

# PERSONAL



# COMMUNICATION

---

*An Interactive Qualifying Project*

*Analyzing the Use and Effects of Personal Communication in the Modern Age*

*By:*

Teodor Serbanescu

Submitted to the Faculty of

Worcester Polytechnic Institute

In Partial Fulfillment of the Requirements for

The Bachelor of Science Degree



## **Abstract**

The Personal Communication project analyzes the technological and social changes in the methods of interpersonal communication within the past decade. It emphasizes its attention to the 'here and now' and thoroughly examines a few key aspects: What are the most used methods of communication today? Why are they used? And what effects are they bringing upon us as a society. This project will involve statistical studies, in-depth analysis, and theorizations to find the most accurate answers to these questions. Ultimately, 'Personal Communication' will provide the reader with insight about what caused personal communication to evolve in the way it has, what are the positive and negative outcomes of this evolution, and how it will most likely progress from here.

## **Executive Summary**

Personal communication methods have undergone a significant amount of changes in the past few decades. To get a clearer picture of this fast growing change-rate, we can look back to a century ago, when the only methods of personal communication that used by an average person were letter-writing and face-to-face. Today, on the other hand, methods such as emailing and messaging via Facebook are just a couple of the various options used by people to communicate with each other on a daily basis (Goodman). The abundant use of modern technologies over the past few years, for the purpose of personal communication, has reached a point where actual behavior and mannerism of the user has been changed (Rittinghouse). The objective of our project is to determine which of today's communication methods are being used most often, why are they being used, what impacts are they having upon society, and what possible solutions can help push personal communication into a more positive direction.

The project's main source of scientific experimentation was through the Personal Communication Survey, which was prepared to determine the communication habits of a population. The survey had approximately 323 responses, from the students, professors and staff of Worcester Polytechnic Institute. In addition to the survey, information was collected from both published and online materials. The information obtained from these sources was analyzed in detail, with major emphasis on the time-efficiency, cost, and reliability of each method explored.

The preliminary research for this project lead me to investigate six different communication methods, which would be the foundation of the survey and post analysis. These six methods represent the six major options of communication methods used by an average person of the modern age. They are as follows: Face-to-face, Emails, Cell Phones, Phones, Instant Messaging Clients, and Social Networking Websites. Upon the completion of the survey analysis, answers to the initial underlying questions of the project were evident. Email has emerged as the leading form of communication used today, followed by face-to-face, then cell phones. The most evident variable for this result is time efficiency, followed by cost efficiency, then reliability. Today's society views time efficiency as the most important decision making

factor, to which communication method they choose. Reliability is their last priority in the decision making process. Further analysis of the survey results shows that today's society is unaware of which form of communication is deemed appropriate for specific situations, and what the proper etiquette should be in these cases. In addition, social networking websites are causing addictions to nearly 50 percent of the population, and decreasing face-to-face communication skills. One of the most prominently suggested solutions to help solve some of these problems is to have a large-scale marketing push for video calling and video text messaging in cell phones, social networking sites, and even emails. This would re-instill some of the forgotten face-to-face skills of communication, which are important to have in a society. Another prominent solution is for schools to educate children of all the various communication tools available, and which of them are appropriate for specific circumstances, as well as the proper etiquette used for each.

The value of this project is to give the reader an understanding of what communication methods are used the most, and why people are using them. This information can be used by communication device manufacturers for marketing campaigns, and provide them a foundation for R&D initiatives. The project is also valuable in terms of isolating communication deficiencies in a society and what can be done to resolve them. Room to improve and expand upon this project is certainly available, as specific sections of the analysis can be individually investigated to a much deeper level, and be transformed into their own individual projects. For example: 'The Value of Time Efficiency in Personal Communication', or 'The Addictions of Social Networking Websites'.

# **Table of Contents**

Abstract	2
Executive Summary	3
Table of Contents	5
List of Figures	7
Chapter 1: Introduction	8
Chapter 2: Literature Review	9
2.0: Introduction	9
2.1: Face to Face Communication	10
2.2: Letter Writing	10
2.3: Telephones	10
2.4: Cellular Phones	11
2.5: Email	11
2.6: Instant Messaging	12
2.7: Social Networking Websites	12
2.8: UNRISD Study	13
Chapter 3: Course of Development	14
3.0: Creating a Foundation	14
3.1: Conducting a Survey	15
Chapter 4: Analysis and Results	16
4.00: Survey Introduction	16
4.01: A&R1 – Popularity	17
4.02: A&R2 - Reliability	20
4.03: A&R3 - Cost Efficiency	23
4.04: A&R4 - Time Efficiency	26
4.05: A&R5 - Cell Phone Change Rate	28
4.06: A&R6 - Reasons to Change the Cell Phone	29
4.07: A&R7 - Monthly Costs	31
4.08: A&R8 - Opinions on Costs	32
4.09: A&R9 - Decreased Face-to-Face Skills	33
4.10: A&R10 - Overburden of Options	34
4.11: A&R11 - Addictions	35
4.12: A&R12 - Progression or Digression	36
4.13: A&R13 - Ideas to Improve	37
Chapter 5: Conclusion	40
5.0: Conclusion Introduction	40
5.1: Review of the Results	41
5.2: Impacts on Society	42
5.3: Final Summary	44

References	45
Appendix	48
Appendix A: Survey Question 1	48
Appendix B: Survey Question 2	49
Appendix C: Survey Question 3	50
Appendix D: Survey Question 4	51
Appendix E: Survey Question 5	51
Appendix F: Survey Question 6	52
Appendix G: Survey Question 7	54
Appendix H: Survey Question 8	55
Appendix I: Survey Question 9	55
Appendix J: Survey Question 10	55
Appendix K: Survey Question 11	56
Appendix L: Survey Question 12	56
Appendix M: Survey Question 13	57

## **List of Figures**

Figure 1: Survey Q1 [Original] – Popularity	17
Figure 2: Survey Q1 [Average] – Popularity	17
Figure 3: Survey Q1 [Graph] – Popularity	18
Figure 4: Survey Q2 [Original] – Reliability	20
Figure 5: Survey Q2 [Average] – Reliability	20
Figure 6: Survey Q2 [Graph] – Reliability	21
Figure 7: Survey Q3 [Original] – Cost Efficiency	23
Figure 8: Survey Q3 [Average] – Cost Efficiency	23
Figure 9: Survey Q3 [Graph] – Cost Efficiency	24
Figure 10: Survey Q4 [Original] – Time Efficiency	26
Figure 11: Survey Q4 [Average] – Time Efficiency	27
Figure 12: Survey Q4 [Graph] – Time Efficiency	27
Figure 13: Survey Q5 [Original] – Cell Phone Change Rate	28
Figure 14: Survey Q6 [Original] – Reasons to Change the Cell Phone	29
Figure 15: Survey Q6 [Average] – Other Reasons to Change the Cell Phone	29
Figure 16: Survey Q7 [Original] – Monthly Costs	31
Figure 17: Survey Q8 [Original] – Opinions on Costs	32
Figure 18: Survey Q9 [Original] – Decreased Face-to-Face Skills	33
Figure 19: Survey Q10 [Original] – Overburden of Options	34
Figure 20: Survey Q11 [Original] – Addictions	35
Figure 21: Survey Q12 [Original] – Progression or Digression	36
Figure 22: Survey Q13 [Original] – Ideas to Improve	37
Figure 23: Survey Q13 [Average] – Ideas to Improve	37
Figure 24: Review of the Results	41

## **Chapter 1: Introduction**

Personal communication has undergone a great amount of technological and social changes from the era of letter writing and house phone usage, which occupied most of the 20<sup>th</sup> century, to the modern era of e-communication and cell phone usage, which has only occupied roughly the last decade (Casson). E-communication, or internet communication, in today's age, consists of emails, instant messaging clients, and social networking websites. In recent years, these devices have even begun merging their primary functionalities with one another, for example, cell phones can now access and deliver emails, and social networking sites now have instant messaging capabilities (Ellison). By analyzing the effects that these modern devices have had on time efficiency, functionality, and sheer ease of communication, we develop picture of the overall progression of person-to-person communication. For example, it is much faster, cheaper, and easier to write somebody an email on the computer and have it sent through the click of a button, than to write that person a physical letter, stamp it, put it into an envelope, bring it to a post office, and then wait until it arrives to that person.

This project will involved an in-depth research of the types of modern personal communication methods that are used today, including how they function, how they differ from older methods, and how they are affecting society. The answers found through this research will enable us to incorporate an interactive element to the project: a questionnaire survey, distributed via email. The main objective of 'Personal Communication' is to discover what are the most used methods of communication today, why they are used, and what effects they are bringing upon society. The secondary objective of the project is to explore any possible solutions that may solve, or improve upon the negative effects of today's communication habits.



## **Chapter 2: Literature Review**

### **2.0: Introduction**

There is a vast difference between personal communication of the past, and personal communication of the present. What is even more remarkable about this difference, is the actual acceleration of how technology evolved. To clarify this point, think about the last twenty centuries, from a time when the only communication method was letter writing, to the point where telephones started emerging. After acknowledging that it took nearly twenty centuries for that progression to occur, think about the last 50 years, where personal communication evolved from just letters and telephones, to the modern cellular phone and various types of e-communication. In today's age, nearly every new year that passes, some sort of technological progression occurs in the field of communication. Cell phones are constantly being updated with new features and gadgets, instant messaging programs are constantly releasing new and improved versions, social networking sites are constantly adding more applications and functionalities, and email clients are constantly increasing their capacity for space and bandwidth. Just a decade ago, cell phones were primarily used solely for calling people, however now, most phones also come equipped with mp3 players, full internet access, navigational devices, instant messengers, and a video recorders. An entire project could be composed on the analysis of technological advances in personal communication over the past decade. However, from 1922 to 1981, the era of telephones, the amount of progression does not even come close. Caller ID, the 'redial button', the answering machine, and just a few other minor upgrades are all that occupy this time frame (Poole).

In this literature review, I have divided personal communication into seven different sections, each representing a separate method of technology. They are as follows: face-to-face, letter writing, telephones, cellular phones, email, instant messaging, and social networking. Each of these methods, except letter writing, is further analyzed throughout the project. At the end of this chapter, a study by the United Nations Research Institute for Social Development will also be analyzed to get an initial viewpoint on the progression of personal communication in society.

## **2.1: Face to Face Communication**

The oldest and only technology-free method of communication discussed is face to face. This consists of two or more people, in close proximity with one other, conveying their message to each other, through the use of vocalization and body language. Technically speaking, this form of communication started with the first of our species, since emotion was portrayed through body language and facial expressions, such as anger, sadness, and fear. Ironically, these fundamental tools are starting to regress in today's society, as popular communication tools do not require them; this will be discussed in later chapters. The introduction of language, about 50,000 years ago, improved face to face communication greatly, and allowed the first homo sapiens to migrate. As language evolved, civilizations grew, and communication also became more prominent (Hockett).

## **2.2: Letter Writing**

Letter writing, in the context of this project, is the process of physically writing a message on a piece of paper, and then delivering it to somebody else to read. Let this not be confused with the simple act of writing an alphabetical letter, which is, although, part of the process. The history of writing originates with the first cave paintings nearly 32,000 years ago, and evolves through to the Egyptian hieroglyphics, and eventually the Semitic alphabet. Postal services started to emerge, the first being in Rome about 2,000 years ago, where carriages were used to deliver people's letters and mail. Much of this process has been replaced by the e-communication of today (Decker).

## **2.3: Telephones**

The telephone was created to simulate face to face communication over long distances, through sound. The first commercial telephone was created by Alexander Graham Bell in 1876, based off the technology of previous telegraphs. Modern day telephones function by allowing the user to, first, activate or turn on the device, then dial the number of party they wish to reach, wait until that party answers their phone, and then simply talk into the mouth piece while listening to

the ear piece (Casson). Telephones are also in the process of being replaced by cell phones and e-communication, which will be discussed in later chapters.

## **2.4: Cellular Phones**

The concept of the cellular phone emerged in the 1950s, and it was not until the first nation-wide network emerged, when cell phones became functional. Japan introduced the first 1G network in 1979, which allowed users to communicate with each other via a wireless device. Over time, wireless networks progressed from 1G to now, 4G, in which both signal strength and speed has improved drastically (Poole). To get a picture of what modern day cell phones are capable of doing, let's go shopping. One of the newest cell phones on the market right now is the Droid Charge, made by Samsung. Aside from its sleek design and HD megapixel screen, it has two cameras, HTML browsing, video camera capability, navigation system, voice assistance, HD movie player, and custom application capabilities. The phone sells for \$300, with a two year contract, otherwise, \$570 (DROID CHARGE). For this project, text messaging will be grouped with cell phones. Text messaging is the process of typing a message in your phone, then sending it to somebody else's phone, for them to read at their convenience. The difference between this, and instant messaging, is that instant messaging is usually done while both parties are online, and the conversation is real-time via text.

## **2.5: Email**

Electronic mail is a digital message sent through a wireless network, to and from a central location. The first email was sent in 1971, but it was not until computers became popular in the early 1990s, when email clients really started to blossom. Today, most email services are free, such as Gmail, created by Google. An internet connection is required, which does cost money. A typical user will log into their account, and be brought to their inbox, where they will find all of their non-deleted emails; even their sent emails are usually saved, unless they manually delete them. The user can send a new message to any valid address in a matter of moments by typing the recipient's address, the message, and then clicking the 'send' button. Initially, emails were only able to be sent by a computer, but now, cell phone devices are also capable of sending and

receiving emails. Emailing has essentially evolved into a much more cost and time efficient way of sending physical letters (Vleck).

## **2.6: Instant Messaging**

Instant messaging is the process of two or more people having a real-time conversation with each other via text. This was traditionally done with computers, connected to a network. Now, other devices, such as cell phones can run instant messaging clients. A client is a software application which hosts a platform for synchronous text communication. One of the biggest clients, and the first to be free for all users, is AIM, American Online Instant Messenger, which was released in 1997. Throughout that time, many other clients emerged, such as Yahoo Messenger, and Google Talk. However, today, a lot of these clients are losing their users at the hands of social networking websites, which have released their own built-in IM clients (Hoyos).

