

Core Factors Influencing the Perceptions of Adolescents in Higher Education Relating to The Impact of Technological Innovations on Human Interaction

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Abstract

This paper aims to reach the perceptions, ideas and intentions of the higher education adolescents on the effects of technological innovations over interrelation/communication between individuals. While advances in technology commonly works for the welfare and benefit of humankind, paradoxically in some instances could have negative outcomes on interrelations among individuals, minimizing face-to-face communication. The perceptions, so ideas of the individuals on the matter could differ depending on their age, gender, race and the culture beyond their relative intimacy and closeness to ICT tools.

In order to penetrate the basic initiatives leading the perceptions of adolescents on the effects of technological improvements on human interrelations/ communication, a survey is conducted with 157 students in high education consisting of Asian, African, Cypriot, Turkish nationals. Results indicate that participants use technological tools for communication which lessens their face-to-face interaction. However they prefer social media more than face-to-face communication during conflict or undesirable situations

Keywords : Adverse Effects, Technology, Adolescents, Higher Education, Communication, Cyprus

1. Introduction

Being the basis of comfort and wealth for human subsistence technologies normally could be having side effects that may lead to problems within the texture of social systems. Relating to organizations while the type and quality of technology implemented happens to be of vital significance for the performance and sustainability so success of the venture the same could lead to certain adverse effects as hampering the interpersonal relations so functioning of the social structures/systems degrading the climates and cultures of organizations.

Technologies while showing to help advancement of the communication process, strengthen the relationships between the individuals and groups in social structures, could similarly have an adverse effect on the same. Barring face-to-face communication permitting people to reach one others' true intentions not merely in a verbal manner but through jests and mimics that make it possible the conveying of intentions and feelings in a healthier way is a good example. Such undesirable effects surely can be stemming from their faulty and ineffective use of these in unprofessional hands.

While in professional groups in business life for a considerable time the familiarity and awareness regarding to the threats and opportunities of technologies over social bodies and ventures are commonly achieved in time, for adolescences in higher education reaching such a clear picture of the matter would be truly difficult if not impossible as a result of the lacking of experience, qualifications, understanding and

practices.

Still, being the heading figures of future it is worthwhile to access their perceptions so the dominating ideas in that case in order to find out the triggering true influences and inspirations, the ultimate reason why the survey is being conducted.

2. Technological Improvement And Human Wellness : Does Technology Truly Lead To The Advancement Of Humankind?

Technological innovations ceaselessly leading to the "constant price declines and performance improvements summarized by Moore's Law [McAfee, Gordon, and Avent, 2013] symbolize a turning point in lifespan of human constantly peaking its living standards and welfare to an extent never experienced before." Moreover "technological development offers new possibilities to make people's daily lives more healthy, safe, understandable, independent, fun and comfortable" [TU/e, 2012]. Consequently in highly populated globe, people of many lands and cultures now have better chances to get in contact permitting them to reach and understand the "other" in a way never experienced before. In order to stimulate coordination to come over the complexity of the global environment "innovative Information and Communication Technologies' (ICT) solutions are implemented and communication processes are continuously re-engineered" [Cuel and Ferrai, 2009].

"With the proliferation of technologies that are able to overcome the obstacles of time and

space” while it happens to be possible to see that tools created to help “to gain an understanding of other cultures, meet people all over the world, maintain and strengthen familial relationships, communicate effectively with others, and help people to become more socially adept” it is also true that “some technological advances cause people to be distracted, overly stressed, and increasingly isolated. We are at a point in history where few people have given critical thought to new social realities created by technology and what those realities mean for the individual and society” [Human Kinetics, n/a]. As discussed by Nair [2012] “the gap between the availability of technological devices, [mobile phones, computers], and basic necessities, [safe water, electricity, affordable housing], in the developing world should send a clear signal that technological progress does not necessarily contribute to meeting development needs and fostering human progress.” Centering on many Asian nations such as India, Indonesia and Philippines he notes that “today, [while] more than 2.2 billion Asians have cell-phones, which is far more than the number of people who have access to potable water or sanitary toilets.” Governmental policies directed to “productivity gains and economic growth rather than human development” shows to be the origin of the “over-emphasis on technological solutions” leading to “the inability of most developing countries to meet the basic needs of its population.” Equally stated by Gordon [McAfee et al., 2013] “the fruits of technical change, called as “innovation”, [that] are measured by the rate of growth in productivity, defined as total output per hour worked” are also

a matter of discussion in view of the comparison of “2.33% growth rate of the 80 years before 1972 with 1.55% average growth since 1972.”

