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Understanding the Use of Electronic Communication

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An Interactive Qualifying Project Report on

**Understanding the Use of
Electronic Communication**

IQP-CEW-1601

Submitted to the faculty of

Worcester Polytechnic Institute

In partial fulfillment of the requirements for the

Degree of Bachelor of Science

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ABSTRACT

This report investigates why there are so many forms of electronic communications despite their apparent similarities. Extensive background research is done to narrow the various platforms and aspects of electronic communication. A survey is then conducted on the general population in order to analyze trends to connect the reason for the many forms of electronic communication. The paper is concluded by assessing the perspectives of technological literacy, demographic, popularity, and situational scenarios on types of electronic communication being used.

CHAPTER 1: INTRODUCTION

Human society has made the world a much smaller place. The world is shrinking is due to the growing advancements in the technological age. Our current era has promoted greater inventions and caused drastic changes in the regular human life. One form of advancement is in the area of communication. From being able to only communicate face-to-face with one another, now it is possible to connect electronically and provide the same communication through video chat. Communication, like human society, has evolved tremendously and has helped connect people together. Despite there being many different forms to communicate, mankind has also worked to develop numerous methods to provide countless forms of electronic communication. We will see that although there are many forms of electronic communication, the majority of them provide similar, if not the same, features. The reason for the many forms of electronic communication is to meet the many needs of the user.

1.1 Problem Statement

In this project, the main question that we want to answer is “Why are there so many different forms of electronic communications, and who is using them and for what reason?” There are many forms of electronic communication, and the majority of them provide similar, if not the same, features. In this report, we walk through how it is that we went about solving this question.

1.2 Project Goals

Before performing any analysis or evaluating any trends regarding forms of electronic communication, we must first understand the scope of this communication. The first goal of this project is to assess existing platforms and identify the characteristics of each. Identifying existing platforms and characteristics helps begin to layout the possible features that attract various users.

The second goal of this project is to evaluate the reason for the different forms of electronic communication and the reason why users would choose to use them over other platforms. The evaluation is done through a survey that adequately covers various demographic and situational cases.

1.3 Road Map

The big question that we want to answer is “Why are there so many forms of electronic communication?” This question seems like a difficult question to answer so we need to compile a strategy to help us get the answers that we want. As the reader will see in Chapter 2, we conducted an extensive background research on our topic to gather a better understanding. After obtaining a myriad of information on the topic of electronic communication, we were eager to try to answer the questions that drew our curiosity.

The first step that we want to take in answering this question is to better define our electronic communication platforms. Since we are analyzing so many electronic communication platforms, it can be easy to become disorganized when trying to acquire data. Due to the possibility of disorganization, we decided to break up our platforms into “buckets.” These buckets allow us to classify our platforms based on their functionality and features. Separating our platforms into buckets allow for us to stay organized when moving through the project. Our

classification of the electronic communication platforms will be revealed in greater detail in Chapter 3.

After our platforms are organized into their respective buckets, we want to take steps to answer the questions that piqued our curiosity. The studies that we found during our background research analyzed electronic communication from mostly an age perspective. While these studies proved to draw some interesting information, we wanted to go more in depth on this broad topic. We wanted to analyze electronic communication from perspectives that have not yet been explored to see if we could find trends that could change how the world views electronic communication. We chose some perspectives that we believed could lead to interesting data which will also be explained in Chapter 3.

Although we were able to decide how to group our electronic communication platforms and devise a plan on how to produce intriguing data, we needed to figure out how to obtain this data. We believed the best way to compile our data points was to simply ask people about their experience with electronic communication and see which platforms that they would use when given a certain situation. This method of gathering data be done by utilizing a survey that will be thoroughly explained in Chapter 4 of this report.

After distributing the survey to the general public, we needed to gather our data and organize it. Upon the conclusion of the survey, we collected and organized the raw data, to display overall trends regarding electronic communication usage. This data is shown in Chapter 5.

Then, in order to understand trends that existed, and why certain forms of electronic communication were more popular in certain situations, we broke down the question answers

with respect to various factors, including age, technological literacy, and hours of use per day. In Chapter 6 we were able to draw conclusions as to what factors affect electronic communication usage.

CHAPTER 2: BACKGROUND RESEARCH

As a starting point this project, we conducted background research on the topic of electronic communications in order to familiarize ourselves with the subject. When starting this research, we decided to focus on researching four main topics/aspects of electronic communication. The first topic that we researched, knowing full well that there are a wide variety of platforms available for people to utilize, was whether any attempt had been, or is currently being made, to consolidate all of these platforms. Having researched the possibility of consolidation, we decided to research electronic communications from a different, second point of view: whether older and established platforms were becoming inconsequential due to new platforms cannibalizing their roles in society and whether any platforms stood out as outliers in the field, that did not in fact impeach on the old. The third aspect of electronic communications that we researched, was how electronic communications are affecting people and society as a whole. Finally, we sought out whether any demographic study had been previously conducted in an effective manner to determine who was using certain platforms and why. The three topics/aspects that we researched can be found below. This background research give us an idea of what trends to expect when conducting our project.

2.1 Facebook's Attempt at Consolidating Platforms

One of the issues that we originally discussed while doing background research on the forms of electronic communication was the issue that we have a large variety of social media/communication outlets that do roughly the same task: allow communication between multiple persons. The quantity of these social communication outlets, and the variety of ways in which these social communication outlets allow people to interact with each other can actually sometimes cause some form of miscommunication between people rather than facilitate the process.

Originally, we were researching for examples or mentions of miscommunication being caused by an almost overwhelming amount of social communication outlets. While doing so, we found that a certain company was already trying to address this issue: Facebook. Facebook has been actively trying to bridge this disconnect in communication for a couple of years now. Facebook, though originally started as a form of intercampus communication/networking quickly evolved into a worldwide phenomenon, and having already tackled intercampus communications and crowned itself king, moved on to other forms of communication[2].

With the rising popularity of other platforms, Facebook decided to try its hand at replicating them. Facebook originally tried to replicate Snapchat with its App "Poke" which launched in December 2012. Poke allowed users to send each other ephemeral messages much in the same way that Snapchat does. Earlier that year in May, Facebook also launched its Camera App in direct competition with Instagram which allowed users to apply filters to pictures and share them on Facebook. Ultimately, Facebook was unable to compete and decided to end it

service of both of these apps in May 2014, shortly after announcing its purchase of Instagram (if you can't beat them, buy them?) [2].

More recently in 2015 Facebook launched Facebook Live in direct competition with Twitter's Periscope which allows users to view ephemeral live streams and comment on them directly in real time to communicate with the caster. In 2015 Facebook also launched Slingshot as its second attempt to compete with Snapchat, offering basically the same functionality. Slingshot faced some original criticism but has since managed to appease some of the critics. How these recent new App developments manage to compete with their current rivals has is yet to be seen [3].

Back to the point of consolidation, Facebook has been actively trying to combine all of these forms of communication that it has tried to replicate under its Facebook platform. Its most recent foray into the field was with the launch of the standalone app Facebook Messenger. Facebook messenger incorporates all the functionalities and forms of communication offered by a variety of mainstream applications under one banner. Facebook messenger allows for Phone Calls, Video Calls, direct messaging (in response to both text messages and emails), picture messaging, and monetary transactions. In doing so, Facebook is trying to erase the disconnect that some people face when trying to choose a communication outlet with which to communicate with others. Instead of having to decide between Instagram, Snapchat, Email, Text Message, Skype, Phone App, or PayPal, one can opt to simply use Facebook Messenger (which is linked to one's Facebook account of course). While slow to start, Facebook's strategy at electronic communication consolidation has already started to produce results: "According to a recent survey in Thailand, about 82% of respondents said that they mailed less, 70% reported less phone use, and

91% admitted [to] sending fewer text messages due to communication over Facebook and Messenger” [4]. If this trend continues, Facebook has placed itself in a secure position to successfully consolidate a large amount of the forms of electronic communication available.

2.2 Decline of Established Platforms, Rise of New Platforms

2.2.1 Email Becomes Outdated

While researching about different forms of electronic communication and how they enhance (or hinder) communications between people, we repeatedly found offhand comments or negative connotations relating to email. After seeing this pattern repeated enough, we decided to research this trend.

One of the most common criticisms expressed about email is how time consuming it is. Email should, in theory, be a quick and easy method of communication. One receives an email, reads the subject line, opens it, reads it, and writes a reply if a reply is needed, sends it, and moves on with his or her day. The email is time stamped so you know at what time you received it, who sent it, to whom, and for what reason. Sounds great. However, this simplicity is rarely the case.

The quantity of emails that most people receives a day often makes it a gargantuan task to efficiently read every single one of them. Often they contain spam, information from an old mailing list, or information that does not pertain to the reader any longer. Sometimes- only sometimes- information that pertains to the reader is wedged in there. However, it tends to be buried under useless information and is easy to miss. Often, if a message is important or urgent, it is more practical to send someone a text message or direct message, this form of communication is immediate and not as likely to be buried under useless information.

When used as a medium for collaboration, email is often criticized as well. As Don Tapscott, an author, strategy consultant, and Professor at the University of Toronto's Rotman School of Management put it:

“Email is all about containing knowledge, putting it in defined boxes. That's the wrong way to go about it. Information and knowledge are much more powerful when people can easily access it, then collaborate and build upon it.” “You need to have a new collaborative suite where, rather than receiving 50 emails about a project, you go there and you see what's new” [5].

One article on Computer Weekly heavily emphasized on replacing email with video conferencing or a Facebook-like social media used for coworkers instead of friends [7] :

“Mention Facebook and people protest, 'Why should I want to know what my friend is doing?' But in a business context, social media makes sense, said Miles. Change the word 'friend' to 'colleague', and why wouldn't you want to know what your colleague is working on? [7]” “[What if an employee] can type a search term into the company intranet, see a list of documents related to that topic, and identify all the people in the company who have expertise in that area.” “They can see at a glance whether a person they might need to speak to is in our out of the office, and can fix up a voice or video call at the touch of a button.”

The article compared email to a great time waster, giving employees a sense of being busy but without helping them achieve any useful results. However, the same article found that replacing email with a group message application such as GroupMe or Group SMS was a bad idea, calling it “email on steroids” where asking one question resulted with a myriad of notifications and alerts on one's mobile device.

Another problem with email is the amount of email accounts many people acquire over their lifetime. Many emails that were once used as the daily driver quickly become “spam email accounts”. An email account that a person uses when they want to sign up for a website, application, or service that they think they might not need in the long run or do not wish to get spammed by. Because of this, people continue to receive emails, some of critical importance, to multiple email accounts, often forgetting to check one instead of the other. Email Applications have tried to solve this problem by allowing users to input separate email accounts on their mobile phone in order to view all emails from all email accounts at once, but this is often treating the symptoms rather than the problem. In 2008 officials at Boston College stopped doling out new email accounts to incoming students [6]. Officials realized that the students already had established digital identities by the time they entered college, so the new email addresses were not being utilized. The college decided to provide forwarding services instead [6].

Following this train of thought, we decided to find out how many emails a day a person receives: In 2011, the typical corporate email user sends and receives about 105 email messages per day [8]. Despite spam filters, roughly 19% of email messages that are delivered to a corporate email user’s inbox are spam. In comparison, U.S. smartphone owners aged 18 to 24 send 2,022 texts per month on average — 67 texts on a daily basis — and receive another 1,831.

2.2.2 The Rise of Ephemeral Messaging

In his article "Sharing the small moments: ephemeral social interaction on Snapchat.” Joseph Bayer discusses the social and emotional experiences on Snapchat and what sets it apart from other forms of electronic communication [12].

Bayer found that users compared Snapchat to face to face interactions, and interestingly that users did not view Snapchat as sharing or viewing photos, rather as a method of sharing spontaneous and small, mundane moments.

The fact that Snapchat is ephemeral is nothing new, traditional face to face communication, and synchronous communication such as video calling and voice calling have existed for a long time while all being ephemeral, however they were synchronous as opposed to asynchronous.

The article states that a rising popularity with ephemeral messaging may be the fact that with persistent social media, users have to mediate their experiences and interactions more closely due to the diverse audience that will see it, meaning that they have to account for a wide audience and how each person will react in the moment and in the future when looking at their profiles and posts, texts, or emails. In contrast, according to the article, most users on Snapchat cannot recall most of the Snap Chat messages sent or received, due to their ephemeral and mundane nature; users often saw Snapchat messages as inconsequential yet paid more attention to them at the moment than persistent communication such as texts or email. Most users compared Snapchat to small talk while comparing Instagram or Facebook to important life events.

2.3 Electronic Communication Based On Culture and Society

2.3.1 Different Cultures, Different Needs

While conducting our research, we discussed how communication can vary based on one's culture. Forbes [13] breaks down cultures as being either low or high context. Low context cultures (most of the Germanic and English speaking countries) rely heavily on explicit and

specific messages when communicating. High context cultures (Mediterranean, Slavic, Central European, Latin American, African, Arab, Asian, American-Indian) are more accustomed to informal agreements and personal bonds. Low context cultures look for what is not said such as body language and tone.

Forbes also broke cultures into sequential and synchronic cultures. Sequential cultures such as North American, English, German, Swedish, and Dutch are believers in the saying “time is money.” These cultures believe that in order for their worlds to function efficiently, they need to focus on one task, complete it in the most efficient way possible, then move onto the next task. The synchronic cultures such as South America, southern Europe and Asia see time as a circle and that the past present and future are all interrelated.

From a business standpoint, these cultures may focus on several tasks at once instead of putting all the focus on a specific task. An example that that the article uses to distinguish the two mentalities is someone being late to a meeting. In sequential cultures, people may see the person that is late as bad planning or a sign of disrespect while the synchronic culture may view this attitude as childish impatience.

The article also said that showing emotion from a business standpoint is a practice that is accepted in some cultures and not in others. “Emotional reactions were found to be least acceptable in Japan, Indonesia, the U.K., Norway and the Netherlands – and most accepted in Italy, France, the U.S. and Singapore” [13].

While not all of this research was directly dealing with electronic communication, we thought that understanding different cultures was a big factor in communicating effectively.

2.3.2 Connecting Society

While conducting our research, we came across an article title “We Are All Connected”, the article talks about how electronic communication, mainly social media, is used to help companies better communicate with their customer base [15]. The article discusses how company- customer relationships have changed with the advent of social media: where once companies relied on their own personal messaging or marketing to consumers through television advertisements, magazine advertisements, or billboards companies now rely on social media to advertise their products by word of mouth, from consumers communicating and expressing their love (or hate) of a product to each other and exposing it for other potential consumers to view. “Consumers increasingly use digital media not just to research products and services, but to engage the companies they buy from, as well as other consumers who may have valuable insights.”

There are literally hundreds of different social media platforms (e.g., social networking, text messaging, shared photos, podcasts, streaming videos, wikis, blogs, discussion groups). Interestingly—and, possibly, confusingly—it is not easy to discern among types of social media platforms. The top 10 websites in 2010 accounted for about 75% of total page views in the United States, up from 31% in 2001 and 40% in 2006 (Anderson & Wolff, 2010). (1) Google; (2) Facebook; (3) YouTube; (4) Yahoo; (5) Windows Live; (6) Baidu.com; (7) Wikipedia; (8) Blogger.com; (9) Twitter; and (10) QQ.com.

The article also talked went into depth about how the social media ecosystem works and how it allows for consumers to interact with companies. “Content in the form of social networks and blogs that enable individuals to create, share, and recommend information is extending the

spheres of marketing influence, and a wide variety of social media platforms are providing the tools necessary for these influential and meaningful firm- customer exchanges.” A weave to better depict this social media system was provided by the article and is shown in Figure 2.1.

