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The Influence of Typeface on Students' Perceptions of Online Instructors

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Abstract

At its base, advertising is the process of using visual images and words to attract and convince consumers that a certain product has certain attributes. The same effect exists in electronic communication, strongly so in online courses where most if not all interaction between instructor and student is in writing. Arguably, if consumers make certain assumptions about a product based on the typeface used on a package, then online students are poised to do the same when they read emails from an online instructor. This pilot study looked at the specific medium of e-mail and how an e-mail's recipient (student) might transfer his or her perceptions of attributes of three typefaces to attributes of the sender (instructor) of the email. One was a commonly used typeface, and the other two were selected for their dramatic differences from the common typeface. The findings revealed that the participants' opinions of the sender were highly influenced by the typeface used. In the arena of online education, attention should be given to typeface selection in instructors' emails to students.

Keywords: Typeface, Online Education, Email, Communication, Font, Teacher-student Interaction

1. INTRODUCTION

Consider the act of reading body language. One watches and listens, giving meaning to both the words spoken and the movements that accompany them. Now consider email. One can only absorb what is on the page. There is no opportunity for body language; there is only the appearance of the text to accompany the meaning of the words.

Written communication represents not only our spoken language but also the emotions and intentions, or the tone, of the message. While written words are images that we sometimes dismiss, preferring to focus on the message's content, they hold degrees of meaning going beyond a word's denotation or connotation. Reducing reading to simply looking at words on a page simplifies and ultimately limits the message. Readers "design multiple interconnections" between what they see and what they read (Lemke, 2009, p. 300), meaning that the image of the words and how they function on a page, or the visual rhetoric, increases in importance when one communicates with an unseen other, as is usually the case in online education.

In the typical online post-secondary classroom setting, the instructor and student communicate electronically, and with the exception of the use of audio or video when available, all of this communication is written. This electronically-mediated setting shifts the student's communication experience to the visual, forcing him or her to comprehend not only the literal message but also construe meaning from the

visual rhetoric of the text itself. As a result, online students "get to know" their professors through the visual image of the electronic text before them.

2. TYPEFACE

Typeface, or font, not only conveys the words intended but also carries a message of its own (Henderson, Geise, & Cote, 2004). Studies consistently show that the visual aspect of a word influences the way that the receiver processes it. As early as 1923, Poffenberger and Franken determined that fonts have an "atmosphere," or an air, of the following qualities: "cheapness, dignity, femininity, antiquity, nature, and elegance" (p. 314) and concluded that the sender of a message was best served if he or she matched the typeface to the readers' expectations of the product. For example, one would advertise luxury items using an elegant calligraphic typeface, while for durable goods would use a no-nonsense, simple font. A typeface's "atmosphere" refers specifically to the "capacity of a typestyle to connote meaning over and above… [what] is linguistically conveyed by words" (Lewis & Walker, 1989, p. 243). In short, visual aesthetics influence a receiver's comprehension and judgment of the message (Bloch, Brunel, & Arnold, 2003; Lewis & Walker, 1989).

Given that individuals perceive consistent meanings to typographical features (Brumberger, 2003a; Poffenberger & Franken, 1923), any incongruence between the words' appearance and meaning will affect the reader's ability to process the meaning of the message. Readers consistently employ prior experience with visual cues of words, e.g. boldface, color, size, and typeface or font, to determine the message's full meaning and emphasis of the message (Kostelnick, 1989). Poor visual images can influence students to interpret an online instructor's message differently than the instructor intended, ultimately impacting communication within the course and attitudes about the instructor. Effective communication between participants is vital for effective performance in any online culture (Clark & Gibb, 2006).

Typeface Personas

Because typefaces are "credited with creating first impressions," Shaikh, Chaparro, and Fox sought to determine whether online fonts have consistently ascribed personas such as *stable,* *mature, formal, elegant, youthful,* and *casual* when testing perceptions about them (2006, p. 1). They noted that typefaces with both serifs and an even baseline, such as Times New Roman and Georgia, connote stability and formality. According to Bernard, Mills, Peterson, and Storrer's 2001 study, these fonts are typically found in business documents with Times New Roman being one of the most popular. Fonts without an even baseline, such as Comics Sans and Kristen ITC, are called scripts and tend to be considered casual and youthful. Additionally, according to Henderson et al. (2004), natural script typefaces that resemble handwriting are re-assuring to the reader (e.g. Bradley Hand ITC and Freestyle Script).