## **2.7: Social Networking Websites**

Social Networking Websites are, in a sense, a combination of all e-communication methods, put into one. They are websites in which a user can create a profile, write about themselves, and add media. A user may search or browse through other profiles, and add them to their friends list. Ultimately, a user can keep current with the activities of their friends, and post messages, either publically or privately with other users. The first social networking website started in 1997, and named itself Six Degrees; it promoted itself as being a “tool to help people connect and send messages with each other.” In the past decade, the popularity of social networking websites has sky-rocketed; Facebook leads the competition with 750 million active users. With an endless array of user profiles to browse and stay current with, it is easy to see why the overuse of these websites can lead to addictions; this will be analyzed in later chapters. Other negative effects from these websites include obstruction of work, and underage users, which, based on consumer reports, are estimated to be at a number of 7.5 million (Ellison).

## **2.8: UNRISD Study**

The United Nations Research Institute for Social Development (UNRISD) conducted a study in the year 2000 about the changing state of modern communication in society. The study was called ‘Information and Communication Technologies, and Social Development.’ The research focuses on the positive effects of internet use for communication, especially in foreign countries. It goes into detail about the increase of levels of communication through the use of email, and internet. The amount of information that can be transferred electronically far exceeds that of physical letter writing, with a much faster rate. This presents an economical advantage, especially to poor countries, and opens a pathway to new business opportunities. Internet Cafes in third world countries, not only provide business ventures for people, but allow the young generation especially, to explore the customs in other countries, which in return, can help provide the knowledge necessary to improve their nation in the future (Sagna).

## **Chapter 3: Course of Development**

### **3.0: Creating a Foundation**

#### **Objective**

To gather external information and develop a thematic foundation for the project.

#### **Justification**

Before conducting my own research on the usages and effects of modern communication devices, a thorough investigation of any available sources must be conducted. Both modern and older communication devices must be researched: how they function, how popular they are, how affordable they are. By doing this, I will obtain a better understanding of the background of what I am analyzing. Any previous publications of the same, or similar, topic must also be investigated. These results will provide the foundation of how to conduct my own experimental research.

#### **Action**

Web sites, articles, and books were my primary sources. Through the WPI Gordon Library, I accessed its database and searched for books that pertained to our topic; Christin Drew, manager of Instructions and Outreach at WPI, was of great assistance in the process. The actual searches were based through keyword searches for either titles or authors. The same was done for articles and website searches. Outside of the WPI search engine, I also used various other engines to gather information, such as Google Scholar, and even actual companies, pertaining to my topic, such as Verizon Wireless.

#### **Special Circumstances**

It was absolutely vital that the sources of information were creditable, so I do not collect any faulty or unjustified data. Using the WPI Library Database was not a concern, because the articles and books from the database are written by certified professionals of their field. However, running into dubious websites and ‘blogs’ pertaining to this field was a high threat; I checked the background of authors and company websites to make sure they were reliable.

### **3.1: Conducting a Survey**

#### **Objective**

To create and implement a survey that meets our justifications.

#### **Justification**

A way to conduct my own research was needed to find the answers that were presented in my introduction: What are the most used methods of communication today? Why are they used? And what effects are they bringing upon us as a society. Therefore, I decided to create and administer a survey through the WPI community.

#### **Action**

Various surveys were studied from unrelated topics, and I reviewed 'Survey Methodology,' a book about how to conduct surveys, published by Wiley and written by Robert Groves, to prepare me for implementing my own survey (Groves). Taking what I had learned into consideration, I carefully established a series of questions for my survey, which involved a specific layout of answer choices as well. Everything in the layout was chosen thoughtfully, to ensure a high response rate from the community, as well as gather useful information for the topic. I used a company website called SurveyMonkey, which was recommended by Christin Drew of the WPI library, to establish the web based survey. In order to distribute the survey to the WPI community, I decided to send it through the campus email server. I worked with the WPI Computing & Communications Center, and eventually was able to email it to the entire undergraduate mailing list.

#### **Special Circumstances**

The survey had to be 100 percent confidential and not contain any personal questions, in order to be accepted by the WPI Institutional Review Board.

## **Chapter 4: Analysis and Results**

### **4.00: Survey Introduction**

The web-based survey was a great success. It was distributed electronically on January 30<sup>th</sup> 2009. The survey was available to the public for exactly one week; it received 323 total responses. The survey had to be split into two parts, due to space constrictions with our host, SurveyMonkey.com. Part one had ten questions and part two had three, totaling in thirteen questions. I altered the numbering scheme in the second part of the survey, within this report, to add synchronization in the results, and avoid confusion of the readers (i.e. Question one of part two is labeled question eleven in the report). The decision to choose an online survey over other data collection techniques, such as interviews and experiments, was to obtain the most number of subjects in the fastest possible time. The objective of the survey was to gather statistical information, which could be analyzed to better understand the nature of personal communication in a society.

I have divided the Analysis and Results chapter by sections, corresponding to each individual question from the survey. Each of the following sections will contain the following:

- The question.
- A screenshot of the direct results, organized into a data chart.
- A simplified and condensed version of the first data chart, combining some of the results together to form useful averages. (Only for Questions 1-4)
- A color-coded line graph to visualize and compare the data. (Only for Questions 1-4)
- An in-depth analysis of question and its results.

The survey did have a few limitations, due to the fact that I did not have money to subscribe to any of the higher level survey options from SurveyMonkey.com. One of the limitations was not being able to add any extra descriptions to the questions, thus some of the questions might have been a little vague for the user. The other limitation was not being able to trace individual responders throughout the survey, thus disabling me from conducting any type of contingency analysis. However, the results of the survey will still be sufficient for a comprehensive analysis.



#### 4.01: A&R1 – Popularity

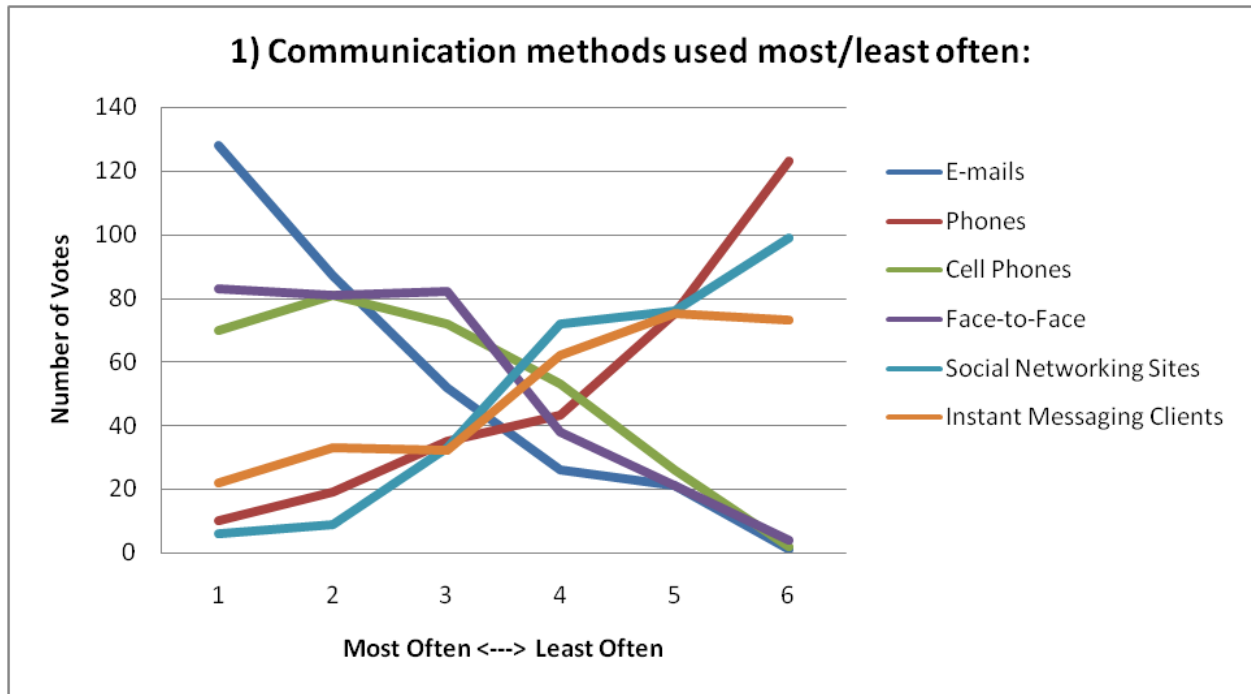
*Note: All original results from the survey are located in the Appendix Section.*

1. Which communication method from the list below do you use most/least often?								
	1(Most often)	2	3	4	5	6(Least often)	Rating Average	Response Count
E-mails	40.6% (128)	27.6% (87)	16.5% (52)	8.3% (26)	6.7% (21)	0.3% (1)	2.14	315
Phones	3.3% (10)	6.2% (19)	11.5% (35)	14.1% (43)	24.6% (75)	40.3% (123)	4.71	305
Cell phones	23.0% (70)	26.6% (81)	23.7% (72)	17.4% (53)	8.6% (26)	0.7% (2)	2.64	304
Face-to-face	26.9% (83)	26.2% (81)	26.5% (82)	12.3% (38)	6.8% (21)	1.3% (4)	2.50	309
Social networking sites	2.0% (6)	3.1% (9)	11.2% (33)	24.4% (72)	25.8% (76)	33.6% (99)	4.69	295
Instant messaging clients	7.4% (22)	11.1% (33)	10.8% (32)	20.9% (62)	25.3% (75)	24.6% (73)	4.19	297
<i>answered question</i>								323
<i>skipped question</i>								0

*(Figure 1: Survey Q1 [Original] – Popularity)*

Which communication method from the list below do you use most/least often?		
	Most Often (# of Votes)	Least Often (# of Votes)
Emails	215	22
Face-to-Face	164	25
Cell Phones	151	28
IM Clients	55	148
Phones	29	198
Social Networking	15	175

*(Figure 2: Survey Q1 [Average] – Popularity)*



(Figure 3: Survey Q1 [Graph] – Popularity)

The first question of the survey asks the reader to rank the communication methods listed in the question: e-mails, phones, cell phones, face-to-face, social networking websites, and instant messaging clients; in terms of most and least frequent use. This question was asked to determine how modern communication devices have affected the preference and popularity of communication methods in today’s society. The results show that email is the most preferred form of communication today, followed by face-to-face, then cell phones, instant messaging, social networking sites, and phones. When analyzing the line graph, you can start to see a “X” shape that is formed by the responses, which indicates that the majority of people use one group of devices significantly more than the other group of devices. In this case, the majority uses email, face-to-face, and cell phones significantly more than instant messaging, phones, and social networking as their main source of communication. An interesting statistic is that email is preferred over face-to-face, especially since email cannot offer the benefits of facial expression and voice tone. However, email does offer some major benefits of its own, as discussed in the literature review. In the public eye, it seems that the benefits of email outweigh the latter option. I theorize that the reason for this choice is time and cost efficiency, not so much reliability. Fortunately, the next three survey questions address just that. I also theorize that there is a slight

addition to the methods that do not require live confrontation or tone of voice, which is another reason for email to be the number one user choice. Further questions of the survey will investigate this clause.

## 4.02: A&R2 - Reliability

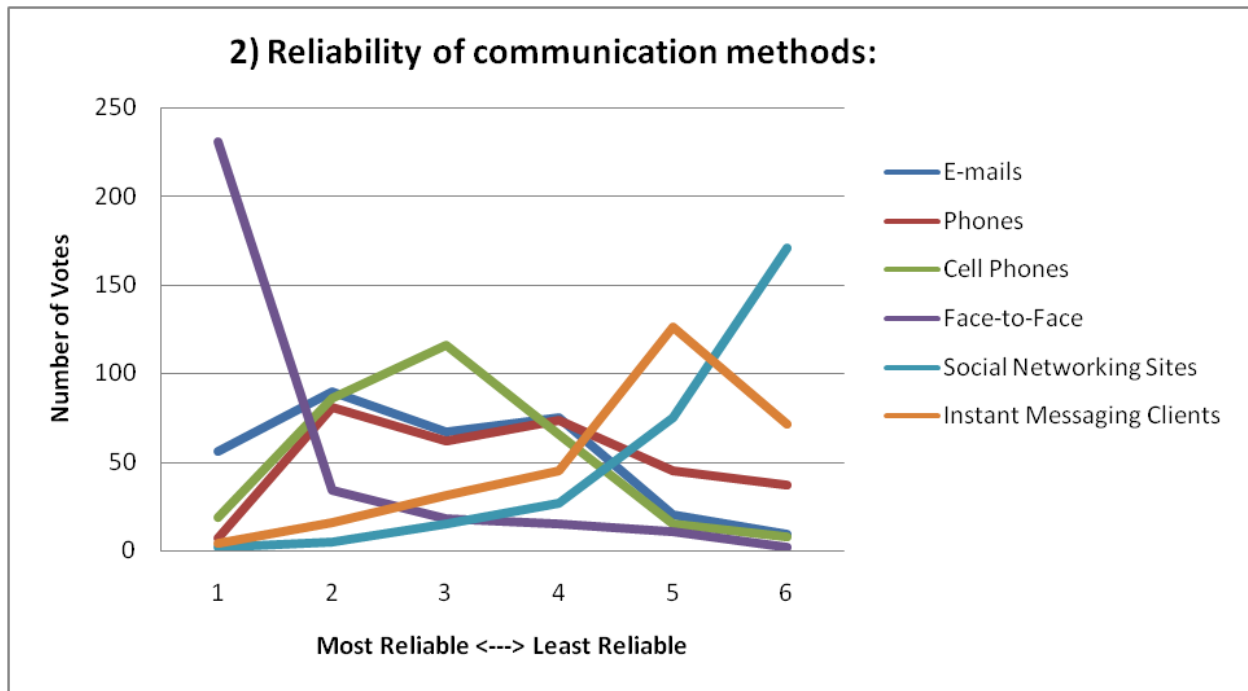
*Note: All original results from the survey are located in the Appendix Section.*

