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Bryan Marshall

Georgia College & State University

Peter Cardon

University of South Carolina

Douglas A. Goings

Georgia College & State University

Sally Humphries

Georgia College & State University

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An Exploratory Study of the Impact of Formatting on Email Effectiveness and Recall

Bryan Marshall
Georgia College & State University
USA
bryan.marshall@gcsu.edu

Peter Cardon
University of South Carolina
USA
pcardon@sc.edu

Douglas A. Goings
Georgia College & State University
USA
douglas.goings@gcsu.edu

Sally Humphries
Georgia College & State University
USA
sally.humphries@gcsu.edu

Neil Jones
Georgia College & State University
USA
neil.jones@gcsu.edu

ABSTRACT

Although literally trillions of emails are sent annually, little empirical research exists about how formatting of emails impacts email effectiveness. Abundant research exists about the use of subject lines, yet little research addresses the formatting of email content. Many experts from the business communication field have offered advice on effective formatting. We conducted an experiment that controlled for formatting of email messages. The first email message was a job announcement. The second email message contained identical content yet employed what are considered best practices for formatting. We found that university students who viewed the formatted message were significantly more likely to perceive the advertised job as attractive. Furthermore, they were significantly more likely to correctly recall facts about the job. This lends credibility to existing advice from the business communication field about effective formatting. It also serves as a foundation for additional and more nuanced research about an issue that nearly all professionals face on a daily basis.

INTRODUCTION

According to the Radicati Research Group, the number of world-wide email users will grow from 1.2 billion in 2007 to 1.6 billion in 2011. In 2007, the average user sent 34 emails and received 99 emails every day (Radicati Group, 2007). Not surprisingly, email users complain about feeling overwhelmed by the volume of messages they receive and keeping track of these messages (Whittaker, 2005). Mass email messages, in particular, cause significant loss of time in the workplace. By one estimate, the time employees spend deleting junk email costs companies nearly \$22 billion a year (McAfee, 2003). While the time spent deleting junk email has been quantified, the intangible loss of information due to email *noise* is not so easy to quantify. Moreover, from the email sender perspective, constructing effective email messages in this climate message bombardment is especially important.

Although literally trillions of emails are sent annually, little empirical research exists about how formatting of emails impacts email effectiveness. Abundant research exists about the use of subject lines and message content (Bellotti, Ducheneaut, Howard, Smith, & Grinter, 2005; Jenkins, 2006; Ngwenyama & Lee, 1997; Rudy, 1996; Stallings, 2009; Takkinen & Shahmehri, 1998; Zack, 1994), yet little research addresses the formatting of email messages. Many experts from the business communication field have offered advice on effective formatting. The purpose of this study was to identify the impact of applying this advice. We constructed a non-formatted and formatted version of identical messages and asked two groups of respondents to assess the degree to which formatting increased message persuasion and memory recall.

The paper continues with a review of literature concerning document formatting, readability, and document organization. This review was used to prepare the documents employed in the study to which students responded, yielding research data. Discussion of the research data concludes the paper.

LITERATURE REVIEW

Over the last 15 years, email, as a communication channel, has evolved from its origins as an electronic postcard to a more proper and professional way to communicate in the business environment. Email is being used for more than pure business—Neville, Marsden, McCowan, Pagliari, Mullen and Fannim (2004) support email as an effective, quick access medium between medical professionals and patients, for example. As this evolution has occurred, organizing one's thoughts, composing carefully, and being concerned with grammar and punctuation has become more important. Ironically, as computer-mediated communication norms have increasingly become less focused on standard formatting compared to traditional business communications, effective formatting may be becoming increasingly important in persuasive communication (Guffey, 2009).

