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ABSTRACT
        This paper explains the difference between one- and
two-way communication between teachers and students and describes the
effect on learning of these types of communication and of
"psychological size," or the total psychological impact that one
person has on another. The importance of integrating individual
teacher style with these concepts is stressed. Since effective
teaching involves skill and can therefore be learned, experimentation
and review of teaching styles is also suggested. (Author/KS)

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Teaching-Learning Monograph Series:

One- and Two-Way Communication in the Classroom

ONE-WAY AND TWO-WAY COMMUNICATION PROCESSES IN THE CLASSROOM

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ONE-WAY AND TWO-WAY COMMUNICATION PROCESSES

IN THE CLASSROOM

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Teachers need to be able to communicate with students. Most of us
would agree that communication is a central part of the learning process.
And, in fact, most of us have a pretty clear idea about how we should teach
and communicate. Frequently, however, our decisions about how to teach and
communicate are based on "how we learned it", "habit", or "the traditions"
of the institutions and the departments in which we work. Some of the
models we use are: lectures, structured discussions, question answering
sessions where we ask, "are there any questions", and other such approaches.
In this paper, we want to talk about the consequences of choosing various
communication approaches in our classrooms. We would like to raise the
level of understanding of these approaches above the level of habit,
mythology, past practice, and tradition and look at some of the indica-
tions that follow from research on communication. At the same time we
would like to provide some ideas and thoughts which we think will help
faculty members do a better job of integrating their approaches to com-
munication by giving them some ideas about the appropriateness of various
methods of communication to the circumstances present in given classrooms
and in given departments.

COMPARISONS BETWEEN ONE AND TWO-WAY COMMUNICATION

Communication processes can be generally described as being either
one-way or two-way processes. A one-way communication process indicates
a flow of information, facts, theory, etc., from one person to another.
For example, when I give a lecture I am talking to students. Similarly,
when I am the author of a book or a radio announcer I am communicating
to the reader or listener. An important characteristic of the one-way
communication process is that reader or listener has little or no oppor-
tunity to respond or react immediately and directly. Therefore, as the
teacher or faculty member I must make a number of assumptions about the
listener's skill level, prior training, and understanding of the topic
being communicated. The obvious errors that I may make include: making
the material too complicated and difficult, too simple and easy, or mak-
ing assumptions which are not fully shared with my audience thus making

it impossible for them to understand what I'm really saying.

A two-way communication process indicates a flow of information, facts, theory, etc., among and between two or more individuals. Examples of two-way communication include: seminars typically conducted with graduate students or undergraduates in honor's programs, small group discussions, research projects involving academic colleagues, etc. The important characteristic of two-way communication is that the sender of a message has a much greater opportunity to get immediate reactions and responses from his listener. Because of the opportunity for immediate feedback, many of the assumptions that one makes under one-way communication about skill level, prior training, and understanding of the topic being communicated get tested immediately.

A considerable amount of research on the differences between one and two-way communication has been conducted over the last ten years by such researchers as Haire, (1956) Leavitt, (1951) Tesch, (1968) and Tesch, Lansky, and Lundgren, (1972).

In relationship to the communication of ideas (content) the research suggests the following differences between one and two-way communication:

1. One-way communication is more efficient than two-way communication. It permits the transmission of more information in a shorter period of time than two-way.

2. One-way communication is less accurate than two-way communication. Although one-way communication is more efficient in permitting the communicator to send more information per unit or time, the listener's understanding of the information sent under one-way is less complete than the listener's understanding of the same amount of information under two-way communication.

3. One-way communication does not permit the development of a common language between the communicator and his listening audience except to the extent that communication defines his terms carefully and in alternative ways. Under conditions of two-way communication the listener can participate in a development of a common language by suggesting terminology, concepts, and ideas that make sense to him and thereby in 'uence the communicator to incorporate these into the message sending pi   ess.

4. Given the same group of people, both one-way and two-way communications improve in accuracy and efficiency over time. In other words, practice and continued communication with the same group lead to improved communication. The relative differences between one and two-way

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communication as indicated in paragraphs one and two above remain the same over time. That is to say, that over time one-way communication remains more efficient and less accurate while two-way communication remains less efficient but more accurate.

The research on one and two-way communication indicates that the process of communication differs between one and two-way communication in the following ways:

1. Under one-way communication the control rests almost totally with the communicator (the teacher). Under conditions of two-way communication control is shared and shifted toward the listener (the class). In two-way communication the sender of the message (the teacher) makes the decision to share some of the control in an effort to achieve increased understanding. By giving up control the teacher may also grant influence to the class to say something about their needs and wants, and the conditions under which they learn best.