The adverse effects of technological advancements on job losses are another gloomy picture that similarly needs to be mentioned. “The double-edged sword of technology automation has been a source of controversy for ages. The edges seem to getting sharper, however, in light of views expressed more recently by some prominent experts, such as Brynjolfsson and McAfee [Bruzek, 2014], that technology advances will displace jobs at growing speed.” McAfee also argues that “with very powerful technologies entering the economy over the next ten years, in a vast range many types of jobs will to be displaced not merely in low-skilled occupations, but also “increasingly specialists in the medical, legal and other skilled professions as well” [McCauley, 2012]. According to Brynjolfsson and McAfee [Bruzek, 2014] this includes “technologies like the Web, artificial intelligence, big data, and improved analytics – all made possible by the ever increasing availability of cheap computing power and storage capacity – are automating many routine tasks.” What they call “the great decoupling” as a paradox of our time, starting from 2011, lead to a gap between economic growth and job creation where “technology is behind both the healthy growth in productivity and the weak growth in jobs.” This called an “autonomous economy” shows to be “far more subtle than the idea of robots and automation doing human jobs” rather “involv[ing] digital processes talking other digital processes and creating new processes enabling us to do many

things with fewer people and making yet other human jobs obsolete” a fact “explain [ing] how productivity has grown without a significant increase in human labor” [Rotman, 2013].

3. The Effect of Technological Innovations on Interrelationships between People : Does it all Influence that in the Right Way?

Upshots in technological improvements saving money and time in communication process with the use of implements like SMS, e-mail, Skype, Facebook, Twitter, video conferencing and chat rooms shows to have a positive effect over interpersonal relations. “The internet has allowed traditional information system boundaries to be extended to include other businesses or direct consumers as system users. These external system users, [such as customers, suppliers, partners and employees], make up an increasingly large percentage of system users for modern information systems” [Bentley and Whitten, 2007]. While such progress commonly benefits individuals, organizations and general public, it also has a distracting effect on traditional value systems and cultural precepts that finally pejorates and restricts human interpersonal communication. “In a digital age” as it happens to be easier to get in touch with others with “a few taps on the keyboard” paradoxically contacts with the others are weakening day by day. People feel to be “guilty of avoiding eye contact with friends and strangers alike ... los [ing] the skills of conversation by becoming dependent on texting and friendships fall in the

shuffle of missed or ignored messages.” Today people’s common way of communicating with one another in an electronic way finally leading to a “decline in daily face-to-face conversations” make “it hard to believe these “convenient” advances are actually positive for society.” Generation of the time seems to be last one “that had to bother ... to hold a conversation, make eye contact and truly listen when someone is talking to them” [Essig, 2013].

“Many of the most influential and widely-publicized studies of the role of internet in sociability compare internet users, or experienced and new users. The findings are mixed.” Yet recent collective findings of research “on the internet can be interpreted to support or refute the claim that the internet is a solitary activity, harmful to social relations with others” where it is claimed that “poorer quality, weak tie, internet social relationships may be substituted for better, i.e. face-to-face, relationships, or that time spent online might otherwise be spent formatting strong-tie, i.e. face-to-face, relationships.” Research also “associate[s] internet use with negative social outcomes including less time spent with family and friends, less total social involvement, and more loneliness and depression” where comparisons with internet users and non-users indicate that the user group to be visiting family or friends more rarely rather preferring to spend more time in “clubs and volunteer organizations” [Baym, Zhang, and Lin, 2008]. While “the advent of the Internet has made the world smaller in terms of global interaction [it makes that] wider in terms of one-on-one relationships.” Leaving children more to

