Lost in Translation: Importance of Effective Communication in Online Education

Kristen Betts
Drexel University
kbetts@drexel.edu

Abstract

Approximately 3.9 million students enrolled in at least one online course in fall 2007. According to Allen and Seaman (2008), online education growth rates have continued to outpace total higher education growth rates and there are no signs of online growth slowing down. As higher education institutions offer increasing numbers of online and blended programs, it is important that administrators integrate communication theory and methods into training and professional development for online faculty. This paper will provide a comparative overview of communication research as it relates to online education. Moreover, this paper will provide recommendations for integrating effective online communication into programming and instruction to increase student connectivity, engagement, and retention. Faculty and student data/feedback collected from Drexel University's online Master of Science in Higher Education Program will be shared to highlight the importance of effective communication in online education.

Introduction

Online education enrollment growth in the United States now far exceeds overall higher education growth. As reported by Allen and Seaman (2008), the online enrollment growth rates increased 12% from fall 2006 to fall 2007 while overall higher education growth rates increased only 1.2%. In fall 2007, there were approximately 3.9 million students enrolled in at least one online course (Allen & Seaman, 2008). As economic and demographic factors continue to drive current and future online and blended program enrollments (Betts, 2009), higher education administrators must develop online communication strategies that foster human interaction and connect online students as well as online full-time and part-time faculty to programs and the institution.

Interaction in face-to-face, online, and blended programs vary depending upon the channels of communication integrated into the courses. According to Faharani (2003), interaction in a face-to-face program is predominately based on verbal and nonverbal communicative behaviors while interaction in online courses is predominantly based on written communication. As further indicated by Collison, Elbaum, Haavind, and Tinker (2000), "in the virtual world, there is no body language from which the instructor can gauge the interest of the participants and,consequently, adjust the tone or pace of the presentation" (p. 1). Therefore, administrators and faculty must be cognizant of the communication differences that exist between the on-campus and online environment.

Personalized communication is critical to recruitment, engagement, and retention of online students. In fact, student data collected through annual surveys by Drexel University's online Master of Science in Higher Education Program (MSHE) indicates the more personalized the online educational environment is for students, the more likely students will be engaged throughout their courses and stay connected as alumni. Recognizing there are inherent differences between traditional and online environments, administrators and faculty must understand the importance of integrating effective communication strategies into online program development,

course design, and instruction to engage, connect, and retain students.

Literature Review

Communication

"Communication is a growing discipline" (Pfau, 2008, p. 598). However, defining communication is not an easy task (Littlejohn & Foss, 2005). In 1976, Dance and Larson identified 126 definitions for communication in *The Function of Human Communication: A Theoretical Approach*. Since this publication, Trenholm (2008) states that communication scholars have been busy adding to the Dance and Larson list of communication definitions. Yet, while scholars have made attempts to define communication, Littlejohn and Foss (2005) note that "establishing a single definition has proved impossible" (p. 12).

Recognizing the inherent challenge presented by identifying a single definition for communication that is universally accepted, this paper will build upon human communication research and communication as a "process." Tubbs and Moss (2006) state that "since human communication is an intangible, ever-changing process, many people find it helpful to use a tangible model to describe that process" (p. 10).

The Tubbs Communication Model

There are extensive types of communication models that exist within the literature including Shannon-Weaver, Osgood & Schramm Circular Model, Gerbner's General Model, etc. This paper builds upon the Tubbs Communication Model due to its generalizability across communication settings. The Tubbs Communication Model focuses on the principles and contexts of communication and exemplifies the most basic human communication event that involves just two people (Tubbs & Moss, 2006). The model includes Communicator 1 (the sender/receiver) and Communicator 2 (the receiver/sender). Tubbs and Moss (2006) describe both Communicator 1 and Communicator 2 as sources of communication since each originates and receives messages simultaneously. These messages are transmitted verbally and/or nonverbally. Tubbs and Moss (2006) provide the following definitions for types of messages:

- **Verbal** - any type of spoken communication that uses one or more words (p. 12);
- **Intentional verbal** - conscious attempts we make to communicate with others through speech (p. 12);
- **Unintentional verbal** - the things we say without meaning to (p. 12);
- **Nonverbal** - all of the messages we transmit without words or over and above the words we use (p. 13);
- **Intentional nonverbal messages** - the nonverbal messages we want to transmit (p. 13); and
- **Unintentional nonverbal messages** - all those nonverbal aspects of our behavior transmitted without our control (p. 14).

While Communicator 1 originates the message, the transmittal of the message may be affected by the communication channel. Therefore, it is important that administrators and faculty are aware of the communication channels that are typically incorporated into educational programs and courses. Channels include face-to-face (sensory), organizational, and mass communication. Organizational communication channels may include email messages, videoconferencing, newsletters, bulletin boards, wikis, blogs, etc. Channels within mass communication include television, newspapers, radio, etc.