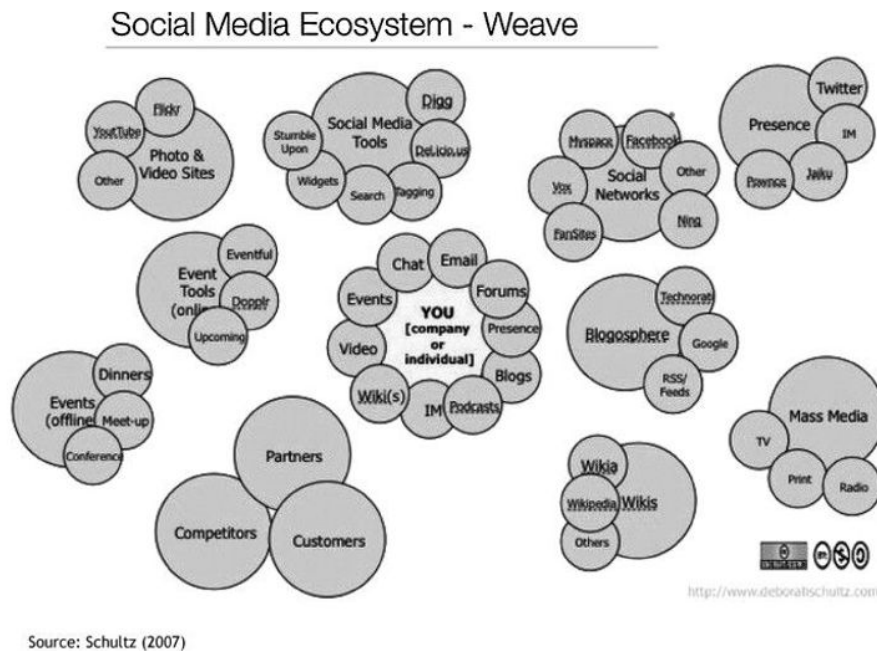


Figure 2.1- Social Media Ecosystem Weave

2.3.3 Negative Aspects of Electronic Communication

Previously we discussed new technological advances in electronic communication. These methods include the use of cellular devices, phones, computers, and the Internet. From there, these types diverge into more forms such as phone calls, text messages, emails, and social media sites (Facebook, twitter, Snapchat, etc.). This growth in technology merely skims the surface of what advances society has made in the field of electronic communication. In all, the purpose of these methods has the same origin, that is to make communicating simpler and easier. Rather than using mailing or meeting someone personally, which could take an extensive amount of time, electronic communication simplifies this process and makes it quicker to connect people to

one another. Technology has helped make the world a smaller place. However, numerous people argue that the implications of electronic communication has also created many negative effects to our society.

Technology has reduced the number and need of social interaction between human beings. Many people began to depend too much on technology to interact for them. Studies show that “users were found to select email deliberately when they wished to avoid unwanted social interactions”[11]. Communication through technology to avoid unwanted interaction, while more convenient, shows that humans beings began to rely on things such as emails or phone calls to avoid unwanted or negative outcomes. In the workplace this has shown in employee’s level of interaction, or lack thereof.

Technology has made communication much simpler and quicker. Likewise, society has also adapted to a simpler and quicker form of written language. Users tend to use a form of abbreviation and slang in their writing. Although utilizing these abbreviations may be quicker, the appropriate language seems to be diminishing. Furthermore, this trend has become popular in modern culture. The use of abbreviations and slang has affected people’s writing so much that “some language researchers argue that language is deteriorating due to increased use in electronic communication”. Nonetheless, language has been creatively adapted to fit the the current technological age.

Overall, electronic communication is a diverse tool to connect the world together. However, at the same time this form of communication may very well be negatively impacting our society as a whole. As we continue to move forward we may begin to see a growing dependence on technology.

2.4 Previous Studies

2.4.1 Social Media Usage By Demography- Pew Institute

One aspect of electronic communication that we researched was social media usage among the different age groups. According to Pew Institute, technology usage seems to drop as people get older[1]. In a study that was conducted from 2005 to 2015, it was shown that people in the 18 to 29 age range were the most likely to use social media at about 90 percent using in this age range while the oldest age category, age 65 and older, were the least likely to use social media. Although the 65 and older age group was the least likely the use electronic communication, their usage has more than tripled since 2005, going from 11% to 35% in 2015.

Other aspects of social media usage that were analyzed in this study by Pew Institute were the differences in usage among genders, race, education, and communities. In regards to gender, women use social media slightly more than men with 68 percent of women using social media compared to 62 percent of males. When analyzing social media usage from a socio-economic perspective over the past 10 years, households with higher income consistently use social media more than household of lower income. It was also noted that people with at least some college experience use social media more than those with a high school education or less. When obtaining social media data from a race perspective, Pew compared these usages between whites, Hispanics, and African- Americans. Among these three groups, there was not a great deal of fluctuation in social media usage with 65 percent of whites and Hispanics and 56 percent of African-Americans using social media. Community differences also showed some

interesting data showing that 68 percent of suburban residents, 64 percent of urban residents, and 58 percent of rural residents use social media.

2.4.2 Mobile Messaging and Social Media 2015

Pew institute conducted a study on mobile messaging and social media in 2015 [14]. The main purpose of the study was to show what smart phone apps were being used and how many people were using them. According to survey, 36 percent of Smartphone owners report using messaging apps such as WhatsApp, Kik, or iMessage. Another interesting piece of information that was found in the study was that 85 percent of adults are internet users and 67 percent are smartphone users. Social media apps such as Pinterest and Instagram have gone up since 2012 (almost doubled) . Even with these two social media apps on the rise, Facebook still locks down the market with 72% of online adults using this social media platform.

2.5 Summary

By conducting this background research, we believe that we have a solid foundation on the topic of electronic communication as a whole. Our background research covered a wide range of topics including how Facebook is trying to consolidate social media, how cultures communicate differently, how businesses utilize electronic communication, and even the negative effects of electronic communication. Previous studies were also included in our research which analyzed topics such as social media usage by demographic and the usage of mobile messaging. Although there were many intriguing bits of information acquired through this research, we still had no solid answer to our question of “Why are there so many forms of electronic communication, who uses them, and why?” .

CHAPTER 3: Research Perspective

After our extensive background research, we had to gather our information and design a method to approach our investigation. Again, we wanted to find out why there were so many different forms of electronic communication. Despite there being so many types of communication, all seem to serve the same general purpose. In order to successfully investigate the reason for many forms of electronic communication, we needed to narrow down how we looked at our experiment and also which platforms we would be observing.

In this chapter, we will explore two different forms of categorization: Platforms and Research Perspectives. Since there are countless forms of communication platforms, we needed to narrow down which platforms we would investigate. This will allow us to limit our research range and make it more feasible to investigate our overall question. Section 3.1 lists the platforms we have looked at and Section 3.2 describes how we choose to categorize the platforms. This approach allows us to understand if the different characteristics of the communication platforms may affect the use of electronic communication.

Before moving forward in analyzing our research questions, we had to also formulate possible reasons that there would be different forms of electronic communication. These perspectives were created by our group members, but it allowed us to create a base for different ways we could look at our research question. The information in Section 3.3 describes the six different perspectives that we saw could answer our question.

Finally, once we have narrowed our platforms and perspectives, this information could be used to help us layout our plans on how we intend to move forward with our investigation.

3.1 Platforms

This section explains which platforms we analyze as well as a brief description of each.

- Email: messages distributed by electronic means from one computer user to one or more recipients via a network
- Facebook: a social networking website that makes it easy for you to connect and share with your family and friends online
- Facebook Messenger: An extension of Facebook with the purpose of solely messaging one or multiple recipients
- Google Hangout: a communication platform developed by Google which includes instant messaging, video chat, SMS and VOIP feature
- Google Plus: a social network designed by google
- Group Me: is a mobile group messaging app owned by Microsoft
- LinkedIn: a business and professional orientated social network website
- Instagram: an online mobile with the purpose of sharing photos and videos on a social networking site
- Phone: a form of communication that permits two or more users to conduct a conversation by voice
- Skype: an application that provides video chat and voice call capabilities
- Snapchat: a mobile messaging application meant for temporary videos and photos
- Text Message: messages distributed by electronic means from one phone user to one or more recipients via a phone provider service

- Twitter: Twitter is an online social networking service that enables users to send and read short 140-character messages
- WhatsApp: mobile messaging app which allows users to exchange messages without having to pay for SMS
- YikYak: a social media mobile application meant to anonymously communicate with people within a 5-mile radius

3.2: Classifying Electronic Communication Platforms

In order to do a proper study, we first needed to get organized. We started off by separating some of our platforms into “buckets.” The social media platforms were placed into these buckets based on their basic functionalities. This chart can be seen in Figure 3.1.

Social Media Bucket	Messenger Bucket	Audio-Visual Bucket	Professional Bucket	Other Bucket
Facebook	FB Messenger	Phone	LinkedIn	Snapchat
Instagram	Text Message	Skype	Email	YikYak
Google Plus	Group Me	Google Hangout (calling)		
Twitter	WhatsApp			

Figure 3.2- Electronic Communication Buckets Chart

Deciding how to categorize the buckets was a delicate task. We wanted to make buckets that would distinctly break up the platforms while also keeping them broad enough to generalize them. Each individual bucket was given a set of criteria.

3.2.1 Social Media

A Social Media bucket was determined to be any form of electronic communication open to the general public with a persistent profile and activity history. In a social media bucket, posts from all time are available to be seen and one does not control who each “message” goes to.

3.2.2 Messenger

In a Messenger bucket, conversations are decidedly private. The user decides with whom he or she is having the conversation and only the recipient of the conversation is able to view the content. In a messenger bucket, a communication may be to one individual or multiple individuals. In addition, electronic communication platforms in a messenger bucket are primarily based on text; due to this text based communication, a viewing history is created.

3.2.3 Audio-Visual

An Audio-Visual bucket is similar to a messenger bucket, however conversations are continuous and not discrete. In an Audio-Visual bucket, conversations may be either purely visual, purely audio, or both; the continuous attribute is the defining characteristic. Audio-Visual bucket platforms are private, and no concept of viewing history exists.

3.2.4 Professional

The defining characteristic of a professional bucket is that any form of electronic communication used in this bucket should be primarily used in a professional setting. A platform under the professional bucket may include all or one of the factors used in previous buckets, the purpose of this bucket is to differentiate forms of electronic communication that users use separately in their personal and professional lives.

3.3 Classifying Perspectives

Based on our research, we were able to take the entire spectrum of electronic communications and determine six perspectives that we would use to answer the question of: “Why do so many forms of electronic communications exist?”. These six integral perspectives are listed below. In this chapter, we define each of the six different perspectives and explain them in further detail.

1. Frequency of Use
2. Technology Literacy
3. Scenario Perspectives
4. Reason for Use
5. Demographics
6. Familiarity

3.3.1 Frequency of Use

Frequency of Use refers to how much time the user spends using electronic communication. This can be analyzed by quantifying exactly how many hours the user spends daily for this communication. We believe that this is an important perspective to consider. By looking into how frequently the user is utilizing electronic communication, we are able to see if that frequency impacts what is used. This will be able to let us know if heavy users or lighter users use different forms of communication.

3.3.2 Technology Literacy

Technology Literacy refers to a person's self-prescribed level of competence when utilizing a variety of electronics and their social applications. More specifically, technology literacy is the user's ability to effectively use technology to find, process, evaluate, create, and communicate information.

Based on our research, we believe that a person's technology literacy is a major factor in determining what form of electronic communication he or she will use. A person with a self-prescribed high level of technology literacy might seek to use, or find a specific form of communication that caters to his or her more refined needs. Similarly, a person with a self-prescribed low level of technology literacy might seek to use or find a specific form of communication that is more suited to his or her needs. Thus, technology literacy could be responsible for affecting a person's choice of electronic communication and could influence the need for such an increasing and evolving variety of forms of electronic communications.

3.3.3 Scenario Perspectives

The Scenarios Perspective is used to see how the situation a person is in, the relationship the person has with whom he or she is communicating with, and the type of information that is being communicated affects how one chooses his or her form of electronic communication. Scenario perspective can be broken down into a variety of situations:

1. One-to-One communications, where a person communicates with a single other individual. A simple example one person sending another person a text.

2. One-to-Many communications, where a person communicates with multiple other individuals at the same time. A simple example can be one person sending multiple individuals a group text.
3. One-to-All communications, where a person communicates with as many individuals as possible at the same time. A simple example can be a person posting a Facebook post for the world to see.

These three perspectives can then be further parsed into a variety situations, such as whether the communication requires a time sensitive response or not; and whether the communication is of an important subject or not. In addition, a scenario can be further modified depending on whether a person is contacting a family member, a friend, a co-worker or boss, or a stranger.

It can be stipulated that the number of people one is trying to communicate with, the urgency (or lack of urgency) of the situation, the importance of the situation, or the audience with whom the person is communicating with can lead an individual to seek or use a certain form of electronic communication.

3.3.4 Reason for Use

There are other various factors that cannot be easily quantified, however this may be very important to keep in mind and may affect the electronic communication. We chose to analyze the following factors:

- Ease of Use
- Popular Platforms
- Effectiveness

Ease of use refers to how easy the user can use and understand how a platform works. Popular platforms is defined as how popular a certain platform is and which are being used by the people the user is communicating with. Effectiveness is explained as which forms of electronic communication can most efficiently display what the user needs to communicate. Although it is difficult to observe these factors, they are still important in explaining why some forms of electronic communication is being designed.

3.3.5 Demographics

A demographic perspective is used to see how the gender or age of a person might affect the forms of electronic communication that he or she might utilize. It can be stipulated that people of older generations or of a different sex might vary in the forms of electronic communications that they use from those of a younger generation or a different sex.

By viewing electronic communications through a demographic perspective, we hope to see if a person's age might lead him or her to use a specific form of electronic communication. We hope to see whether a user's age and need for a specific form of electronic communication might be partially responsible for incrementing the variety of electronic communication services. Similarly, we hope to see if a person's sex might lead him or her to seek or use a specific form of electronic communication and thus also increment the variety of forms of electronic communications.

3.3.6 Familiarity

A familiarization perspective can be used to see how familiarity with a specific electronic communication platform relates to a person's choice of platform. A person who is intimately familiar with a certain platform may forgo other more convenient or effective forms of electronic

communication to use the platform in which he or she is more familiar with. It can be stipulated that individuals who are very familiar with a certain platform might use less forms of electronic communication with overlapping functionalities.

3.4: Research Questions

Our background research brought up interesting aspects regarding electronic communication, but we wanted to answer a bigger question with this project. We wanted to know why there are so many forms of electronic communication. We believed that this big question could be answered by analyzing smaller aspects of this topic. This big question was broken down by examining three different trends in electronic communication.

3.4.1: Frequency of Use and Platform Choice

We want to see if there if one's familiarity with a platform would affect his or her platform choice. Some people may choose one platform over another just because they use it often and are comfortable with how the platform works. People may feel more confident with a certain platform because it is a platform that they have used for a while and may have never heard of more effective forms of communication.

3.4.2: Technological Literacy

Some people may be better with technology than others. We want to know if one's technological literacy affects his or her platform choice. People that are not technology savvy may opt to use a simple platform because they do not know how to use a more complicated platform that has more features.

3.4.3: Scenario and Platform Choice

Another interesting trend of electronic communication that we wanted to look into was how relationships and how many people one with which one is communicating affects his or her platform choice. We wanted to see if a certain platform was needed in order to effectively communicate with someone depending on the relationship between the people communicating. Some platforms may not be socially acceptable to use in a certain situation based on the relationship of the people trying to communicate. We also wanted to see if one's platform would change depending on if they were communicating with just one person or with many people. Some people may choose a different platform when communicating with more people because it could be easier and possibly less notifications and alerts.

3.4.4: Reasons for Use and Platform Choice

We also wanted to know if people's reason for use will affect their platform choice. Some of the reasons of use include ease of use, platform popularity, and its effectiveness at communicating. The people that are using electronic communication because of a platform's popularity may choose a different platform that someone who is using electronic communication because of a platform's effectiveness.

3.4.5: Demographic and Platform Choice

In our background research, we found some studies on electronic communication based on a few demographics and specific platforms. We wanted to see if there was any trend in platform choice when dealing with age and gender. We also wanted to see these trends over many platforms rather than a single platform. There could be an abundance of electronic communication platforms because people of older generations are more familiar with older

platforms. These older platforms could still be in existence because they are still being used by an older generation. Some platforms may appeal to one gender more than the other gender. These are just a few examples of the insight that this question could give us.

3.4.6: Familiarity and Platform Choice

We want to see if one's familiarity with a platform changes their platform choice. Some people may not use a certain platform because they do not recognize it. People might be more confident with platforms that they are familiar with and may not feel the need to choose an electronic communication platform that is new to them.

3.5 Summary

By taking the entire spectrum of electronic communications and determining six perspectives we hope to simplify yet thoroughly examine various perspectives through which we can answer the question of: "Why do so many forms of electronic communications exist?". In the following chapter, we utilize these perspectives as well as the variety of forms of electronic communications previously discussed in Chapter 3 to carefully plan, layout, create, and finally send out a survey to the general public.

CHAPTER 4: SURVEY METHODOLOGY

After our extensive research into the various platforms and finding previous research with electronic communication trends, we wanted to see how well the trends would stand in more recent times. Since the number of platforms has risen, it would be interesting to see how much technology would influence how users are adapting to electronic communication.