In 2003, Brumberger conducted two studies on whether typeface and text had distinct personalities in readers' eyes. She determined that people "consistently ascribe particular personality attributes" to both typeface and texts (2003a, p. 213). Brumberger's study revealed that readers recognize whether a typeface is appropriate for a certain situation as well as that some typefaces are considered "all-purpose," which she theorized may be because they are seen regularly enough to have become "generic" (2003b, p. 227).

Mackiewicz's (2005) analysis of fifteen typefaces' letterforms found that typefaces consistently regarded as *professional* contained similar elements, such as straight-edged ending strokes balanced by teardrop lobes (which soften the sharper edges), horizontal crossbars on *e*'s, serifs, and letters resting on an even baseline. She also noted that typefaces with imperfections are typically perceived as *friendly*. These "imperfections" consist of broken construction, such as when the loops of the *g* or a bowl on the *a,* are not completely closed. Typeface imperfections also include rounded ending strokes, slanted crossbars on the *e*'s, and an uneven baseline where letterforms either dip below or sit above (Mackiewicz, 2005).

3. ONLINE LEARNING

As noted, the receiver constructs meaning when presented with written electronic communication. How this meaning is constructed influences the success or the failure of that particular communication (Geisler et al., 2001). The level of trust that the receiver has in

the sender affects how successful the communication is (Smith, 2008), and that trust is influenced by structure (Dirks & Ferrin, 2001). Structure, in this situation, is defined not only as the formal guidelines within which one operates, but also is the sense of knowing what to expect from interactions.

The instructor's communications are vital in developing that interpersonal structure because his or her behavior greatly determines the student's perception of the course and instructor and influences academic success. The role of the online instructor is little different from an instructor in a face-to-face classroom in that there are expectations regarding content delivery and classroom control, though the online classroom places more responsibility on the student and expects a higher level of self-direction and motivation. As found by Finn, Schrodt, Witt, et al. in 2009, a strong relationship exists between students' perceptions of an instructor and student learning. Part of this perception comes from "immediacy behaviors," or communication between the instructor and the student that reduces both the social and psychological distance between them (Menzel & Carroll, 1999, p. 32). Online instructors who engage in immediacy behaviors (e.g. asking the students about the course, providing personalized examples, and revealing a sense of humor) have a higher level of student academic success (Arbaugh, 2001).

4. METHODOLOGY

This study sought to learn whether the typeface in an e-mail influences the receiver's perception of the sender in cases where there is a lack of body language and prior interpersonal, face-to-face interaction. An online survey, consisting of one e-mail presented in three typefaces and a forced-choice scale with nine pairs of adjectives for rating each typeface was administered to post-secondary students to first rate each typeface and then rate the sender of the e-mail in each typeface. We sought to explore whether an e-mail's typeface persona would be attributed to the sender. The study was IRB approved.

Participants
The pilot study convenience sample was drawn from three post-secondary schools in which instructor colleagues teach that offer both online and on-ground classes. One was a two-year career college with an average enrollment of 575. The other two schools were four-year private universities, one with about 4,000 students, the other with nearly 5,000 students. All three institutions are in the same city in the Mid-Atlantic.

The sample consisted of 22 females and 30 males (N=52) between the ages of 18 and 48. Ten participants (19%) were students in accredited allied health programs at the career college. Forty-two participants (81%) were students in the four-year universities, primarily in core curriculum courses. Twenty-five different majors were reported by the participants.

Instrument

A web-based survey was designed to gather the participants' perceptions about three typefaces (typeface persona) in an email and their perceptions of the sender using the three typefaces (sender persona) in an email. The survey was based on the research instruments of Brumberger (2003a, 2003b), Lewis and Walker (1989), Poffenberger and Franken (1923), and Shaikh et al. (2006), all of whom conducted studies to understand the reactions that typefaces elicit. The three typefaces were Times New Roman, Impact, and Kristen ITC:

1) Times New Roman, according to Bernard et al., (2001), is a typeface that suggests a businesslike tone and is neither elegant nor youthful; it lacks a personality. Because of its visual harmony or directness, this font is often used by respected companies and in business documents (Brumberger, 2003a, Henderson et al., 2004; Shaikh et al., 2006). Its effect on immediacy may be neutral.

2) Typically considered masculine because of its thick lines, **Impact** typeface is engaging and is considered a "modern" typeface (Henderson et al., 2004). It is considered easy to read and is often found on posters or in headlines (*Impact Typeface*, 2007). Because of its heavy tone, it may impede immediacy.