Research has shown most email users will only look at an email for about 15-20 seconds (Email Sherpa, 2005). This short time period does not allow much time for the recipient to read long and poorly formatted messages. Loren McDonald, Vice President of Marketing at Email Labs, suggests that users can scan approximately 50 words in the 15-20 seconds they allot to each email (Email Sherpa, 2005). Add to this the constant distractions (noise) we are now getting in

email messages, by way of animated pictures or crazy backgrounds, and the recipient's ability to scan 50 words is diminished. A quick snapshot view of email messages is sufficient for many people to catch the necessary meaning in a message. As a quick snapshot is vital for understanding a message, research concerning the design of questionnaires by Mullin, Lohr, Breshahan, and McNulty (2000) offers tantalizing insight that is applicable to email design. They want documents that are free of irrelevant information (noise) that would reduce the significance of relevant information. Jenkins and Dillman (1997) suggest creating a "natural reading flow," where information starts at the top of the "page" and runs unfettered down the page. This might be enhanced through the use of bulleted lists. They suggest avoiding techniques that add special emphasis to words or phrases as it tends to lead to uneven reading that might dilute the intended meaning. In the past, writers would often emphasize words and phrases by underscoring or by using italics. Additionally, according to Mullin et al. (2000), writers who wish to facilitate reading and information retention on their recipient's part should use a serif typeface, like Times New Roman; avoid over use of italics; avoid use of all upper-case lettering; and never use full-justification.

Besides typographical conventions that promote rapid reading and prolonged retention, research has focused on content and placement of information to enhance understanding. Previous marketing research on subject lines suggest 1) that it is better to front load the subject line with important information; 2) it is important to keep the subject line as short as possible to convey the message; 3) it is okay to use longer subject lines when there is compelling reasons to do so; and 4) to test the subject lines before mass emails are sent out (Stallings, 2009). Interestingly, research advised writers to keep subject lines short and direct.

The following is a representative set of principles for effective use of email messages by Jenkins (2006):

- Design email messages to capture the limited window of opportunity allowed by recipients.
- Define clearly the communication goal and link message to recipient though place emphasis (placing the most important information or argument first).
- Create layouts so recipients can easily and quickly scan and reference contents.

In addition to the design principles offered above by Jenkins, other design principles should ensure recipient understanding and responsiveness. Headings, like those frequently found in business reports and journal articles, should be used in emails. The use of headings provides context that is often missing in emails. Lack of context may reduce a recipient's understanding and reaction to a message and may cause incorrect cataloguing for archiving purposes (Whittaker, Bellotti, & Gwizdka, 2006).

Email has been called a lean medium—as van der Meij and Boersma (2002) put it, "It is not much more than white space on a computer screen . . ." That absence of structure can be invaluable for creative tasks; but such freedom in business, however, as people work with accepted protocols for written communication, can lead to lack of clarity and unneeded repetition. In the study by van der Meij and Boersma, email content was categorized as either **communication** (inquiries about ability and skill), **social talk** (comments about pop music and sports), or **domain talk** (remarks about the task at hand). In business, we would consider domain

talk to relate to business. It is that subset that demands the greatest level of formatting so that recipients can glean context, goal and objective.

Because much of what we do in email communication is domain talk or business related messaging, experts suggest that email messages may be archived (Neville et al., 2004; Whittaker, Bellotti, & Gwizdka, 2006). Whether the storage of email is intentional or not (an issue of permanence), it is critical that writers carefully consider content, tone, and correctness. Experts also suggest remembering the “top of the page” rule, which suggests that conciseness and brevity are key composition considerations. In addition, it is suggested that email be used only for routine communications, and not as a channel for complex, complicated, or negative messages. Given this straightforward mission, a direct approach to the organization of the message is appropriate.

Direct organization highlights the goals of an email message by allowing the writer to frontload the message, putting the important information first. This organizational strategy allows for a more concise message—the ultimate goal of a good email. Indirect organization allows the writer to develop the context of the message before presenting the main point. This requires a longer message and is more appropriate for persuasion or difficult communications. The hallmarks of email, brevity and conciseness, are often missing in the indirect approach, and thus may not be appropriate for this channel of communication. It would be easy to miss the main point in an indirectly organized email if the reader is applying the “top of the page” approach to reading email.

METHODOLOGY

We created two email messages with nearly identical content. One email contained nearly no formatting features, whereas the other employed more effective formatting by using space more effectively and by using bolding, italics, and underlining to make certain parts of the message stand out (see Figures 1 and 2).

We chose to make the message a job announcement from Verizon Wireless. The job announcement is a real announcement that was originally placed on the Website *www.collegegrad.com*. In the original version, there was essentially no formatting applied. Our choice of a job announcement for a wireless service provider was based on an initial assignment in business communication courses where students are asked to identify effective persuasive communications. In recent semesters, students are most likely to describe communications involving the sale of cell phones. Furthermore, with the exception of speeches, students are most likely to describe emails as the medium for these communications (more often described by students than the mediums of interpersonal conversations, sales letters, or advertisements). Thus, we felt this was a topic that students could relate to in terms of content and medium.