What is effective communication? Tubbs and Moss (2006), state, "communication is effective when the stimulus as initiated and intended by the sender, or source, corresponds closely to the stimulus as it is perceived and responded to by the receiver" (p. 24). In online education, effective communication is particularly important because students may never or infrequently come to campus. Hence, there may be limited or no face-to-face communication and interaction throughout a student's enrollment. Therefore, it is important that administrators integrate communication theory and methods into training and professional development for online faculty. As indicated by Lorenzetti (2003),

> Faculty members are one of the most critical hires that you have to make in your online program. While traditional, on-campus students form an impression of your institution based on factors from physical plant to extracurricular activities, the one face that often represents your entire institution to online students is the instructor. (p. 1)

Faculty play a critical role in student engagement and retention. According to Tinto (1975, 1982, and 2006), "Frequency and quality of contact with faculty, staff, and students has repeatedly been shown to be an *independent* predictor of student persistence" (p. 2). Additional research by Chickering and Gamson (1987) reveals that knowing faculty and faculty concern assist students get through challenging times and enhance a student's intellectual commitment. It is through human communication and interaction that students are able to connect with faculty. Therefore, with growing numbers of traditional courses and programs transitioning to online and blended formats, there is an increasing need to examine effective human communication in online environments to foster a personalized connection between students, faculty, and the institution.

Lost in Translation

The term "lost in translation" is defined for the purpose of this paper as *the misinterpretation or communication breakdown of the message or stimuli between the sender/receiver (Communicator 1) and the receiver/sender (Communicator 2).* Within an educational setting, the role of sender/receiver and receiver/sender can change regularly and frequently between students, faculty, administrators, administrative staff, technical support staff, and academic advisors. Therefore, as communication increases, simultaneously there is a greater opportunity for the message to be lost in translation due to technical or semantic interference.

The lost-in-translation communication phenomenon can have a powerful negative effect in online education and can be linked to student attrition. Data collected from Drexel University's MSHE Program during the Program's first academic year revealed that 12% of the students who opted to leave/withdraw based their decision on their experience with the online instructor citing poor communication. As a result, the MSHE Program has spent three years developing strategies to increase effective online communication and to decrease communication being lost in translation.

Overview of Types of Communication

Faharani (2003), Meharabian (1971), Lockwood (n.d.), Baron (2008), Stone (n.d.), Turnage (2007), and Kruger, Epley, Parker and Ng (2005), provide the foundation for a comparative overview of communication research including (a) face-to-face, (b) telephone/mobile phone/Voice over Internet Protocol (VoIP), (c) computer-mediated, and (d) written communication. These types of communication have been selected for this comparative overview since they are most commonly associated with educational delivery.

A. Face-to-Face Communication

Face-to-face communication is typically associated with traditional on-campus courses. In face-to-face communication, communication channels include sensory organs for receiving stimuli; however, of the five senses, individuals almost exclusively rely on hearing, sight, and touch (Tubbs & Moss, 2006).

Hearing, while different from listening, is critical because it is the first element in the listening process (Tubbs & Moss, 2006). Listening, as defined by the International Listening Association (1996), is "the process of receiving, constructing meaning from, and responding to spoken and/or nonverbal messages" ("International Listening Association," n.d.). Trenholm (2008) states, "being able to listen well is one of the most essential communication-related skills" (p. 44). As individuals listen, they are not passive receivers but active "creators of meaning" (Trenholm, 2008). While listening is a critical component of the communication process, the emphasis on listening shifts as the communication channel changes from face-to-face to telephone/mobile phone/Voiceover Internet Protocol (VoIP) to computer-mediated and to written communication.

In face-to-face communication, verbal and non-verbal communication affects communication transaction, interpretation, and meaning. Therefore, it important to distinguish *verbal from nonverbal* and *vocal from nonvocal* (Stewart & D'Angelo, 1980, as cited in Tubbs & Moss, 2006). Verbal communication as previously stated is "any type of spoken communication that uses one or more words" while "nonverbal communication is all of the messages we transmit without words or over and above the words we use" (Tubbs & Moss, 2006, p. 12-13). Therefore, according to Tubbs and Moss (2006), verbal/vocal communication refers to communication through the spoken word while verbal/nonvocal communication refers to the use of words but without speaking.

Nonverbal/vocal communication, also referred to as paralinguistic's, consists of vocalizations without words (e.g., inflection, pitch, tone, etc.) as well as "noises without linguistic structure, such as, crying, laughing, grunting" (Trager, 1958, as cited in Tubbs & Moss, 2006, p. 136). More specifically, vocal cues associated with nonverbal/vocal communication include: volume (low or loud voice), rate and fluency (rate of speech), pitch (high or low), tone (distinctive sound), and inflection (modifying pitch or tone).

Nonverbal/non-vocal communication includes visual, spatial, and temporal cues. Visual cues include kinesics (posture, facial expressions, body gestures), oculesics (eye behavior), haptics (use of touch to communicate), appearance (clothing, hairstyle, body shape, artifacts, choice of color, etc.), and use of objects. Spatial and temporal cues include proxemics (need for personal space) and chronemics (the way individuals handle and structure their time). Consequently, nonverbal communication conveys nonlinguistic messages that essentially replace, reinforce, or contradict a verbal message (Tubbs & Moss, 2006).

