

## **AC 2007-2658: HELPING ENGINEERING STUDENTS WRITE EFFECTIVE EMAIL**

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# Helping Engineering Students Write Effective Email

## Abstract

With the widespread availability of text messaging, instant messaging, and email, people are communicating with more frequency, speed, and ease than ever before. However, some of the same characteristics that make electronic communication so appealing to so many young people may be leading to some nonstandard writing in educational and professional contexts. Interestingly enough, a review of the literature reveals few educational efforts to systematically teach the correct use of electronic communication. Thus, this paper discusses ways to teach engineering students how to communicate effectively and politely in their email interaction with professors, potential employers, peers, and others. An interactive class session has been developed for the discussion and practice of some of the conventions of email writing. Audience awareness on the part of the email writer is stressed as crucial to the accurate receipt of the writer's message; therefore, students learn the effect of tone and linguistic choices on different audiences. The use of culturally appropriate salutations and closings also is emphasized.

## Introduction

The use of electronic technology is pervasive on college campuses today. Between classes, students can be seen walking with cell phones pressed to their ears, checking messages they missed during class and making calls. Others are using their phones to text-message. In any university hallway, students are sprawled on the floors accessing the Internet, working on homework, "chatting/instant messaging," and reading and sending email on their laptops. Clearly, Generation Y is comfortable with communication technology.

The spatial restrictions of text-messaging and instant-messaging have created a new lingo that has found its way into email. Because of this, some email can be nearly undecipherable to people outside this tech-savvy demographic group. The abbreviations, sometimes obscure emoticons, and lack of standard grammar, punctuation, and capitalization which are common in emails among friends have caused some educators to wonder whether students' writing skills are being affected<sup>1-3</sup> and if this generation of students can communicate effectively with recipients outside its peer discourse community. This paper discusses the background of this potential problem and reports on the results of an informal in-class experiment to see whether educators have a valid reason to worry.

## Background

ABET 2000's emphasis on communication skills,<sup>4</sup> especially vital in the era of the global economy with burgeoning virtual collaboration among colleagues on distant continents, and the prevalence of email in the engineering workplace, means that engineering graduates have a greater need than ever for effective written communication skills.<sup>5</sup> Any email miscommunication can be costly in terms of job advancement, time, productivity, and establishing rapport with unseen recipients.

Unfortunately, miscommunication appears to be an all-too-common side effect of email. One study found that the intended meaning of email is fully understood by only about 50% of its readers, yet most people think of themselves as effective communicators.<sup>6</sup> Part of the inherent problem with email is the lack of nonverbal communication that generally accompanies people's spoken messages. Face-to-face, people are able to use tone-of-voice and a variety of types of body language to convey the nuances of a message. Even on the telephone, tone-of-voice still helps to clarify the actual meaning of the message. Emoticons such as the "smiley face" were originally developed to help convey the intended meaning of email messages, but not everyone is familiar with some of the less common ones, created out of various combinations of punctuation and other symbols. In any case, emoticons usually are considered inappropriate in more formal email contexts.

Of course, traditional hard-copy correspondence can suffer from the same lack of nuanced meaning. But email seems to occupy a hybrid status between writing and oral speech that causes some of its problems for its users—is it "written conversation."<sup>7</sup> or "letters by phone"<sup>8</sup>? The literature contains several papers outlining the ambiguity of email's identity, sharing some features of both writing and speech.<sup>7,8</sup> Like speech, email can be produced rapidly and often is transmitted unedited. With early email programs, it was often cumbersome to run a check on the spelling and/or grammar, but this excuse is no longer valid. However, many email writers hit the "send" button without reviewing their writing, and may later regret their haste when they see their errors in a reply. Unfortunately, errors in email writing sometimes can reinforce some readers' racial and/or xenophobic biases about the author—a misspelling in a message can be regarded as an innocent typographical error, sloppiness, or even a sign of weak educational preparation.<sup>9</sup> Finally, unlike spontaneous (and unrecorded) speech, email is not ephemeral—it can be stored on servers infinitely and can be forwarded and printed.<sup>7,10</sup> Just such a situation occurred in 2006 in which sent email messages with unsuitable content led to the resignation of a U.S. senator. "Sending inappropriate email is one of the greatest dangers in using the Internet for communicative purposes."<sup>11</sup>

Moreover, miscommunication in email and other media also can stem from linguistic or cultural differences. The impact of email on global audiences is especially important as North American companies do business over the internet. Many non-American cultures have overt ways of showing politeness; a major difference in many languages other than English is the existence of two forms of second-person pronouns (eg. a "polite" or "respectful" "you" and the common "you" used with subordinates such as younger people, intimates, and animals). Because the expression of politeness can vary according to culture, there is much opportunity for misinterpretation when the rhetoric does not seem to fit the conventions for politeness in the reader's speech community.<sup>12</sup> Related to this is the use of certain accepted salutations and signatures in business correspondence, in particular. Because of the increased informality of North American culture during their youth, many Generation Y members have not had the everyday experience of using courtesy titles such as "Mr." or "Ms." when addressing older adults, in contrast to earlier generations.

