using a 5-point scale) of technology-mediated communication in creating relationships, maintaining relationships and in self-disclosure, as shown in Table 4.

Table 4. Correlation between EIS and perceived influence of technology-mediated communication in creating and maintaining relationships and self-disclosure, N=322

Perceived Influence	Correlation with EIS	Level of Significance
<i>Extent to which texting is able to (5-point scale):</i>		
Create relationships	-0.037	.638
Maintain relationships	0.202	.009
Aid in self-disclosure	0.122	.117
<i>Extent to which cellular phone call is able to</i>		
Create relationships	-0.003	.971
Maintain relationships	0.142	.073
Aid in self-disclosure	0.086	.282
<i>Extent to which e-mail is able to:</i>		
Create relationships	0.038	.659
Maintain relationships	0.228	.007
Aid in self-disclosure	0.098	.254
<i>Extent to which e-chat is able to:</i>		
Create relationships	0.060	.483
Maintain relationships	0.088	.307
Aid in self-disclosure	0.044	.613

Ego identity had a maximum score of 12. Perceived influence of technology-mediated communication (text message, cellular phone call, e-mail, and e-chat) in establishing relationships, maintaining relationships and in self-disclosure was measured using a 5-point scale, with 1-Not at all, 2-Seldom, 3-Sometimes, 4-Often, and 5-Always

Positive correlation was obtained between EIS scores and perceived influence of texting in maintaining relationships. High EIS scorers are associated with the perception that texting plays a role in the maintenance of

relationships to a greater extent. Conversely, low EIS scorers tend to believe that texting influences to a lesser extent the maintenance of relationships.

Another positive correlation was established between EIS scores and perceived influence of e-mail in maintaining relationships. High EIS scorers believe that e-mails play a role, to a greater extent, in the sustaining of relationships. On the other hand, low EIS scorers are associated with the perception that e-mails, to a lesser extent, allow for the maintaining of relationships.

The results in this section indicate that EIS scores are found to have positive correlation with perception of the extent of influence of text messages and e-mails in the maintenance of relationships but not in the creation or establishment of relationships.

DISCUSSION OF RESULTS

While monthly allowance for most students was below PhP2500, almost 60 percent of the respondents owned a cellular phone. Of these 192 owners of cellular phones, 95 percent were prepaid subscribers. This may not be a surprising statistic for a student sample that has to live within a limited budget and cannot afford to overspend. It implies self-regulating behavior among young cellular phone users and could prove to be a preventive measure against the potentially addicting effect of texting.

Text messages dominated the usage of cellular phones (98 percent) closely followed by personal calls (95 percent). Despite its other features (e.g., games, organizer, alarm clock, and so on), the cellular phone is still, first and foremost, used for its primary purpose – that is, as a tool for communication. On the other hand, even as 85 percent of computer users made use of computers for electronic mail, it was really primarily for encoding reports. More of the respondents had access to a computer than owned a cellular phone, but the cellular phone is seen as a more convenient medium for communication while the computer is put to practical research and student work. These results should be of value to those into the marketing of such interactive tools.

Majority of the students had average ego identity levels (72 percent) showing that most of the respondents are probably at a stage of moratorium. As earlier reviewed, this is considered to be a kind of time-out during which they experiment with alternative identities without trying to settle on any one. Young college students (the sample) would typically be at this stage. Those who are identity diffused (about 11 percent of the respondents) may be described as having few commitments to goals or values and are probably

apathetic about trying to find an identity. Those who are considered as identity achieved (about 17 percent of the respondents) have established goals and values by abandoning some of those set by parents and society and accepting others.

Young people are communicating through technology and are doing so through cellular phones far more often than they are through computers. This is true primarily in communicating with close friends, but also with family members. The quality of communication among friends was inspirational-relational. Among family members, it was inspirational-religious. Humor in the form of green jokes was also common among friends. Giving and seeking information was common among family members. Most respondents do not mind forwarded messages. Only seven percent expressed outright dislike for them

These findings may be strongly related to the results of the item wherein respondents were asked the question "In what instances would you prefer technology-mediated communication over direct, face-to-face communication?" Technology-mediated communication (e.g., texting, electronic chatting) was almost always preferable when distance separated people communicating, but face-to-face communication was preferred for "more important reasons," such as talking about problems and being able to "see someone's feelings."

Despite the convenience and practicality of technology-mediated communication, it appears that, for the most part, it still remains a less personal medium for communicating feelings, especially those of a deep level, such as sincerity, honesty, and direct confrontation. There is an element of the impersonal in forwarded or "canned" messages. Respondents do not mind that. They would rather talk, even if through a cellular phone or a computer (as in chat), however, if the conversation is more personal or when there is an emergency.

It must be pointed out that from among the significant relationships found between ego identity and technology-mediated communication, both texting and electronic mail are perceived by identity achieved individuals as aids in maintaining relationships, but not as aids in creating relationships nor in self-disclosure. Presumably, both creating relationships and self-disclosure are done at a more personal level – the initial first step and the later, more deeper expression of the self, respectively. This implies that technology-mediated communication fulfill certain practical purposes. Many of those who do not own a cellular phone in fact agree that it is useful. But they recognize that technology has its limitations.

Indeed, technology-mediated communication may even foster misunderstandings, as evidenced by such perceived disadvantages as “anxiety over waiting to hear from someone,” “creating enemies,” and the bad language people get exposed to, particularly through e-chat. There were also “worst” experiences like “I broke up with my boyfriend,” “someone borrowed my phone and returned it with zero balance,” and “someone borrowed my phone and then a woman texted me to stop communicating with her husband.” Expense as a disadvantage no longer seems such a negative in the light of the disadvantages related to miscommunication precisely because people are apart and are not communicating face to face in direct ways.

One of the more significant findings indicated that those who were low on ego identity levels (i.e., identity diffused individuals) usually reacted in anger when they did not receive text messages from acquaintances. There were no significant results when the persons sending (or rather, not sending) text messages were close friends or even family members. Presumably, the identity diffused person could rationalize away these people’s behavior, but not when it happened to be an acquaintance. In the latter case, it appears that the person who has made few or no definite commitments to goals and values gets affronted when ignored by someone who does not even know him. It would be reasonable to assume that identity diffused young people are highly sensitive. They have probably figured out why they don’t hear from their friends or relatives, but they would be more suspicious about the motivation of people they do not know very well.

The foregoing cases indicate that technology-mediated communication, while important in maintaining relationships – a very real aspect in the search for identity – fails to account for so much of what colors the interpersonal. It has already been said that the ease or difficulty of finding an identity is very much affected by forces outside the individual. It has also been mentioned that being identity achieved in today’s society is probably rarer among teens than in previous eras because today’s adolescents have far more options and technological and social changes are becoming so rapid and complex that identity resolution takes a longer time.

Perhaps, the majority of young people who are still trying to achieve a separate identity will remain there for some years because of the many options open to them. Technology-mediated communication enhances relationships because of the quick and easy access. Yet, people still do recognize the value of direct communication. The search for identity continues to be an important task in young people.

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