Understanding how verbal, nonverbal, vocal, and nonvocal communication affect communication in face-to-face and online environments is critical to program development, course design, and instruction. According, Dr. Albert Mehrabian, professor emeritus at the University of California-Los Angeles, face-to-face communication can be broken down into basically three elements, including nonverbal (55%), tone (38%), and words (7%) (Mehrabian, 1971) (see Figure 1). While critics claim that Mehrabian's three-element rule for face-to-face communication has been overly interpreted, this breakdown in communication provides a framework that should be examined and considered by administrators and faculty when developing online programs, courses, and instructional strategies.

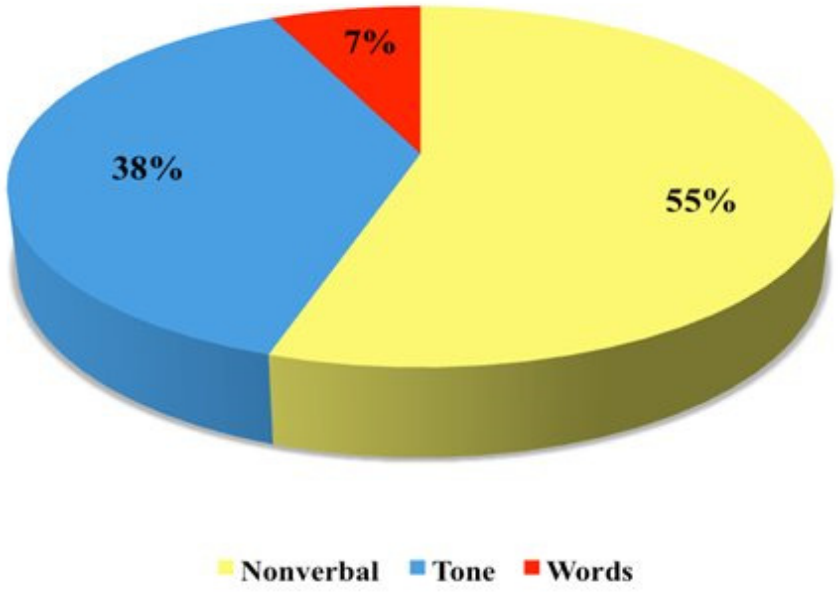

Figure 1. Mehrabian's Breakdown of Face-to-Face Communication

B. Telephone/Mobile Phone/VoIP Communication

Advancements in telecommunications and technology have greatly transformed communication since the patent of the telephone in 1876 (Public Broadcasting Service, n.d.). While the telephone is still a commonly used communication channel today, the number of mobile phone subscribers has increased exponentially since 2000. Data reveals that worldwide mobile penetration has grown from 12% in 2000 to over 60% at the end of 2008 with 4 billion mobile subscribers registered worldwide (UNESCO, 2008). Mobile phones (also referred to as cellular or cell phones) optimize voice and data communication with services and features supporting email, messaging, video, gaming, etc. An additional new feature unveiled by Google in February 2009 is a 1.5-million digital-book collection for the cell phone that was developed through a partnership with several major college libraries (Young, 2009). With these innovative services and features, online education is becoming increasingly "mobile" and portable by enabling students to speak with faculty as well as download pre-recorded videos/podcasts and text lectures, respond to emails, and participate in synchronous "live" classes - just using a mobile phone.

Voiceover Internet Protocol (VoIP) is also transforming online education by providing faculty with new opportunities to connect with students. VoIP is
"an IP telephony term for a set of facilities used to manage the delivery of voice information over the Internet" ("What is VoIP?," 2008, ¶1). VoIP enables synchronous (real-time) communication providing voice and video options through the Internet which avoids the toll charges typically charged by telephone service ("What is VoIP?," 2008). "Voice" options, both asynchronous and synchronous, are becoming increasingly prominent as educational features in course management systems such as Blackboard, Angel, and Moodle. For example, faculty can now create voice announcements, voice emails, voice boards, and podcasts to integrate into their courses through Horizon Wimba. Additionally, faculty can schedule "live" synchronous online lectures through Horizon Wimba Classroom that are instructor- or student-led, including voice and video options. Wimba Classroom uses VoIP and video to:

Replicate the dynamic dialogue of a face-to-face class with real-time, multi-way

> voice and video. A speaker's video is triggered by voice-detected switching, making technology invisible while allowing a discussion to flow naturally. A telephone dial-in feature allows users to participate when traveling or acts as a back up if network problems occur. (Wimba Classroom, n.d., ¶14)

Skype, Adobe Connect, and GoToMeeting also use VoIP to support teleconferencing and videoconferencing.

In the corporate sector, call centers share many similar challenges to online education. Since customers typically do not go to a call center, just as online students typically do not go to campus, there is increased communication by telephone, mobile phone, and VoIP. Technology continues to provide new channels for communication within the call center industry, including computer telephony integration (CTI). However, human communication remains central in call center employee training. According to Lockwood (n.d.) of Fenman Ltd., "In a call centre environment, the minute we pick up the call, body language in the traditional sense disappears. Remember, however, that a customer will 'hear' body language in the tone of voice" (¶1). Fenman Ltd., a global publisher of training resources, states that within a call center "tone accounts for 86% of the total communication, words accounting for the remaining 14%" (¶1) (see Figure 2).