“themselves and the Internet, the less likely we are to see familial interdependence ... companies that produce all of these technologies are making virtual interaction synonymous with face-to-face interaction [where] this can be disastrous for family life” [Sorensen, 2010]. As noted by Nilles [2012] “there is something intangibly real and valuable about talking with someone face-to-face. This is significant for friends, partners, potential employees, and other recurring people that make up your everyday world.” These people become to be crucial connections in one’s life, “not just someone whose disembodied text voice pops up on your cell phone, iPod or computer screen.” The question here is what we lose when we replace face-to-face interactions with face-to-computer screen time. “Is information valuable on its own or are conversation and collaboration required to fully leverage it? How can we make the most of all that technology offers without losing the important interactions that have always shaped working and learning experiences?” [Izzy⁺, 2012].

Between the affected groups by the negative effects of the technology are the families, work-mates, students and military, hospital and factories. Today “there is less interaction in families as members are busy on television, Facebook, Pps3, Twitter, Skype, etc.” In “working places work-mates are busy with the computer/Internet where they do not each other very well. Some have even never talked [despite being] in the same office.” Concerning with the schools and colleges “the strong relationship that existed between a student and a teacher/lecturer no more exists. Since curricula are found on web-

sites, some students prefer to use the internet or library and not the lecturer.” Related to military, hospital and factories “the existence of the robots makes people’s work to be replaced by the robots” where all those lead to “high levels of social interaction with less physical contact reduc[ing] social involvement and mental well-being” [Komwa, 2012].

4. Methodology and Data Collection

The survey used for this research has been generated by John Drussell [2012] for a similar research by 22 college students on “Social Networking and Interpersonal Communication and Conflict Resolution Skills among College Freshmen.” In this research the researchers replicated similar survey with the bachelors and masters students from Cyprus International University, Nicosia.

The survey is composed of 34 questions and four demographics (age, gender, nationality and ethnicity). 200 printed surveys have been distributed to the students during the class hours and they were told that the participation is voluntary. 175 surveys returned back and only 157 were analyzed, 18 surveys were not used for not being appropriate for the analyzes.

In the survey some questions were asked to the students to rate their attitudes on the statements related to social networking. There were other questions asked to see their estimated time spent for social networking activities or their relationship endings etc. Some questions were rated by a 5 point Likert scale (1-Strongly Disagree to 5-Strongly Agree). In two questions

the students were asked to rank their preferences in terms of communication and conflict management issues.

The collected quantitative data was entered into an SPSS program and descriptive studies; independent sample T Tests and ANOVA analyzes have been done.

4.1 Data

4.1.1 Demographics

53% (n = 83) of the participants are in between 17~20 ages where the remaining 47% (n = 74) are in between 21~25 ages. While 49% (n = 76) of the participants are male and 51% (n = 80) of them are female. The breakdown of the participants according to their nationalities are 24% (n = 38) Turkish or Turkish Cypriots, 54% (n = 85) are African (from Botswanian, Nigerian, Ugandan, Zambian etc.), and 22% (n = 34) are Asian (i.e. Azeri, Turkmen, Kazakh, Kirgыз, Tacikh, Uzbek etc.). Although the ethnicity was asked, it is not used for analyzes for not being indicated by a large number of the participants.

〈Table 1〉 Demographics

	Group	Frequency	Percentage %
Age M = 20,62	17~20	83	53
	21~25	74	47
	Total	157	100
Gender	Male	76	49
	Female	80	51
	Total	156	100
Nationality	Turkish/ Turkish Cypriot	38	24
	African	85	54
	Asian	34	22
	Total	157	100

4.1.2 Access to Social Network

94% (n = 147) of the participants have mentioned that they have mobile phones and Facebook accounts, and 6% (n = 10) of them did not have. Relating to having a computer, 95% (n = 149) of the participants either have one or access to on while merely 5% (n = 8) mentioned that they did not have.