2. Please rank the methods below in terms of reliability.								
	1(Most reliable)	2	3	4	5	6(Least reliable)	Rating Average	Response Count
E-mails	17.7% (56)	<b>28.4% (90)</b>	21.1% (67)	23.7% (75)	6.3% (20)	2.8% (9)	2.81	317
Phones	2.3% (7)	<b>26.5% (81)</b>	20.3% (62)	24.2% (74)	14.7% (45)	12.1% (37)	3.59	306
Cell phones	6.1% (19)	27.7% (86)	<b>37.4% (116)</b>	21.3% (66)	4.8% (15)	2.6% (8)	2.99	310
Face-to-face	<b>74.3% (231)</b>	10.9% (34)	5.8% (18)	4.8% (15)	3.5% (11)	0.6% (2)	1.54	311
Social networking sites	0.7% (2)	1.7% (5)	5.1% (15)	9.2% (27)	25.4% (75)	<b>58.0% (171)</b>	5.31	295
Instant messaging clients	1.4% (4)	5.5% (16)	10.6% (31)	15.4% (45)	<b>43.0% (126)</b>	24.2% (71)	4.66	293
<i>answered question</i>								320
<i>skipped question</i>								3

*(Figure 4: Survey Q2 [Original] – Reliability)*

Please rank the methods below in terms of reliability.		
	Most Often (# of Votes)	Least Often (# of Votes)
Face-to-Face	265	13
Emails	146	29
Cell Phones	105	23
Phones	88	82
IM Clients	20	197
Social Networking	7	246

*(Figure 5: Survey Q2 [Average] – Reliability)*



(Figure 6: Survey Q2 [Graph] – Reliability)

The second question of the survey asks the reader to rank the communication methods listed, in terms of reliability. This question is the first, in a series of upcoming questions, to determine the reasons why our subjects ranked the communication methods in question one, the way they did. From the results, we see that face-to-face communication is rated as the most reliable method, followed by e-mails, then cell phones, phones, instant messaging, and social networking sites. Face-to-face communication has far more votes than all of the other answers, which brings up an interesting possibility: legality. Face-to-face is usually not recorded, and if in private, is not considered reliable evidence in a court of law. Email, which is ranked second, does in fact provide enough evidence in most situations; this was proven to be true in the 1998 court case of US vs. Microsoft, where officials found and used emails between top executives as evidence against Microsoft (USA vs. Microsoft Corporation). According to the data, social networking sites seem to be the unanimous choice for the least reliable method; it also happens to be the newest form of personal communication. Perhaps as it matures over the years, it will become more reliable to the user than it is now. In the first question of the survey, email was selected as the most frequently used method [with 128 votes], but, ironically, it is far below the most reliable in question two [with 56 votes]. The results are starting to show that maybe

reliability is not what the average person prioritizes, since both email and cell phone have taken a significant drop in reliability vs. popularity. This possibility will be re-visited in the conclusion.

### 4.03: A&R3 - Cost Efficiency

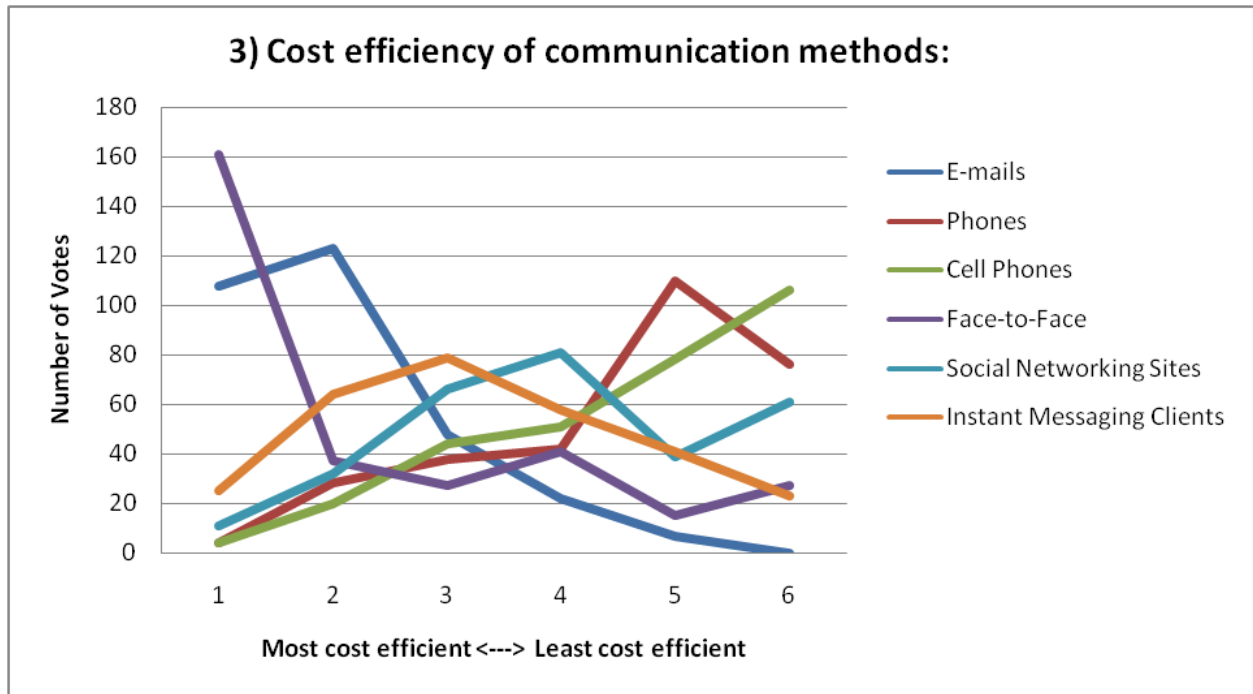
*Note: All original results from the survey are located in the Appendix Section.*

3. Please rank the methods below in terms of cost efficiency.								
	1(Most efficient)	2	3	4	5	6(Least efficient)	Rating Average	Response Count
E-mails	35.1% (108)	39.9% (123)	15.6% (48)	7.1% (22)	2.3% (7)	0.0% (0)	2.02	308
Phones	1.3% (4)	9.4% (28)	12.8% (38)	14.1% (42)	36.9% (110)	25.5% (76)	4.52	298
Cell phones	1.3% (4)	6.6% (20)	14.5% (44)	16.8% (51)	25.7% (78)	35.0% (106)	4.64	303
Face-to-face	52.3% (161)	12.0% (37)	8.8% (27)	13.3% (41)	4.9% (15)	8.8% (27)	2.33	308
Social networking sites	3.8% (11)	11.0% (32)	22.8% (66)	27.9% (81)	13.4% (39)	21.0% (61)	3.99	290
Instant messaging clients	8.6% (25)	22.1% (64)	27.2% (79)	20.0% (58)	14.1% (41)	7.9% (23)	3.33	290
<i>answered question</i>								315
<i>skipped question</i>								8

*(Figure 7: Survey Q3 [Original] – Cost Efficiency)*

Please rank the methods below in terms of cost efficiency.		
	Most Often (# of Votes)	Least Often (# of Votes)
Emails	231	7
Face-to-Face	198	42
IM Clients	89	64
Social Networking	43	100
Phones	32	186
Cell Phones	24	184

*(Figure 8: Survey Q3 [Average] – Cost Efficiency)*



*(Figure 9: Survey Q3 [Graph] – Cost Efficiency)*

The third question of the survey asks the reader to rank the communication methods listed, in terms of cost efficiency. We asked this question to improve our understanding of why society chooses certain communication methods over others. Face-to-face is selected as the most cost efficient method, followed by email, instant messaging, social networking sites, phones, then cell phones. However, the average vote count tells a slightly different story; emails are actually more cost efficient than face-to-face. In the question, it did not specify whether face-to-face costs includes just the actual meeting, or the entire process, including transportation and scheduling. This is a significant distinction that was erroneously over-looked in the development of this particular survey question. My prediction, which is based on the setup of the survey, as well as the original vs. average vote count, is that the people who voted face-to-face over email did not consider the preparation costs, and the people who voted email did. The only cost to send an email is to have an internet connection, which does not increase based on how much you use it. Furthermore, having an internet connection today is social normality in the US; most jobs and nearly all schools will expect you to have access to the internet at home. According to statistics provided by Nielsen Net Ratings, a well trusted e-monitoring company, over 74 percent of the US population had internet access in 2009, and if you take into account the users who share



networks, this percentage continues to raise (InternetWorldStats). Overall, emails are essentially free, if you do not include your monthly internet bill. The face-to-face process can be cost free if you are already at or close to the location of your partner, but that rarely is the case, and most likely, it will cost travel fees, including money for gasoline. The reason why email was ranked higher than instant messaging clients and social networking sites could have been because a few of these websites cost money to use, although the mainstream of them do not, such as AOL Instant Messenger and Facebook.com. I speculate that our subjects chose email over IM and Social Networking just because they had to chose something from the list, and it was the first thing that they thought of, due to its longer and more secure history. An interesting question that relates to this, and could possibly be used in a future project, is how to rank internet features in terms of value over cost; what are the most valued aspects that people base their decision to pay a monthly bill for? With this knowledge, one can start dividing up commercial internet costs, and putting value prices on things like email, social networking sites, and instant messaging. However, the means of gathering such statistical data in a reliable manner would be difficult.

#### 4.04: A&R4 - Time Efficiency

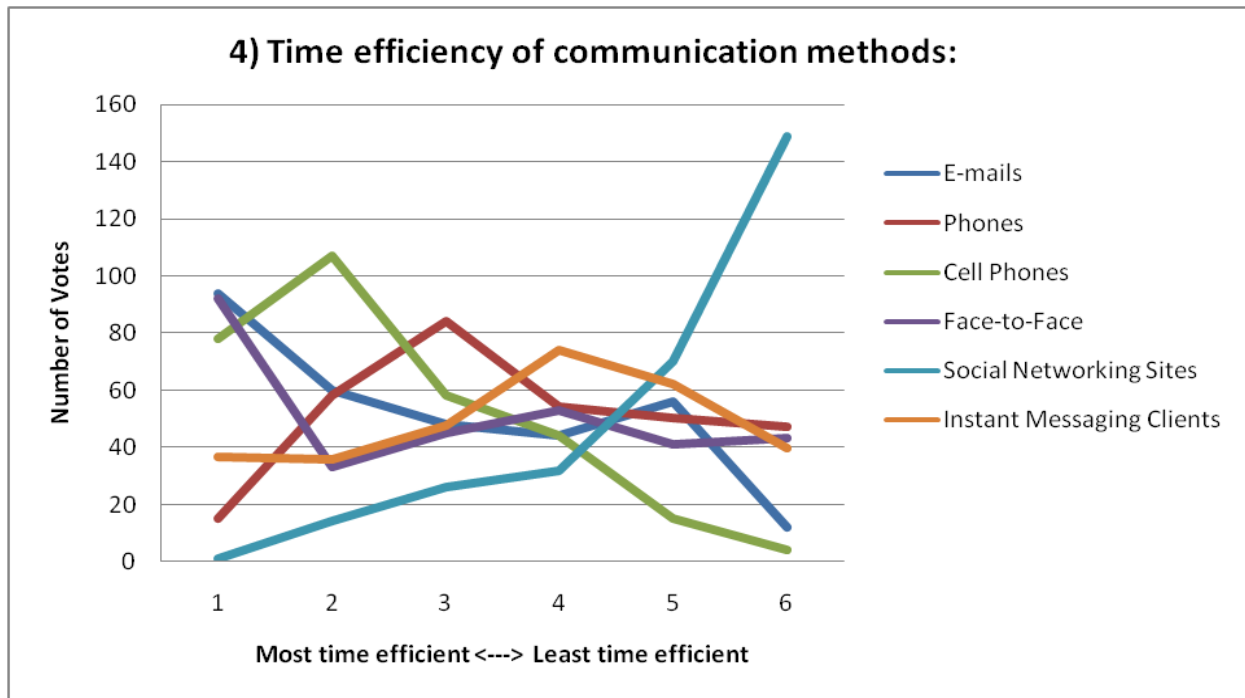
*Note: All original results from the survey are located in the Appendix Section.*

4. Please rank the methods below in terms of time efficiency.								
	1(Most efficient)	2	3	4	5	6(Least efficient)	Rating Average	Response Count
E-mails	29.9% (94)	19.1% (60)	15.3% (48)	14.0% (44)	17.8% (56)	3.8% (12)	2.82	314
Phones	4.9% (15)	18.8% (58)	27.3% (84)	17.5% (54)	16.2% (50)	15.3% (47)	3.67	308
Cell phones	25.5% (78)	35.0% (107)	19.0% (58)	14.4% (44)	4.9% (15)	1.3% (4)	2.42	306
Face-to-face	30.0% (92)	10.7% (33)	14.7% (45)	17.3% (53)	13.4% (41)	14.0% (43)	3.15	307
Social networking sites	0.3% (1)	4.8% (14)	8.9% (26)	11.0% (32)	24.0% (70)	51.0% (149)	5.07	292
Instant messaging clients	12.5% (37)	12.1% (36)	16.2% (48)	24.9% (74)	20.9% (62)	13.5% (40)	3.70	297
<i>answered question</i>								319
<i>skipped question</i>								4

*(Figure 10: Survey Q4 [Original] – Time Efficiency)*

Please rank the methods below in terms of time efficiency.		
	Most Often (# of Votes)	Least Often (# of Votes)
Cell Phones	185	19
Emails	154	68
Face-to-Face	125	84
Phones	73	97
IM Clients	73	102
Social Networking	15	219