In an online education course, much like a call center, body language in the traditional sense disappears over the telephone, mobile phone, and "live" synchronous classes unless there is access to video. Therefore, it is critical that administrators and faculty understand the breakdown of communication when incorporating voice options into program development, course design, and instruction. Moreover, training and professional development is needed so that faculty and students can optimize course management system tools that support engagement and foster human communication.

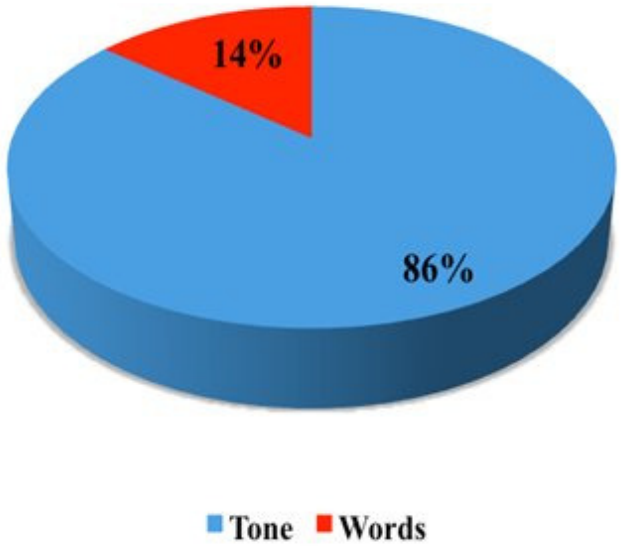

Figure 2. Breakdown of Telephone/Mobile Phone/VoIP Communication

C. Computer-Mediated Communication

Computer-mediated communication (CMC) provides extensive communication channels in online

education for interaction through written communication, including email, IM (instant messaging), text messaging, bulletin boards, chat rooms, discussion boards, listservs, social networking, virtual worlds (MUD, multi-user dimensions; MOO, MUDs Object Oriented; Second Life, etc.), blogging, etc. In *Always On*, Baron (2008) seeks to answer the questions below relating to communication and language in an online and mobile world:

- How has the growing domestication of email, IM, text messaging on mobile phones, blogging, Facebook – and the rash of other forms of online and mobile communication platforms – altered our communication landscape? (p. 4)
- Is computer-mediated communication a form of writing or speech (i.e., emails, bulletin boards, computer conferencing, chat, virtual worlds, etc.)? (p. 48)
- How does gender affect language (i.e., speech, writing, computer-mediated communication, etc.)? (p. 50)

As the communication landscape continues to alter through advancements in technology, these types of questions will become increasingly more difficult to answer, particularly since many computer-mediated formats now include voice options.

Email has become one of the most commonly used formats in computer-mediated communication. However, communicating effectively by email is not at easy as "type and send." In the article "Egocentrism Over E-mail: Can We Communicate as Well as We Think?," Kruger et al. (2005) investigate the difficulty of conveying emotion and tone via email without the "benefit of paralinguistic cues" (p. 1). They conducted five studies to examine overconfidence over email by comparing the perceived and actual ability of participants to communicate via email. The results of the five studies indicated that participants who sent emails overestimated their *ability to communicate* by e-mail and that participants who received emails overestimated their *ability to interpret* e-mail. Furthermore, participants who sent emails predicted about 78% of the time their partners would correctly interpret the tone. However, the data revealed that only 56% of the time the receiver correctly interpreted the tone (Kruger et al., 2005; Winerman, 2006). As further noted by Winerman, the receivers in the study "guessed that they had correctly interpreted the message's tone 90% of the time" (2006, p. 16).

CMC provides extensive communication channels between faculty and students. However, it is essential that the correct and intended message is being sent and received when communicating electronically. Therefore, faculty need training and professional development programs that provide effective communication strategies for communicating online.

D. Written Communication

Written communication is an integral component of human communication. In *The Origins of Writing*, Senner (1991) states "writing is relatively new to man" (p. 1). This is in contrast to spoken languages which Senner states have "evolved over tens of thousands of years and left few traces of their beginnings" (p. 1). As argued by Abraham Lincoln in the Lincoln-Douglas debates in 1858, "Writing….is the greatest invention of the world" (American Bar Association, 2009, p. 2). It is this great invention - writing – that enabled and supported the origins of correspondence education dating back "as early as the 1720s and to what was indisputability correspondence education in the 1830s (Holmberg, 1995, p. 3.) Through advancements in media and technology, correspondence education served as a foundation for the emergence of distance education in the early 1970s (Holmberg, 1995). Distance education, which encompasses multiple modes of delivery including online education, has grown exponentially over the past 40 years. While technology and the Internet enable and support innovative channels for communication, written

communication is and will continue to be a fundamental component of online education.