International students, even those from countries in the so-called "Outer Circle," in which English is one of the official languages<sup>13</sup> often need to acquaint themselves with the common North American phrases for correspondence greetings and closings. Thus, a greeting such as

“Dear Esteemed Madam,” which may be used to address a female with status in some countries, may sound antiquated to North American ears. International students need to learn that “status” has little importance” in this culture.<sup>14</sup>

Finally, the tone informality and use of humor found in the writing of many North Americans may actually be considered “offensive” to people in other parts of the world. This can include syntactic elements such as personal pronouns (as noted above), contractions, informal punctuation, and voice.<sup>13</sup> While a Japanese business letter writer may go to great lengths to create a good relationship with his or her reader, establishing rapport in written documents may be irrelevant to a French businessperson.<sup>14</sup>

How do undergraduate engineering students learn how to write email for non-peer audiences? Although information on email etiquette (a.k.a. “netiquette”) is readily available on the Internet and in the professional literature<sup>10,15-21</sup>, some of the information is contradictory (such as the contexts in which emoticons are acceptable),<sup>10,17</sup> and the status of email seems to be in flux.<sup>22</sup> Despite the availability of information on email etiquette, it is difficult to know if/how many students have accessed it. In addition, many engineering students have little opportunity in their already-crowded curriculum to take classes in professional writing where they might receive explicit classroom instruction or be exposed to textbooks with a chapter on email writing. With the likelihood that many current university engineering students have received no formal training in writing email, some professors and administrators worry that the sloppiness they have seen in emails and other correspondence from students might also appear in the students’ communication to audiences outside the university. Therefore, I developed a lecture to pass along some general email writing guidelines to undergraduate engineering students and to collect some information on their email literacy in the process.

## Methods

This study had two purposes—to give students an introduction to appropriate use of email and to see what they already know, given the same rhetorical purpose but three different specified audiences. Two required undergraduate engineering classes were used—the sophomore and senior seminars. At the beginning of each 50-minute class, the students were asked to fill out the regular information on the front side of their attendance sheets and then turn over the paper to write a fictitious email asking the intended recipient to meet. The addressee either was a potential employer, a professor, or a friend, and this was determined by the location of the students’ seat (the classes were held in large lecture rooms conveniently divided into three sections). These lectures on email etiquette were quite timely, as many of the students were actively corresponding with prospective employers several weeks following a very large engineering job fair on campus. The students were given about five minutes to write the email and then told to keep the sheets until the end of the class.

Although having the students write out an email longhand on paper was artificial, it was unavoidable since the classes are not held in computer labs. However, the rhetorical purpose was authentic in all three situations. A number of students even reproduced email templates to the top of the page to make it appear more like a real email.

The lecture covered a variety of topics: the characteristics of writing and speech and a discussion of where email communication fit in; the use of appropriate greetings; common rules of email etiquette and style for various audiences; how email reflects the author, positively or negatively; and how to establish appropriate tone in the message. At the end of the class, I informally questioned each section of the class about whether their emails had been suitably written, given the designated audience. For instance, I asked the section which wrote emails to potential employers whether any of the students had used emoticons in their writing.

## Results

After I collected the papers from the two classes, I separated them according to the intended audience. Taking two of the eight common rules for email writing documented<sup>16</sup>--“Use ‘online lingo’ abbreviations cautiously” (for example, “C U” and “OMG”) and “Reserve emoticons for personal communication” as the most likely indicators of audience awareness in the students’ writing—I calculated the percentage of such occurrences in each of the emails. In addition, the use of verb contractions is most common in more informal writing<sup>12</sup>, so I looked for instances of these as well.

I also searched for examples of phatic communication—communication used to establish rapport—to determine where students were most likely to use these. Adding words such as “dear” and “sincerely” can serve to create positive feelings in the addressee. Phatic words are most often omitted when people are writing emails to peers<sup>16</sup>, so it could be expected that the students’ emails to friends would have the lowest number of these linguistic forms.

Of the 99 emails written in the senior seminar, 36 (36.3 %) were addressed to a potential employer; 27 ( 27.2%) to a professor; and 36 (36.3 %) to a friend. In the sophomore seminar, a total of 182 emails was written--42 (23 %) to a potential employer; 44 (24%) to a professor; and 96 (53 %) to a friend. Because it seemed possible that there could be some differences in the results based on the students’ year in college, results were figured separately for each class. It should be noted that although nearly 30 percent of the undergraduate enrollment is international, I did not attempt to separate their responses by U.S. citizenship or visa status.