〈Table 2〉 Access to Social Network

	Yes/No	Frequency	Percentage %
Having a mobile phone	Yes	147	94
	No	10	6
	Total	157	100
Having computer	Yes	149	95
	No	8	5
	Total	157	100
Having Facebook account	Yes	147	94
	No	10	6
	Total	155	100

4.1.3 Average Time Spent in Texting, Facebook and Face-to-Face Communication

The students were asked to report on hours and minutes spent in each day for different social networking activities. Table below roughly indicates the estimated time spent by students for texting, Facebook and as well as face-to-face communication.

The highest number of the participants mentioned that they spent 1~5 hours for almost all three different types of the communication activities. For text messages the time is 85% (n = 133), for Facebook it is 87% (n = 137) and for face-to-face communication it is 65% (n = 102).

The students stated that they spent 6~10 hours for social networking activities. The distribution of them is 6% (n = 10) for text mes-

sages, 8% (n = 12) for Facebook and 21% (n = 34) for face-to-face communication.

Finally students who mentioned that they spent more than 11 hours in a day for social networking. The distribution of this time is 5% (n = 8) for text messages, 2,5% (n = 4) for Facebook and 12% (n = 18) for face-to-face communication.

<Table 3> Average Time Spent for Texting, Facebook and Face-to-face Communication

Day-Hour	Text		Facebook		Face-to-face	
	Freq.	%	Freq.	%	Freq.	%
1~5 hours	133	85	137	87	102	65
6~10 hours	10	6	12	8	34	21
11+ hours	8	5	4	2,5	18	12
Total	151	96	153	97,5	154	98
Missing	6	4	4	2,5	3	2

When comparing the ranges of the three activities reported by the participants, for texting it ranges from zero to 16 hours (mean = 2,9 hours); for Facebook from zero to 15,2 hours (mean = 2,4 hours); where face-to-face interaction from zero to 16 hours (mean = 5,1 hours).

4.1.4 Average Daily Sent-Received Text

Messages and Sent Facebook Messages

The students were asked to report the number of text messages they sent and received including those for the Facebook. As indicated in table below, most of the participants mentioned that they sent 1~19 messages daily. The figures for sent, received text and Facebook messages consequently are 53% (n = 83), 48% (n = 136) and 87% (n = 136). Of the students sending 20~49 messages daily similar figures show to be 11% (n = 17), 15% (n = 23) and 6% (n = 10) in the sim-

ilar order. Finally for students that sent more than 50 messages daily the figures are 34% (n = 53), 36% (n = 57) and 5% (n = 8).

<Table 4> Average Daily Messages in Social Networking

Day / Messages	Sent Text		Received Text		Facebook	
	Freq.	%	Freq.	%	Freq.	%
1~19	83	53	75	48	136	87
20~49	17	11	23	15	10	6
50+	53	34	57	36	8	5
Total	153	98	155	99	154	98
Missing	4	2	2	1	3	2

4.1.5 Usage of Social Media for Ending Intimate Relationships

The respondents were asked how text usage and Facebook messaging affect ending their intimate relationship with others. Results indicate that while 39% of the respondents (n = 61) stated that they ended an intimate relationship by sending text messages, 36% of the respondents (n = 57) mentioned that their intimate relationship has been ended by their partner informing them by a text message. As for Facebook, 26% of the respondents (n = 40) stated they ended a relationship with someone by using Facebook, yet 24% of them (38) have mentioned that their partner have ended the intimate relationship with them by using the same.

Results show that majority of the participants prefer not to use text messages or Facebook messages to end their intimate relationships. On the other hand still ending of an intimate relationships by using text messages and Facebook, (39% by sent text, 36% by received text and 26% by Facebook), shows to be interesting where similar results also achieved by Drussels [2012].

