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ABSTRACT

Electronic communication tools may have more in common with the old communication game where tin cans were connected by a string than with traditional classroom communication. The charge is to find ways to make the communication more like, and possibly better, than effective classroom communication. Creating a firm foundation for successful electronic communication must start before the source sends the message. Consideration must be made on whether or not electronic communication tools should be used. If there appears to be an instructional and student need for electronic communication, the next step would be to determine which type of tool would be used to implement an electronic communication system. The next step is also entangled with the previous steps and relates to message creation determine what forms of electronic communication will take place. To implement the electronic discussion, it is necessary to do some preparation in order to assure effectiveness. Participants must be trained on the various uses of the technology and given guidelines or principles related to the use of the electronic communication. Then, provide training and information on the proper, ethical use of the communication tools and determine faculty role of management and facilitation. By carefully planning for electronic communication, much as other parts of a class are planned, a beneficial environment can be more assured. (AEF)

Replacing the Tin Can: Creating an Effective Electronic Communication Environment

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com•mu'ni•cate 1. to impart, transmit; 2. to make known, tell; 3. to be connected; 4. to hold converse; impart ideas or information - Scribner Dictionary, 1977

It is easy to remember fondly the days when we would hold a tin can to our ear which was connected by a string to another tin can and a friend. We would struggle to hear our friend through the piece of yarn. The goal was more the act of putting the device together and less the actual communication itself. The same held true for the childhood game of operator, when one person started a message and the message was whispered from ear to ear to ear, around a circle until the final person said the altered message out loud. Everyone would laugh to hear how the message had changed during the communication process.

However, the simplicity of that type of communication does not work in the classroom. The purpose of communication in the classroom is to impart knowledge and information and to receive feedback. A garbled message will not work when students and faculty are depending upon clear, cogent communication. This need is particularly true in the realm of teacher education when not only is communication necessary for the learning process, but as a modeling process of effective classroom communication that preservice teachers will use in the field.

To accomplish that mission, a large number of texts have been created to help faculty and teacher alike create a scaffold where communication thrives for all persons. Friedrich, Galvin and Book (1976) break down the communication process into a system of communication where the student and the teachers have specific roles. Gavriel Salomon (1981) examines the richness and reciprocal interactions inherent in classroom communication. Hurt, Scott and McCroskey (1978) return to the classic communication model of source, receiver, channel, message and feedback and relate this specifically to classroom communication and how each piece plays out in the classroom environment. Finally, Cazden (1988) provides specific analysis tools and exercises to enable the teacher to understand the type of communication interactions which take place in the classroom and the variety of roles that are played by the individuals. The books mentioned here are just a taste of what sources are available regarding the facilitation and understanding of the classroom communication process. That process is far more complex than the string and tin can or the ring of friends whispering in each other's ears.

Classroom Communication in the Electronic Age

In an odd way, however, the tin can has returned to our communication system in the way of computer e-mail (i.e., two pieces of metal connected by fiber wire). At the same time, the circle of friends whispering to each other has returned as the electronic discussion group, where a message is passed to everyone. The analogy may seem stretched, but in many ways, the new electronic communication tools may have more in common with these old games than with traditional classroom communication. The charge is to find ways to make the communication more like, and possibly better, than effective classroom communication.

The statement above demonstrates that childhood games are similar to electronic communication tools. The question then arises, how are these forms of communication alike? They would seem remarkably dissimilar in their complexity and expense. However, just like the two people joined only by metal and string, e-mail messages are devoid of nonverbal communication and inflection. The hope is that the person at the other end understood what you were really trying to say. Likewise, the circle playing "operator" is much like the electronic discussion group where an original message is sent, and each person involved receives a slightly different message. The original sender is not able to relay the context of the message to every person and the final outcome or interpretation of that message may in no way resemble the original.

This paper and these authors will not begin to assume that all communication that takes place in a classroom

setting is effective. The face-to-face communication can also be charged with misunderstanding and false communication. However, classroom communication has the value-added benefit of immediacy and the possibility of immediate feedback (Hurt et al., 1978) for the purposes of clarification and consensus of understanding. Models such as these provide teachers with methods to ensure that the "noise" which disrupts communication is eliminated. Therefore, can these same models be applied to the development of an effective communication model for electronic discussion?

Building a Foundation for Electronic Communication

Creating a firm foundation for successful electronic communication must start prior to the models, i.e., before the source sends the message. First, the consideration must be made on whether the technology should be used. The mere ability to use electronic communication tools does not translate into an instructional need for the tool. For instance, perhaps a class meets several times a week and engages in active discussion during the class period and students are readily able to have all topics and questions covered during scheduled class periods. It could be argued that the use of electronic discussion in this instance would possible take away from and not complement the rich discussions already taking place. However, if there are students who are not comfortable speaking aloud in front of their peers, or class time does not permit discussion of issues indirectly related to course topics, or even if students have experiences (such as in preservice early field experiences) that they would like to share immediately instead of waiting for class time, an electronic discussion forum would appear to be a useful tool. When an instructional or student need is fulfilled by a tool, students will not feel a need to use it just to make the instructor happy or just for a grade, and more meaningful communication can take place.