To do this, we designed a survey to help us analyze trends that may show us the possible reasons for the the growing number of communication platforms. The following sections will explain how we approached the survey and what factors we considered in developing the questions.

4.1 Systematic Approach

In order to effectively create a survey, we needed to develop questions that would cover all of the topics needed and efficiently use the participants' time. Our first step in approaching this survey was to create a systematic approach to the survey and create a table that could easily show what questions we needed to ask.

Table 4.2.1: Our perspectives systematically categorizing platforms

Systematic Approach					
	Family	Friend	Acquaintance	Co-worker	Boss/Professor
One-One	X	X	X	X	X
Email	X	X	X	X	X
FB Messenger	X	X	X	X	X
Phone Call	X	X	X	X	X
Skype	X	X	X	X	X
SnapChat	X	X	X	X	X
Text Message	X	X	X	X	X
Twitter	X	X	X	X	X
WhatsApp/Viber	X	X	X	X	X
One-Many (Groups)	X	X	X	X	X
Email	X	X	X	X	X
FB Messenger	X	X	X	X	X
GroupMe	X	X	X	X	X
Instagram	X	X	X	X	X
Skype	X	X	X	X	X
SnapChat	X	X	X	X	X
Text Message	X	X	X	X	X
Twitter	X	X	X	X	X
WhatsApp	X	X	X	X	X
Quick Response	X	X	X		
FB Messenger	X	X	X	X	X
Phone Call	X	X	X	X	X
SnapChat	X	X	X	X	X
Text Message	X	X	X	X	X
Twitter	X	X	X	X	X
WhatsApp/Viber	X	X	X	X	X
Casual	X	X	X		
FB Messenger	X	X	X		
Phone Call	X	X	X		
Skype	X	X	X		
SnapChat	X	X	X		
Text Message	X	X	X		
YikYak/Whisper	X	X	X		
Important			X	X	X
Email	X	X	X	X	X
Phone Call	X	X	X	X	X
Skype	X	X	X	X	X
Text Message	X	X	X	X	X
WhatsApp/Viber	X	X	X	X	X
Research	X	X	X	X	X
Facebook	X	X	X	X	X
Twitter	X	X	X	X	X
Instagram	X	X	X	X	X
LinkedIn	X	X	X	X	X
One-All					
FaceBook	X	X	X	X	X
Instagram	X	X	X	X	X
SnapChat	X	X	X	X	X
Twitter	X	X	X	X	X
YikYak/Whisper	X	X	X	X	X

Table 4.2.1 shows that table we used to develop our survey. We chose to assess our research through two parameters, platform features and audience. These two parameters are the two factors that we believed would affect the trends the most. Platform features describe the unique characteristics different platforms have that may influence why a user is more attracted to form of communication over another. Audience describes the types of people the user may potentially communicate with and how that may influence the choice of communication. We now examine these parameters.

4.1.1 Platform Features

Our research has shown that even though there are numerous electronic communication platforms most of them serve that same overall purpose, connect to someone else. However, why some of these platforms are able to succeed simultaneously may be due to the platform's specific features that make it unique. We needed to analyze which features make it a key factor in choosing a platform to use.

After comparing numerous platforms together, we noticed seven general characteristics that some platforms targeted to effectively communicated. With this analyzation, we could see just how much a platform's performance in a particular feature affected if a user would choose to use that platform. Below are the seven different types of features and how we defined them:

1. One-to-One

This feature was defined as how well the platform performed in communicating with someone on a one to one basis. This feature should help show how the differences of the amount of people would influence the use of a certain platform.

2. One-to-Many

This feature was defined as how well the platform performed in communicating with someone on a one to multiple basis. This feature should help show that if we need to contact multiple at once then perhaps another platform would be more applicable.

3. Quick Response

This feature was defined as how well the platform performed when the user needed to communicate with someone quickly. This feature should help show how various situations, such as the user needing to quickly and easily contact another person, would affect platform use.

4. Casual

This feature was defined as how well the platform performed when the user needed to communicate with someone in a casual setting. This feature should help show how various situations, such as if the user wanted to communicate casually, would affect platform use.

5. Important

This feature was defined as how well the platform performed when the user needed to communicate with someone on an important topic. This feature should help show how various situations, such as the user needing to discuss an important and perhaps personal matter with someone else, would affect platform use.

6. Research

This feature was defined as how well the platform performed when the user wanted to see what another person has been doing over various spans of time. This feature should help show that if the user wanted to research on what a person has been doing then some specific platforms may be a better fit.

7. One-to-All

This feature was defined as how well the platform performed when the user needed to broadcast a message to all of their contacts. This feature should help show how the differences of the amount of people would influence the use of a certain platform.

4.1.2 Audience

Along with the features of the various platforms, the next important factor was who we would be communicating with. The audience that the user chose to communicate with will drastically change what form of electronic communication is used.

Narrowing down the list of audience members to analyze was a difficult task. Not only are there many ways to categorize the audience, but each person would have different levels of connection with as well. Thus, we decided to select types of distinct audience members that could easily be distinguished from one another. Below are the four types of audience members we classified:

1. Family

This audience member was chosen because this would most likely show how communication is influenced when communicating with someone that is well known. The family member will help show which form of electronic communication is associated with someone that the user has a deep connection with.

2. Friend

This audience member was chosen because this would most likely show how communication is influenced when communicating with someone that the user is acquainted with. The friend will help show which form of electronic communication is associated with someone that the user may spend time more casually with.

3. Professional Colleague

This audience member was chosen because this would most likely show how communication is influenced when communicating with someone that is in the professional setting. The Professional Colleague will help show which form of electronic communication is associated with someone that the user needs to communicate professionally.

4. General Public

This audience member was chosen because this would most likely show how communication is influenced when communicating with someone that the user is not familiar with. The general public will help show which form of electronic communication is associated with someone that the user is not close to.

4.2 Survey Methodology

The ultimate question that we intended for the survey to help answer was “Why are there so many different forms of electronic communication, and who is utilizing them and for what?”.

With this in mind, we needed to create a survey and to develop our questions to help find an answer to our problem.

The survey we created was an online survey, created through the use of Google Forms. We decided to utilize an online survey in order to best and most easily reach the largest amount of people possible in the shortest amount of time. Google Forms provided us with a method of constructing an online survey simply and quickly, allowing us to be efficient with our time. As an added benefit, Google Forms provided built in integration with Google Sheets which allowed us to view all of the results in a spreadsheet format in real time. In addition, Google Forms is a free service that allowed users to reply anonymously. Overall, we decided to utilize Google Forms to create our survey because it allowed us to be the most efficient with our time.

Using our systematic approach, explained previously in Section 4.1, as the bulk of our survey, we needed to further formulate our questions to help categorize our participants and create worthwhile trends.

The survey was broken down into four main types of questions: General, Scenarios, Demographic, and Reasoning.

The General Questions were designed to evaluate our participants on how much they used electronic communication. This allows us to begin to categorize our survey takers on their level of familiarity. The results will help show if the level of usage could correlate with different forms of electronic communication being used.

The Scenario Questions were designed to determine what forms of communications were used depending on who they were talking. These questions are the bulk of our survey. We chose to make the questions similar to one another to make it easier for the participant to answer. The

questions only differed on who was being communicated with and how many (one or multiple). As explained before, these questions would help us understand how relationship could affect electronic communication use.

The Demographic Questions were designed to help us further categorize our participants. We asked our survey takers what age group and gender they belonged to. These questions helped us see if either of these factors could affect which types of electronic communication they used.

The Reasoning Questions were designed to directly ask the participants why they answered the questions the way they did. Since the main purpose of our survey was to find out the reason why there are so many different forms of electronic communication, these types of questions would directly help us meet our purpose. These questions offered some possible answers and it also gave the participants the choice to answer open ended.

With these four types of questions in mind, we were able to successfully design our survey to help meet the purpose of our project.

4.3 Survey

Overall, the survey was made available online on December 7, 2015. We let the survey remain open for approximately seven weeks. The survey was closed on January 19, 2016. During that duration we received 341 responses.

The rest of this section displays our full survey.

Electronic Communications Survey

1. Welcome Screen

Hello, and welcome to our Electronic Communications Survey!

Thank you for participating! This survey will help us understand the common trends of how and why various forms of electronic communication are used.

Please note that participation is voluntary and responses will be anonymous.
This survey should take no longer than 5 minutes.

Please click the "Next" button below to begin!

2. How many hours per day do you spend communicating online?

Texting, calling, messaging, social media.

- Less than 1 hour
- 1 - 5 hours
- 5 - 10 hours
- 10 hours or more

3. How would you rate your technological literacy?

“I consider myself _____ with technology”

- Very Literate
- Literate
- Somewhat Literate
- Not Very Literate
- Not Literate At All
- “I Don’t Use It”

4. You are looking to contact a *family member* to discuss something, what technology are you most likely to use to do this?

Examples Include: You are going to the beach and need to figure out where to meet up. You are telling them about a recent event in your life.

- Email
- Facebook Messenger
- Google Plus
- Phone Call
- Skype
- Snapchat
- Text
- WhatsApp
- Other Form of Electronic Communication
- Do Not Use Electronic Communication

5. You are looking to contact a *friend or acquaintance* to discuss something, what technology are you most likely to use to do this?

Examples Include: You are going to the beach and need to figure out where to meet up. You want to know about an organization they participate in.

- Email
- Facebook Messenger
- Google Plus
- Phone Call

- Skype
- Snapchat
- Text
- WhatsApp
- Other Form of Electronic Communication
- Do Not Use Electronic Communication

6. You are looking to contact a *professional colleague* to discuss something, what technology are you most likely to use to do this?

Examples Include: A potential job opening. A question regarding a product you're working on.

- Email
- Facebook Messenger
- LinkedIn
- Phone Call
- Skype
- Text
- Other Form of Electronic Communication
- Do Not Use Electronic Communication

7. You are looking to contact someone from the *general public* to discuss something, what technology are you most likely to use to do this?

Examples Include: You're trying to find your lost ID. You want to know about something they're selling online. You want to know who will be going to a certain event.

- Email
- Facebook
- Facebook Messenger
- LinkedIn
- Phone Call
- Other Form of Electronic Communication
- Do Not Use Electronic Communication

8. You are looking to share something with *multiple family members*. What technology are you most likely to use to do this?

Examples Include: Pictures taken at a recent gathering. Discussing an upcoming event.

- Email
- Facebook
- Google Plus
- Instagram
- Phone Call
- Snapchat
- Text
- WhatsApp
- Other Form of Electronic Communication
- Do Not Use Electronic Communication

9. You are looking to share something with *multiple friends or acquaintances*. What technology are you most likely to use to do this?

Examples Include: Working on a group project. Asking them to donate to a charity event you participate in..

- Email
- Facebook
- Facebook Messenger
- Google Plus
- GroupMe

- Instagram
- Snapchat
- Twitter
- WhatsApp
- Yik Yak
- Other Form of Electronic Communication
- Do Not Use Electronic Communication

10. You are looking to share something with multiple *professional colleagues*. What technology are you most likely to use to do this?

Examples Include: You want to discuss a news article related to your research. You are broadcasting a question you need answered.

- Email
- Facebook
- Facebook Messenger
- Google Plus
- GroupMe
- Instagram
- LinkedIn
- Skype
- Text
- Twitter
- WhatsApp
- Other Form of Electronic Communication
- Do Not Use Electronic Communication

11. You are looking to share something with the *general public*. What technology are you most likely to use to do this?

Examples Include: Promoting for an upcoming event. A funny link you want more people to see

- Email
- Facebook
- Google Plus
- GroupMe
- Instagram
- LinkedIn
- Snapchat
- Text
- Twitter
- WhatsApp
- Yik Yak
- Other Form of Electronic Communication
- Do Not Use Electronic Communication

12. What was your reason for using the technologies you chose in the previous questions?

- They're the easiest to use
- They're what the people I'm contacting use
- I can communicate most effectively using them
- I don't know

13. In more detail, why would you say you use different forms of electronic communication?

[Text Box]

14. What is your gender:

- Male
- Female
- Other

15. What is your age:

- Under 17 years old
- 18-24 years old
- 25-29 years old
- 30-34 years old
- 35-39 years old
- 40-44 years old
- 45-49 years old
- 50 years or older

16. Please rate which of the following platforms you would use on a regular basis.

Never, once every few days, almost daily, multiple times a day

- Email
- Facebook
- Facebook Messenger
- Google Plus
- GroupMe
- Instagram
- LinkedIn
- Phone Call
- Skype
- Snapchat
- Text Message
- Twitter
- WhatsApp
- YikYak
- Other Platform

17. Do you have any lasting comments? How do you describe your use of Electronic Communication?

[Text Box]

4.4 Survey Breakdown

In the process of developing this survey it is also important to note all the factors that we had considered to design the questions. To interact with our audience, we needed to communicate with them through an easy form of interaction. We chose to use email and Facebook to communicate with our audience. When interacting with our participants, we needed to have them understand the purpose of our project and what we needed them to do.

Furthermore, to maximize the amount of responses received, we added a small incentive for any survey takers. If they completed the survey, they would be able to review the responses and compare their answers to others. Below is the message used to communicate with our participants:

Hello and thank you for your time,

We are writing this email to ask you to fill out this brief survey on different forms of electronic communication and how you use them in your everyday life. This survey will help us understand the common trends of how and why various forms of electronic communication are used; we would like your help in this endeavor.

Once completed, you can compare your answers the answers of others who have taken the survey as well! It should not take more than 5 minutes of your time.

All submissions are anonymous.

Please fill out the survey linked below:
<http://goo.gl/forms/A75LjmDXpb>

Thank you for your time once again!

Moreover, in order to receive the most results, we understood that we had to capture the participant's attention quickly and couldn't overwhelm them with too many time consuming questions. With these factors in mind, we addressed each question with a specific thought process in mind. Below, we will explain each section of our survey.

4.4.1 Introduction

This first section served as an introduction to our entire survey. It thanked the survey takers and reiterated the purpose of the survey. It is also important to let the participants know that the survey would not take long and also emphasize that their responses is voluntary and anonymous.

4.4.2 General Questions

General questions served as a way to gauge the participants level of familiarity and use of electronic communication. We broke this down into 3 questions. At the beginning, questions 2 and 3 helped us understand how much they used the electronic communication and if they were familiar with different forms. After the bulk of the questions were answered in the survey, we asked them one more time in questions 16. This question was designed to be more specific and showed us exactly which platform our respondents used the most.

4.4.3 Scenario Questions

The scenario questions helped us understand how different forms of electronic communication was used. These types of questions were asked in questions 4 to 11. The questions were split into two categories, questions 4-7 address one person while questions 8-11 address multiple people. Each set of questions asked the same question except the person whom they were communicating with were different (ie. Family Member, Friend/Acquaintance, Professional Colleague, General Public).

The questions were designed this way to make it as simple as possible for the survey takers. By making all the questions similar to one another and emphasizing the audience, the participants could quickly answer each question.

4.4.4 Reasoning Questions

The reasoning questions served as a way to directly ask the participants why they answered the questions the way they did. This type of question was asked in questions 12, 13, and 17. Question 12 gave the participants choices to select why they used their forms of electronic communication. This would help us easily quantify the results and also give the participants

examples to think of. Question 13 asked the participant the same question once more, this time it allowed them to respond open ended. The final question 17, allowed the user to respond freely, giving us one more chance to see if the participant had any other reason for their answers.

4.4.5 Demographic Questions

The demographic questions helped us understand if gender and age could have any impact on the forms of communication used. Question 14 asked for gender. This would help us see if gender could correlate with which platforms were used. Question 15 asked for age. This would help us see if age could also have an impact of why some platforms were used over others.

4.5 Summary

The survey was an important tool for us to understand why there were so many different forms of electronic communication. We had hoped that our survey would be able to lay out possible answers to this question. Due to the importance of the survey, we had to place a good amount of thought into each question and ways to interact with our participants. By simplifying our questions and designing it to target specific goals, we effectively used our survey to maximize the number of responses received. The next step was analyzing our raw data and evaluating possible trends that could answer our project purpose.

CHAPTER 5: SURVEY RESULTS

After our survey was closed, we collected and organized the raw data, to show us some overall trends regarding electronic communication usage. This chapter shows the numerical results and percentages for each question we asked. In total, our survey gathered 342 responses.

5.1 Hours per Day

The first question we asked was “How many hours per day do you spend communicating online?” with answers of “Less than one hour”, “1-5 hours”, “5-10 hours” and “10 hours or more”. The results are shown below.