*(Figure 11: Survey Q4 [Average] – Time Efficiency)*



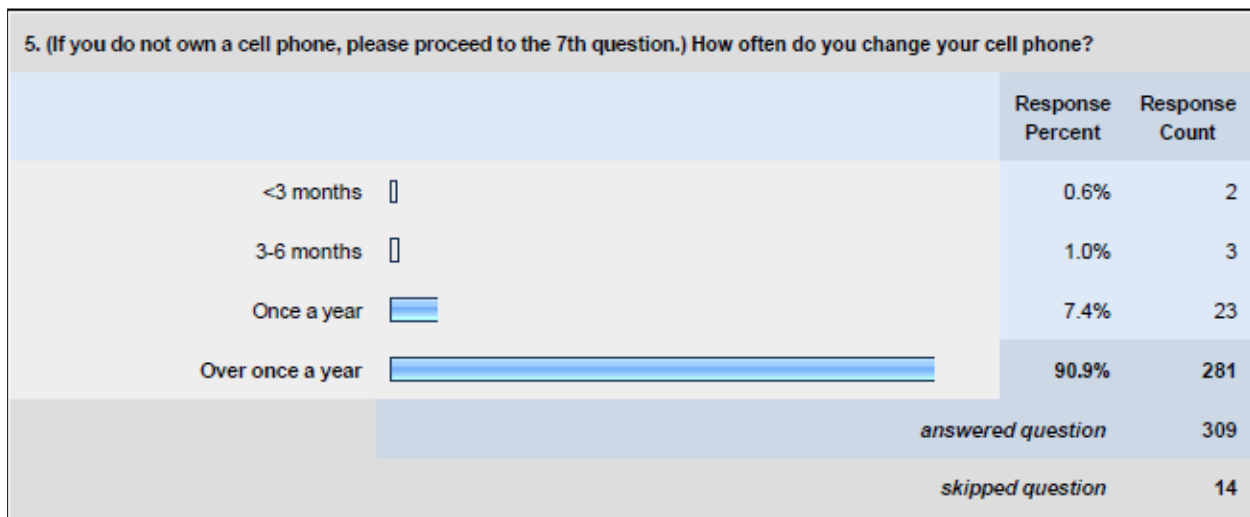
*(Figure 12: Survey Q4 [Graph] – Time Efficiency)*

The third question of the survey asks the reader to rank the communication methods listed in the question, in terms of time efficiency. Email, face-to-face, and cell phones are close to each other for the most time efficient method; in this case, we will use the average vote count, as we did in Question Two. The most time efficient methods are cell phones, followed by email, face-to-face, phones, IM, and social networking sites. Social networking websites are by far the most time deficient methods of communication, and for good reason. As the results from Question One show, people will not check their social networking sites for new messages as often as other available methods, and in return, will take more time to communicate back and forth with each other. Furthermore, there are a lot more distractions in a social networking site, such as newly uploaded pictures of friends and family. Email, which was ranked the most used method in Question 1, is very close to being the most time efficient. This brings up an interesting observation: as I established in Question Three, our subjects are most likely split between thinking face-to-face includes preparation and thinking that it does not. But, even with this holding true, email was still ranked more time efficient than face-to-face. This leads me to suspect that the average person would choose email over face-to-face, which was proven in Question One, because they can type a quick message to somebody, faster than actually having a

real conversation with them. As social creatures we tend to digress from the main topic of conversation when we are face-to-face with somebody (i.e. sports, current events), which uses time. The use of acronyms in emails, which have become popular among today’s society, also adds to the time saved, but can have potential repercussions. It is not surprising that cell phones score as the most time efficient method, due to their obvious portability, but it is surprising how close emailing is to them. This will be further discussed in the conclusion.

#### 4.05: A&R5 - Cell Phone Change Rate

*Note: All original results from the survey are located in the Appendix Section.*



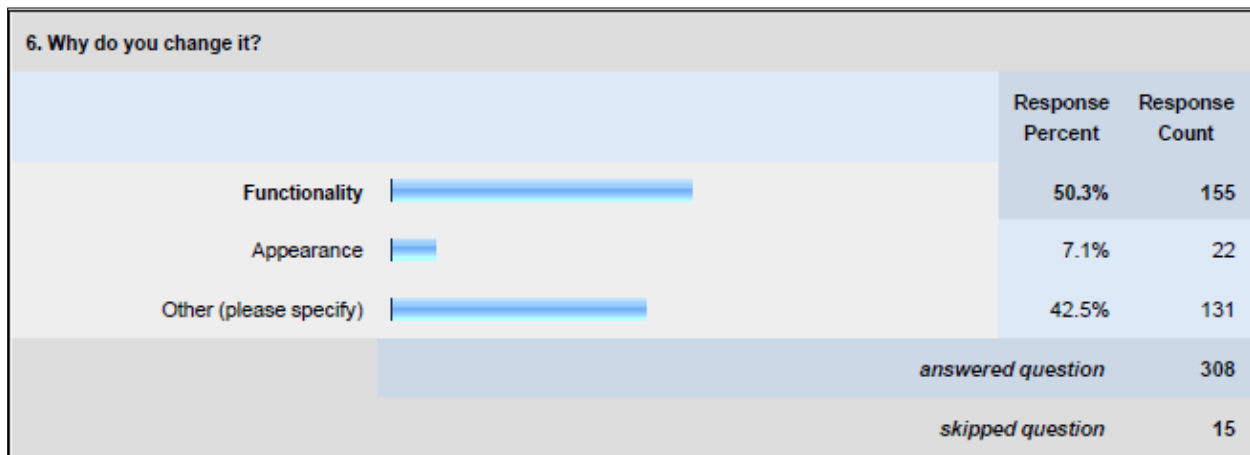
(Figure 13: Survey Q5 [Original] – Cell Phone Change Rate)

The fifth question of the survey asks the reader how often they replace their cell phones. The wording that was used for ‘over once a year’ should be improved, as one might misinterpret this for meaning ‘multiple times in a single year’, rather than ‘once over a course of multiple years’, which was the intended meaning. Fortunately, the order of the answer options followed a decreasing rate of phone replacement, which the subjects seemed to understand. Another aspect that needs obvious improvement is the scale of options. I should have combined the first two options and added one ‘Once every two years’ and ‘Over two years’, since most company contracts last two years. The participants of the survey who do not own a cell phone were not required to answer this question, nor Question six. Note that only 14/323 did not answer this

question, which attests to the large popularity of their use. Over 90 percent of the respondents change their cell phones less than once a year; this shows a couple of things. Firstly, the conception that cell phones are evolving into fashion accessories, such as shoes and clothes for the young generation, along with the subtle suggestions that cell phone companies give people: that cell phones progress drastically each year and should be purchased, is not true; at least not for the WPI population. It appears that this is more of an advertising campaign rather than fact, which the above statistics uncover.

#### 4.06: A&R6 - Reasons to Change the Cell Phone

*Note: All original results from the survey are located in the Appendix Section.*



(Figure 14: Survey Q6 [Original] – Reasons to Change the Cell Phone)

*Note: The results for "Other" have been organized by sections, below. To view the original responses, go to the Appendix Section.*

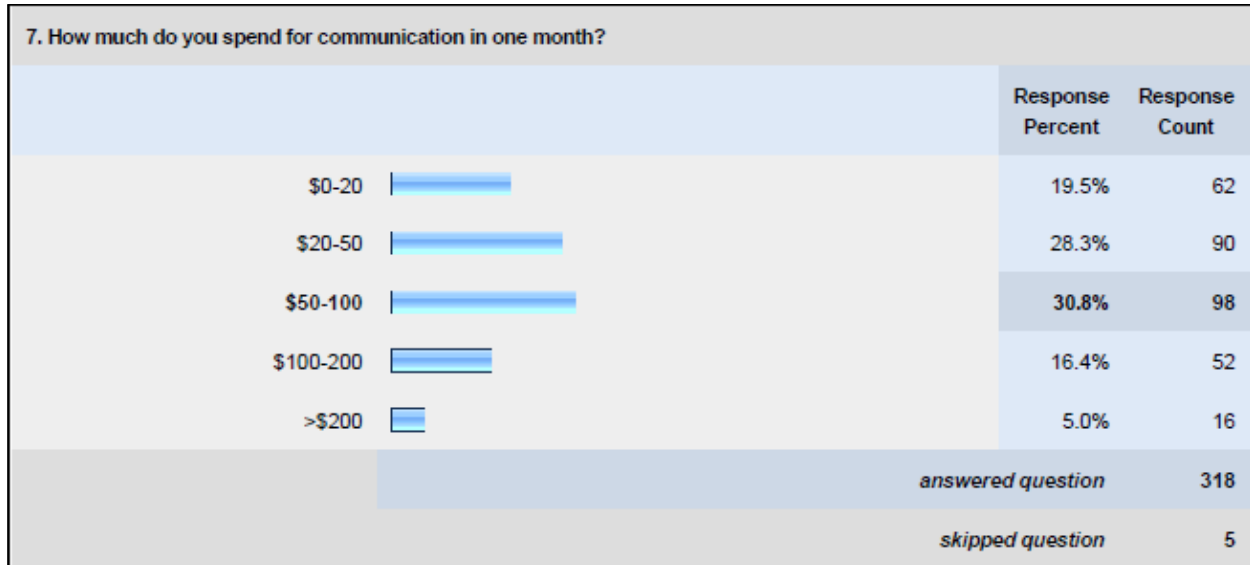
My phone broke.	41 votes (33.3%)
I have upgraded to a new service provider.	22 votes (18%)
My service plan gives me a free new phone every two years.	20 votes (16.3%)
I have never changed it.	19 votes (15.5%)
My service plan has ended, and I cannot re-activate it.	11 votes (9%)
My service plan costs too much.	5 votes (4%)
My new phone was a gift.	3 votes (2.4%)
I lost my phone.	2 votes (1.6%)

(Figure 15: Survey Q6 [Average] – Other Reasons to Change the Cell Phone)

Question Six asks the subjects for the reason they change their cell phones. The choices are functionality, appearance, and other. A little over 50 percent of the respondents chose functionality as the reason. Functionally can mean a few things in this case. It can mean availability of features, such as HTML browsing, video cameras, keyboards, or navigational systems. This illustrates how today's society wants to continue combining personal communication with other functionalities. Due to all of these attractions, it is becoming easier to understand why cell phones are among one of the most used methods of communication today. Appearance was chosen by seven percent of the respondents, which is nearly the same percentage of respondents from Question Five, who stated that they change their cell phone once a year. There is a good possibility that these two options are related to one another, and that the same seven percent who change their cell phone once a year, are also the ones who change it for appearance. However, since I am unable to complete a contingency analysis, this is only a theory. A little over 42 percent of the respondents chose 'other' as the reason of change. Of these respondents, 41 of them claim that the reason they change their phone is because it breaks. Perhaps this is one of the reasons why cell phones scored so low in reliability. Breakage could also, technically, fall under the 'functionally' option, and there is a possibility that a portion of the respondents who chose functionality assumed that it includes breakage. The wording of this option could have been improved, to clearly distinguish what 'functionality' exactly involves. However, doing this would be challenging, as to make sure not to over-clutter the question and wear out the patience of the respondents. Another popular response, with 22 votes, was that they upgraded to a new provider, and needed to buy a phone that functions with their network. 20 of the respondents changed their phones simply because it was free for them to do so. Some service providers, such as Verizon Wireless, offer their customers a free cell phone every two years (Verizon Wireless). Surprisingly, 19 of the respondents stated that they have never changed their phone, and one person in particular has had theirs for five years. This is a relatively small portion of the total respondents, as opposed to the rest, which have all inevitably found clever reasons to change their cell phones.

#### 4.07: A&R7 - Monthly Costs

*Note: All original results from the survey are located in the Appendix Section.*



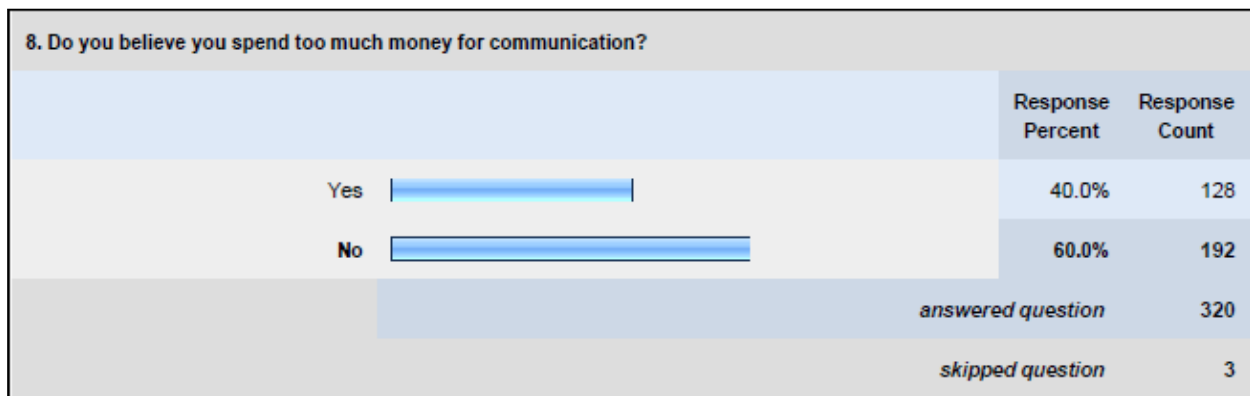
(Figure 16: Survey Q7 [Original] – Monthly Costs)

The seventh question asks the participants how much money they spend on communication in one month. The reason for asking this question was to determine the price ranges that people are paying for communication, and then compare these results with the previous questions regarding cost-efficiency and popularity. One flaw of this question, is that it did not specify that if the respondent is a student, being supported by their parents, then to use their parents' average bill, not their own, which would be zero dollars per month. Judging by the results, most of the WPI community seemed to have understood this concept. Additional details would have also been helpful for an analysis, such as dividing the costs by service. However, this many details would wear on the patience of the participants; five of them, who have skipped the question, seemed to have had enough already. The two most popular options were \$50-100 per month, which came in the lead, and \$20-50, which was very close. Only five percent answered over \$200 per month. By investigating the prices of some of the most popular service brands, we can attempt to divide some of these costs. Verizon Wireless offers a 450 minute monthly plan for \$45, a 900 minute plan for \$65, and an unlimited plan for \$75 (Verizon Wireless). Comcast, a popular internet service provider, offers high speed internet for \$42 per month (Comcast.com). If

we were to choose the unlimited minute plan, along with internet costs, we would reach a sum of \$117, which only represents 16.4 percent of the answers. Nearly 80 percent of the respondents pay less than that. With these results, a few predictions can be developed. Firstly, the results show that the average person is attempting to save money on personal communication, by not choosing the most popular services, which would equate to over \$100 per month. They are taking advantage of special deals and value plans, such as family plans. Another possibility is that they are using less popular providers, such as NetZero, which offer cheaper services.