Written communication, unlike face-to-face, telephone/mobile phone/VoIP, or computer-mediated communication, does not have the benefit of voice cues or vocalizations. Consequently interpretation/misinterpretation is based on lexicon (words of a language), semantics (meaning of words), and syntax (how words and symbols are put together). Furthermore, the way in which messages are constructed using lexicon, semantics, and syntax can greatly affect the interpretation/misinterpretation of tone in writing.

According to Ober (2005), "Tone in writing refers to the writer's attitude toward the reader and the subject of the message. The overall tone of a written message affects the reader just as one's tone of voice affects the listener in everyday exchanges" (p. 88). In "Setting the Tone" (n.d.), Stone states, "Just as the pitch and volume of one's voice carries attitude and tone at parties and meetings, the choice of words and the way we put our sentences together convey a sense of attitude and tone in our writing" (¶2). Stone further states "Tone is attitude, whether you want to be subtle or bold, tone is conveyed through word choice, sentence structure and even font" (¶4). Writing that is complex, ambiguous or indirect may lead to misinterpretation of the intended message. Selecting all caps or bold may be interpreted as shouting, screaming, or aggression. Changes in font size, style, or color may create confusion or misinterpretation since the receiver may not understand the meaning or intention behind the changes.

Research indicates that nonverbal cues are commonly used online to convey tone and volume (Hancock & Dunham, 2001 and Jacobson, 1999, as cited in Tubbs & Moss, 2006). Tubbs and Moss (2006) state that when individuals "want to create an impression or express feelings, or convey variations in tone or volume, they use capital and lowercase letters differently, typing errors, exclamation points, and other punctuation marks and emoticons (sometimes called smileys) along with their verbal message" (p. 136). In fact, email etiquette (netiquette) publications provide extensive tips and strategies to minimize misinterpretation of email messages (e.g., avoid shouting by not using ALL capital letters, reply in a timely manner/within 24 hours; layout message for readability; keep message concise; etc.) (Steele, 2006; Stone, n.d.).

In online education, written communication is a primary form of communication between the institution and students as well as faculty and the students. Consequently, it is important for administrators and faculty to be cognizant of "tone" in writing so the message being sent is not misinterpreted or lost in translation.

Drexel University's Online MSHE Program

The online Master of Science in Higher Education (MSHE) Program in the School of Education at Drexel University was launched in fall 2005/06. The MSHE Program has grown from its first cohort of 26 students to 175 students in fall 2008/09. The number of faculty has grown from one full-time faculty and three adjuncts to 37 full-time and part-time faculty. Since launching the MSHE Program in fall 2005/06, the student retention rate for the MSHE Program is 83% and the three-year faculty/adjunct retention rate is 93%. In 2008, the MSHE Program received national recognition for best practices in online education from the United States Distance Learning Association (USDLA).

MSHE Studies and Feedback Highlighting Importance of Communication

Personalized communication is central to recruitment, engagement, and retention of students and faculty in the MSHE Program. To highlight the importance of communication to the online educational experience, descriptive data and feedback will be shared from the 2008 MSHE Faculty Survey, 2008 Annual MSHE Student Survey, and comments shared by MSHE students.

2008 MSHE Faculty Survey

The 2008 MSHE Faculty Survey was sent to 26 faculty who had been contracted to teach for the MSHE Program between Academic Year (AY) 2006/07 and AY 2007/08. Over two-thirds of faculty (N=16) responded representing a 67% response rate. The results of the survey revealed that the majority of the MSHE faculty (71%) had never taught an online course prior to being contracted by the MSHE Program. Of the 29% who had previously taught online, only half (50%) had received any prior training for teaching online. Furthermore, only 38% of the faculty stated they had enrolled in an online course.

Recognizing that the majority of the MSHE faculty had not been trained to teach online and had not been enrolled previously in an online course, the MSHE Program developed training and ongoing professional development for full-time and part-time faculty. This includes a required 10-week shadowing program and a mentoring program. Communication theory and methods are incorporated into the shadowing program, mentoring program, and the MSHE Online Professional Development Program. The positive results of the participating in these programs are evident through the 2008 MSHE Faculty Survey data. Faculty were asked to rate their professional skills prior to teaching in the MSHE Program and then their current skills since teaching in the MSHE Program. The results indicated that increases between 28% to 79% for communication-related activities such as teaching online, oral communication, text communication, developing "live" classroom presentations, and delivering "live" classroom presentations (see Table 1).

Table 1

Questions: Prior to teaching in the MSHE Program, how would you rate your previous skills in the following areas? & Since teaching in the MSHE Program, how would you rate your current skills in the following areas?