## Greetings

As mentioned above, the emails to friends could be expected to show the lowest incidence of greetings. In fact, 30% of the sophomore emails contained no greeting at all; 40% began their emails with “Hey +/- a personal name or something generic such as Dude or Man;” and a total of eight different greeting were used. Yet among the senior emails to friends, only one email (3%) omitted a greeting; 56% began it with “Hey + /-;” and a total of nine different greetings were used.

In their email to professors, both the sophomores and seniors used greetings 100% of the time. Interestingly, the sophomores wrote “Dear + name” in 45% of their emails and “(Prof)essor +/- name” in another 40%. However, the seniors preferred “(Prof)essor +/- name” in 59% of the emails and “Dear + name” in only 22%. A total of only five different greetings was used, and “Hey” was not one of them.

Although all the senior emails to potential employers included greetings, 7% of the sophomore messages did not. Of the seven different greetings used by the sophomores, “Dear + name” occurred in 60% of the emails, followed by “Mr./Ms. + name)” in another 12%. Among the eight greeting options used by the seniors, “Dear + name” led with 44% and “Mr./Ms. + name)” in 25% of the emails.

### Closings

By far, the most popular way for sophomores and seniors to close their emails to friends was with the sender’s first name, 44% in both groups. For the sophomores, the next most common closing was using no closing at all (14%), followed by some form of “Later” (7%). The variety of closings used by the sophomores was extensive—there were 25 different closings, ranging from online lingo (eg., <3, CU~, l8tr) to a closing as formal as “Regards.” Seniors only used 13 different closings in their emails to friends; the next most popular after their first name was a form of “Later.” These closings also varied from “Bye ^\_^” to the formal “Best Regards” and even “Sincerely.”

Not surprisingly, there was a great difference in the nature of the closings used in the emails to professors. Because of the large public state university context, it was clear from the emails that some students had never interacted with their professors. Many of these emails started, after a greeting along the lines of “Dear Prof. X,” “This is [first name last name] from your \_\_\_\_ class.” Since the students typically asked the professors to meet at some time other than the regular office hours, many of the closings tended to take some form of “thanks.” Of the sophomore emails to professors, 43% ended with “thanks +,” as did an almost identical 44% of the senior emails.

In the emails to potential employers, some variation on “Sincerely” accounted for 40% of the sophomores’ closings, followed by another 31% using some form of “Thanks.” In the senior emails, the results were reversed, with “Thanks +” in 33% of the emails, followed by “Sincerely” in 19%, and no closing (or name) in another 19% of them.

### Contractions

As predicted, verb contractions appeared most often in the emails to friends: 62.5% of the sophomore emails contained contractions, while they appeared in 64% of the senior emails to friends. Of the 17 different contractions used by sophomores, the most popular was “let’s,” followed closely by “what’s,” and “I’m.” For the seniors, of the 11 different contractions they used, “let’s” was most common, followed by “what’s” and “how’s.” Since email authors frequently omit punctuation, especially in informal messages, it was not surprising that the apostrophe that belonged in the contractions often was missing. However, this was *not* the case in the use of contractions in the two other categories of email.

The results of the use of contractions in the emails to professors were contradictory. While the sophomores used contractions in 29.5% of their emails to their professors, the seniors only used them in 7% of the emails. Again, the sophomores showed more variety in their choice of

contractions, using seven different ones, of which “I’d” was the most popular, followed by “I’m.” Only two senior emails, or 7% of the total, used contractions and both were “I’m.”

Finally, 19% of the sophomore emails to potential employers used contractions, with “I’d” and “I’m” the most popular out of only five different contractions used. The seniors used the contractions “I’m” and “I’ve” the most out of only four different contractions; 25% of their emails to employers contained contractions. Given the seriousness of this writing context, it was surprising that more seniors used contractions in these emails than in those written to professors. Interestingly enough, three of the senior email authors had originally used contractions but crossed them out and substituted the long form of the verb phrase.

### On-line Abbreviations and Emoticons

Neither of these showed up to any extent in the emails of both seniors and sophomores. Neither group used any online abbreviations in their emails to potential employers or professors. Only one sophomore author used a smiley face in an email to a professor, while one senior used ^\_^ in an email to a potential employer. Even with their friends, sophomores only used online abbreviations in 4% of the emails and emoticons in 8%. Seniors used online abbreviations in 8% of their emails to friends and emoticons in 14%.