3) Kristen ITC is characterized by an uneven baseline and san serif design. Both Bernard et al. (2001) and Shaikh et al. (2006) noted that Kristen ITC is a friendly font best used to convey happiness,

creativity, and a casual tone. It is often used for children's documents. Because of its friendly tone, it may create more immediacy.

The typefaces that we selected were chosen for their commonality a well as the distinctive differences in their design. Other than the ubiquitous Times New Roman, the other two were selected because of their opposing styles to each other, a lightweight script and a heavy block, to demonstrate the effect of many similar fonts with stark differences from Times New Roman. The electronic survey was presented on a split-screen with the e-mail message on the left and the survey questions on the right so that the participants could answer the questions while looking at the typeface. After a few demographic questions, the participants viewed a neutral, general welcome message from a fictitious online instructor in three different fonts. The first was in Times New Roman, the second in Impact, and the third in Kristen ITC. The instructor's name, Dr. Smith, was generic and gender-neutral. The only difference between the e-mails was the typeface itself; perceptions derived from the name of the instructor, gender, or content of the message were minimized.

A four-point semantic differential scale containing nine paired attributes was used to quantify the participants' perceptions of the typefaces and the sender. One adjective of a contrasting pair (*youthful*) appeared on the left side of a list and the other (*mature*) on the right side. In between the adjectives were numerals 1, 2, 3, and 4. Participants selected a numeral on the scale indicating their perception of, first, the typeface and then second, of the sender. The four points were used to force a choice and prevent the selection of "neutral." The list of adjectives used in the scale came from the studies of Shaikh et al. (2006), Brumberger (2003b), and Lewis and Walker (1989). The paired attributes were: Polite — Rude, Mature — Youthful, Formal — Casual, Consistent — Inconsistent, Supportive — Unsupportive, Professional — Unprofessional, Attractive — Unattractive, Assertive — Passive, Masculine — Feminine. The instrument also allowed for write-in attributes through open-ended spaces for participants to add perceptions for each typeface and each sender's use of the three typefaces.

Data Collection

Participants were recruited through personal visits to college classrooms of instructor colleagues where one of the authors, M.L., explained the study and invited students to participate. M.L. read a brief introduction to the study then passed around a sign-up sheet to collect volunteers' e-mail addresses by which to send the survey link. The 149 volunteers received the link within 48 hours. Reminder emails with the link were sent twice over two weeks. Fifty-two ultimately completed the 10-15 minute survey.

Data Analysis

We decided to collapse the four-point scale to two points because the choice of attributes was either toward one or the other, and the sample size did not allow for finer distinctions in the analysis. There were six data points: Times New Roman typeface persona, Times New Roman sender persona, Impact typeface persona, Impact sender persona, and Kristen ITC typeface persona and Kristen ITC sender persona. Frequencies for each of the nine attributes were obtained. Attributes from the open-ended options were collected and grouped by theme, first negative or positive, and then by similarity to the nine attributes in the instrument. The relationship between each of the typeface personas and the sender personas was analyzed by comparing the frequencies for each of the three typefaces' nine attributes with the sender's nine attributes on each typeface. Written-in adjectives were used to confirm or disconfirm the quantitative results.

5. RESULTS

Times New Roman Typeface

For Times New Roman, the typeface was judged *polite* and *consistent* by at least three-quarters of participants, and *attractive, professional, supportive, youthful, casual, passive*, and *feminine* by more than half. Senders using Times New Roman were more highly regarded than was the typeface alone. Perceptions of the sender who used Times New Roman were unequivocal on all attributes, with *consistent, professional, formal, polite*, and *mature* all receiving at least 90% of the scores. *Supportive, attractive*, and *assertive* were attributes of senders by at least three-quarters of participants. Perceptions of the typeface and the sender were most well matched on *politeness*. Contradictory perceptions of

attributes of the typeface and of the sender were found on four items, with the typeface receiving more than 50% of the scores on *youthfulness, casualness, passivity*, and *femininity* while the sender was overwhelmingly assessed as being the opposite: *mature, formal, assertive*, and *masculine*. Table 1 shows the highest rated adjective of each pair in descending order on the Times New Roman typeface persona compared with the sender persona using it*.