		NA	**Very weak**	**Weak**	**Moderate**	**Strong**	**Very Strong**	**Strong & Very Strong**
Teaching Online	Previous skills	14%	22%	1%	36%	14%	0%	14%
	Current skills	0%	0%	0%	7%	86%	7%	93% **(+79%)**
Oral communication (voice announcements, voice email, etc.)	Previous skills	21%	14%	14%	30%	21%	0%	21%
	Current skills	0%	0%	0%	14%	79%	7%	86% **(+65%)**
Text communication (voice announcements, voice email, etc.)	Previous skills	7%	7%	7%	21%	29%	29%	48%
	Current skills	0%	0%	0%	0%	43%	57%	100% **(+52%)**
Developing Horizon Wimba Classroom "live" presentations	Previous skills	36%	21%	29%	7%	7%	0%	7%
	Current skills	7%	0%	0%	43%	43%	7%	50% **(+43%)**
Delivering Horizon Wimba	Previous skills	36%	21.5%	21.5%	14%	7%	0%	7%

Classroom "live" presentations	Current skills	7%	0%	14%	43%	29%	7%	35% **(+28%)**

The majority of the MSHE faculty (93%) stated they would like to attend faculty development throughout the academic year. Over half of the faculty (57%) said they would like to attend faculty development *online* while 7% stated they would like to attend *on-campus* and 29% stated they would like to attend faculty development *on-campus and online*. Over half of the faculty (60%) stated they would like to attend faculty development twice a year while there was a split between faculty who wanted to attend faculty development once a quarter (four times a year) (15%), once a year (15%), and three times a year (7%). The majority of the faculty indicated they would like sessions to last 90 minutes (54%) or 60 minutes (31%). Less than one-fifth of the faculty (15%) indicated they would like faculty development sessions to last two hours.

2008 MSHE Annual Student Survey

The 2008 MSHE Annual Student Survey was distributed to 144 students enrolled in the MSHE Program in June 2008. Over half of the students (N=75) responded representing a 52% response rate. The purpose of the MSHE Annual Student Survey was to collect student data relating to student engagement, retention, academics, and satisfaction. While the survey provided robust data regarding the MSHE Program, the data and feedback revealed that written and voice communication as well as student-to-student interaction are critical elements in engaging and connecting students to faculty and to classmates.

The MSHE data indicated that students feel engaged and very engaged through weekly discussion boards, group assignments, and live classroom lectures led by faculty (see Table 2). Additionally, the data revealed students feel connected and very connected to the MSHE faculty and students in their cohort with whom they typically interact each quarter through educational activities (see Table 3).

Table 2

Question: As an online student how engaged are you with the following course activities?

	Engaged	**Very engaged**	**Total**
Weekly Discussion Boards	39%	53%	92%
Group Assignments	26%	62%	88%
Horizon Wimba Live Classroom lectures offered by faculty and adjuncts	42%	45%	87%
Audio/voice Chat Rooms	24%	19%	43%
Text Chat Rooms	21%	12%	33%

Likert scale: Very engaged, Engaged, Neutral, Disengaged, Very Disengaged

Table 3

Question: As an online student in the MSHE Program how connected do you feel to the following constituent groups?

	Connected	**Very connected**	**Total**
Faculty and adjuncts	51%	18%	69%
MSHE student in your cohort	55%	12%	67%

School of Education	35%	11 %	46%
Drexel University	32%	10%	42%
MSHE students outside of your cohort	12%	1%	13%

Likert scale: Very connected, Connected, Neutral, Disconnected, Very Disconnected

Students were provided with a list of 12 educational activities that are integrated in MSHE courses and asked to rate the level to which each activity makes them feel connected as a student to the MSHE Program. The top three activities identified as making students feel connected and very connected to the MSHE Program included: text comments on graded assignments, weekly discussion boards (text), and text announcements. The two activities that least connected students to the MSHE Program were pre-recorded video lectures by faculty and pre-recorded voiceover PowerPoint/Camtasia presentations by faculty (see Table 4).

Table 4

Question: Rate the level to which each educational activity makes you feel connected as a student to the MSHE Program.

	Connected	**Very connected**	**Total**
Text comments on graded assignments	41%	53%	94%
Weekly Discussion Boards (text)	45%	47%	92%
Text announcements	46%	43%	89%
Text email	52%	36%	88%
Audio/voice announcements	45%	39%	84%
Live Classroom lectures presented by faculty	35%	49%	84%
Live Classroom lectures presented by individual students and groups for graded assignments	40%	43%	83%
Audio/voice comments on graded assignments	30%	48%	78%
Audio/voice email	34%	42%	76%
Weekly Discussion Boards (Audio/Voice)	33%	43%	76%
Video lectures by faculty	30%	27%	57%
Voiceover PPT/Camtasia presentations by faculty	34%	23%	57%

Likert scale: Very connected, Connected, Neutral, Not very connected, Not connected at all

Almost all of the students (96%) stated they would recommend the MSHE Program to individuals seeking to advance their career in higher education and 92% stated they would recommend the MSHE Program to individuals seeking to transition into higher education (Betts, 2009). Additionally, close to two-thirds of the students (61%) stated they planned to stay connected to Drexel University as alumni.