Hours per day	Responses
Less than 1 hour	41(12%)
1-5 hours	173 (51%)
5-10 hours	92 (27%)
More than 10 hours	34 (10%)

Table 5.1- Number of Responses in Each Usage Category (342 total)

The results of this question have a pretty wide distribution, with a heavy concentration, 78%, of responses using technology 1-10 hours per day.

5.2 Tech Literacy

The next question we asked was:

How would you rate your technological literacy?

‘I consider myself _____ with technology’

with answers of “Very Literate”, “Literate”, “Somewhat Literate”, “Not Very Literate”, “Not Literate at All” and “I don’t use it”. The results are shown below.

Literacy	Responses
Very Literate	146 (43%)
Literate	130 (38%)
Somewhat Literate	49 (14%)
Not Very Literate	12 (3%)
Not Literate at all	3 (1%)
“I Don’t Use It”	2 (1%)

Table 5.2- Number of Responses in Each Literacy Category (342 total)

The results of the literacy demographic show us that a majority of our responses consider themselves either literate or very literate with electronic communication. Only 17 total responses went so far as to say they were either “Not Very Literate” or “Not Literate at all”.

5.3 Scenario Questions

As discussed earlier, the survey asked 8 questions about what forms of electronic communication responders would use to communicate with different groups of people in *1- to- 1* or *1- to- many* scenarios. The questions were in the following form:

You are looking to [contact OR share something] with [a OR several] [Group of people]to discuss something, what forms of electronic communication are you most likely to use to do this?

Going forward, Table 5.3.1 will show the responses for a single member of each group shown in the top column. Table 5.3.2 will show responses for several members of each group, again shown in the top column. “N/A” indicates that that form of electronic communication was not listed as an option for that question.

5.3.1: 1 to 1 Situations

	Family Member	Friend or Acquaintance	Professional Colleague	General Public (1)
Email	170 (49%)	169 (49%)	322 (94%)	251 (73%)
Text	251 (73%)	262 (76%)	30 (8%)	N/A
PhoneCall	183 (53%)	117 (34%)	128 (37%)	75 (21%)
Facebook	N/A	N/A	N/A	88 (25%)
FacebookMessenger	48 (14%)	116 (33%)	5 (1%)	16 (4%)
Snapchat	11 (3%)	65 (19%)	N/A	N/A
LinkedIn	N/A	N/A	13 (3%)	0 (0%)
Skype	11 (3%)	19 (5%)	10 (2%)	N/A
WhatsApp	19 (5%)	28 (8%)	N/A	N/A
GooglePlus	3 (0%)	4 (1%)	N/A	N/A
Other Forms of Electronic Communication	20 (6%)	37 (11%)	12 (3%)	30 (9%)
Do Not Use Electronic Communication	5 (2%)	1 (<1%)	6 (2%)	14 (4%)

Table 5.3.1- Platform Usage in One to One Situations

Note: Percentage based on 342 survey responses

Note that the platform ordering for Chapters 5 and 6 will be based on which electronic communication platforms were used the most when all eight scenario questions were combined. Based on the raw feedback from 1- to- 1 questions, we can immediately see that certain electronic communication forms are used more than others, and that these forms vary across the group being contacted. For example, texting was popular for communicating with family, or friends or acquaintances. However, for speaking with anyone from the general public, it was used much less. Email, on the other hand was used broadly for all questions, but was most popular in the workplace, where 98% of respondents said they would use email to communicate.

5.3.2: 1- to- Many Situations

	Family Members	Friends or Acquaintances	Professional Colleagues	General Public
Email	220 (64%)	207 (60%)	316 (92%)	169 (49%)
Text	181 (52%)	N/A	18 (5%)	13 (3%)
PhoneCall	41 (11%)	N/A	N/A	N/A
Facebook	133 (38%)	139 (40%)	8 (2%)	145 (42%)
FacebookMessenger	N/A	101 (29%)	5 (1%)	N/A
Snapchat	14 (4%)	57 (16%)	N/A	22 (6%)
LinkedIn	N/A	N/A	8 (2%)	5 (1%)
Skype	N/A	N/A	8 (2%)	N/A
WhatsApp	20 (5%)	29 (8%)	4 (1%)	6 (1%)
GroupMe	N/A	70 (20%)	8 (2%)	2 (1%)
Instagram	14 (4%)	26 (7%)	2 (1%)	21 (6%)
Twitter	N/A	22 (6%)	3 (1%)	28 (8%)
GroupMe	N/A	70 (20%)	8 (2%)	2 (1%)
YikYak	N/A	3 (1%)	N/A	13 (3%)
Other Forms of Electronic Communication	26 (8%)	58 (17%)	24 (7%)	33 (10%)
Do Not Use Electronic Communication	7 (2%)	3 (1%)	5 (1%)	20 (6%)

Table 5.3.2- Platform usage in One to Many Situations

Note: Percentage based on 342 survey responses

Based on these responses, there is much more variety in forms of electronic communication used to communicate with many people. Email and Facebook were still generally popular. However, other forms, such as WhatsApp, Snapchat, and GroupMe showed relevant users in certain situations as well.

In general, it seems that despite recent advances in forms of electronic communication, more traditional forms, such as email, texting, and to an extent Facebook, have the highest usage percentage of any technologies. Later on in this chapter, we will ask why this is the case, and explore the variety in different responses for different demographics and situations.

5.4: Reason for Use

Our goal of this project was to determine why we use so many different forms of electronic communication. To answer this, we asked each user “What was your reason for using the technologies you chose in the previous questions?” with the options of: “They’re the easiest to use”, “They’re what the people I’m contacting use”, “I can communicate most effectively using them” and “I don’t know”. Each person could only select one answer. The responses are below.

Reason for using each form	Responses
They’re the easiest to Use	66 (20%)
They’re what the people I'm contacting use	135 (39%)
I can communicate effectively using them	134 (39%)
I don't know	7 (2%)

Table 5.4- Reasons for Platform Choice (342 total)

Interestingly, there is almost an even split between two responses, “They are what the people I’m contacting use” and “I can communicate effectively with them”.

5.4: Reason for Use

We next asked each user to elaborate on this response with “In more detail, why would you say you use different forms of electronic communication?”. These results varied and were free form, so we did not quantify them in any way.

5.5: Gender Breakdown

After asking why people used different types of electronic communication we asked some demographics questions, starting with “What is your gender?”. The results are below.

Gender	Responses
Male	194 (57%)
Female	138 (41%)
Other	6 (2%)

Table 5.5: Gender of survey responders (338 total, not mandatory)

Table 5.5 shows that there were 56 more male responses than female responses. This is likely accounted for by the fact that most of our responses were from the WPI community, which has a skewed gender ratio similar to what our responses show.

5.6: Age Breakdown

Next, we broke asked people “What is your age?”, with the options shown below.

Age	Responses
Under 17 years old	6 (2%)
18-24 years old	196 (57%)
25-29 years old	13 (4%)
30-34 years old	18 (5%)
35-39 years old	17 (5%)
40-44 years old	7 (2%)
45-49 years old	13 (4%)
50 years or older	68 (20%)

Table 5.6- Number of Responses in Each Age Category (342 total)

Throughout the analysis of the survey, it is important to keep in mind that an overwhelming majority of responders are 24 or younger. Age groups such as 40-49 or 25-29 are much less represented. The small sample size of these groups is relevant, especially when analyzing data relative to certain age groups.

5.7: Platform Use

The final part of our survey presented users with every form of electronic communication that was an option in question responses. We asked responders “Please rate which of the following forms of electronic communication you would use on a regular basis”, from “Never”, “Once every few days”, “almost daily”, or “multiple times a day”.

	Never	Once Every Few Days	Almost Daily	Multiple Times per Day
Email	1 (0%)	13 (3%)	68 (19%)	259 (75%)
Text	9 (2%)	45 (13%)	68 (19%)	219 (64%)
PhoneCall	4 (1%)	135 (39%)	120 (35%)	82 (23%)
Facebook	47 (13%)	101 (29%)	87 (25%)	106 (30%)
FacebookMessenger	76 (22%)	132 (38%)	51 (14%)	82 (23%)
Snapchat	182 (53%)	54 (15%)	33 (9%)	72 (21%)
LinkedIn	141 (41%)	174 (50%)	22 (6%)	4 (1%)
Skype	113 (33%)	196 (57%)	20 (5%)	12 (3%)
WhatsApp	266 (77%)	38 (11%)	18 (5%)	19 (5%)
GroupMe	189 (55%)	66 (19%)	42 (12%)	44 (12%)
Instagram	208 (60%)	75 (21%)	33 (9%)	25 (7%)
Twitter	209 (61%)	82 (23%)	27 (7%)	23 (6%)
GooglePlus	256 (74%)	75 (21%)	5 (1%)	5 (1%)
YikYak	268 (78%)	42 (12%)	20 (5%)	11 (3%)

Table 5.7- Percentage of Respondents Who Use Each Platform

Note: Percentage based on 342 survey responses (non mandatory question)

This data is helpful because we can normalize with respect to daily users to see if certain technologies are more popular among its actual users.

5.8: Summary

These results show clearly that different forms of communication differ based on who uses them, and what they are used for. Going forward, we analyze each form of electronic communication with respect to different variables, to determine what factors affect how a user chooses to communicate.

CHAPTER 6: DATA ANALYSIS

In this project, we seek to answer the question “Why do we use many different forms of Electronic Communication?”. Due to the large scope of the question, we seek to find an answer by breaking it down in a variety of factors; each of these factors was then integrated into the survey. In this chapter, we analyze the survey results and see how the hours of electronic communication use per day, technological literacy, type of situations, reasons for use, demographic, and platform familiarity affect the electronic communication platform someone chooses to use.

Going forward, we analyze the results of the survey from the previous section with respect to each of factors above mentioned. By analyzing the results, we hope to determine which factors affect the forms of electronic communication a user uses and answer the research questions that were stated in Chapter 3.

6.1: How Hours of Daily Use Affects Platform Choice

The first factor we explored was whether a person’s hours daily of use of electronic communication affected what platforms he or she selected. People chose ranges of hours of use per day from “Greater than 10 hours”, “5-10 hours”, “1-5 hours”, and “less than 1 hour”. These groups had had 34, 92, 173, and 41 responses, respectively. To analyze how hours of use affects platform choice, we graphed the percentage of users in each group that used a certain platform in each situation. Graphing these percentages allows us to easily compare users responses for different forms of electronic communication, and see trends in what groups are using (or not

using) which platforms. In Figure 6.1.2, Electronic Communication forms are shown on the x axes, and the percentage of users are shown on the y axes.

6.1.1: Hours of Daily Use Relative to 1-1 Situations

Based off the graphs shown in Figure 6.1.2 we can observe a few trends. First, individuals that use electronic communication more per day also use each platform more, on average, than those that use it less. This holds for almost every platform across every 1-1 situation. Interestingly, with more traditional forms of electronic communication, such as phone calls, texts, and emails, have a small difference between each different group. However, other forms, such as Facebook and LinkedIn have a much wider difference between each group.

6.1.2: Hours of Daily Use relative to 1-Many Situations

In 1-Many situations, we can see similar trends as those seen 1-1 scenarios. In the case of most platforms, people that use electronic communication more hours per day also use each platform more. One point of note here is that email does not follow the observed trends as closely as other platforms. It is very popular amongst all users. This could be partially due to familiarity, which we'll explore later in this chapter. In communicating with several friends or acquaintances, 10+ hour users per day are much more likely to use social media forms, such as Instagram or Twitter.

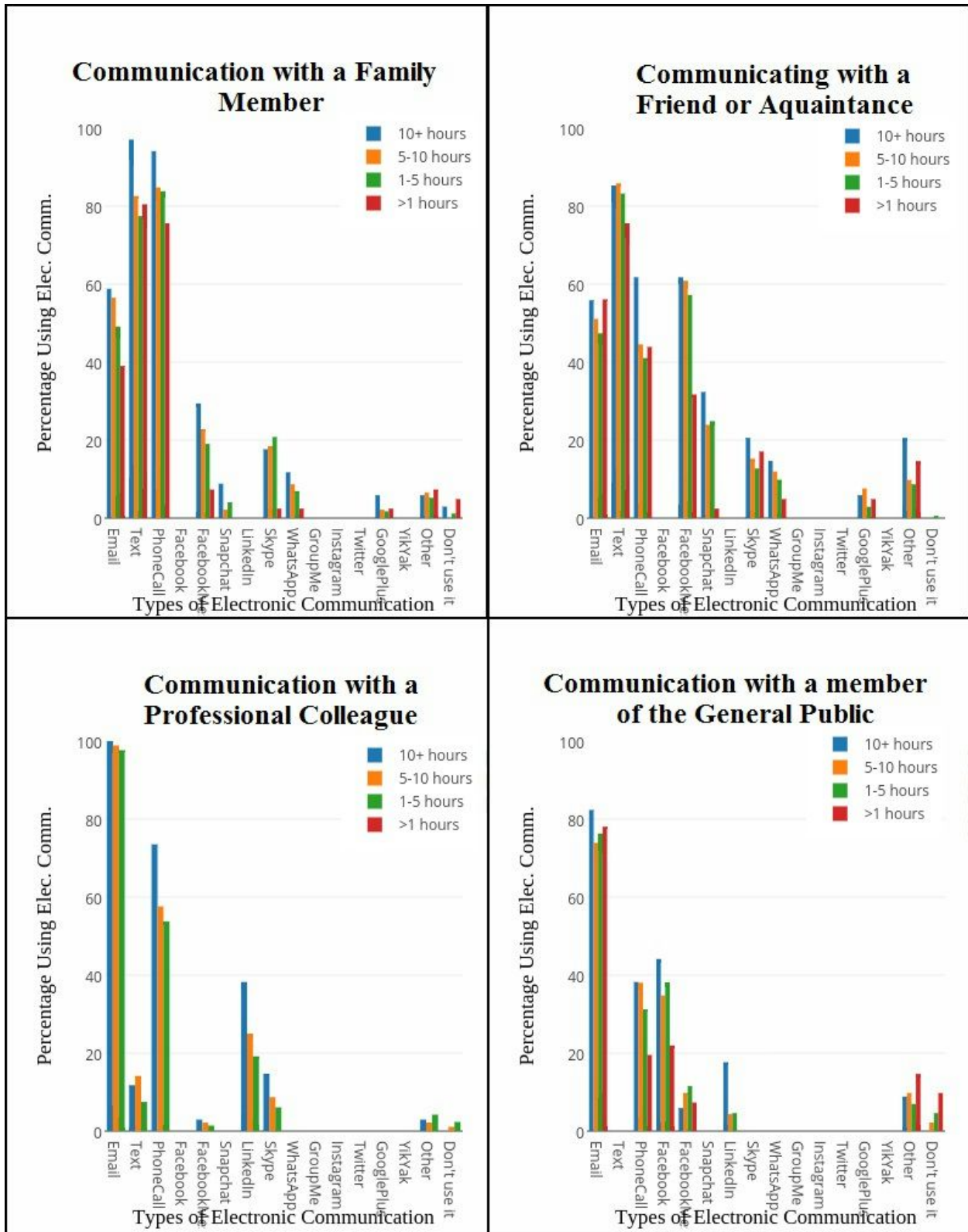


Figure 6.1.1: Analyzing Platforms Used in 1-1 Situations Based off of Hours of Electronic Communication Per Day