<Table 5> Usage of Social Media for Ending Intimate Relationship

	Respondent Text		Partner Text		Respondent Facebook		Partner Facebook	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Yes	61	39	57	36	40	26	38	24
No	93	59	99	63	116	73	117	75
Total	157	98	157	99	157	99	157	99
Missing	3	2	1	1	1	1	3	1

After the factor analyzes two factors have emerged (KMO = 0,708 and $p = 0,000$). The items related with text messaging have been loaded under “text usage” while items related with Facebook were loaded under “Facebook usage.” A mere item 21 wording “I feel out of touch with others because of social networking (texting, Facebook)” related with both factors with a low factor loading point (0,448) is loaded under text messaging.

The Varimax method have been used for factor loading where loading levels of all items are

either at good (over 0,70) or at acceptable levels (over 0,60) (except item 21, the factor loading is 0,448). It is found that the reliability of “Facebook usage” (Cronbach’s Alpha = 0,740) is better than the reliability of text messaging (Cronbach’s Alpha = 0,610).

Most of the students have mentioned that they rely on text messaging and Facebook to communicate with people. They also mentioned that using text messaging and Facebook improved their abilities to communicate with others.

4.1.7 Preferences for Conflict Management and Problem Solving

Eleven questions were asked to learn whether the students prefer to use social media (text messaging or Facebook) or face-to-face communication for their conversations through mentioning their aggression, problem solving and ending

<Table 6> Factor and Reliability Analyzes-Facebook and Text Usage

Factor	Items	Factor Loading	Reliability Cronbach’s Alpha	Frequency %
Facebook Usage	- I’ve improved my ability to work out problems by using Facebook.	,827	0,740	18,68
	- I’ve improved my ability to communicate by using Facebook.	,728		
	- Facebook friends I’ve never met are as important to me as “real” friends.	,697		
	- I rely too much on Facebook to stay in touch with people.	,691		
Text Usage	- I rely too much on texting to stay in touch with people.	,839	0,610	35,32
	- I’ve improved my ability to work out problems by texting.	,697		
	- I’ve improved my ability to communicate by texting	,610		
	- I feel out of touch with others because of social networking (texting, Facebook).	,448		
		Total Frequency		54,00

KMO (Keiser-Meyer-Olkin Measure of Sampling Adequacy) **0,708**

Bartlett’s Test of Sphericity-Approx. Chi-Square: **260,630** df: **28** Sig. **0,000**

their friendships etc. tendencies. The questions were evaluated by a 5 point Likert scale. In factor analyzes one of the items, "I've asked friends to 'gang up' on someone on Facebook who I'm mad at", is left out of the analyzes.

The conclusion of factor analyzes are the occurrence of two factors (KMO = 0,848, $p = 0,000$). One of them is composed of eight items named as "social media preference" (Cronbach's Alpha = 0,840) and the other one is composed of two items named as "face-to-face communication preference" (Cronbach's Alpha = 0,520). It can be concluded that students prefer social media more than face-to-face communication whenever there is a conflict or problem and during undesirable situations (such as preferring to unfriend that person from their Facebook account instead of talking to him/her).

4.1.8 Ranking the Preferences

Last two questions were related with ranking the students' preferences on "keeping in touch with others" and "letting someone to know that they are upset." For these two questions students were asked to rank five different items (1-Least preferred choice to 5-Most preferred choice).

When students were asked for "their preferences to keep in touch with others" the highest percentage of them mentioned that they prefer talking in person 47% ($n = 74$), that followed by phone by 25% ($n = 39$) than using other media. Least preferred media are mentioned as usage of email 51% (80) and Facebook 34% ($n = 52$).

Similarly when students were asked for "their preferences to let someone know that s/he is upset" they mentioned that when they are upset, the most preferred medium is phone by 47% (n

<Table 7> Conflict Management Preferences

Factor	Items	Factor Loading	Reliability Cronbach's Alpha	Frequency %
Social Media Preference	- I carry on conversations by texting rather than talking to someone.	,758	0,840	37,55
	- I carry on conversations on Facebook rather than talking to someone.	,753		
	- I solve problems with friends by texting.	,706		
	- I send messages on Facebook to someone I'm mad at instead of talking about it.	,694		
	- I text people who are in the same place as me rather than talking.	,688		
	- I solve problems with friends on Facebook.	,668		
	- I've unfriended someone on Facebook instead of talking about it.	,606		
	- I send texts to someone I'm mad at instead of talking about it.	,574		
Face-to-face	- I solve problems with friends face-to-face.	,799	0,521	15,35
	- I make an effort to spend time with friends.	,736		
		Total	Frequency	52,90