Comments Shared by MSHE Students

Comments shared by MSHE students through emails with faculty
highlight the importance of communication in connecting with students and creating a supportive and encouraging educational environment. Included below are sample comments from student emails sent to the founding MSHE Program Director/current MSHE professor between fall 2005/06 and fall 2008/09. The emails indicate that text and verbal communication from faculty in

online courses can convey attitude, caring, and encouragement; particularly during times of doubt or difficulty for students which can affect recruitment, engagement, and retention. Additionally, the emails support research by Tinto (1975, 1982, and 2006) that "frequency and quality of contact with faculty, staff, and students" can influencestudent persistence. Moreover, the emails support research by Chickering and Gamson (1987) in that "knowing faculty and faculty concern" can assist students get through challenging times.

- Thank you so much for the kind words and feedback you continue to provide. Your attentiveness and support have relieved a lot of the anxiety and worry I felt about an online format at the beginning of the quarter. I am truly enjoying every aspect of the program thus far.
- Thank you so much for your voice mail. I really appreciate that you took the time to respond to me individually. Your statement about how much I've gained in the past five weeks was especially important to me. I've been having a lot of doubts lately and your message, along with some well-timed support from my coworkers, was just the boost I needed to keep going.
- I want to thank you for all of your amazing feedback and support throughout this program. I had an extremely hard day at work yesterday - but I managed to forget most of the stress and cheer up after I listened to your voice email and words of encouragement!
- Your support over the past two years has been unlike anything I have ever known. Although there have been some tough and frustrating moments throughout the program you have always been so encouraging that I have been able to work through them.
- This program has been just what I need at this point in my career. I don't know if you remember meeting me at one of the online open houses. I was not sure if this program would be the right choice for me. I am very thankful that you encouraged me to take this program, it has definitely been one of the "best" choices I could have ever made for my future.

Discussion

Communication is extremely important in online education since students may never step foot on an institution's campus or do so infrequently. For most online students, their primary contact with an institution is through their communication with faculty. In this capacity, faculty are truly institutional ambassadors; therefore, communication training is essential. Human communication, as outlined in this paper, is complex but plays a valuable, if not pivotal, role in student engagement, connectivity, and retention. In online environments, students may not have the advantage of the many visual and vocal cues inherent in face-to-face courses; however, through advancements in technology, faculty can reach out to students through learning system tools that support text, voice, and video communication.

It is clear that nonverbal communication in a face-to-face classroom, including visual cues and vocal cues, can affect how a message is conveyed by the sender/receiver and interpreted by the receiver/sender. Even when words are not being used, communication is still taking place in a face-to-face classroom. However, in an online classroom, there is a shift and increased emphasis on words, particularly with written communication. Lexicon, semantics, and syntax can greatly affect how a written message is conveyed and interpreted. Tubbs and Moss (2006) provide definitions for types of messages (verbal, intentional verbal, unintentional verbal, nonverbal, intentional verbal, and unintentional verbal). However, these definitions primarily apply to a face-to-face setting. Therefore, building upon these definitions and research by Tubbs and Moss (2006), this paper puts forth the following definitions for verbal/text and nonverbal/text messages for the online environment:

- **Verbal/text** - any type of *written communication* that uses one or more words;
- **Intentional verbal/text**- conscious attempts we make to communicate with others through *writing (words, abbreviations, shorthand, chat slang*);
- **Unintentional verbal/text** - the things we *write* without meaning to (typos, spelling errors);
- **Nonverbal/text** - all of the messages we transmit *with text* or over and above the *text* we use;
- **Intentional nonverbal/text messages** - the *nonverbal/text* messages we want to transmit (*e.g., font style, font size, color, upper and lower case letters, punctuation, symbols, exclamations, emoticons, etc*.); and
- **Unintentional nonverbal/text messages** - all those *nonverbal/text* aspects of our behavior transmitted without our control.

Both verbal/text and nonverbal/text can convey tone in the message to the receiver/sender. As indicated by Rudick and O'Flahavan (ND), "Tone comes from your choice of words, the structure of your sentences, and the order of the information you present" (¶2). Rudick and O'Flahavan (n.d.), provide an example of how word selection alone can convey different meanings to the receiver/sender. "Would you prefer to be described as slender, slim, svelte, skinny, scrawny, or starved?" (Rudick & O'Flahavan, nd, ¶1). Tone can also be conveyed by faculty in written feedback on graded student assignments. The combination of verbal/text and nonverbal/text may affect a student's interpretation of the feedback. Read the sample feedback provided below and consider how the same message may be interpreted differently by a student based on the verbal/text and nonverbal/text.

- **DO NOT INCLUDE A COVER PAGE ON YOUR NEXT PAPER!!!**
- **DO NOT INCLUDE** a cover page on your **NEXT paper!**
- ***Do not include*** a cover page on your next paper ☹
- Do not include a cover page on your next paper ☺
- Do not include a cover page on your next paper.

While the words are the same in the feedback, it is the nonverbal/text that conveys differences in tone. Read the next set of sample feedback provided below and consider how the message may be interpreted by a student.

- Remember, do not include a cover page on your next paper.
- Remember, do not include a cover page on your next paper ☺

Although the message is essentially identical to the previous set of sample feedback, consider how the addition of the word "remember" as well as the decreased usage of intentional nonverbal/text change the tone of the message.