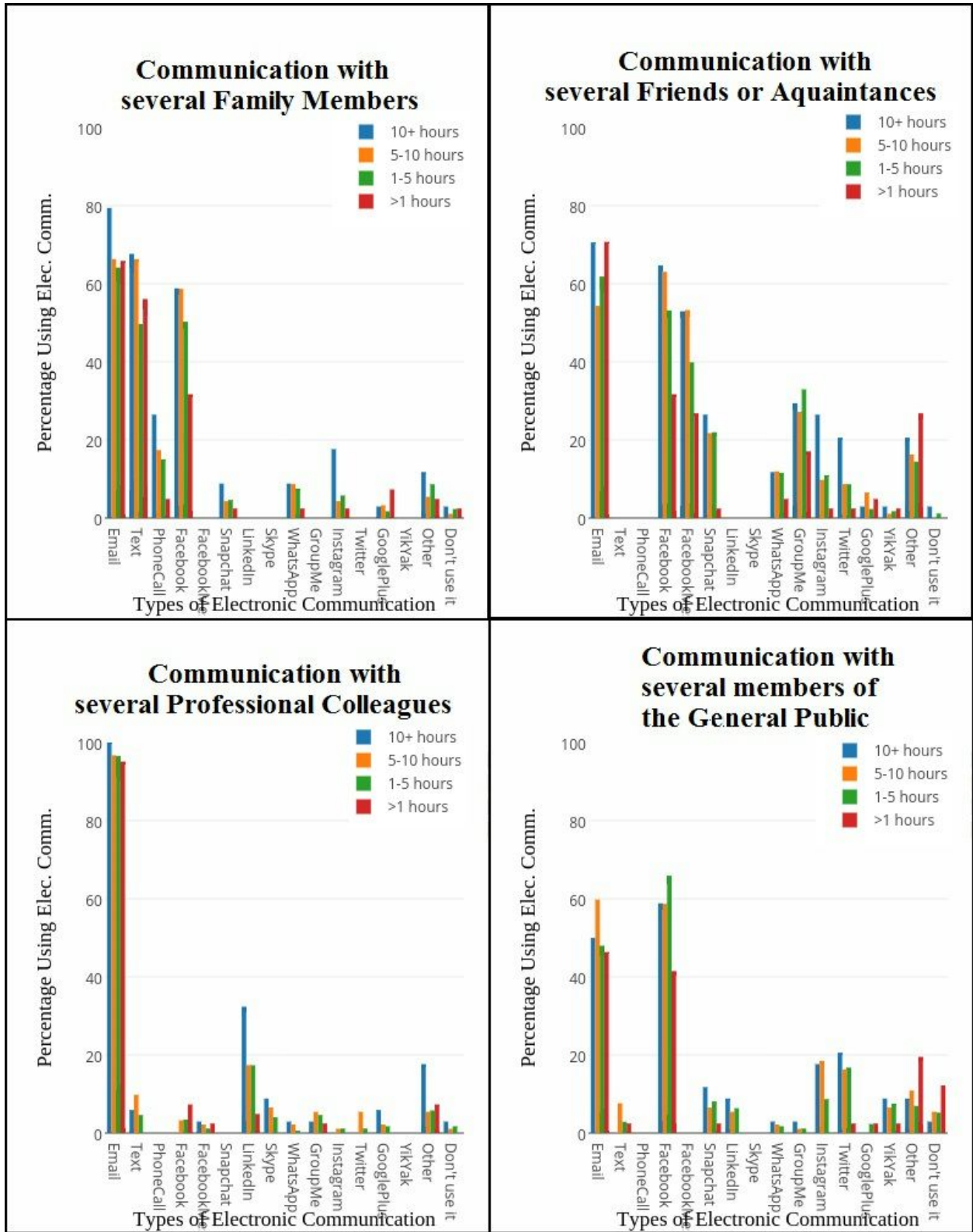


Figure 6.1.2: Electronic Communication Platforms Relative to Hours of Use in 1-Many Situations

6.1.3: Hours of Daily Use - 1-1 compared to 1-Many Situations

In 1-1 versus 1-Many situations, there are a few notable observations. First, there was a wider set of technologies used in 1-Many than 1-1 situations. Also, forms of electronic communication that are used less tend to lead to greater disparities between hours groups. This trend can be seen with Instagram, Twitter, GroupMe, and LinkedIn in 1-Many situations. A final interesting observation between 1-1 and 1-Many situations is that Email transcends both, and is popular in almost every situation.

6.1.4: Hours of Daily Use Summary

Based on the insights when sorting responses to our survey by how many hours of electronic communication people use per day, we can observe certain trends. For example, in most cases people that use technology more per day are more likely to use each platform than people who use it fewer hours per day. This trend is less obvious with more traditional platforms, and more apparent with newer ones, especially social media platforms. In general, hours of use per day does affect on how many people use each platform, but does not show a much distinction between which ones people are using.

6.2: How Technological Literacy Affects Platform Choice

One factor we wanted to explore in this project was whether a person's technological literacy had an affect on the forms of electronic communication that they used. To analyze this,

we broke responses into three groups: those “very literate” with electronic communication, those “literate” with electronic communication, and those “somewhat literate” or less. These groups had 146,130, and 65 responses, respectively. To analyze technological literacy affected platform choice, we graphed the percentage of users in each group that used a certain platform in each situation, as we did with hours of use per day in section 6.1. In doing this, it allows us to easily compare users responses for different forms of electronic communication, and see trends in what groups are using (or not using) which platforms. Electronic Communication forms are shown on the x axes, and the percentage of users are shown on the y axes.

6.2.1: Technological Literacy Relative to 1-1 Situations

Based on Figure 6.2.1, we can see that in most cases, technological literacy shows a trend of more technologically literate people using electronic communication more often. Note that the graphs do not show any trends that technological literacy results in people using different forms of electronic communication, just more of it.

6.2.2: Technological Literacy relative to 1-Many Situations

In 1-Many situations, we can see similar trends from the 1-1 scenarios. As we observed from Figure 6.2.2, for most platforms, those more technologically literate used technology more. With certain platforms, such as email, technological literacy makes little difference. Although technological literacy in 1-Many situations does show differences in percentages of responses, each platform does have a similar ratio of responses, and there are no platforms more popular among more literate users, or vice versa.

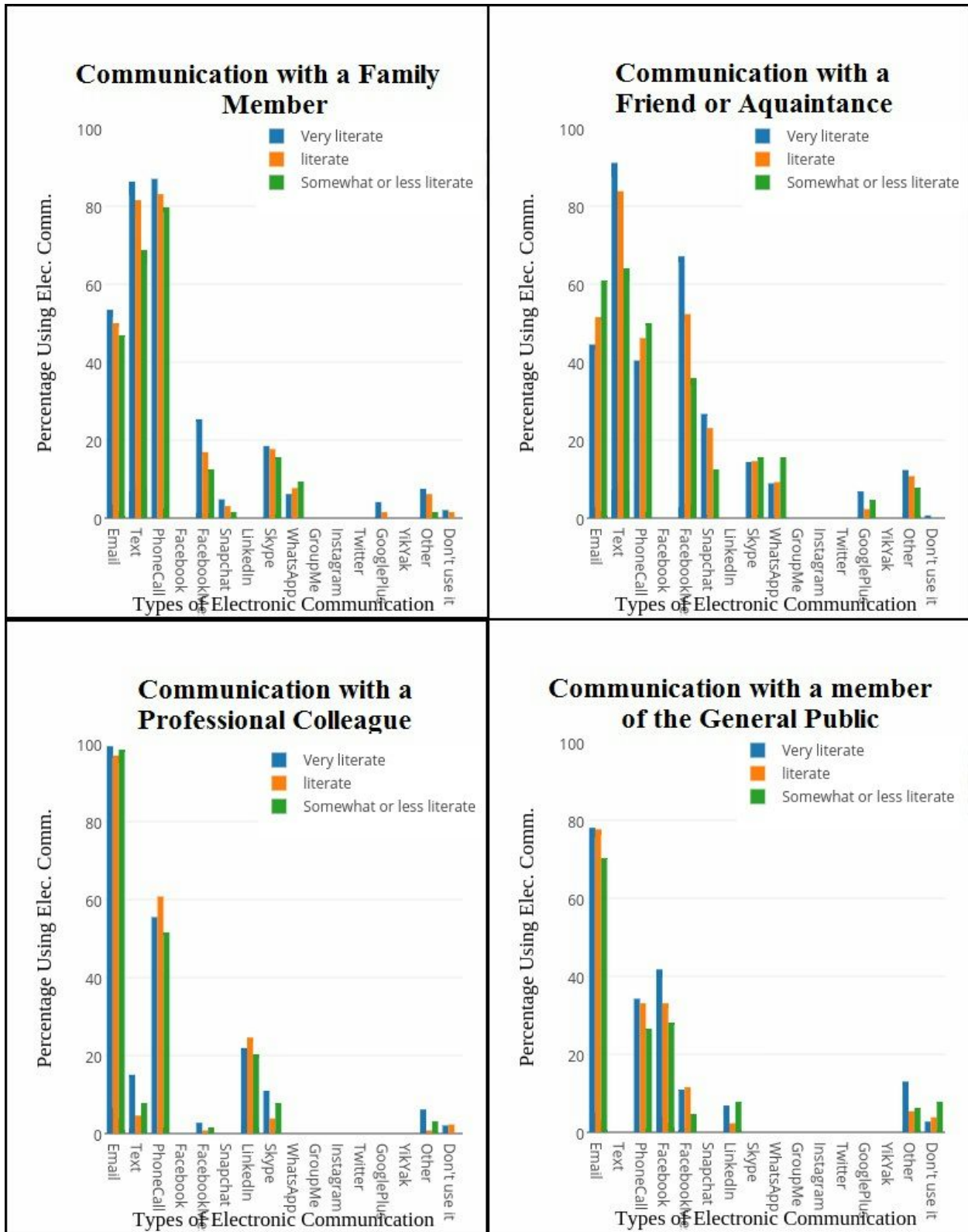


Figure 6.2.1: Analyzing Platforms Used in 1-1 Situations Based off of Technological Literacy

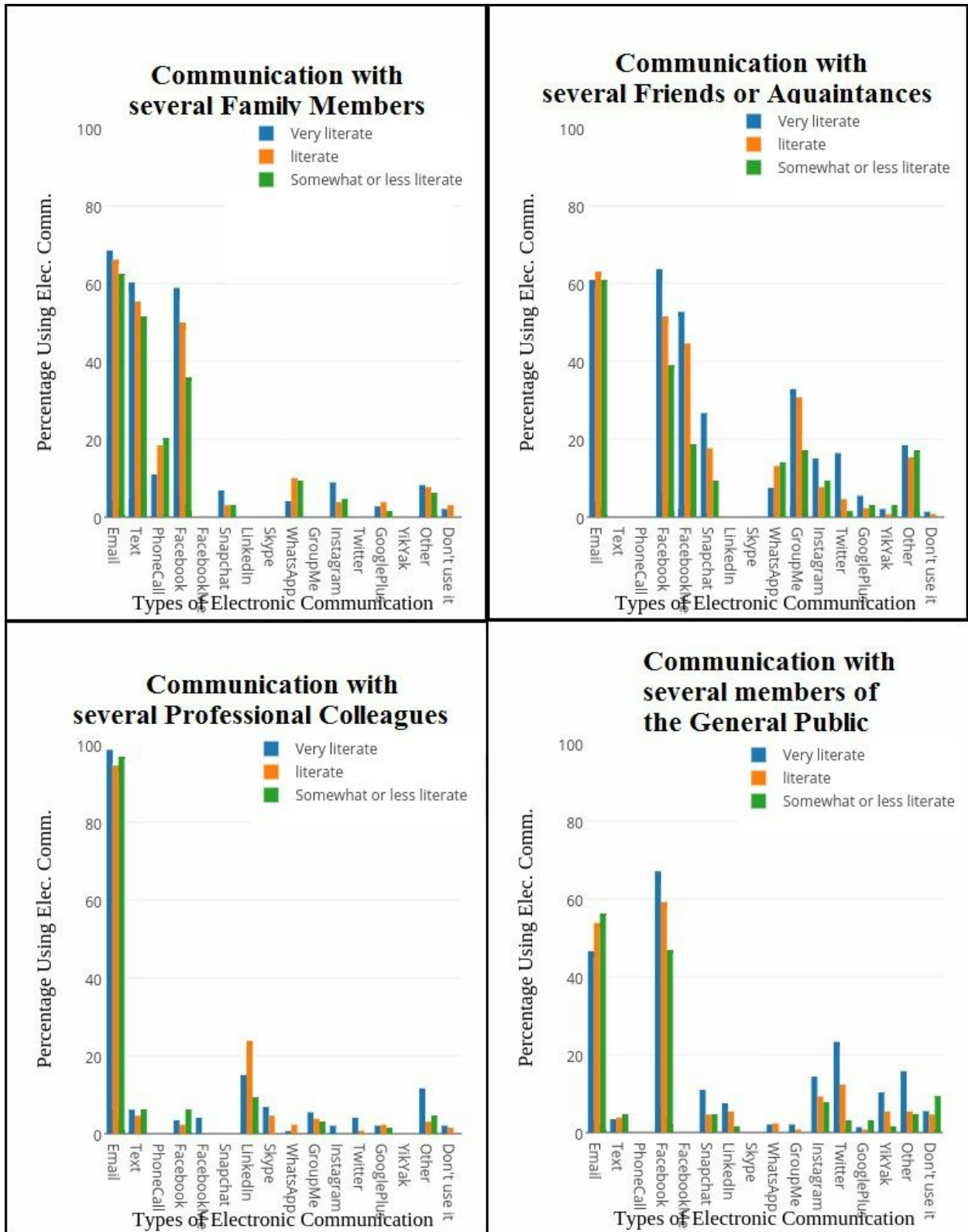


Figure 6.2.2: Electronic Communication Platforms Relative to Tech Literacy 1-Many Situations

6.2.3: Technological Literacy - 1-1 Compared to 1-Many Situations

In 1-1 versus 1-Many situations, there are a few notable observations. Similar to section 6.1, there was a wider set of technologies used in 1-Many than 1-1 situations. Also, as mentioned previously, Email is used pretty evenly by all forms of literate users in 1-1 and 1-Many scenarios.

6.2.4: Technological Literacy Summary

Based on the insights gained from separating responses by technological literacy, we can see that it does affect how many people used each platform, but does not necessarily result in different platforms being used. Similar to hours of use per day, more literate people used technology more, but this did not manifest itself in specific platforms.

6.3: How Different Scenarios Affects Platform Choice

The next factor we analyzed was whether someone used different electronic communication platforms based on the scenario they were in. These scenarios were based on two factors, who a user is communicating with, and how many people a user is communicating with. Unlike other observations, here we grafted the percentage of all survey answers that used each platform. This gives a more whole perspective as to how a situation a user is communicating in affects the forms of electronic communication they are using.

6.3.1: 1-1 Scenarios

Based on Figure 6.3.1, we can see that there are noticeable disparities in which platforms someone uses based on who they are communicating with. For example, when communicating with a family member, using a phone was most popular. When communicating with a friend or acquaintance, texting and then facebook messaging. When communicating with a professional colleague and the general public, email was most popular. One reason for these disparities might be based on the closeness of a relationship. Family implies a tighter bond, so phone calling makes more sense. Contacting a Friends or Acquaintance does not indicate as close of a relationship, which could be why other forms, such as texting, are more popular. What's also interesting is how certain forms get more or less popular when communicating with different groups of people, such as LinkedIn with Professional Colleagues and Snapchat with Friends or Acquaintances.

6.3.2: 1-Many Scenarios

Based on Figure 6.3.2 scenarios, there is also a difference in forms of electronic communication used in 1-Many scenarios. When communicating with multiple family members, email, Facebook, and Texting were most popular. With multiple friends or acquaintances, Facebook grew more popular. Email was used by almost all people communicating with Professional Colleagues. Communicating with the general public was done through facebook and email. Again we can see that when communicating with different groups of people there are very different sets of platforms that users deem appropriate.