2. There are a number of reasons why a teacher might avoid two-way communication. The teacher may fear "things will get out of hand", "students will take advantage", "the students aren't ready for it". Teachers may also be unsure of their own mastering of the material and not want to be questioned too extensively. Fear of not covering the assigned material may result in underuse of two-way communication. This fear may be realistic in very large classes or where certain ideas are needed for later activities. However, not covering the material may mean that the teacher has designed too much into the class.

3. Two-way communication facilitates the accurate expression of feelings on the part of the listeners to a greater extent than the one-way communication. Under conditions of one-way communication listeners may shuffle their feet, tap their fingers, sleep or do things that suggest they're having some kind of response to the message being sent but the response is impossible for the communicator to decipher. The communicator must make assumptions (which clearly could be inaccurate) about the meaning of the various nonverbal responses. Under two-way communication the listeners can more directly discuss their feelings of uncertainty, confusion, clarity, satisfaction, or whatever about the messages being sent. Two-way communications enhance the possibility that students will feel more free and open to discuss fears or concerns they have about their competence in the subject. For example, students

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are frequently reluctant to discuss their own confusion because they run the risk of appearing "dumb" either to faculty or to fellow students.

4. One-way communication is much more orderly in appearance than two-way communication. In one-way communication the message is sent and individuals receive it without making explicit responses. If one wants to make a good presentation, present a knowledgeable image and a smooth performance then one has the option of one-way communication. By comparison, two-way communication is much less orderly. It is less orderly because it deals directly with problems of misunderstanding. It is less orderly because it permits the expressions of feelings as indicated in paragraph two above.

TEACHING, PSYCHOLOGICAL SIZE, AND COMMUNICATIONS

Faculty members are faced with a special problem when they attempt to encourage two-way communication between themselves and students. In the presence of a leader who has power over them, people are frequently reluctant to express feelings or opinions which might offend, upset, or irritate. While this problem is most acute in settings where a teacher has the power to influence the academic success of his students, it is not confined to such situations. Even in organizations where the leaders are elected by the members and democratic equality is the rule, difficulties in speaking freely to people in leadership positions may still exist.

What can be done to encourage those of lesser status and power to speak freely? We can approach this problem by introducing the concept of "psychological size".* This phrase is a convenient label for the total powerful impact which one person has on another. It refers to the assumed potential which one person has for helping or hurting other people. "Psychological Bigness" consists of potential for interfering with productive and meaningful learning, grades, or for making students look ridiculous, incompetent, and weak. "Psychological Smallness" consists of low potential for influencing people in these ways. The condition of a group with a psychologically "big" leader is shown in Figure 1.

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*We want to thank Dr. Edwin Nevis and the late Dr. Richard E. Wallen who first introduced us to the concept of "psychological size" in connection with one and two-way communication.

When the teacher is perceived as much "bigger" than any of the students, students hesitate to speak up. They carefully censor their remarks so that they will stay in the good graces of the teacher. This situation can be dramatically visualized by imagining a teacher who is ten feet tall while his students are in the six foot range. The sheer difference in physical size would be overwhelming and would make the students anxiously alert and cautious.

Marked differences in psychological size have other consequences besides interfering with two-way communication. When the teacher is psychologically big, students have a tendency to lean heavily upon him. They expect him to solve many problems, to see that all goes well, to take care of them. This can easily result in apathy, lack of initiative, and dependence. Another, less apparent consequence, is hidden resentment and frustration in those who are psychologically small. Believing they must carefully nurture the good will of the "big" leader they do not feel free to be themselves. They feel they must defer to him and, in a sense, deny their own individuality. Thus, even when the teacher is doing a good job of taking care of his students, considerable inner resentment may be building. Stated in psychological terms, conditions producing inappropriate dependency usually produce hidden frustration and hostility.