We surveyed 135 college students. There were 71 males (52.6%) and 64 females (47.4%) in the sample. Over half of the sample were sophomores (59%), followed by juniors (31%), and seniors (10%). Students were given an online survey. The first group (60 students) viewed the unformatted email message and the second group (75 students) viewed the formatted email message.

Figure 1: Unformatted Email Job Announcement.

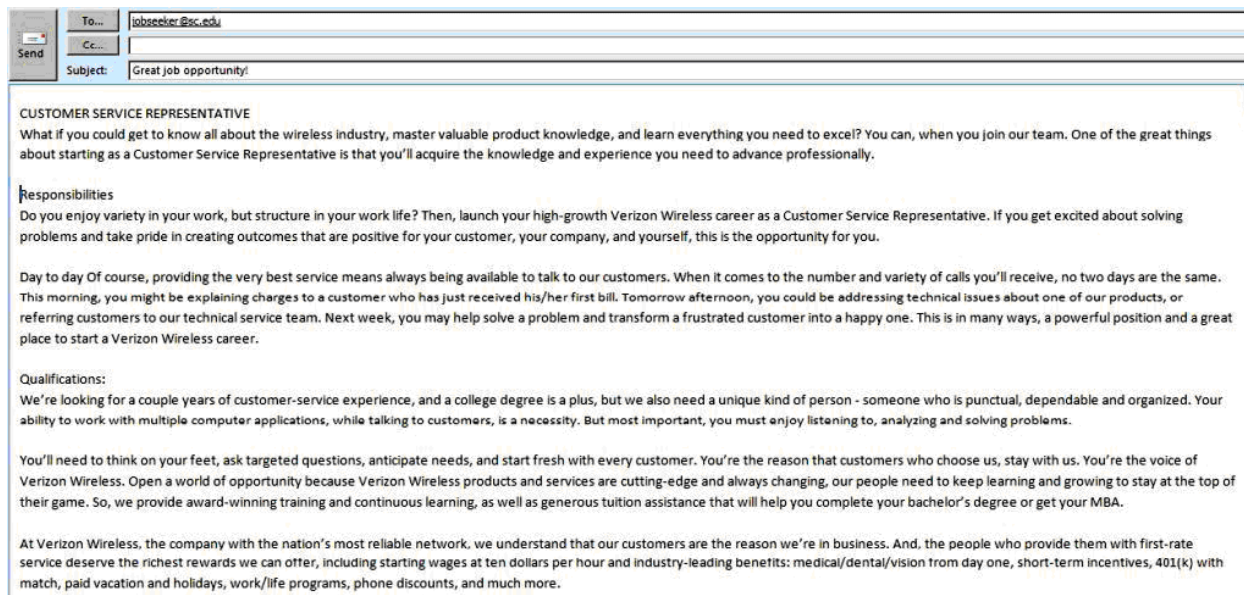
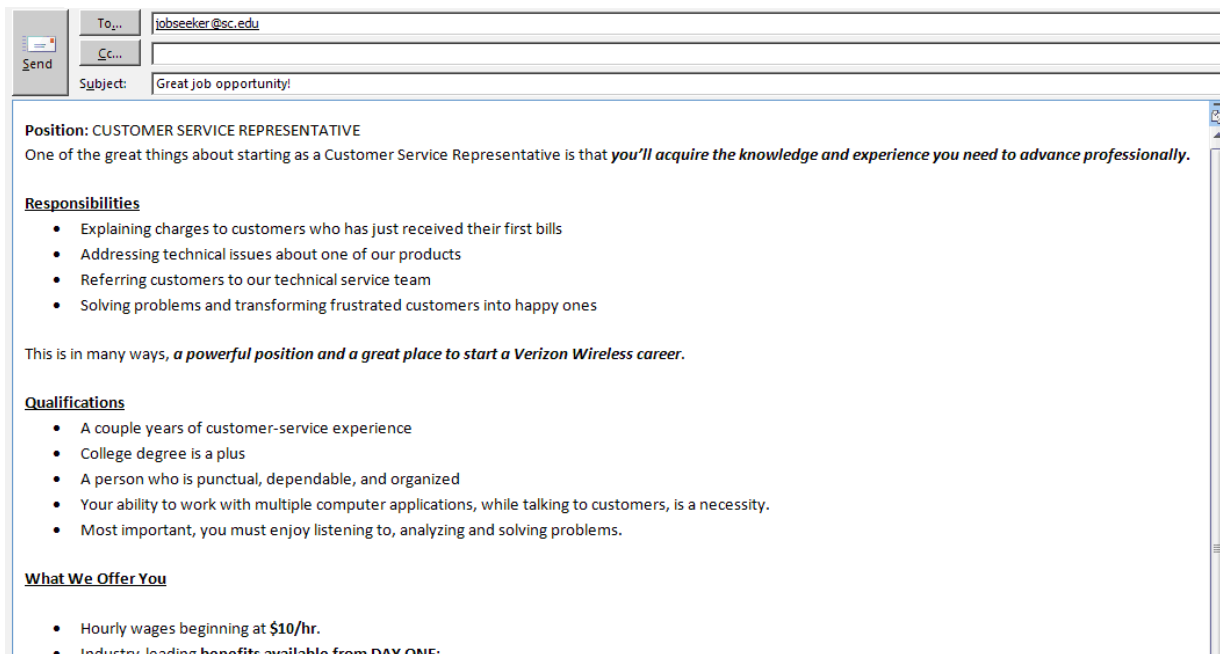