If there appears to be an instructional and student need for electronic communication, the next step would be to determine which type of tool would be used. This step could be equated with selecting a channel for communication and messages. Again the student needs must take precedence in the selection. As an instructor, I may have become interested in the concept of conferencing on the web. However, a tool such as this will require students to have access to a certain level of software and computer in order to have class communication that is not frustrating because of the mechanics. Alternatively, perhaps communication with the entire class is not necessary, and only e-mail links to the instructor need to be established to encourage students to seek information and mentoring from the instructor. By matching the tool to the needs and resources of the students, a foundation is being built that will help support effective communication.

The next step is also entangled with the previous steps and relates to message creation. The specific types of electronic communication that will be sent must be determined and established. Will the electronic discussion be dedicated only to certain topics that are either integral to the course or, at the other extreme, will students be allowed to determine what topics will be discussed collectively. Perhaps students in the class have little time to develop social relationships with classmates, or are unable to do so in a distance environment. Therefore, it might be appropriate to allow students to use an electronic discussion group to form those important bonds with peers. On the other hand, it might also be equally important that students don't want to waste valuable time with trivial information and all communication must be professional in nature.

Implementing the Electronic Discussion

With the above decisions made, the foundation for an effective, electronic class discussion has been set. Now all that remains is the implementation. Implementation may seem to be a simple task, but once again, it is necessary to do some preparation in order to assure effectiveness. The environment itself needs to be built. As much as effective classroom discourse is managed and planned (Cazden, 1988), so too must the electronic classroom be managed. Many of these steps might appear to affect the message development. Their real purpose though is to eliminate the noise that disrupts the receiver from fully understanding, or even receiving, the source's message.

Training the Participants

There are many things that all the participants must learn in order to eliminate noise and hold effective communication. First, can all participants use the electronic tools that have been selected? For example, do all students have an active e-mail account and know how to send and read their e-mail? If web conferencing is being used, do students know how to input their information in a web form? Also, if a listserv is being used, does the faculty member have the knowledge to moderate the list? To ensure that everyone has the same basic level of psychomotor skills, it might be necessary to provide class time to learn these skills, or workshop time to do the same.

When you consider classroom discussion, there exists a certain degree of etiquette and a code of conduct. Students have learned not to interrupt the instructor. Students will usually raise a hand before speaking, or at least look to see if someone else is about to speak. For the most part, students and instructor alike are respectful of each other and allow each other to complete thoughts without interruption. These standards of behavior are not something that must be taught at the beginning of the class; instead, those skills have been learned over the years as students travel through a variety of educational levels.

It would absurd to assume students will enter an electronic communication environment and be able to achieve the same skill level they have obtained in face-to-face communication. In the first place, electronic discussion gives the user a certain level of anonymity that empowers individuals to say things they may not have said before. This empowerment may be to the betterment of the class as students who may not speak in a classroom environment now are willing to discuss issues and communicate with others electronically (Powers & Mitchell, 1997; Powers & Dutt, 1997; Johnson, 1997). However, the anonymity can also permit individuals to say things they would not ordinarily say to another person if they were sitting in a classroom together which might be to the detriment of the class environment.

Developing Guidelines

There are other skills to be learned to help eliminate noise. The written, textual base of words do not necessarily carry the same meaning as the spoken word. In other words, I may say something harsh in a classroom discussion to provoke debate. However, through the use of my body language, facial expression and tonality, I can soften the words enough that they will in fact provoke debate and not insult. Through the text of electronic communication, I am not able to convey all those communication tools that are outside of the words. I would therefore need to find different words and phrases that will accomplish the same mission and purpose and not offend or insult.

For basic Internet usage, there is reference source of online etiquette principles called "netiquette." These are core rules of acceptable behavior for online interactions, such as Virginia Shea's Core Rules of Netiquette (1997). These rules cover issues such as saying electronically only what you would say to someone face-to-face, ethics, sharing expertise with others, and forgiveness. Groups take netiquette guidelines such as these and adapt them to their specific needs. For example, Augsburg College (Mateer, 1996) has posted a list of guidelines with which they hope to guide their constituents. These guidelines also deal with issues of respect, educate users about how inflections in voice can change meaning and the related problem of not having that inflection present, and how the mere typing of text (e.g., all capital letters come across like shouting) can change meaning. By compiling these guidelines, Augsburg College is hoping to influence its community of electronic discussion.

The same process of "guideline creation" or adaptation of netiquette principles can take place at the classroom level. As mentioned previously, classroom communication generally takes a certain shape based on the years of experience the participants have in classroom discussion. Even when an instructor wants to change classroom discussion, students must be informed of the "new rules." For example, if an instructor wants students to jump in with comments at any point during a lecture, the students will probably need to be informed that it would be considered acceptable behavior. Therefore, we should expect electronic communication, which is undoubtedly new to many of the participants, to need the same level of permission and information.