### **Discussion**

Given the emails my engineering colleagues and I have received from students over the years—with unusual greetings such as “Hello Lax,” “Professor Joanne,” and “Joan” (repeatedly misspelled), and self-centered requests/commands to meet students at night or on weekends (the best times for *their* schedules)—I was fully expecting to find similar examples among the couple hundred emails I collected in the two classes. Surprisingly, very few were inappropriate in any way (although there were a couple of students in each class who saw the exercise as an opportunity for expressing their sense of humor). Among the emails to employers and professors, there were no examples of inconsiderate tone, requests for meetings beyond the normal workday or workweek, or odd-sounding salutations. Perhaps the students were on their best behavior, knowing that the papers would be turned in to their professors as evidence of their attendance that day.

In any case, it is heartening to see that the majority of students demonstrated some awareness of the audience to whom they were writing. Perhaps this is a result of prevailing writing pedagogy in their first-year composition classes emphasizing the need to analyze audiences before writing. The vast majority of the informal writing, including contractions, lack of greetings or signatures, missing capitalization and punctuation, incorrect spelling, and incomplete sentence structure occurred only in the emails written to friends, right where it was most acceptable. The few nearly incomprehensible (at least to a non-Generation Y member) emails were found exclusively in the emails to friends. The language of the emails to friends reflects the playfulness of peers planning to get together and have fun. On the other hand, with the other two email audiences, the students clearly seemed to realize that they were dealing with less familiar audiences, and that the stakes of their communication were much greater. In the majority of the emails addressed to potential employers and professors, the student authors politely, formally, and with

few linguistic errors, asked for favors which could lead to employment or better grades (through an opportunity to clarify their understanding of the course material). The engineering students' attention to writing was quite similar to a study showing carefully constructed emails of international students requesting enrollment in the class of a professor with whom they were unfamiliar.<sup>11</sup> The implication of the current study is that the “trickle up” concern of some educators<sup>1-3</sup>—that the informality of instant messaging and text messaging would adversely affect more formal rhetorical situations—is not substantiated here.

However, the variability of the format and salutations and closings of the students' emails to employers and professors seems to justify some explicit instruction on writing emails to less familiar audiences. Regular use of the typical email template, with its designated spaces for “To” and “From,” may have influenced those students who omitted either the greeting or closing in their emails. In these students' minds, perhaps the use of either would have been repetitious and a waste of time in a medium characterized by its speed and efficiency. Yet a potential employer may see the omission of a salutation and/or closing as a lack of courtesy; in fact, an Internet survey asking participants “Which Netiquette issues aggravate you most?” identified “including no hello or thank you” as one “annoying behavior” in email use.<sup>19</sup>

The physical placement of email greetings and closings is another issue. Many of the students included both greetings and closings in the text of their messages, without using vertical spaces to separate them from the texts. For example, it was relatively common to see a phrase such as “Hey, what's up?” both set off by itself as a greeting in one email and as the first sentence of the message in another. The same situation occurred in the closings, where some form of “Thanks” could appear spaced down a couple of lines in one email, and serving as the final line of the message in another one. In addition, students put the separated closing in various places between the left and right margins, when traditional letter format would call for the closing to be flush left. Finally, students need to pay attention to the use of signature files at the end of their emails. Students often use this area to express a personal opinion or perhaps to highlight a favorite quotation, and some signature file content may be offensive to unfamiliar recipients (eg. typically sensitive topics such as sex, politics, religion, and race).<sup>10</sup> Therefore, signature files should contain only the student's personal contact information.

Another formatting issue—not obvious, of course, in the students' longhand emails—is how email can differ from the way it looks on the writer's computer screen to the way it appears on the reader's screen. To preclude this situation, at least one source mentioned the need to make certain that the email text-wrap function is set below 76 so that the format will be easily readable for the recipient.<sup>10</sup> Students can check the appearance of their email by sending it to themselves first before sending it to its intended recipient. Finally, because it is not clear that our students have ever learned *what* goes in email correspondence to potential employers, specific instruction in content (of a cover letter, for example) should be taught along with the *how*, or formatting of the email. Websites such as *graduatingengineer.com* and the online writing lab at Purdue University, and textbooks such as *Pocket Book of Technical Writing for Engineers and Scientists* and *The MIT Guide to Science and Engineering Communication* have helpful information on professional correspondence which can be adapted to email.<sup>18,23,22</sup>

## Conclusion

Today's students need to be prepared to communicate electronically with audiences throughout the world. Since email may be their first (and perhaps only) contact with someone, students must understand how the effort they put into their email will create a positive (or negative) impression. Despite English being the lingua franca of the scientific/business world, email writers need to be aware of culturally appropriate greetings and signatures. In addition, adopting the appropriate tone in email discourse is very important to the reception and successful interpretation of the intended message. Indeed, with the large numbers of international undergraduates currently enrolled in North American engineering programs, we have an additional obligation to instruct these students in the use of appropriately worded email correspondence as many of them seek internships and full-time employment in North America after graduation.

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