#### 4.08: A&R8 - Opinions on Costs

*Note: All original results from the survey are located in the Appendix Section.*



(Figure 17: Survey Q8 [Original] – Opinions on Costs)

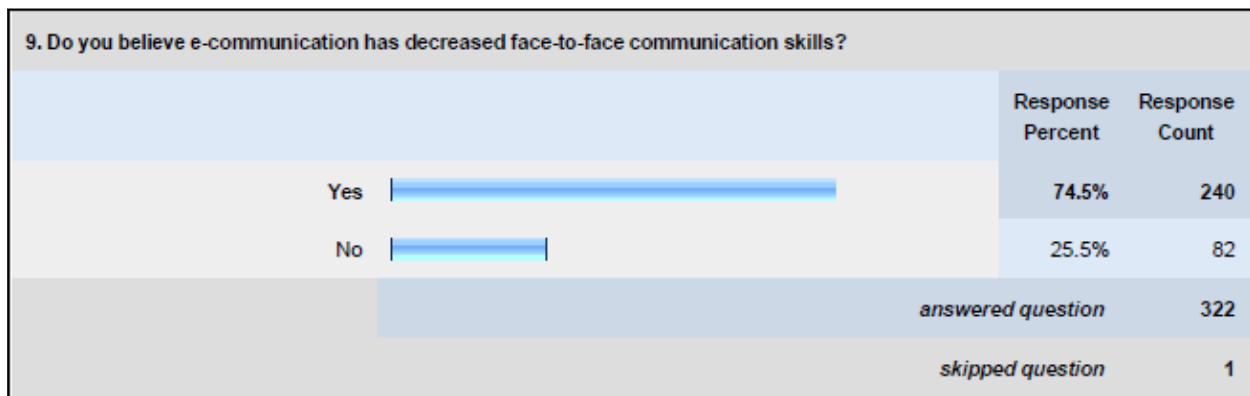
The eighth question of the survey asks the participants if they feel that they spend too much money on communication. This question was asked to further our understanding of the communication habits, based on price efficiency. The responses are closely spread between yes and no; 40 percent of the participants feel that they spend too much money, and 60 percent do not. From this data, we can infer that the costs of modern communication, even if high, do not deter people from using these devices, especially cell phones, which are the most expensive of the group. Even though 80 percent of our respondents, as we learned from the previous question, are not buying the best communication devices and service plans, over half of these people are satisfied with their current costs. This leads to two possible theories. Either these people do not have the desire to have the best devices, and thus are pleased with their cheaper ones. Or, they



cannot afford the best, but what they currently have is so much less expensive than the latter, that the costs of what they are currently using does not bother them. For example, the fastest commercial internet connection offered by Comcast is nearly \$75 per month, while NetZero offers, what they call 'high speed internet' for only \$20 per month. The difference in cost is so much that somebody who uses the cheaper option may be satisfied with their costs, and not need a faster connection (Comcast).

#### 4.09: A&R9 - Decreased Face-to-Face Skills

*Note: All original results from the survey are located in the Appendix Section.*

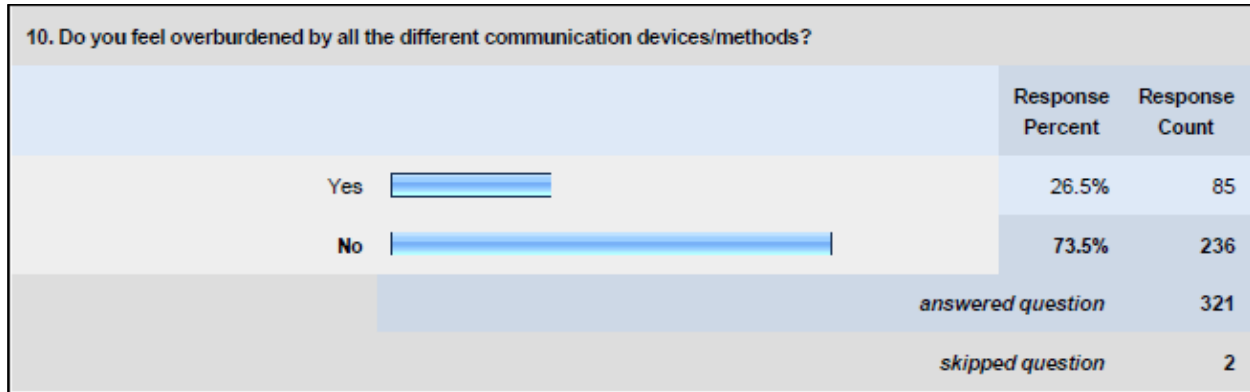


*(Figure 18: Survey Q9 [Original] – Decreased Face-to-Face Skills)*

Question nine begins the investigation on the social and psychological effects that modern day communication is having on the average person. The question asks the participants if they believe e-communication has decreased face-to-face communication skills of individuals. The response to the question is clear: 75 percent of the participants believe that we are losing our face-to-face communication skills. It is interesting that in Question One, 27 percent of the respondents chose face-to-face as being their most used method, and now, 25.5 percent have stated that e-communication has not decreased face-to-face skills. Perhaps these are the same group of respondents, which would make sense; if a person uses face-to-face communication most often, then it would be difficult for them to depreciate the skill, since they are constantly in practice. The following survey questions will continue this investigation.

#### 4.10: A&R10 - Overburden of Options

*Note: All original results from the survey are located in the Appendix Section.*

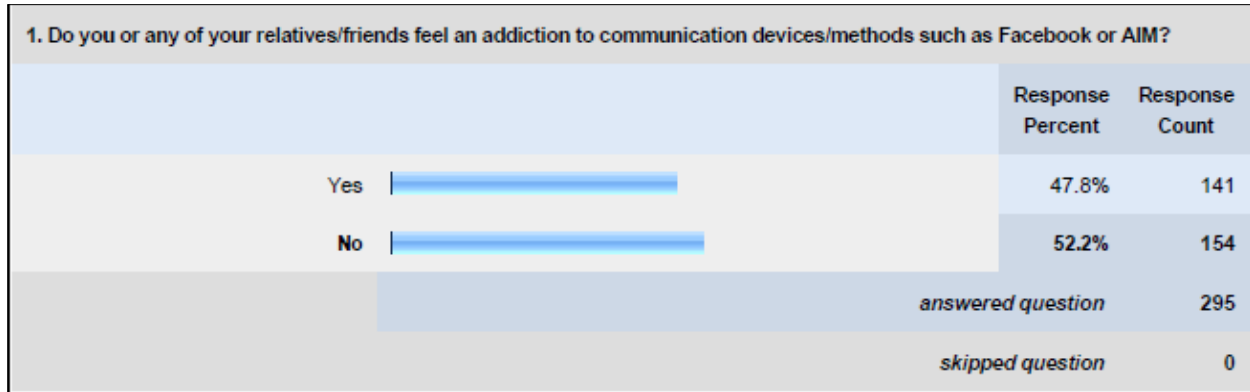


*(Figure 19: Survey Q10 [Original] – Overburden of Options)*

Question Ten asks the participants if they feel overburdened by all the different communication methods around them. The reason to ask this question was to see how the average person, at WPI, feels about the sheer quantity of communication options that have become popular in today’s age, and to see if there is a connection between them and the decrease in face-to-face skills. Almost 75 percent of the participants do not feel overburdened by these methods. This result was a little surprising to me, as I would have theorized, from the results of the previous question, that one of the reasons why face-to-face communication is deteriorating is because there are too many methods to adapt and handle, leaving an insufficient amount of time for traditional face-to-face practices. One possible explanation of these results, is that the average person realizes that face-to-face is deteriorating, but does not realize that the reason behind it, is that they are subconsciously overburdened by the need to keep up with all of today’s technologies. Another possibility is that people are adapting to the new e-communication era, realizing that it is here to stay and grow, and are simply accepting the fact that face-to-face is slowly deteriorating due to it. Perhaps they are not aware of the consequences of this phenomenon, which will be discussed in the conclusion of the project.

## 4.11: A&R11 - Addictions

*Note: All original results from the survey are located in the Appendix Section.*

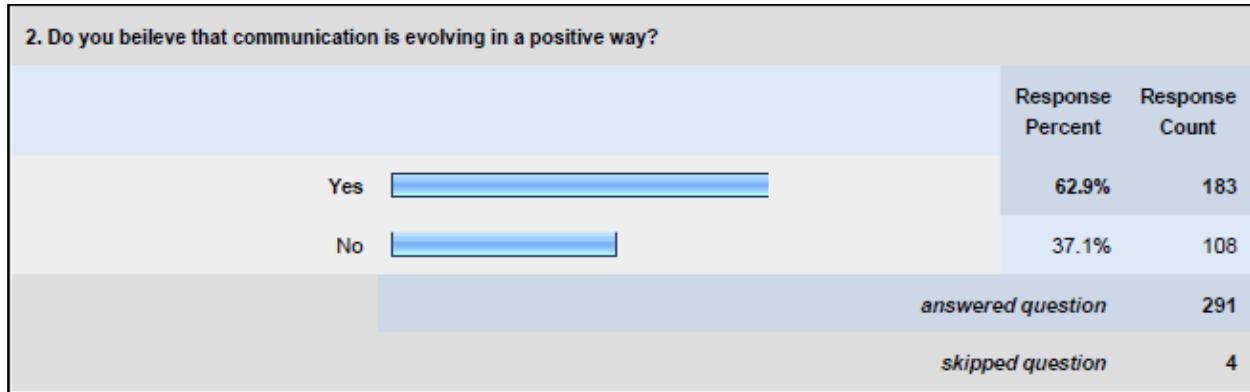


*(Figure 20: Survey Q11 [Original] – Addictions)*

Question 11 investigates the addictions to e-communication services such as Facebook and AIM. It asks if the participants, or anybody they know, have an addiction to these type of applications. The responses are almost evenly distributed between yes and no. Having nearly 50 percent of our respondents admit to this, is alarmingly high. One clear indication of this addiction is the deterioration of face-to-face skills, which 75 percent of our respondents also agree with. Facebook, in particular, is starting to worry specialists; a new service at AddictionInfo.org stated that many students are now seeing Facebook more as an addiction than a networking tool, and psychologists are starting to agree. Some clear indications of an addiction are: personal relationships taking a ‘backseat’ to Facebook, thinking about Facebook even when you’re offline, using Facebook to escape problems or homework, staying on Facebook longer than intended, and concealing Facebook use (Pope). Networking sites, such as Facebook, have not been around for as long as drugs or alcohol, but are certainly starting to show their negative effects, as we can see from the results.

## 4.12: A&R12 - Progression or Digression

*Note: All original results from the survey are located in the Appendix Section.*



*(Figure 21: Survey Q12 [Original] – Progression or Digression)*

Question 12 is a summary question for our respondents, asking them if they believe personal communication is evolving in a positive way. This question is closely related to the next one, which asks for ideas to improve communication. The responses to this question show that 63 percent of the people believe communication is evolving in a positive way. This result is a little contradictory with the data from Question Nine, which shows that 75 percent of the respondents believe that face-to-face skills are diminishing; meaning that 38 percent realize that face-to-face is deteriorating, but still think that the evolution is positive. Therefore, it is reasonable to theorize that, in the eye of the beholder, the positive effects of today's communication methods outweigh the negative. Society has adapted well to these new technologies, and is enjoying the speed and convenience of them, but overlooking the slowly evolving long-term impacts.

### 4.13: A&R13 - Ideas to Improve

*Note: The responses below are organized into groups. For the full list of original responses, go to the Appendix Section.*

3. Ideas to improve communication? (If any, please fill in the space provided below)	
	Response Count
	104
answered question	104
skipped question	191

*(Figure 22: Survey Q13 [Original] – Ideas to Improve)*

Communicate verbally more with your friends and family, and try to participate in social activities more often.	22 votes (30%)
Push video chatting to become a more popular choice in both computer and cell phone communication.	14 votes (18.4%)
Have classes to teach children about the various communication options, and the proper etiquette for them.	13 votes (17%)
The problem is that people are losing their skill to communicate face-to-face affectively. Behind the computer screen, you have limitless time to think about what to type back to a person, and thus you lose the reflex attribute, which is vital for communication. I do not have a suggestion to solve this problem.	10 votes (13.2%)
Improve the costs of new technology.	7 votes (9%)
The problem is information overload; there is too much spam in today's communication methods, and most of it promotes vanity. I do not have a suggestion to solve this problem.	5 votes (6.6%)
It is fine the way it is.	3 votes (4%)
Dedicate one day per week exclusively for face-to-face communication.	2 votes (1.3%)

*(Figure 23: Survey Q13 [Average] – Ideas to Improve)*

The last question of the survey, Question 13, was a fill-in question, asking for ideas to improve personal communication. On a minor note: the response count was 104, but only 99 responses are shown in the appendix, meaning five people pressed the space bar, then exited. Also, in Figure 23, the percentages are based off of the 76 responses that were used in the 'average ideas'; the 23 responses that were not used in this figure were either jokes or illogical statements. However, there were plenty of good ideas and themes as well. The most popular theme that was addressed by 22 respondents was that people need to participate more in face-to-face communication. In Question One, face-to-face was exceeded by emails, and almost the same as cell phones in popularity; the respondents seem to realize that this is a problem. Fourteen of the respondents agreed that the way to improve today's communication is to encourage video calls, instead of text messaging and voice calls. This is an excellent solution, because video calls will simulate a face-to-face experience, and at the same time, solve the issue of travel time. Respondent #13, from the appendix, brought up an interesting point: he/she said "I feel that the more 'connected' people feel with all of these electronic devices, the more 'disconnected' we actually become as people," he/she also went on and gave an example of how his/her sister-in-law spends so much time on social networking sites, that she has no time left for her actual social life, which is ironic because the whole point of these sites is to improve your social life! A professor in Response #25 emphasized that the priority settings for communication methods needs to improve, and that people don't know which method is appropriate for which circumstance, she also mentioned that some messages are just outright inappropriate, such as a text message she had received recently, from a student, saying "How long do you expect a five page maximum case analysis paper to be?" Thirteen of the respondents wanted to have classes to teach children about proper etiquette for each communication method, which is a great point, perhaps the student from the last example might consider taking that class someday. Another reason of why face-to-face skills are deteriorating was well explained by Respondent #45: he/she stated that people are able to type excellent emails and text messages because they have time to think about how to word certain things and get their point across, and over a period of time, they get used to it. Therefore, when they are finally confronted by somebody face-to-face, they are no longer used to thinking 'on the fly', so they don't follow the basic etiquette, such as eye contact, voice tone, fidgetiness as they talk, and overall awkwardness. The majority of these answers

followed the theme that was accumulated from the previous survey questions: face-to-face communication skills are decreasing over time as newer technology paves the way.