Characteristic	Typeface (N=52)	Sender (N=52)
Polite	90	94
Consistent	75	98
Supportive	65	85
Mature	40	90
Formal	40	96
Professional	58	96
Attractive	56	81
Assertive	44	77
Masculine	38	67

Table 1: *Frequencies Comparing Typeface Persona and Sender Persona for* Times New Roman*, in Descending Order, as Percentage of Total Sample*

In addition to the nine pairs of adjectives for the font and the sender using the font, participants who completed the open-ended portion typed in adjectives that supported the results of the quantitative section of the survey. For Times New Roman, 127 adjectives were provided; 85% conveyed a positive or professional assessment, such as *approachable, fair, friendly, normal, polite,* and *traditional*. Only 15% of the adjectives carried a negative judgment: *boring, busy, sharp,* and *weak.*

The written-in adjectives to describe the sender were very similar to those for the typeface. Of the 99 adjectives describing the sender, 84% were positive or professional, e.g. *business-like, classy, conservative, formal, honest, intelligent, neat, simple,* and *white collar.* Only 16% were

negative, and they were predominantly focused on behavior, such as *brownnoser, compliant, distant, rule driven,* and *workaholic.*

Impact Typeface

For **Impact**, most participants assessed the Impact typeface as *assertive, masculine,* and *consistent*. Half judged Impact as *rude* and *unsupportive*. The typeface persona was attributed to the sender using it on six of the nine attributes meaning the typeface persona and sender persona were similarly perceived. Senders using Impact were judged much less *polite*, somewhat less *assertive*, and slightly less *supportive* than was the typeface alone, but more *mature*, and slightly more *formal, professional*, and *attractive.* The perception of the typeface and the sender matched most closely on *masculine* and *consistent*. Table 2 shows the highest rated adjective of each pair on the Impact typeface persona, in descending order, compared with the persona of the sender using it*.

Characteristic	Typeface (N=52)	Sender (N=52)
Assertive	83	73
Masculine	77	75
Consistent	67	69
Supportive	48	42
Polite	48	30
Mature	42	62
Formal	40	46
Professional	33	38
Attractive	31	35

Table 2: *Frequencies Comparing Typeface Persona and Sender Persona for* Impact*, in Descending Order, as Percentage of Total Sample*

The written-in terms participants added again supported the quantitative results. Participant-provided adjectives for the typeface Impact were 48% negative and primarily described the appearance of the typeface itself, e.g. *blob, cluttered, dark, hard to read,* and *thick*.

Participant-provided adjectives describing the sender were also higher in negativity (53%). Like those provided for Times New Roman, the adjectives provided for Impact focused on the behavior of the sender, such as *arrogant, bossy, cold, egotistical, grumpy, mean, selfish, short-tempered,* and *unapproachable.*

Kristen ITC Typeface

Participants viewed both the typeface and the sender as polite and attractive. The typeface persona of Kristen ITC was perceived as supportive and consistent, but the sender who used it was judged less so. The sender using Kristen ITC was perceived considerably differently than the typeface on all the attributes other than attractive, but in the same order. The sender was perceived as youthful, feminine, casual, polite, passive, attractive, and unprofessional more dramatically than was the typeface itself. Table 3 shows the highest rated adjective of each pair, in descending order, on the Kristen ITC typeface persona compared with the sender persona using it.

Characteristic	Typeface (N=52)	Sender (N=52)
Polite	81	87
Attractive	79	81
Supportive	73	64
Consistent	73	50
Professional	46	19
Assertive	45	15
Formal	42	11
Mature	38	4
Masculine	21	6

Table 3: *Frequencies Comparing Typeface Persona and Sender Persona for Kristen ITC, in Descending Order, as Percentage of Total Sample*

For Kristen ITC, the written-in adjectives varied. There were 121 adjectives provided to describe the typeface. Participants described Kristen ITC as *childish, girly,* and *welcoming.* The sender was described by 99 participants' adjectives as *childish, girly, carefree,* and *glamorous.* The typeface and sender were also described in unattractive terms. For the typeface, 27% of the adjectives were negative: *distracting, messy, sloppy, unattractive,* and *unlegible* [sic]. For the sender, 21% were negative, e.g. *ditsy, dumb, meek, timid,* and *unassertive*.

6. DISCUSSION

Supporting McLuhan's decree that the medium is the message, the role of typeface in electronic communication goes beyond visually displaying the sender's words (1964). Typeface not only conveys the literal meaning of a message but also the personality of the sender, which means that the receiver of the message reads the physical appearance of the words as well as the words themselves.

The online student, relying solely on the electronic words sent by the instructor, construes meaning in the typeface as well as in the words used and attributes certain personality traits to the sender based on the style of the typeface. The instances where the perception of the typeface and sender did not match on Times New Roman may be because it is so common and, to some participants, has lost visual meaning and is simply a generic font, appropriate for all purposes and carrying little weight in terms of influencing perception (Baumberger, 2003b). Participants judged senders as more professional for using a common business-like font, transferring the typeface's persona more fully to the sender. However, for differences in perception between typeface and sender for Kristen ITC, the transference of typeface person to the sender resulted in a less favorable perception of the instructor as a professional, even though participants tended to perceive the typeface persona rather favorably.