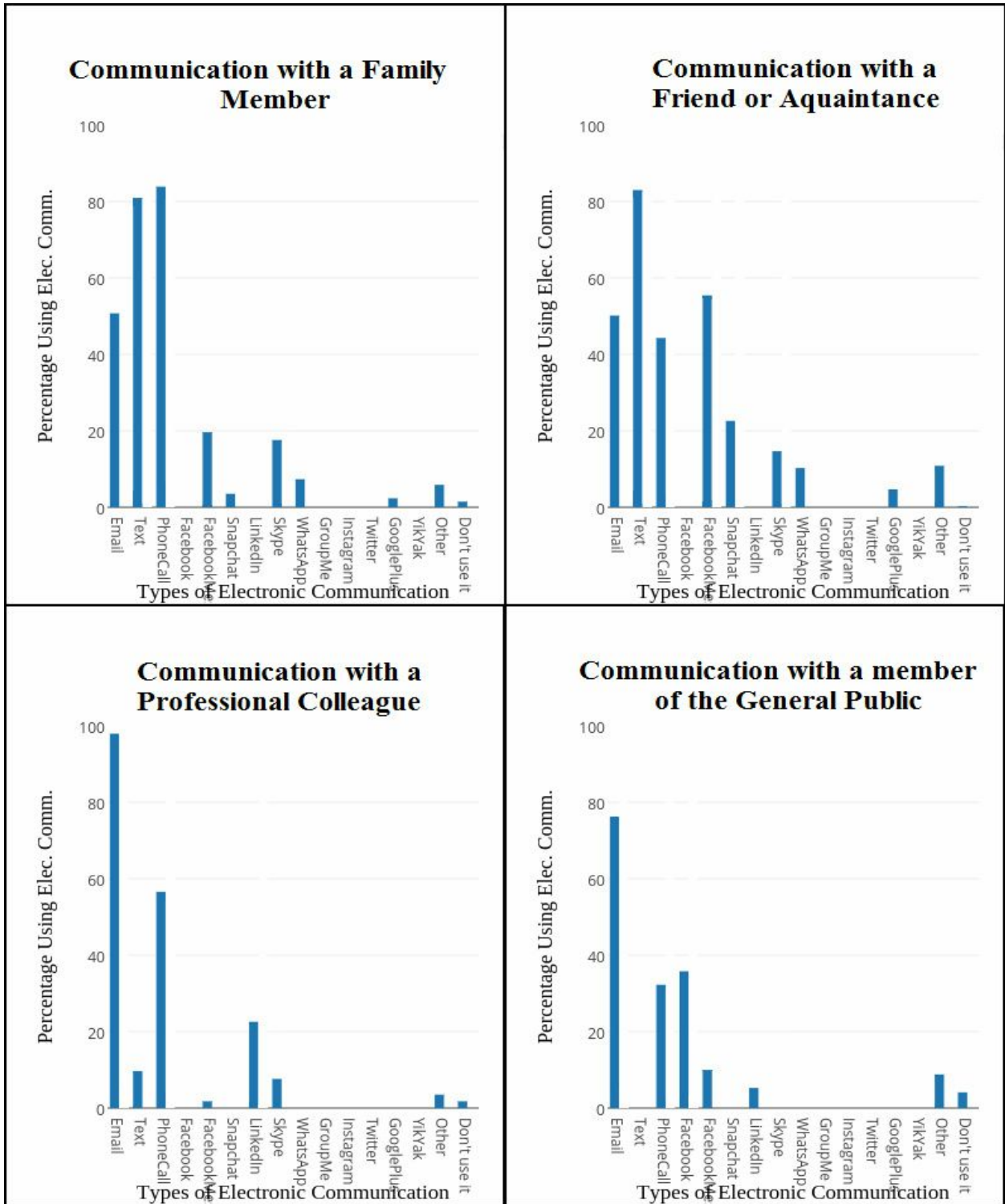


Figure 6.3.1: Analyzing Platforms Used in 1-1 Situations

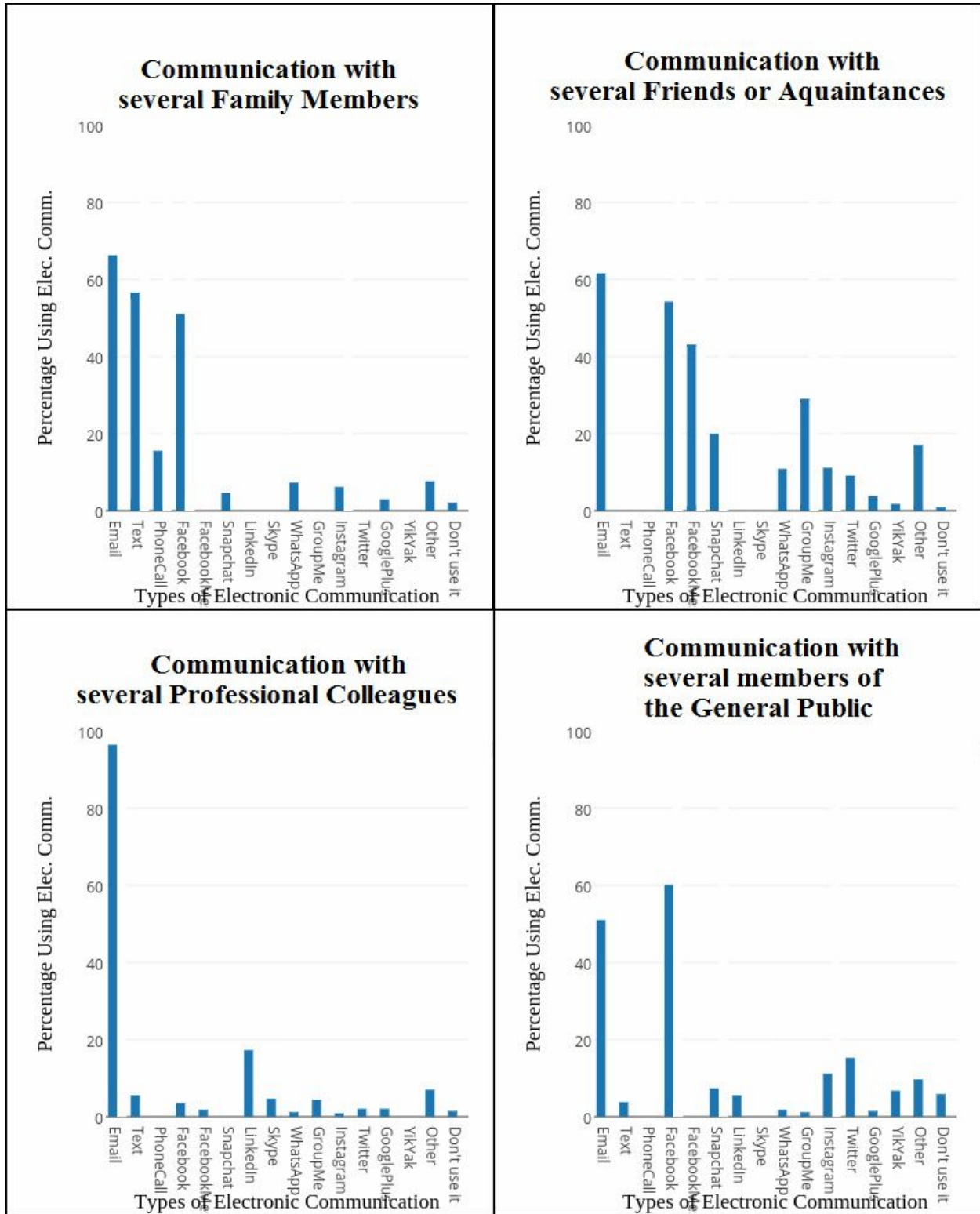


Figure 6.3.2: Electronic Communication Platforms used in 1-Many Situations

6.3.3: 1-1 Compared to 1-Many Scenarios

Thus far, we have observed that people use different communication platforms when communicating with different groups of people. However there is also different sets of electronic communication used in 1-1 versus 1-Many communication. For example, social media sites were much more popular in 1-1 versus 1-Many scenarios. Also, when communicating with many people, users had a much larger set of platforms that they used, whereas in 1-1 scenarios there were 3-4 that were primarily popular.

6.3.4: Scenario Summary

From each scenario, it is clear that there are different forms of electronic communication that are used the most. Also, 1-1 versus 1-Many scenarios result in various different platforms being popular as well. From these observations we can confidently say that the scenario a person is using electronic communication affects which platforms they will use. Overall, a variety of scenarios where electronic communication is needed is part of the reason so many platforms exist.

6.4: How Reasons for Use Affects Platform Choice

Another factor we analyzed was a person's reasons for using electronic communication, and whether this impacted the set of forms the used. On the survey, users had four potential responses as to why they used certain each forms of electronic communication in each situation.

The responses were then broken into three groups, those who said they used forms of electronic communication because they were “the easiest to use”, “what the people they were contacting used”, and they were “Easiest to communicate effectively with”. These groups had 66, 135, and 134 responses respectively. Only seven responses said they did not know why they chose forms of electronic communication, so they excluded from the analysis due to small sample size. We plotted the percentage of people in each of these groups that used different platforms in different scenarios, to visualize trends between the answers.

6.4.1: Reasons for Use Relative to 1-1 Situations

Based on Figure 6.4.1, we can see that there is little consistency in the responses. Unlike the case with hours or literacy observations, there are few trends or consistency we can observe from 1-1 scenarios.

6.4.2: Reasons for Use Relative to 1-Many Situations

The observations made earlier are similar with 1-Many situations. Based on Figure 6.4.2, we can see that there is little consistency in the responses. Little anomalies in percentages of use stick out. For example, people choosing platforms based on what the people they are contacting use are more likely to use Facebook to contact a family member. However, small observations like these do not indicate a larger trend. Unlike the case with hours or literacy observations, there are few trends or consistency we can observe from 1-1 scenarios.

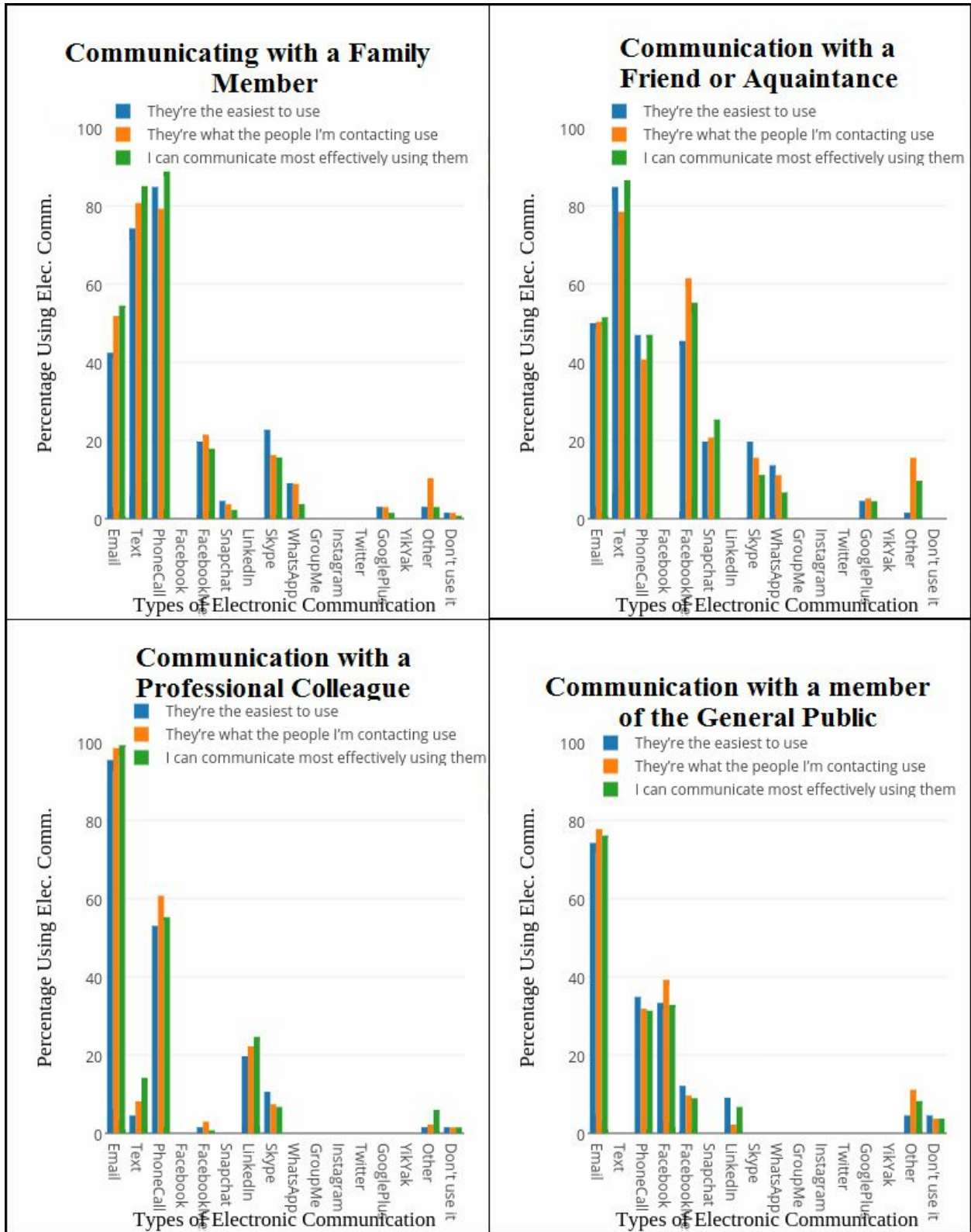


Figure 6.4.1: Analyzing Platforms Used in 1-1 Situations Based off of Reason For Use

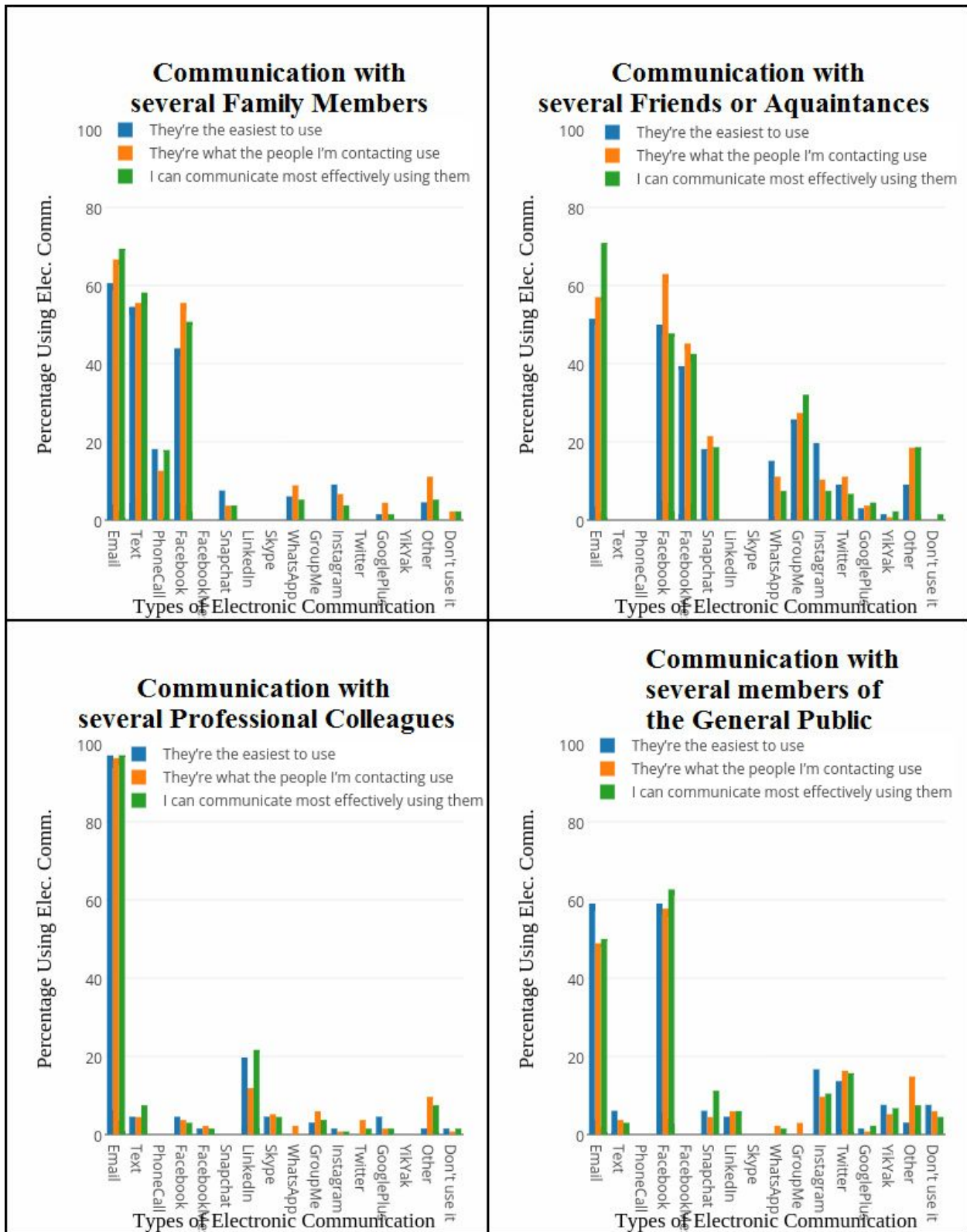


Figure 6.4.2: Electronic Communication Platforms Relative to Reason for Use of Use in 1-Many Situations

6.4.3: Reasons for Use - 1-1 Compared to 1-Many Situations

In 1-1 versus 1-Many situations, there are not many observations that pertain to reasons for use of certain platforms. There are more platforms represented in 1-Many situations, but this seems to be more of an observation of the scenario than reasons for use.

6.4.4: Reasons for Use Summary

There were few insights gained from users reasons for use. In general, we can say that a someone's reason for using electronic communication, based on our survey, does not affect the platforms someone uses. In the future, using more continuous options for this question could reveal better trends.

6.5: How Demographic Affects Platform Choice

The next factor we explored was whether a user's demographic influenced which electronic communication platforms they would use. The demographic information we collected on users pertained to their age and gender, so we will analyze how these factors in particular affect platform choice.