Figure 2: Formatted Email Job Announcement.



After viewing the email message, students answered three questions about overall job attractiveness (see Table 1). Also, they answered nine questions about the content of the email message to ascertain see how much information they could correctly recall. These questions dealt with benefits provided by the job, such as tuition assistance, bonuses, travel opportunities, medical insurance, and so on.

RESULTS

We found that formatted message (Figure 2) was more effective in terms of persuasiveness and ensured that recipients recalled message content more accurately (see Table 1). This provides support that effective formatting can significantly influence the persuasiveness of the message. Furthermore, respondents who read the formatted message were able to more correctly remember facts about the job. Moreover, these impacts were considered medium to large, based on the classification scheme by Kotrlik and Williams (2003), of effect sizes between .4 and .6 being considered relatively strong.

Table 1: Impact of Formatting on Email Effectiveness and Recall.

	Unformatted (Figure 1)		Formatted (Figure 2)		<i>t</i>	<i>df</i>	<i>p</i>	<i>ES</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>				
Job Attractiveness	4.57	1.3	5.14	1.26	2.6	133	.01**	.45
<i>This is an attractive job for a university student.</i>	4.53	1.52	5.09	1.55	2.10	133	.04*	
<i>This job would look good on my resume.</i>	4.53	1.49	5.13	1.39	2.42	133	.02*	
<i>This job could lead to promotions within the company.</i>	4.63	1.43	5.20	1.43	2.29	133	.02*	
Memory Recall	6.33	1.63	7.19	1.32	3.36	133	.01**	.58

Note: Job attractiveness items were on a 7-pt Likert scale. Memory recall is a measure of the number of correct responses out of nine questions.

CONCLUSIONS

This study lends credibility to existing advice about improving email formatting. In this case, the email message was developed from a real online job announcement that was unformatted in its original version. Based on the results of this study, taking the simple steps of formatting this message could significantly impact the ability of the company to draw high-quality job applicants. Thus, the bottom line impact can be substantial.

We consider this study exploratory. There is significant additional work to be done in this area. We believe that additional research should compare unformatted versus formatted messages in various contexts. A particularly rich area would be in one-to-one interpersonal workplace email communications (this email would be considered a mass email) that take into account various combinations of dyad relationships (peer-peer, superior-subordinate, etc.). Also, conducting this research in a lab setting that simulates the time crunches and information overload that employees deal with is especially warranted.

Finally, we think a study should be undertaken that simultaneously controls for other aspects of emails. For example, in addition to controlling for formatting, a study could control for aspects

of message content, such as directness, politeness, and formality. Furthermore, subject lines should be considered in such a study. While it is true that email subject lines have been extensively studied, most of these have been done so in the context of mass email messages.

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