KMO (Keise-Meyer-Olkin Measure of Sampling Adequacy) **0,848**

Bartlett's Test of Sphericity-Approx. Chi-Square: **414,859** df: **45** Sig. **0,000**

= 74) and the least percentage belong to “talking in person” as 45% (n = 71) and “email” as 48% (n = 76).

4.1.9 Demographic Analyzes

In order to test whether those four dimensions differentiate according to demographic variables, independent Sample T-tests and one way ANOVA analyzes have been done. Two out of four dimensions were found related to the usage of Facebook and text messaging and the other two were found related with conflict management styles (preference of social media or face-to-face communication).

4.1.9.1 Gender

According to the independent T-Test analyzes a significant difference come about only in terms of Facebook usage ($t = 1,909$; $p = 0,058$). As could be seen from Table 10 males usage of Facebook was more than females (mean-male = 2,79; mean-female = 2,50).

4.1.9.2 Citizenship

According to one way Anova analyzes significant differences occurred in three of the four dimensions (<Table 11>). In terms of Facebook usage ($F = 3,269$, $p = 0,041$) the means of Turkish and Turkish Cypriot citizens are higher than the

<Table 8> Medium Preference to Keep in Touch with Others

1-Least preferred 5-Most preferred (157/100%)	1		2		3		4		5	
	Frq.	%	Frq.	%	Frq.	%	Frq.	%	Frq.	%
Texting	40	26	25	16	40	26	24	15	27	17
Facebook	52	34	25	16	31	20	29	19	19	12
Talking in person	38	24	9	6	15	10	21	13	74	47
Phone	34	22	25	16	18	12	40	26	39	25
Email	80	51	23	15	20	13	10	6	23	15

<Table 9> Preference to Let Someone Know That S/He is upset

1-Least preferred 5-Most preferred (157/100%)	1		2		3		4		5	
	Frq.	%	Frq.	%	Frq.	%	Frq.	%	Frq.	%
Texting	43	27	26	17	44	28	18	12	23	15
Facebook	33	21	25	16	26	17	54	34	19	12
Talking in person	71	45	22	14	18	12	23	15	21	13
Phone	43	27	7	5	14	9	17	11	74	47
Email	76	48	32	20	11	7	13	8	22	14

<Table 10> T-Test Analyzes According to Gender

	Levene test		T test			Gender	N	Mean	SD
	F	Sig.	df	t	Sig (2-tailed)				
Facebook Usage	,044	,844	149	1,909	,058	Male	74	2,78	,91
						Female	77	2,50	,92

<Table 11> Anova Analyzes, Citizenship - (Post Hoc Comparison Test : Tukey)

	Anova		Tukey Test		Mean diff.	Standard error	Tukey p
	F	p	Group 1	Group 2			
Facebook Usage	3,269	,041	Turkish-Cypriot	Asian	,55	,22	,035
Text Usage	4,248	,016	African	Asian	,39	,16	,048
Social Media Usage	3,248	,042	Turkish-Cypriot	Asian	,47	,19	,034

Asians (Tukey $p = 0,035$) while for text usage ($F = 4,248$, $p = 0,016$) the means of Africans are significantly higher than the Asians (Tukey $p = 0,048$). Finally in terms of one of the conflict management style, social media usage ($F = 3,248$, $p = 0,042$), the means of Turkish and Turkish Cypriot citizens are higher than those of the Asians (Tukey $p = 0,034$). No significant difference resulted in terms of the other conflict management style, the face-to-face communication.

4.1.9.3 Age Groups

In order to compare the differences in age groups T-test analyzes have been done for two age groups (17~20 and 21~25). No significant difference resulted in terms of age groups.