Before the first electronic discussion takes place, the instructor needs to develop guidelines and criteria that are specific to that class. These guidelines would incorporate many of the decisions made previously in the process, such as whether social conversations are appropriate or if all communication must be professional in nature. The guidelines can include provisions for who can participate in the discussion; for example, will the instructor take the lead role in answering questions or initiating communication, or will all participants be considered equal. The guidelines can be even more basic and cover issues such as whether or not aliases will be allowed by individuals or must a student's identity always be obvious; whether or not signature lines can include items of a personal nature (scripture or sayings); preferences for responses to messages (should original message be included and to what degree); whether spelling and grammar is important in messages. Finally, the repercussions for violating the class policy must be codified.

Generally speaking, students are informed at the front end as to what the penalties will be if they, for instance, miss class or fail to complete assignments on time. If the electronic communication is truly a part of the classroom communication structure, the same information and repercussions must be made available to students for that part of the class. The instructor must decide up front whether students who abuse the electronic communication system will lose those privileges, and how that will impact their performance in the class. At one end of the spectrum, there might be no impact on final class outcomes, at the other end of the spectrum a student may not be able to successfully complete the class without the electronic communication. An instructor must decide whether there will be a series of warnings, or if there might be offenses severe enough to warrant immediate removal. Opinions and options will vary on this issue. However, the consideration must be made that our students are being prepared for participation in the world at large. It is far preferable that students make these types of errors within the confines of our educational system where we can work with the students and help their understanding, than to have them make these same mistakes in electronic communications that may be worldwide. Our education of students should extend beyond content and should include the tools for transmittal of content.

It could be argued that these principles and guidelines could be achieved through modeling by the instructor who would pay special attention not violate her own guidelines.

However, the instructor is not a peer and students will not be privy to all of the communications that take place, as in the case of private electronic communication. The modeling will help support the guidelines and give the students examples, but the overarching classroom electronic communication principles will provide a scaffold for students as they develop their communications.

Faculty Role

As one additional way to eliminate noise, faculty must also consider their level and type of participation in the electronic communication process. As with many teaching decisions, the purpose for implementing a teaching strategy must be considered when deciding the role s/he wants to play. For example, an instructor could choose to use an electronic discussion group to address specific topics related to course content; or, the instructor could decide to use an electronic discussion group to discuss issues related to the course that may or may not be addressed in class. In this last example, students would drive the message design by posting issues that have interest to them. In all of these scenarios, just like with regular class discussions, the instructor must decide his/her level of participation in the discussion. Confusion about faculty roles will create noise or disruption for the student as s/he struggles to determine the role as student. In any case, whether the instructor participates in the electronic discussion on a regular basis or chooses to step aside, the instructor must find a way to communicate to the students that s/he is reading the ongoing discussion. In this way, students still feel a responsibility to participate in the electronic discussion and know that the instructor cares about the ensuing discussion.

Specific Thoughts for Teacher Education

Recent teacher education reform movements including the National Board for Professional Teaching Standards (NBPTS), National Council for the Accreditation of Teacher Education (NCATE), and the Interstate New Teacher Assessment and Support Consortium (INTASC) acknowledge the need for beginning and experienced teachers to demonstrate competence in the use of technology as well as effective communication skills. Integrating electronic communication into teacher preparation courses not only provides students with exposure to technology-related communication, but also provides students with an opportunity to practice effective communication skills in new contexts.

In addition, it seems that professors of education are always concerned with the over abundance of content to cover during class time, especially now as field experiences become such a critical component of many teacher preparation programs. Electronic discussion can provide instructors with opportunities to use other forums for communicating with students and provide students with other forums for communicating with each other. As a tool, it provides a vehicle for students to share ideas, discuss topics, ask questions that would otherwise take up class time. It is also an effective way to open communication lines while students are out in the field.

Conclusion

Returning to the definition provided by Scribner on communication, we see that to communicate means to impart or transmit, to make known or tell, to be connected, and to impart ideas or information. All of these aspects, molded together along with the deliberative design of the communication system will create an effective electronic communication environment for classroom discussion. In a condensed form, the instructor must:

1. determine the instructional need that would indicate whether or not electronic communication tools should be used;
2. determine exactly which tools would be used to implement an electronic communication system, again dependent on the student and instructional needs;
3. determine what forms of electronic communication will take place;
4. train all participants on the various uses of the technology;
5. create guidelines or principles related to the use of the electronic communication;
6. provide training and information on the proper, ethical use of the communication tools; and,
7. determine faculty role of management and facilitation.

Effective electronic communication can take place without all these decisions being made and this advanced planning. Some classes of students contain the capacity and critical mass to be able to approach these tasks without problems. However, the risk and outcome of unsuccessful electronic communication may be too great and may prove to be too heavy a burden on the class as a whole or the individual participants. By carefully planning this discourse, much as other parts of a class are planned, a beneficial environment can be more assured.

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