6.5.1: How Age Affects Platform Choice

The first factor considered as part of a person's demographic was their age. Survey responses for age included eight options. However, due to the size of demographics, we had to narrow these responses into three appropriately sized groups. The first group, 24 and younger,

included 205 responses. The second group, 24-49 years old, included 68 responses. The last group, 50 and older included 68 responses.

6.5.1.1: Age Relative to 1-1 Situations

Based on Figure 6.5.1.1, we can see that there is a notable difference between platforms used for electronic communication in 1-1 situations with regards to age. Several forms of electronic communication are much more popular with younger users, and are used less and less in the next two age groups. For example, texting, Facebook, and Facebook Messenger all are very popular among responses who were 24 or younger, but decline in popularity for older users. The opposite trend is seen with email, which is more popular with 50 and older responses than those 24 and under.

Another point of note is that when communicating with certain groups, platforms have a much more noticeable disparity. For example, when communicating with family or professional colleagues, the difference in platform use is subtle. However, when communicating with friends or acquaintances, there are more clear differences in platforms used than when communicating with family. One thing to consider in this instance is whether age is the only contributing factor, or age of a person being communicated with is also a factor. For example, family and professional colleagues age *probably* covers a wider age range than friends, which could account for why communicating with these groups shows less extreme results. We will discuss this more in Chapter 7.1.

6.5.1.2: Age Relative to 1-Many Situations

Figure 6.5.2 emphasizes some the trends observed in 1-1 scenarios in 1-many scenarios. Especially in communicating with Friends or Acquaintances, certain platforms vary with age. Another talking point based on this visualization is the fact that not only do younger age groups use different forms of electronic communication, they use a much wider range. Especially when communicating with Friends, 10% or more 50+ year olds only use 3 platforms, Email, Facebook, and Facebook Messenger. Under 20 users, conversely, use 9 forms of electronic communication in this situation.

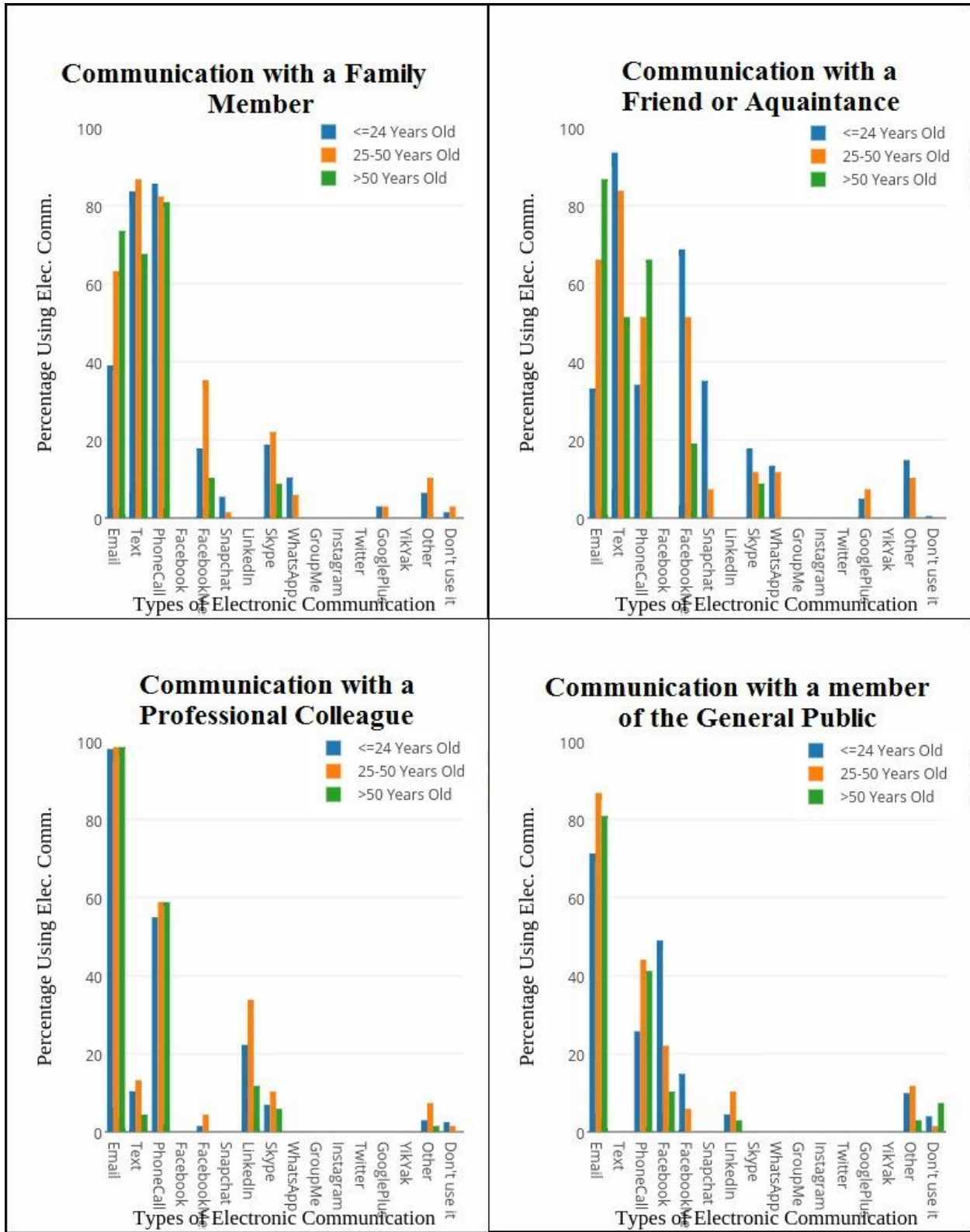


Figure 6.5.1: Analyzing Platforms Used in 1-1 Situations Based off of Age.

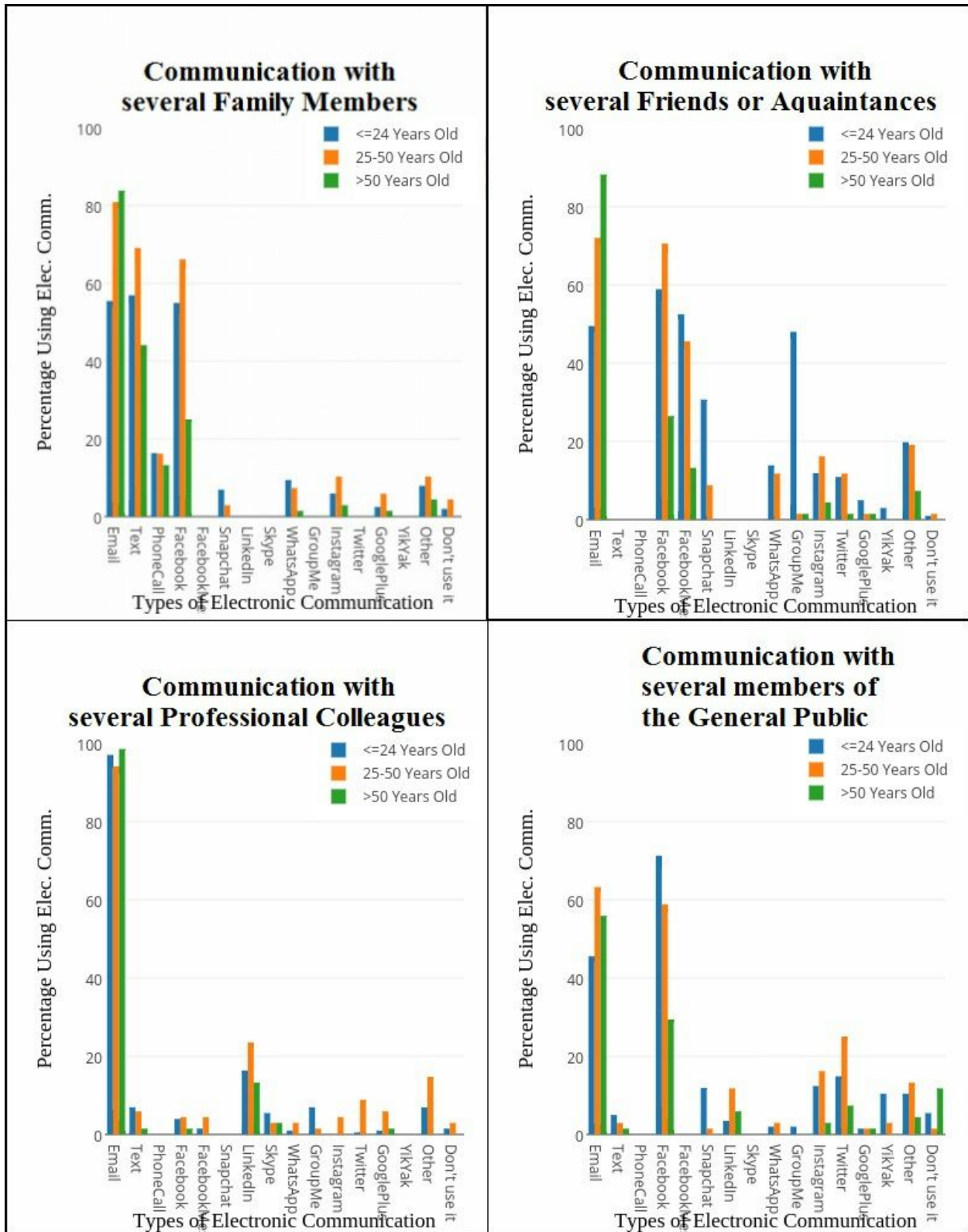


Figure 6.5.2: Analyzing Platforms Used in 1-Many Situations Based off of Age.

6.5.1.3: Age - 1-1 Compared to 1-Many Situations

As touched on earlier, 1-1 and 1-many responses both reveal similar results about ages influence on electronic communication platform used. The noticeable difference was the number of forms used. The youngest age group used noticeably more forms of electronic communication in 1-many scenarios than in 1-1 scenarios.

6.5.1.4: Age Summary

Based on these observations, we can confidently say that a person's age affects what forms of electronic communication they use. The older group had a particular set of platforms that they used. The younger group used a different set of platforms, and more of them. The middle group fell roughly in the middle

6.5.2: How Gender Affects Platform Choice

Another factor of the demographic was gender, and we analyzed whether males and females used different sets of electronic communication. In the survey, there were 194 male responses and 138 female responses. One point to keep in mind is that we did include an "Other" option for gender on the survey. However, with only 6 responses, this category was such a small sample size that insights gained from it could be misleading. To analyze gender, we graphed the platforms each group uses by showing their results for each platform. We then separated these graphs into 1-1 versus 1-many situations. Electronic Communication forms are shown on the x axes, and the percentage of users are shown on the y axes.

6.5.2.1: Gender Relative to 1-1 Situations

In 1-1 situations there is not a clear disparity between forms of electronic communication used by different genders. There are some very specific observations, for example that males were more likely to contact friends with Snapchat, Skype, or WhatsApp. Females emailed friends more, but males emailed family more. These observations are unlikely to be an indication of a greater trend, and more likely to be specific outliers.

6.5.2.2: Gender Relative to 1-Many Situations

In 1-Many situations, we can see similar trends from the 1-1 scenarios. Females used Facebook and Facebook Messenger more to communicate with several friends or acquaintances, whereas males used Snapchat and GroupMe. However, again, there is little variance in platforms used by gender, except in very specific situations.

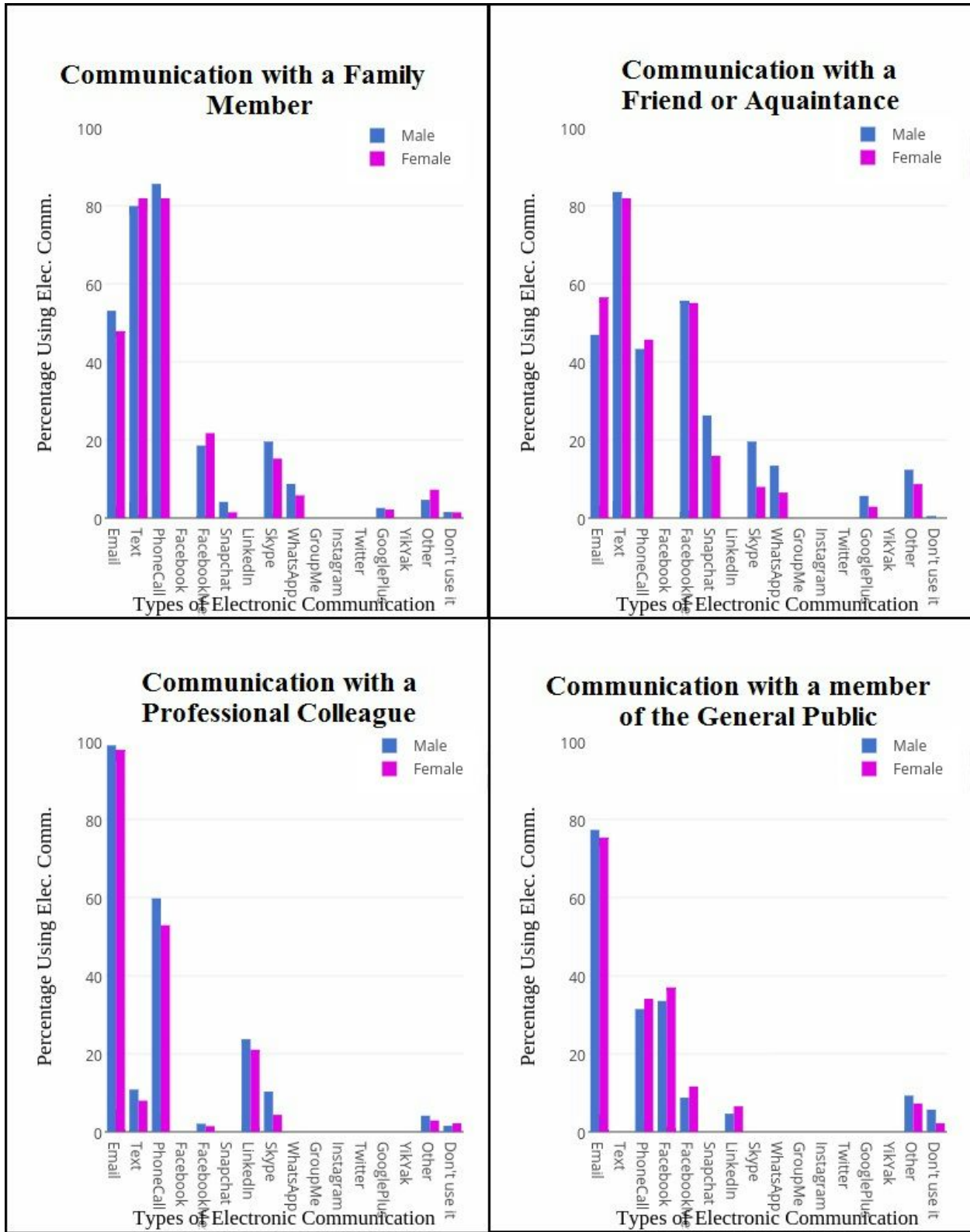


Figure 6.5.2.1: Analyzing Platforms Used in 1-1 Situations Based off of Gender.