5. Results and Discussions

Results indicate that most of the participants have a computer (95%), a mobile phone or a Facebook account (94%) where a minimum number of them mentioning that they do not have (5~6%). Thus it can be concluded that survey participants commonly show to be using almost all technological communication and social network tools. Students are spending almost 20% more time on Facebook and texting than face-to-face communication, where the average time spent for texting by the highest number

of students is between 1~5 hours for all three types of the communication activities. For text messages, Facebook and face-to-face communication the figures are 85% ($n = 133$), 87% ($n = 137$) and 65% ($n = 102$) consecutively.

Results also indicate that 30~35% of the students prefer the use of Facebook for messaging to text messaging for communication where commonly 1~19 messages sent each day, the breakdown of that being 53% ($n = 83$) for sent text messages, for received messages 48% ($n = 136$) and 87% ($n = 136$) for sent Facebook messages (<Table 4>).

Results show that majority of the participants prefer not to use text messages or Facebook messages to end their intimate relationships. But ending of intimate relationships by using text messages and Facebook (39% sent text -36% received text and 26% by Facebook) shows to be interesting where similar results also achieved by Drussels [2012].

In terms of ending an intimate relationship a high number of the participants have mentioned that they prefer not to use text messaging or Facebook messaging to end their intimate relationship except a group of others mentioning that they prefer to do that through text messaging where such relationship were ended in that way (In case of text messaging 39% by themselves and 36% by the partner and for Facebook

messaging 40% by themselves and 38% by partner). Such figures indicate that the participants mentioning that they prefer to end intimate relationships by using technological media cannot be neglected.

According to the factor analyzes relating communication methods (text or Facebook) the common tendency of the participants is on using text and Facebook messaging rather than person to person communicating with others. Moreover these also mentioned that using text and Facebook messaging improved their abilities to communicate with others. Consequently, it can be concluded that they commonly prefer social media to face-to-face communication whenever encountered with a conflict or a problem or an undesirable situation (example being their preference of unfriending a person through their Facebook account instead of talking to him/her).

In terms of "students' common preference to keep in touch with others" their preference is talking in person (47%; $n = 74$) rather than using other media where the least preferred media in such case being the use of email 51% (80) and Facebook 34% ($n = 52$). Similarly, participants when asked for "their preference to let someone to know that s/he is upset" their general response is to use phone 47% ($n = 74$) in which least preferred way in such case is "talking in person" by 45% ($n = 71$), "email" by 48% ($n = 76$) and other types of media.

All such results indicates that participants as adolescence individuals in higher education use technological tools for communicating with others that lessens their face-to-face communica-

tion chances. However despite that some of them still mention that they prefer to use face-to-face communication to establish contacts with others. Moreover they mostly prefer telephone conversations whenever they are upset by someone rather than all other media.

Relating to demographic data supplied in terms of gender a significant difference resulted between males and females in Facebook usage indicating that males use more Facebook than females (mean-male = 2,79; mean-female = 2,50). Moreover related to citizenship differences resulted in three dimensions. For Facebook usage ($F = 3,269$, $p = 0,041$) the means of Turkish and Turkish Cypriot citizens are found to be higher than the Asians (Tukey $p = 0,035$). For text usage ($F = 4,248$, $p = 0,016$) the means of Africans show to be significantly higher than that of the Asians (Tukey $p = 0,048$). Lastly in terms of the conflict management style, the preference of social media usage ($F = 3,248$, $p = 0,042$), the means of Turkish and Turkish Cypriot citizens are found higher than the Asians (Tukey $p = 0,034$) where no difference have been found in terms of age categories (as 17~20 and 21~25).

6. Limitations and Future Research

The research has been done by easiest sampling method meaning through participants that are the students of the business school volunteering to answer the questions of the survey. For such reason it will not be convenient to generalize the results. Use of the random sampling method with the inclusion of participants from

other departments and also other universities are advised. Moreover because of the limitation in time the questionnaires were distributed and collected within a short period of time no more than 15 days. It may be better to collect more data in order to increase generalizability capacity of the research.

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