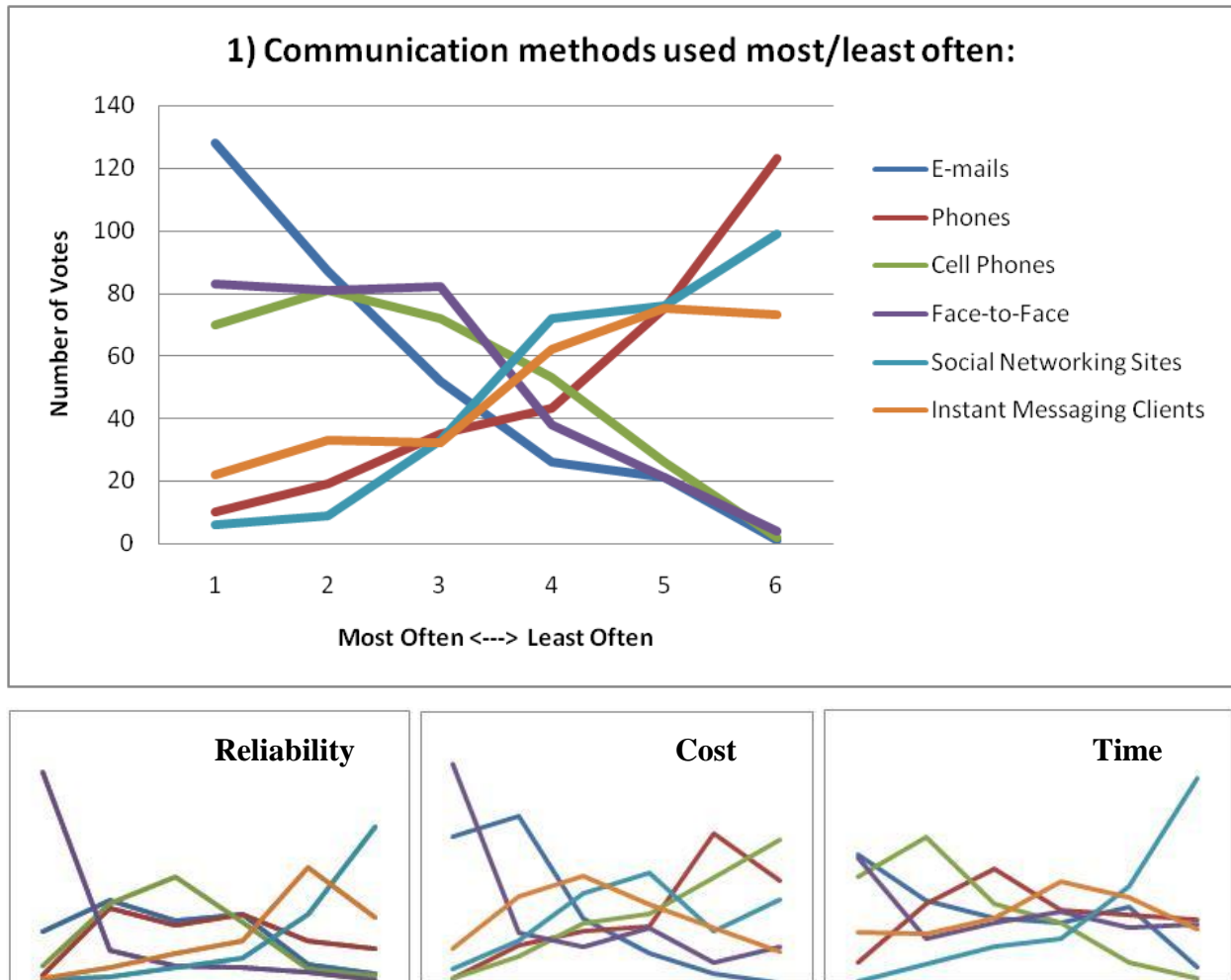
## **Chapter 5: Conclusion**

### **5.0: Conclusion Introduction**

Personal Communication of today's age can be looked at with both a positive and negative point of view. The advantages are certainly easier to recognize than the disadvantages, due to the numerous technological upgrades that have occurred, and are still occurring. The advantages of cell phones, email, instant messaging, and social networking can be condensed in one word: convenience. They require less energy than traditional face-to-face methods; less physical movement, no need for facial expression, and, aside from cell phones, no need for voice projection. They are marketed to be appealing, with an endless array of nifty features, and sleek designs. In the case of instant messaging, emails, and social networking, users can take their time responding to messages, which relieves them of having to practice social reflexes. The act of meeting new people has also become nearly effortless; users do not have to worry about their appearance, tone of voice, body language, and surroundings, to approach somebody in an online chat room. Although cell phones can be quite expensive, most emails, instant messaging programs, and social networking sites are free to use, further adding to their convenience. Another major attribute of today's e-communication is time efficiency; making a call on your cell phone, or sending somebody an email is faster than walking to a house phone, or writing a physical letter to somebody. Reliability is not e-communication's strong point, especially for instant messengers and social networking. Our survey shows that the most used communication methods are email, followed by face to face, and then cell phones. Normal phones, social networking, and instant messaging rank the lowest for most used form of communication, which does not imply that less people are using it, but means that the other options are being used more frequently throughout the day.



## 5.1: Review of the Results



(Figure 24: Review of the Results)

One of this project's main purposes was to determine why certain methods are being used today, more than others. Above, Figure 24 is a layout of the four graphs created for Questions 1-4, to get a better visualization of why the most and least used communication methods were chosen the way they were. By comparing each individual method from the first graph, to the three mini graphs, we are able to infer that time efficiency has the overall closest correlation to the main frequency chart. The data also supports this; in terms of time efficiency, email is still ranked above face-to-face, as it is in frequency. Cell phones have a higher average rank in time efficiency, than they do in frequency, however, they are only 34 votes away from each other, by

average. The cost efficiency graph has a major difference in cell phones, as they rank the absolute lowest of the six options, although, aside from this, it also holds some similarities with frequency. Reliability is the most different from frequency; face-to-face is almost unanimously chosen, with 231 votes, as the most reliable method, leaving all of the other choices dwindling with only a handful of votes.

To conclude these results, and answer the questions from the introduction, email is the most used method of communication, followed by face-to-face and cell phones, which are close to each other in rank. The most prevalent for this, is time efficiency. Cost efficiency a partial reason, but holds no effect on cell phone use. And finally, face-to-face is the only reliable method viewed by our majority, but is not the reason they use modern methods to the extent that they do.

## **5.2: Impacts on Society**

The disadvantage of modern communication tools is not their functionality, but their long term effects on society. Over one fourth of our subjects feel overburdened by all of their communication devices. This includes checking their cell phones for missed calls/voicemails/text messages, checking their instant messaging clients, checking their ‘wall posts’ and messages from social networking sites, and checking their email clients. This process is repeated daily, and takes a toll on the user's time, especially when they have an array of contacts who all like to use different methods to reach you. Eighty percent of the respondents spend less than \$100 per month on communication, and nearly half of them believe they are spending too much. However, after calculating the costs of using a popular internet and cell phone plan, the result is well over \$100, which shows that costs are also taking a toll on the consumer. As discussed in section 4.13, people are using modern communication devices in an inappropriate way. One notable respondent from the survey stated, “Priority setting needs to improve. Currently, students can contact me by email or cell phone. Some messages should never be left in the first place. For example, I received one today: "How long do you expect a five page maximum case analysis paper to be?"” This is an example of a college student addressing a professor in a manner that lacks mannerism and clarity; no introduction or closing is given, and the answer to their question

is actually in the question itself, had they spent more time to think about it, before asking. Addiction is another issue to be concerned with; 48 percent admit to themselves or somebody close to them having an addiction to modern communication devices. People that use instant messengers and social networking clients to a superfluous extent, are prone to sacrificing real life events for virtual ones. Tying into this, 30 percent of the respondents from the last survey question, wrote that face-to-face communication needs occur more often, to improve the overall communication of a society. Furthermore, people's ability to hold face to face conversations are diminishing, due to the lack of practice. Proving this, 75 percent of the respondents believe that, indeed, modern communication tools have decreased face to face communication skills. A comment from one of the respondents, which correlates with this, is "I feel that the more 'connected' people feel with all of these electronic devices, the more 'disconnected' we actually become as people. There is less face-to-face and more disconnectedness. My sister-in-law spends ALL of her free time on the computer on Facebook and all these other sites, instead of interacting with people on a personal level."

Physical danger, from inappropriate use of modern communication devices, is also prevalent in today's society. Cell phone use is a leading cause of car accidents in the US; "Cell phone distraction causes 2,600 deaths and 330,000 injuries in the United States every year" –this was quoted from Journal's Publisher, the Human Factors and Ergonomics Society (Robert). Another danger is the 'Internet Predator': a person who stalks other people over the internet for unwanted sex, or other illegal activities. This is a concern, especially for children who have access to the internet. A well known example of this phenomenon was televised by Dateline NBC, in a series called 'How to Catch a Predator'. What they discovered throughout the show, is that Internet Predators use instant messaging programs, such as AIM (AOL Instant Messenger) to seduce and manipulate underage children into meeting them in real life. Reporter, Christopher Hansen, confronted some of these predators in the act of the crime, in attempt to discover the psychological process of their actions. The show resulted in many viewers and shocked parents, which in return, helped keep children away from these traps (Catch a Predator).

### **5.3: Final Summary**

Overall, the project's objective was complete, and the introductory questions were answered. What are the most used methods of communication today? Email is the most used, followed by face-to-face and cell phones. Why are they used? Time efficiency is the main reason. Cost efficiency is a partial reason, but holds no effect on cell phone use. And reliability is not one of the reasons to why society uses their communication methods. What effects are they bringing upon society? Face-to-face communication skills are deteriorating, due to the overuse of modern technology and underuse of physical interactions. Addictions to social networking clients and instant messaging programs are prevalent and recognized by society. What possible solutions can help improve personal communication? The simplest and most popular solution is to decrease the time spent on modern devices, and practice more face-to-face interactions with people. Another solution is promote video calling in both cell phone devices and internet software, so people can benefit from the technology, and still practice the essentials of face-to-face communication. The Personal Communication IQP investigated the broad topic of interpersonal communication, and can provide a strong foundation for future projects that wish to explore individual aspects.

## **References**

- Britt, Roy Robert. (2005, February). Drivers on Cell Phones Kill Thousands, Snarl Traffic. In *Live Science*. Retrieved February 19, 2009, from  
<[http://www.livescience.com/technology/050201\\_cell\\_danger.html](http://www.livescience.com/technology/050201_cell_danger.html)>
- Casson, Herbert Newton. (1910). History of the Telephone. In *Google Books*. Retrieved June 27, 2011, from  
<<http://books.google.com/books?hl=en&lr=&id=cw4LAAAAIAAJ&oi=fnd&pg=PA11&dq=history+of+the+telephone&ots=dxz6C5NQK2&sig=b4NSbnNMidROU5yOAWvNiVr44t8#v=onepage&q&f=false>>
- Cell Phone Plans. (2010, January). In *Consumer Search*. Retrieved February 18, 2010, from  
<<http://www.consumersearch.com/cell-phone-plans>>
- Decker, William Merrill. (1998). Letter Writing in America Before Telecommunications. In *Google Books*. Retrieved June 27, 2011, from  
<<http://books.google.com/books?hl=en&lr=&id=Mx2GnV9MtnwC&oi=fnd&pg=PP13&dq=history+of+letter+writing&ots=qpZC4u44ZL&sig=iCGMwesetnglsXV17I2E-wQE6t6E#v=onepage&q=history%20of%20letter%20writing&f=false>>
- Droid Charge. (2011). In *Verizon Wireless*. Retrieved July 21, 2011, from  
<<http://www.verizonwireless.com/b2c/store/controller?&item=phoneFirst&action=viewPhoneDetail&selectedPhoneId=5642>>
- Ellison, Nicole B. Boyd, Dana. (2007). Social Networking Sites: Definition, History, and Scholarship. In *Indiana.edu*. Retrieved February 15, 2010, from  
<<http://jcmc.indiana.edu/vol13/issue1/boyd.ellison.html>>
- Facebook. (2010, February 12). In *Facebook*. Retrieved February 12, 2010, from  
<<http://www.facebook.com>>

Groves, Robert M. *Survey Methodology*. John Wiley & Sons Inc, New Jersey, 2009.