Recognizing that nonverbal/text can influence how feedback is interpreted/misinterpreted by students, administrators need to develop communication training for online faculty with strategies for integrating constructive written communication into instruction, feedback, and correspondence (e.g., email, discussion boards, wikis, feedback on assignments, etc.).Communication with faculty is often an online student's primary source of contact with an institution so it is essential that faculty are able to communicate effectively in an online environment.

Recommendations

Effective communication is important to online, blended, and face-to-face education. Therefore, administrators need to develop training and professional development that builds upon communication theory and provides faculty with skills and strategies for being effective online

communicators. While the following recommendations are for online programs, the recommendations can also be used by blended programs as well as on-campus programs since faculty communicate regularly with students electronically. The recommendations include training, setting the tone, and diversifying communication strategies.

Training

Human communication and effective communication strategies need to be an integral part of faculty training and professional development. Program administrators need to provide online faculty with overall program expectations for communicating through instruction and communicating with online students. For example, faculty guidelines should denote how quickly faculty are expected to respond to student emails, the type(s) of feedback expected on graded assignments, the timeframe for posting grades, how often to post in discussion boards, how often to post announcements, etc. If expectations and guidelines are not provided, there will be inconsistency in overall communication from one course to another. Training should showcase the available types of course management system tools that support communication, instruction, and engagement as well as how to use the tools. Most importantly, training should be ongoing. While it is critical to provide training for newly hired online faculty, ongoing professional development provides faculty with opportunities to develop new skills, augment instructional methods, and utilize innovative tools for reaching out to and connecting with students through effective communication.

Setting the Tone

As previously stated, communication for online students is extremely important since a student's primary contact with an institution is often through engagement with faculty. Therefore, administrators need to support the integration of effective communication across all courses. It is recommended that administrators encourage faculty, through professional development, to introspectively examine their own communication style relating to written and voice communication by reviewing previous feedback sent to students (e.g., feedback on assignments, emails, discussion boards, etc.) as well as watching/listening to archived live classrooms, voiceover PPTs, or pre-recorded video lectures. By doing so, faculty will be able to identify patterns that may positively or negatively affect the tone in their communication with students. For example, patterns may emerge when examining the use of lexicon, semantics, and syntax in written communication. Conversely, patterns may emerge when examining the use of visual and vocal cues in voice communication through pre-recorded synchronous or asynchronous classes or PowerPoint presentations. Throughout each quarter/semester, faculty send hundreds of messages through various communication channels. Therefore, faculty need to become aware of their own communication style relating to tone so they can build upon communication strengths and improve communication weaknesses through training and development.

Diversifying Communication Strategies

As indicated by Faharani (2003), interaction in a face-to-face program is predominately based on verbal and nonverbal communicative behaviors, while interaction in an online program is predominantly based on written communication. Online faculty need training on how to incorporate diverse communication strategies into online courses to communicate more effectively with online students. Today's course management system tools provide extensive channels for communicating with students, so it is recommended that online instruction integrate a

mixture of communication strategies throughout a quarter/semester. Voice announcements are an excellent way to share enthusiasm about a submitted course assignment in which the students performed very well. Voice announcements can also be used to provide verbal reminders and tips relating to an upcoming assignment to augment the written requirements. Voice emails can be sent to an individual student to provide encouragement if the student has voiced concern or doubt about an assignment, a course, or enrollment. Voice emails can also be used to share group accolades about a project that was well presented. Online synchronous classroom environments (e.g., Horizon Wimba Classroom, Adobe Connect, GoToMeeting, etc.) provide opportunities for students to engage in a synchronous setting and enable faculty to use video or voice communication to connect with students. Asynchronous voice boards provide venues for class debates and role-plays. Written communication (e.g., email, text discussion boards, announcements, etc.) will always have a critical role in online education; however, hearing and seeing an online instructor is an excellent way to personalize the online educational experience.

Conclusion

Effective communication in online education begins with an understanding of human communication and the differences between teaching in a face-to-face and an online environment. Training is essential for newly hired faculty as well as seasoned online instructors so communication is not "lost in translation." Faculty guidelines are needed to provide expectations relating to communication. Recognizing that online education can be very text-driven, it is important that faculty integrate diverse communication strategies into online courses to engage and connect students as active participants. While communication training is essential to developing effective communication skills, faculty must introspectively examine their own style of communication which will greatly assist in professional development and growth as an online instructor.

As technology advances, it is important that research continues in the area of human communication and online education. While this paper has provided an overview of human communication, many facets of communication were not covered due to the vastness of literature in the field of communication (e.g., gender, interpersonal, intercultural, group communication, organizational communication, etc.). Comparative research and studies with online, blended, and face-to-face programs are needed to better understand human communication across these types of educational settings. Research should also examine so-called channel effects, in which the channel used to communicate may carry with it certain strengths, weaknesses, biases, and expectations. Additionally, further research should examine these affects on the effectiveness and efficacy of different learning modalities. While advancements in technology and telecommunications are transforming communication and educational delivery, the key to engaging, connecting, and retaining students in online education will be human communication, online human touch, and administrative support.

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