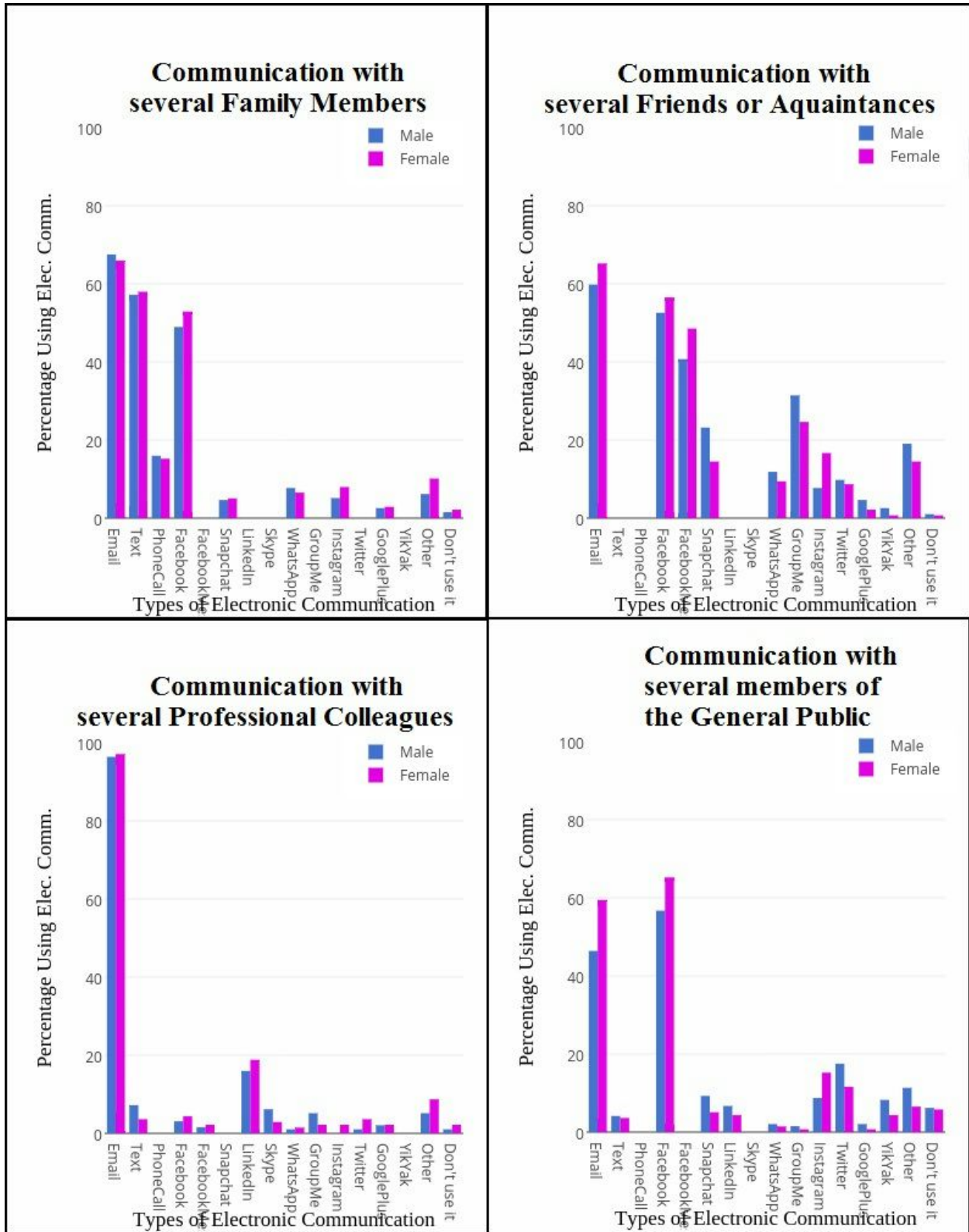


Figure 6.5.2.2: Analyzing Platforms Used in 1-Many Situations Based off of Gender.

6.5.2.3: Gender - 1-1 Compared to 1-Many Situations

In 1-1 versus 1-Many situations, there are few useful observations. Similar percentages of Male's and Female's used similar platforms for all 8 scenarios, regardless of number of people being communicated with.

6.5.2.4: Gender Summary

Based on the insights when sorting responses based on gender, we can confidently say that a person's gender does not affect the set of platforms they use in a given situation.

6.5.3: Demographics Summary

In this project, we analyzed two different factors of a user's demographic. First, we analyzed platforms someone used with respect to their age. Our observations showed that age impacted how someone communicated with technology, and which forms they used. Certain platforms grew more popular as age increased. while others grew much less popular. Gender analysis did not show an impact on user's communication platforms.

6.6: How Familiarity Affects Platform Choice

Throughout the analysis, it became clear that certain forms of electronic communication were used more than others. One thing the survey aimed to determine was whether forms of electronic communication were being used because they were popular, or because they were best suited to communicate in that situation. For example, platforms such as texting and emailing are very popular, but how much of that can be attributed to the fact that they are pre downloaded on

most phones. To address this, we determined the number of people that could be considered “users” of each platform, meaning they used them “almost daily” or “multiple times per day”. From here we graphed each platform in each scenario, with respect to the number of “users” of that platform.

6.6.1: Familiarity Relative to 1-1 Situations

In 1-1 scenarios, there is much more variety in platforms when they are adjusted with respect to daily users. Forms that had less general users are very popular in certain scenarios among those that use them, for example WhatsApp and Snapchat for communicating with friends. These results give an indication that although some platforms may lack total users, those that do use it find it just as effective if not more for communicating in a certain scenario.

6.6.2: Familiarity Relative to 1-Many Situations

Observing platform use in 1-Many scenarios shows similar trends from 1-1 scenarios. Certain forms show much more popularity when normalized for daily users. This is especially apparent with social media forms when communicating with friends or acquaintances and the general public. From 1-Many observations, Twitter, Instagram, and GroupMe all show more popularity and use than any other analysis we have conducted.

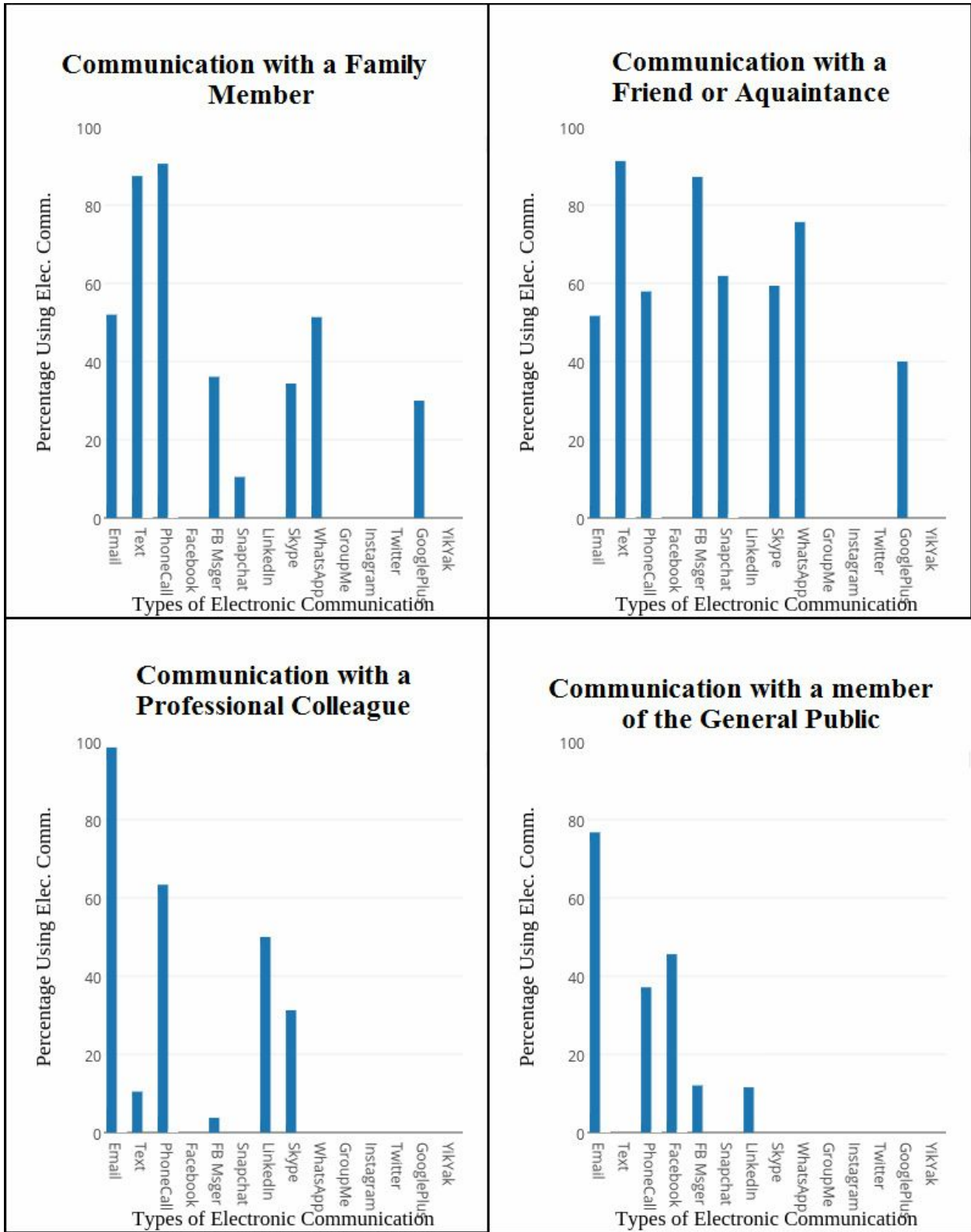


Figure 6.6.1: Analyzing Platforms Used in 1-1 Situations Based off of Familiarity

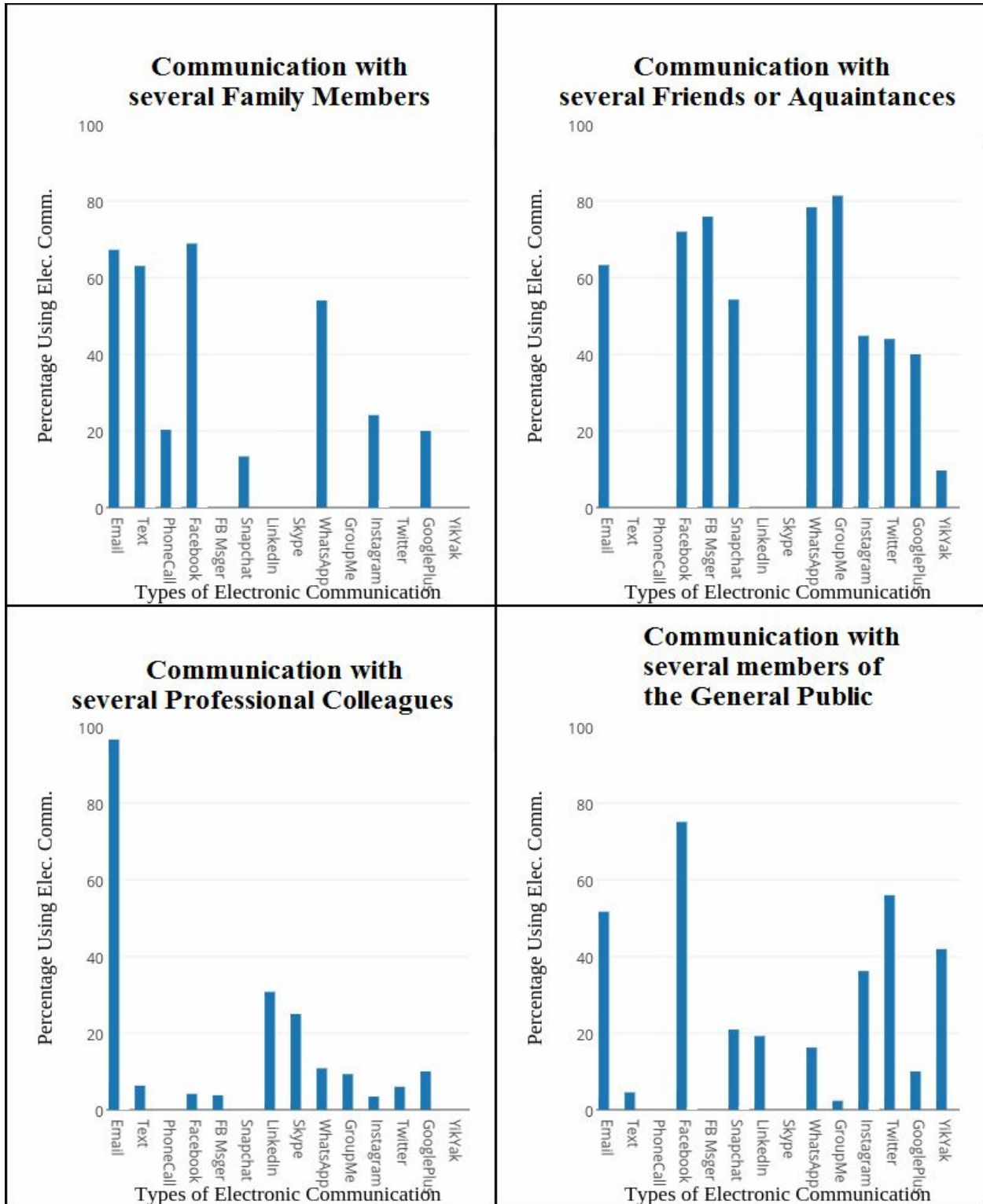


Figure 6.6.2: Electronic Communication Platforms Relative to Hours of Use in 1-Many Situations

6.6.3: Familiarity - 1-1 compared to 1-Many Situations

In 1-1 versus 1-Many situations there are similar observations, with different platforms. In each case certain forms with less total users are very popular with respect to their daily users. In 1-1 scenarios this is different forms of messaging or calling, such as WhatsApp, Snapchat, and Skype. In 1-Many scenarios this is different forms of social media, such as Instagram and Twitter.

6.6.4: Familiarity Summary

When we analyze with respect to daily users, certain forms have a much greater percentage of use. This helps to answer the question “Why do we use so many forms of electronic communication” because it provides evidence to the fact that even though platforms do not have a huge user base, the user base they do have makes dedicated use of their services.

CHAPTER 7: CONCLUSION

7.1 Future Research

There are some aspects of this topic that can be analyzed in future projects.

1. Expose our survey to a larger and wider demographic. Some perspectives or data we would have liked to analyze was limited by the number of responses, especially when trying to combine two factors (i.e. technologically literate 50+ users). More responses and a wider demographic would provide more consistency, legitimacy, and better trends for our conclusions.
2. As we began to see in the age analysis, age being communicated with may have been another factor influencing electronic communication usage. Reevaluating the survey to analyze this could prove to be a factor affecting electronic communication forms.
3. Another variable to analyze in the future would be whether one's platform choice changes with the content of the message that is being sent.
4. If we were looking to move outside the realm of surveys, one method of experimentation going forward would be to observe volunteers, and log real situations that they use electronic communication forms in.

All these options, going forward, could explore our this topic in more depth, and provide more concrete data for the trends and observations we witnessed in Chapter 6.

7.2 Summary

Technology has been expanding at an exponential rate. This technology influences the way we contact people and consume information on a daily basis. With this explosion of technology, a number of forms of electronic communication have emerged. Although it is convenient to have so many options to communicate with others, one may question why there are so many forms of electronic communication.

Our team investigated why there are so many forms of electronic communication over the course of seven months. During the first couple of months, we did extensive research in order to gain a better understanding on the topic of electronic communication. Through this research, we determined that it was possible to answer our challenging question by breaking it down into smaller steps. We needed to know what kinds of platforms people were using and how these platforms were being used in order for us to be able to produce this answer. Our team chose to analyze the most prevalent electronic communication platforms that are used today. We needed to have a good understanding of these platforms so we clearly defined these platforms and classified them into distinct categories.

Once these platforms were defined and classified, we analyzed them from different perspectives so that we could see how people were using these forms of electronic communication. After we decided what we were going to analyze, we created a survey that would be able to obtain the information that we wanted. Once we gathered enough data, we conducted a thorough analysis of it.

From these trends we were able to derive some answers as to why there are so many forms of electronic communication. We determined six factors that might affect which forms of electronic communication person might use, and narrowed these down to four that actually did:

1. Hours Per Day: The hours of use affects electronic communication use.
2. Scenarios
 - a. The number of people a user is communicating with affects electronic communication use.
 - b. The type of people a user is communicating with affects electronic communication use.
3. Demographics
 - a. Age of Users: The age of the user may affect electronic communication use.
4. Platform Use: Which platforms the user actually knew and used may affect electronic communication use.

One reason that there are so many forms of electronic communication is because some platforms are more effective to use when the number of people with which one is communicating changes. Platforms such as text and phone call seem to be more effective when communicating with only one person while platforms such as GroupMe and email are more effective when communicating with many people.

Another reason for a large amount of electronic communication platforms is because certain platforms are needed to communicate with specific groups of people. One can use phone calls and other messengers when communicating with family members and acquaintances but these would be impractical when in certain professional settings. Platforms such as LinkedIn and Email are a more acceptable choice when communicating in a professional setting.

Age is another factor that contributes amount of electronic communication platforms. People of an older age utilize the older forms of electronic communication such as Email and Phone calls more than those of a younger age who utilize text messages and Facebook more. The reason for this trend could be that these platforms emerged during these group's child, teenage, and young adult years which are usually a time where people are most socially active. Since the older population utilized these platforms during a socially active time in their lives, they might be more confident using them.

Familiarity is another factor as to why there are so many forms of electronic communication. Two people can use two different electronic communication platforms that do the same thing, but choose one platform because they are more familiar with it. Because there are still groups of people utilizing different platforms, there is no reason to get rid of these forms of electronic communication.

We were able to determine that these factors independently influenced what specific forms of electronic communication someone might use, and why there are, and will continue to be, so many different forms.

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