Overall, the results relating to students' perceptions about Times New Roman support previous research regarding the typeface's persona as traditional, non-threatening, and accessible to readers (Henderson et al., 2004; Mackiewicz, 1990; Bernard et al., 2001) This typeface works well as a default typeface for online communication as it allows the receivers

to read the message and experience little negative distraction by the typeface (e.g. being difficult to read due to design qualities or suggesting a tone that contradicts the message itself). Times New Roman can aid in influencing the receiver as it lacks an aggressive or too-playful appearance. In essence, the fact that its design does not create a large amount of visual noise means that it allows the receiver to focus on the message (Bitzer, 1968). With 73% of the participant-provided adjectives describing the sender as professional, this typeface can influence the receiver to accept the message for what it is and not for what it appears to be.

With its bolder lines, Impact literally and figuratively takes up more space on the page, forcing the reader to pay more attention to the design. Its fixed pitch, or the spacing between the letters, makes the letters appear more cramped together. The participant-provided adjectives attested to the effect of this typeface's design in instructor-student communication, as 74% of the adjectives focused on the negative aspect of the typeface's appearance and 70% focused on the negative or unprofessional personality of the sender. The Impact typeface, then, creates too much visual noise for the message, changing a neutral message from a professor into one with an underlying harsh tone. As with Times New Roman, the results for perceptions relating to the Impact typeface support previous research. This typeface, according to the participant-provided adjectives, is inappropriate for general communications because it comes across as abrasive, rude, and demanding. The strongest theme within the participant-provided adjectives was negative in tone, thus senders who need to develop a professional and/or positive working relationship, as instructors do to create a successful learning environment, should avoid this typeface. However, in situations where the message is brief and important, e.g. *Please submit your final papers today!*, or when the message is a headline, e.g. *Take a Study Break at the Café*, this typeface is appropriate due to its attention-getting design as well as the fact that the information is brief and does not visually overwhelm the page.

Unlike the other two typefaces in our study, Kristen ITC possesses a very specific visual connotation to femininity and youthfulness. Combining its rounded design with its historical use in communications aimed at children, Kristen ITC has evolved to represent the opposite of Impact's harsh tone and Times New Roman's professionalism. This typeface does not present itself in a threatening or forceful manner, which can influence its being perceived as more polite and attractive. As with Impact, the participants had opinions regarding the appropriateness of this typeface for instructors. Participants rated Kristen ITC as too casual and unprofessional for it to have the same accessibility and the same neutrality as Times New Roman. Like the Impact typeface, the appearance of this playful typeface can overpower the sender's intended message. Two of the major themes within the participant-provided adjectives, for both sender and receiver, were childishness and playfulness, therefore, senders who need to convey an air of authority or send an important message should avoid this typeface.

Limitations

Validity issues revolve around the participant pool, specifically its size and its demographic make-up. The sample size was small, out of 149, only 52 ultimately completed the survey. Some students started the survey, but failed to complete it. This may be due to the length of the survey, though the time required tocomplete it was roughly 10-15 minutes. Some participants completed the survey but, with each progressive screen, provided fewer adjectives in the qualitative section, which may be because participants were eager to finish and/or lost interest. There is the possibility that the length of the email letter, though only eleven sentences long, was perceived as being too long. Another possible limitation is the fact that the sample letter contained instructions so the words' meanings may have influenced the participants' perception of the sender. Finally, not providing a neutral option on the semantic differential scale forced the participants to choose between the adjectives. This pilot study has led to the design of a new study to overcome these limitations.

7. CONCLUSION

Online students who have a positive sense of their instructors are more likely to do well academically and have a higher level of satisfaction with their courses (Arbaugh, 2000). This study offer evidence of one way in which instructors' electronic communications can influence positive student perception of the

instructor and the course, especially in early interactions. On-line instructors should be aware of the effect of choice of typeface when communicating with their students. Our study encourages the design of basic communication guidelines which have been found conducive to decreasing miscommunication in virtual settings (Remidez, Stam, & Laffey, 2007; Hsu & Chou, 2009; Clark & Gibb, 2006). Using these results as a guide for typeface will prove useful for those in academia who want to ensure that the visual rhetoric of their message does not distort the meaning of the message.

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