Hockett, Charles F. (1960 September). The Origin of Speech. In *Columbia.edu*. Retrieved June 25, 2011, from <[http://www.columbia.edu/~rmk7/HC/HC\\_Readings/Hockett.pdf](http://www.columbia.edu/~rmk7/HC/HC_Readings/Hockett.pdf)>

Hoyos, Brandon. ( 2010 January). The IM Industry from 1970 to Present. In *Computer and Technology*. Retrieved February 22, 2010, from <<http://im.about.com/od/imbasics/a/imhistory.htm>>

Internet Usage and Broadband Usage Report. (2010 April). In *Internet World Stats*. Retrieved May 21, 2010, from < <http://www.internetworldstats.com/am/us.htm>>

Kock, Ned F. *Encyclopedia of E-Collaboration*. Idea Group Inc. 2007

Motorola Mobile Phones. (2010 February). In *Motorola*. Retrieved February 10, 2010, from <<http://www.motorola.com/consumers/v/index.jsp?vgnextoid=8b871df4f3d89110VgnVCM1000008406b00aRCRD&appInstanceName=default>>

Poole, Ian. (2009). History of the Mobile / Cell Phone. In *Radio-Electronics*. Retrieved July 15, 2011, from <<http://www.radio-electronics.com/info/cellular/comms/history/mobile-cell-phone.php>>

Pope, Danielle. (2008 January 24). Potential Facebook Addictions. In *Addiction Info*. Retrieved February 10, 2010, from <<http://www.addictioninfo.org/articles/2171/1/Potential-Facebook-addiction/Page1.html>>

Rittinghouse, John W. Ransome, James F. *Instant Messaging Security*. Elsevier Inc. 2005

Sagna, Olivier. (2000, August). New Information and Communication Technologies, Social Development and Cultural Change. In *United Nations Research Institute for Social Development*. Retrieved March 17, 2009, from [http://www.unrisd.org/80256B3C005BCCF9/\(httpAuxPages\)/63CFC0D257A25E5980256B81005E2C17/\\$file/sagnaeng.pdf](http://www.unrisd.org/80256B3C005BCCF9/(httpAuxPages)/63CFC0D257A25E5980256B81005E2C17/$file/sagnaeng.pdf)

To Catch a Predator. (2009, February 17). In *MSNBC*. Retrieved February 19, 2009, from [http://www.msnbc.msn.com/id/11152602/ns/dateline\\_nbc/t/catch-predator-iii/](http://www.msnbc.msn.com/id/11152602/ns/dateline_nbc/t/catch-predator-iii/)

Veck, Tom Van. (2011 December). History of Electronic Mail. In *Multicians*. Retrieved July 21, 2011, from <http://www.multicians.org/thvv/mail-history.html>

USA Vs. Microsoft Corporation. (1999 November 5). In *Justive.gov*. Retrieved February 20, 2010, from <http://www.justice.gov/atr/cases/f3800/msjudgex.htm>

Wenburg, John R. Wilmot, William. *The Personal Communication Process*. R.E. Krieger Pub. Co. 1982.

# Appendix

## Appendix A: Survey Question 1

1. Which communication method from the list below do you use most/least often?								
	1(Most often)	2	3	4	5	6(Least often)	Rating Average	Response Count
E-mails	40.6% (128)	27.6% (87)	16.5% (52)	8.3% (26)	6.7% (21)	0.3% (1)	2.14	315
Phones	3.3% (10)	6.2% (19)	11.5% (35)	14.1% (43)	24.6% (75)	40.3% (123)	4.71	305
Cell phones	23.0% (70)	26.6% (81)	23.7% (72)	17.4% (53)	8.6% (26)	0.7% (2)	2.64	304
Face-to-face	26.9% (83)	26.2% (81)	26.5% (82)	12.3% (38)	6.8% (21)	1.3% (4)	2.50	309
Social networking sites	2.0% (6)	3.1% (9)	11.2% (33)	24.4% (72)	25.8% (76)	33.6% (99)	4.69	295
Instant messaging clients	7.4% (22)	11.1% (33)	10.8% (32)	20.9% (62)	25.3% (75)	24.6% (73)	4.19	297
<i>answered question</i>								323
<i>skipped question</i>								0



## Appendix B: Survey Question 2

2. Please rank the methods below in terms of reliability.								
	1(Most reliable)	2	3	4	5	6(Least reliable)	Rating Average	Response Count
E-mails	17.7% (56)	28.4% (90)	21.1% (67)	23.7% (75)	6.3% (20)	2.8% (9)	2.81	317
Phones	2.3% (7)	26.5% (81)	20.3% (62)	24.2% (74)	14.7% (45)	12.1% (37)	3.59	306
Cell phones	6.1% (19)	27.7% (86)	37.4% (116)	21.3% (66)	4.8% (15)	2.6% (8)	2.99	310
Face-to-face	74.3% (231)	10.9% (34)	5.8% (18)	4.8% (15)	3.5% (11)	0.6% (2)	1.54	311
Social networking sites	0.7% (2)	1.7% (5)	5.1% (15)	9.2% (27)	25.4% (75)	58.0% (171)	5.31	295
Instant messaging clients	1.4% (4)	5.5% (16)	10.6% (31)	15.4% (45)	43.0% (126)	24.2% (71)	4.66	293
<i>answered question</i>								320
<i>skipped question</i>								3

### Appendix C: Survey Question 3

3. Please rank the methods below in terms of cost efficiency.								
	1(Most efficient)	2	3	4	5	6(Least efficient)	Rating Average	Response Count
E-mails	35.1% (108)	39.9% (123)	15.6% (48)	7.1% (22)	2.3% (7)	0.0% (0)	2.02	308
Phones	1.3% (4)	9.4% (28)	12.8% (38)	14.1% (42)	36.9% (110)	25.5% (76)	4.52	298
Cell phones	1.3% (4)	6.6% (20)	14.5% (44)	16.8% (51)	25.7% (78)	35.0% (106)	4.64	303
Face-to-face	52.3% (161)	12.0% (37)	8.8% (27)	13.3% (41)	4.9% (15)	8.8% (27)	2.33	308
Social networking sites	3.8% (11)	11.0% (32)	22.8% (66)	27.9% (81)	13.4% (39)	21.0% (61)	3.99	290
Instant messaging clients	8.6% (25)	22.1% (64)	27.2% (79)	20.0% (58)	14.1% (41)	7.9% (23)	3.33	290
<i>answered question</i>								315
<i>skipped question</i>								8

## Appendix D: Survey Question 4

4. Please rank the methods below in terms of time efficiency.								
	1(Most efficient)	2	3	4	5	6(Least efficient)	Rating Average	Response Count
E-mails	29.9% (94)	19.1% (60)	15.3% (48)	14.0% (44)	17.8% (56)	3.8% (12)	2.82	314
Phones	4.9% (15)	18.8% (58)	27.3% (84)	17.5% (54)	16.2% (50)	15.3% (47)	3.67	308
Cell phones	25.5% (78)	35.0% (107)	19.0% (58)	14.4% (44)	4.9% (15)	1.3% (4)	2.42	306
Face-to-face	30.0% (92)	10.7% (33)	14.7% (45)	17.3% (53)	13.4% (41)	14.0% (43)	3.15	307
Social networking sites	0.3% (1)	4.8% (14)	8.9% (26)	11.0% (32)	24.0% (70)	51.0% (149)	5.07	292
Instant messaging clients	12.5% (37)	12.1% (36)	16.2% (48)	24.9% (74)	20.9% (62)	13.5% (40)	3.70	297
<i>answered question</i>								319
<i>skipped question</i>								4

## Appendix E: Survey Question 5

5. (If you do not own a cell phone, please proceed to the 7th question.) How often do you change your cell phone?		
	Response Percent	Response Count
<3 months <input type="checkbox"/>	0.6%	2
3-6 months <input type="checkbox"/>	1.0%	3
Once a year <input type="checkbox"/>	7.4%	23
Over once a year <input type="checkbox"/>	90.9%	281
<i>answered question</i>		309
<i>skipped question</i>		14

## Appendix F: Survey Question 6

6. Why do you change it?		
	Response Percent	Response Count
Functionality	50.3%	155
Appearance	7.1%	22
Other (please specify)	42.5%	131
<i>answered question</i>		308
<i>skipped question</i>		15

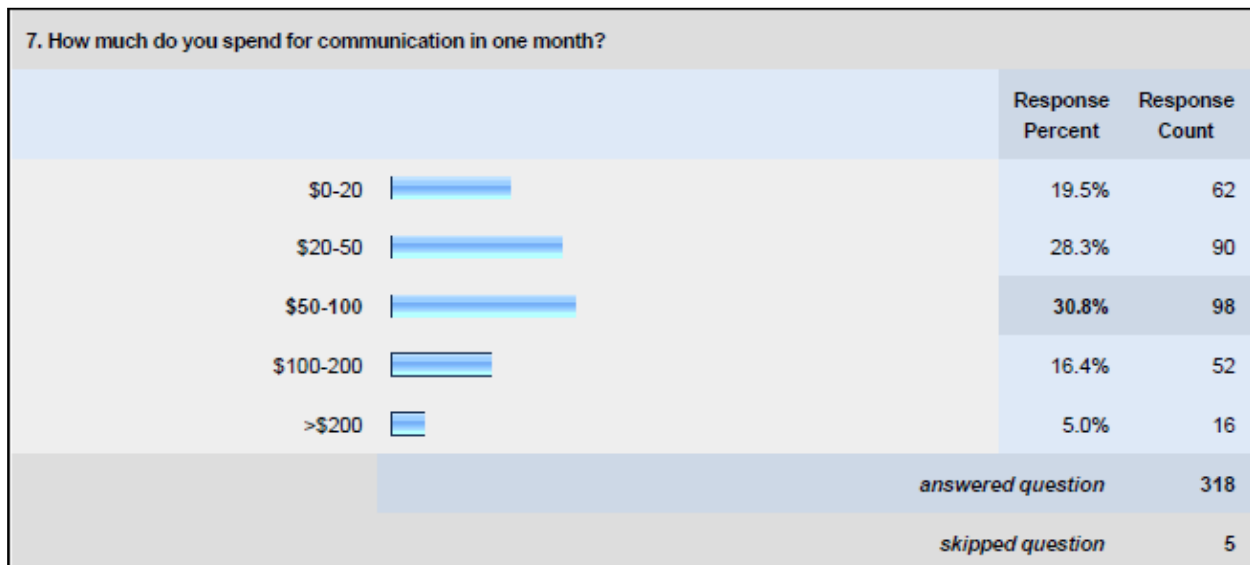
### Answers for 'Other (please specify)' are listed below:

- last much over a year
- Subscription expiration
- broken
- when the old one falls apart
- It gets broken
- The plan renews it automatically
- Operation
- It breaks
- Damage rendering phone inoperable
- I don't.
- Plan Changes
- Keep them until they break
- new better free phone
- Laundered my old phone
- I usually break them
- phone deal
- When it breaks/Functionality
- I've had my phone for 5 Years
- Always breaks
- It breaks
- Contract
- Broken
- I get a free new one at two years
- Free Upgrade
- new plan, new phone
- I don't change it
- I lose it
- Cost of the plan
- If I am up for an upgrade
- new plan
- Contract expires
- Old one breaks or is obsolete
- Because the old one dies
- run it till she's broken
- Cost
- Carrier Contract renewal period
- upgrade offer from company
- usually breaks
- Only when the old one craps out
- Both appearance and functionality
- switching providers
- Battery for phone no longer 'available
- for efficiency to return
- I don't.
- 2 yr contract ends can upgrade
- They make me.
- I have never changed it.
- haven't changed yet


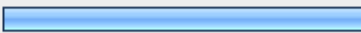
- Never changed yet
- when it dies
- Both
- any problem with the existing service
- Damage/non-functioning
- Gift from brother
- if it fails
- The new one comes for free!
- when it fails
- plan runs out
- Switch plans
- End of contract
- It breaks... they are not made well.
- Amount of time.
- it breaks
- cost
- if it breaks or if I change plans
- phone dies
- I lose it or it breaks
- change provider
- stops functioning, too old
- new plan
- it breaks
- Only if it stops working
- Upgrade
- My son gives me his discard, which is always better than the I currently have
- Never have; have had the same phone for several years.
- cheaper to get new phone than buy new battery
- New contract needs a new phone. I usually get a free upgrade at least once a year, and I take advantage of it to ensure that the cell phone I have is most reliable/in good shape.
- Never changed it yet, I do not believe in more waste than necessary.
- I don't change it; I want people to be able to reach me
- I have only had my cell phone for about a year and a half, and it's the same one
- Owner of plan upgrades phone and needs to upgrade mine.
- On my family's plan, I can get a new phone every 2 years for
- contract expires, discount on new phone
- both functionality and appearance, depends on the year
- It breaks, and even then, I'd rather repair it
- I wouldn't.
- I have never changed it.
- It becomes lost
- Lost or broken
- When it breaks or is lost
- Malfunctions
- Previous cell phone died...
- I haven't changed it yet (2+ years)
- free upgrade
- necessity
- Stops working
- I break or lose my phone
- Free upgrade
- new contract
- Both
- Contract renewal
- Free.
- new plan
- only when it breaks
- I don't
- Don't change it
- New service plan
- Contract expires
- Cheaper plan
- Upgrade for free

- If I get a free upgrade from the Service Provider
- Because Verizon gives me a new one for free and most don't
- I break one every 2-3 years apparently which works out
- perfectly with my warranty.....hmmm what a coincidence
- plan expires- new phone is a free upgrade option
- I have never changed my cell phone
- I have never gotten a new phone - have had mine for 3 years.
- I change it because of both functionality and appearance. Also because plans allow you to (and who doesn't like new things)
- It breaks. Not that it need to be more functional, it just breaks.
- Free 'upgrade' every few years... cheaper than buying a new battery.
- when i get a free phone from the phone company
- Only when the previous phone is no longer functional
- Free cell phone every two years as part of the contract.
- Replace it only when it wears out or breaks
- normal wear & tear...not working properly after a certain
- it's assigned to me by my employer, they make the decisions to change (or not)
- It's usually banged up enough by then to warrant a new one.
- 2-year upgrade w/my cell phone plan

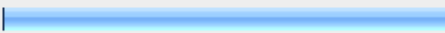

## Appendix G: Survey Question 7



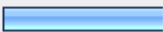
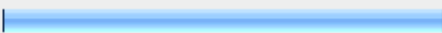
## Appendix H: Survey Question 8

8. Do you believe you spend too much money for communication?		
	Response Percent	Response Count
Yes 	40.0%	128
No 	60.0%	192
<i>answered question</i>		320
<i>skipped question</i>		3


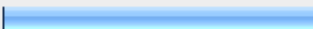
## Appendix I: Survey Question 9

9. Do you believe e-communication has decreased face-to-face communication skills?		
	Response Percent	Response Count
Yes 	74.5%	240
No 	25.5%	82
<i>answered question</i>		322
<i>skipped question</i>		1



## Appendix J: Survey Question 10

10. Do you feel overburdened by all the different communication devices/methods?		
	Response Percent	Response Count
Yes 	26.5%	85
No 	73.5%	236
<i>answered question</i>		321
<i>skipped question</i>		2

## Appendix K: Survey Question 11

1. Do you or any of your relatives/friends feel an addiction to communication devices/methods such as Facebook or AIM?		
	Response Percent	Response Count
Yes 	47.8%	141
No 	52.2%	154
<i>answered question</i>		295
<i>skipped question</i>		0

## Appendix L: Survey Question 12

2. Do you believe that communication is evolving in a positive way?		
	Response Percent	Response Count
Yes 	62.9%	183
No 	37.1%	108
<i>answered question</i>		291
<i>skipped question</i>		4



## Appendix M: Survey Question 13

3. Ideas to improve communication? (If any, please fill in the space provided below)	
	Response Count
	104
<i>answered question</i>	104
<i>skipped question</i>	191

### The responses to Question 13 are listed numerically below:

1. The desire for immediate gratification on the part of consumers drives this appetite for yet more gizmos to cart around. If people had five minutes of time, all to themselves, they might realize how crazy this all is. Life is so full of interruptions now; people are losing the ability to concentrate on long term thought-intensive tasks. just do it!
2. Word ideas and questions clearly. Pick method of communication for a specific activity. While multiple types of communication are nice, it is easy to be spammed or to spam something or someone while trying to communicate/get in contact with them.
3. There is a time and place for each method of communication. Each 1 has benefits and drawbacks. Children raised in this digital communication era should be encouraged to communicate verbally, either by phone or in person. They seem to shy away from this and at best are awkward at carrying on conversations over the phone.
4. Any method of communication that doesn't currently have video and/or audio should have it added in some form. Either that or a disclaimer that reminds people that text does not carry tone of voice.
5. The main issue is that people have to be conscious of the differences between different communication methods. Some things have to be said differently over different media, and some can only be said properly over certain media.
6. Face-to-face communication works best. It is hard to gauge the feeling of an email, where as a face-to-face communication conveys the exact sentiment. It would be nice if people got up from their desk and walked over to people to speak instead of just typing out a quick message and hit send. I don't how to improve this- maybe have non-email

Mondays, or 12-2 hours designated as non-email time so that people can learn how to communicate verbally again.

7. I don't know how you would improve communication. It seems like it's an issue of individual behavior. It would be very hard to change people's habits, especially relating to this matter. I've noticed that if it's brought up, people get very defensive.
8. Teach more on etiquette for different forms of communication.
9. The world should speak a universal language
10. I thought communication was evolving positively (instant messaging, email, etc) until the rise of these wretched social networking sites. One could have argued that they were useful and beneficial before they became clogged with shit like apps and superfluous features. The signal to noise ratio on social networking sites is nothing short of abysmal! Their popularity in their current form speaks only to the vanity and stupidity of our generation.
11. I believe interpersonal communication is continually being cheapened by new methods of communication (especially text messaging in the 'developed' world). From a capitalist mindset, I don't think anything will/can be done. New, "easier" methods of communication will always be marketable. I think the only way for face-to-face communication to regain the stronghold that it was is for parents to be more communicative with their children as they grow up - to be in the house more, and more in touch. This is where appreciation for person-to-person, face-to-face contact can be restored.
12. I would love to see more face to face communication. Even if it is not as time efficient, if you have a question for the person in the next office, TALK to them does not email them. Also I have concerns about the interpretation of written (email) communications versus verbal communication.
13. I feel that the more "connected" people feel with all of these electronic devices the more "disconnected" we actually become as people. There is less face-to-face and more disconnectedness. My sister-in-law spends ALL of her free time on the computer on Facebook and all these other sites instead of interacting with people on a personal level. As for me, I only use my cell phone in case of emergencies. I refuse to let anyone and everyone be able to hunt me down via cell phone. That in itself can be six of one and half

dozen of the other in case someone were trying to get a hold of me to notify me of an emergency. You're damned if you do and you're damned if you don't.

14. Real-time, synchronous communication is faster, more reliable, and better conveys intent.
15. To bring the human element back to communication. You should be able to see the face of the person you are talking to. The ability to hide behind a computer screen stunts peoples' ability to communicate. Services that utilize audio and video communication are best. Skype, Gchat, etc
16. Increase cell phone clarity and reliability. I don't need a billion features if I can't even make and receive calls with clear reception.
17. encourage face to face communication
18. I find that the more ways made available for people to connect, the less people feel the need to actually interact. In this way it inhibits one's ability to communicate with others.
19. More face to face communication. Many people are awkward in that form of communication.
20. Video messaging on phones
21. Create efficient privacy safe guards
22. NVC -or Nonviolent communication. (It's not about learning to not yell...). NVC is about connecting feelings to needs. Once the need is identified it is much easier to look at many strategies that could meet that need. It's great for communication in the office, at home, with friends, and with clarifying to yourself what it is you're actually wanting. If everyone were to learn this method of communicating I think it would add a great deal to creative problem solving.
23. Make it free, and open source it.
24. People need face-to-face communication. The more activities that get us student out of our dorms and into public settings, the better.
25. Priority setting needs to improve. Currently, students can contact me by email (I have over 10 different email addresses all work related), by cell phone, phone, fax, US surface mail (BTW, you forgot US surface mail in your survey!) or office drop-ins. It takes me over 2 hours a day to sort through messages received while I am 'away' (i.e., sleeping, giving lectures, attending meetings). Some messages should never be left in the first

place. For example, I received one today: "How long do you expect a five page maximum case analysis paper to be?"???!

26. People need to be better at talking but still be able to use the other methods
27. We need to destroy computers. They are turning us into robots who can only communicate if we type (whether it be on a computer or on a cell phone). I find it pathetic that people would rather text to each other than take the time to sit down face to face and actually talk.
28. Get rid of dead zones for cell phones...
29. None that come to me right now.
30. Need to improve children's handwriting. with computers and the popularity of typing over hand-writing, script has become more and more illegible in teens and adults in the current generation.
31. I feel face-to-face communication should always be a first choice, but electronic communications such as email and IM are a terrific resource which can bring people closer together when used properly.
32. Consolidate personal communication ID, cell phone / landline/ email / AIM / Google talk etc are generally all different ids for the same person
33. Have a well-defined sense of online communication etiquette, as there currently is no standard on what constitutes proper email conduct.
34. Take more time to actually go meet and converse with people in real life.
35. No ideas to improve as much as things to be cautious for, people are so open now and people believe they are entitled to every bit of information, People need to remember what is and is not appropriate information to spread.
36. Make people less busy so that face-to-face communication can return
37. Video calls
38. Teleportation, so you could see a person face to face, anytime you wanted!
39. Text messaging is extremely convenient. However, text messaging is cumbersome. It is hard to type texts on typical cell phones using just the number keys 0-9, and the other cell phones with full A-Z keyboards are too large and bulky to carry. It seems that someone should design a better interface for text messaging.
40. Use more professionalism in communication.

41. Talk more face to face.
42. More read receipts
43. Say what you mean, mean what you say
44. Not an idea for improvement, just a comment: Social networking allows frequent (though shallow) contact with a broader sphere of people than would otherwise be possible, thus broadening your ability to network. Also, when meeting face to face or on the phone with someone you at least loosely follow on a social networking site, some of the "catching up" has already happened digitally, letting you cut straight to more meaningful conversation, thereby possibly even improving face-to-face communications.
45. All the electronic ways that people communicate has ruined people's communication skills. Someone may be able to write an excellent email yet they have time to think about what they say. When speaking to someone you do not have that same time, which causes you to be able to think quickly. Also, when speaking face to face with someone, there are certain courtesy rules to follow. Looking someone in the eyes, don't fidget, etc. These skills have also been lost. Good Luck with you project guys, hope it goes well.
46. There's too much of it--you don't know what method the other person will expect you to use. Get rid of all the excess commercialism: 25c per text message? \$100 a month for a phone? Enough advertisements to keep Adblock Plus busy for decades? Not to mention completely unnecessary cable TV and its horrific pricing plans. This is ridiculous and scares me away from both old and new technology.
47. Don't be a CS major.
48. People need to be retaught social etiquette. Lack of face-to-face communication and the expanding world of digital communication has almost killed these skills.
49. What does that mean, are you asking if telecommunication infrastructure should be expanded, or want our ideas on the ethics of implanted communication devices, or something else overly broad.
50. More video mail
51. It's got to be about balance. Sending emails and facebooking and going on AIM are fine but you need face-to-face interactions too. Finding new ways and opportunities to communicate is only a true step forward if we add that to our communications repertoire. We should not just immediately throw out the old forms as soon as a new one is created.

52. more face to face contact
53. Facebook and AIM are useless in a professional work environment. Face to face meetings remain the most important part of any business transaction to this day. Things like video conferencing cut back on travel costs while offering more functionality than instant messaging or phone conversations.
54. Increase accessibility
55. Virtual reality environments. More security.
56. When speaking over the internet, have at least some regard for grammar and spelling. Realize the limitations of all types of communication (ex. tone can't be heard and is not always clear in text) and work how you communicate around those limitations. Do not replace face-to-face conversation with digital conversation, just supplement it.
57. NVC! Non-violent communication. It's not a technology; it's a way of communicating. You see, all people have needs and to meet these needs, people use various strategies (to avoid feeling sad or upset about their needs not being met). People's strategies can come into conflict, but if they talk about what needs they are trying to meet (We both reach for a soda, but what's the need? We both need hydration. Now that we've discovered the need, we realize that there are other ways to meet them than this one soda; water for example). If WPI student were all given this type of training, the quality of communication would improve drastically.
58. Less distance between me and my friends/family
59. Increase communication with unfamiliar individuals both via phone and face-to-face communication. It is now all too often that individuals need time to begin feeling comfortable and openly communicate with individuals they do not know.
60. Phone and text plans need to be reasonably priced, but neither seems like a good solution anyway. Perhaps something cheaper and resembling face-to-face communication. It's more effective and likely cheaper.
61. Faster internet, better cell phone service, cheaper cell phones.
62. More Face time
63. Combine all the forms into one easy to use interface
64. Support by Instant Messaging services for a standard protocol (xmpp/jabber) for text, video, and voice

65. No real ideas, this just seems to be how things progress, though more face to face communication would be nice.
66. Lower the cost for text messages.
67. Teleportation.
68. Get rid of it, it only screws you if you get in any kind of trouble with the cops. No driving without a license any more.
69. I have no ideas.
70. Lower price cell phones
71. Better way to video chat
72. It would be great if people took walks together without any electronic devices
73. I often find that E-mail with the return receipt to be annoying, but more efficient in getting a timely response. Generally, I prefer E-mail because there is a record of the communication. Any method which will provide a (semi) permanent record as well as confirmation that the message was received and/or read by default would be an improvement.
74. Texting being cheaper would be much easier to quickly communicate.
75. Lower the cost to purchase and use new communication technology
76. communication is much faster these days, but not necessarily positive, instant messaging and text messages decrease person to person interactions which isn't good in my opinion, I know a lot of kids who are more comfortable texting someone than calling or talking face to face
77. More face time through webcams or some other method. Cheaper features for some types of communication e.g. texting
78. More real time, synchronous conversation such as face-to-face, IM, phone. Email is too asynchronous. More public communication is better as well.
79. Better cell phone connectivity. Lower dropped calls and reduce non service areas.
80. Access across all mediums using a several methods to communicate will be the key
81. I observe people sitting in clusters, each talking on a cell or texting on a phone or laptop and not a one looking or talking with each other. When video phones are more affordable so that people can see each other, I think we'll enjoy a vast improvement in communication.

82. Same for regular email.
83. Email is great because if someone has a yahoo or Gmail account they can communicate. Text messaging from a cell phone should be able to talk with AIM or send emails. I-phone is moving this along.
84. Work to eliminate fear based failure in communication the way that the internet does. Most people communicate much better over email than face-to-face, partly because it's emotionless and non-threatening.
85. More use of Internet telephones and remote video conferencing.
86. Living a one day of the week with no computers, cell phones, TVs, etc.
87. I know Intel pushed video phones a few years ago and they failed, partly due to technology limitations and partly because the consumers were not ready. I think they will return in the next decade. The technology is solid now, and more people are accepting of their images being sent as data.
88. Simplify it. Cell phone service is complicated, way overpriced and service is spotty at best. Having all (especially social) communication take place over computers instead of face-to-face reduces empathy and encourages deception. Texting reduces the ability to think and write. Don't dismiss all communication technology, but also don't rid the world of some of the older, more human ways to communicate. Holding a newspaper or a book is nice and it can be passed along to someone else who might want to read it too. You can't easily pass along your computer. Fight the impulse to be wired to a phone or a blackberry at all times--how is it good communication to have two people walking side by side but talking into individual phones? Worse still, to be texting each other side by side instead of talking?
89. They do this ranking thing with e-mails in big companies to prevent the sending of stupid e-mails. Like you only get so many e-mail 'importance' credits so you have to use them wisely. I think this is brilliant.
90. Email etiquette classes on campus. Having the students on outlook- help with scheduling meetings.
91. Unplug the electronics!
92. Not sure if communication is evolving in a positive way. While speed of communication may be faster now, the quality of the communication may be worse beyond simple



messages containing facts. There is a need to discuss and learn which means of communication are best for which situations, and not rely on any one means too much. Also with the expansion of social networking sites, there seems to be some information that gets passed along that is really inappropriate to be made "public". On the positive side, people in the past who had no voice are now able to have a voice and get heard. But sorting out the quality communications from the fraudulent or inappropriate ones is not easy. Information overload also makes it hard for people to be able to sort out the chaff from the grain.

93. Build activities into your social life that require your senses (sight, sound, smell, touch, and hearing). You'll find electronic communication does not suffice for most of them to get the quality communication or interaction that brings you the most satisfaction.
94. Take away IM, Facebook, etc. as primary interactive media and make people talk face to face.
95. More face to face!
96. Do not rely on e-mails for critical communication.
97. The best thing that could happen would be to disable electronic communication and return to salons, classrooms, social events, discussions groups, etc.
98. "Professional" communication could be improved by some students, courtesy and appreciation as well could be improved by many (such as thanking people for information or service received)
99. Stress the importance on face-to-face communication and social communication skills.