The solution to the problem posed in the first paragraph is for the teacher to reduce his psychological size. Then we would have the condition shown in Figure 2.
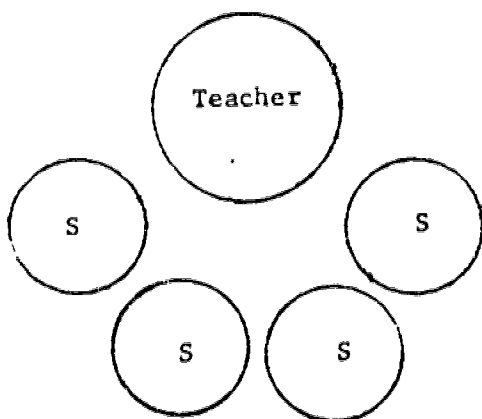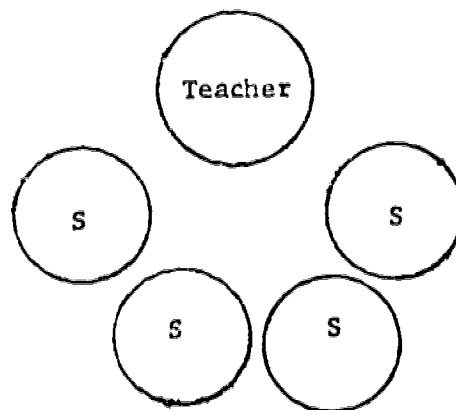
Figure 1   Figure 2

The reduction in psychological size depends on recognizing the factors which contribute to it.

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The following is a list of some of the important ones:

High Status and Titles - Faculty members often underestimate the powerful impact the title doctor or professor has on the student. For many students, this status and the titles present an image of one who is scholarly, extremely intelligent, quick minded, and quite discerning about intellectual competence and incompetence. As a consequence, students are often a bit awestruck which can result in their feeling fearful of being open and free with regard to discussing or contributing their thoughts and ideas in a classroom situation. The teacher can reduce the negative impact of this factor by deleting unnecessary references to his status and titles.

Power to Pass and Fail - In the classroom situation for the student is the fact that the teacher is in a position to make and pass judgments on his competence or incompetence. In other words, the teacher is in a position to either pass or fail the student in the subject matter. This again can result in students feeling less than the optimum freedom and openness to discuss and contribute around the subject matter in the classroom setting.

Using Sarcasm or Ridicule - It is important for the teacher to be sensitive to the manner in which he criticizes a student's work, whether written or verbal, in the classroom setting. While the teacher's intent or motivation may be constructive and positive, the student may well perceive the criticism of his work as being in the form of ridicule. In the one-way communication process which is most characteristic in our classroom situations there is little or no opportunity for the teacher to test out how students are receiving the manner in which he attempts to constructively criticize their work.

Another important point to consider is the form or kind of humor the teacher uses in a classroom setting. While the teacher's intent may be to lighten the situation or to introduce some fun into the learning process, he needs to be sensitive to, and aware of, how the students receive or see his sense of humor. For example, if he has a sarcastic kind of humor it might in fact be having negative consequences in the classroom. Students may feel "put down" or "pushed away".

Making Terminal Statements Where No Disagreement Is Possible - This situation occurs most frequently in conditions where one-way communication is used. It is probably safe to assume that most teachers

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don't intend to make a terminal statement or to discourage disagreement, but if he doesn't make a conscious effort to solicit feedback from the students he may well be perceived as primarily concerned with controlling or cutting off the discussion.

Very Formal Manner - Fortunately, or unfortunately, because we just happen to be the kinds of people we happen to be, some of us come across in a very formal fashion. The students see us as being sort of rigid and tight with our suit coats buttoned and our ties neatly tied and tightly pressed against the adams apple. Given this portrait, it is safe to assume that students will have some reluctance or difficulty in being open and free with us in the classroom. We may like our present style as is, not be able to change, or want to experiment with being more informal. In any event, we should be aware of how formality affects communication with our students.

Making Punishing Remarks - Remarks like "that's illogical" or "that doesn't follow" may be felt to be very punishing by the student. Less obvious remarks than the above may be punishing and unfortunately we are not always aware we have made a punishing remark when criticizing the work of students. A punishing remark probably doesn't facilitate the improvement of students' work and more likely teaches the student to be "more careful and not get caught again". Open two-way communication with our students will help us become aware of when we have committed a communication error.

Displaying a Great Amount of Detailed Knowledge - Teachers, because of their training, almost always have a great deal more knowledge about the subject matter than the student. It is important, however, to be aware of the fact that some students find this a bit over elming. In other words, a student could say to himself, "I'm not going to say anything about the subject because the teacher has so much knowledge that I run the risk of appearing stupid or incompetent".

Facility in Use of Language - Teachers typically have a great deal of experience in using the language of their subject. Again, extensive vocabulary or facility in expressing complicated concepts can be overwhelming for some students, particularly when students have some difficulty in discussing or communicating complex concepts or have a somewhat more limited vocabulary. The teacher should continue to utilize his expertise in communicating concepts, but be aware of the impact his

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language system has on students and be prepared to assist students in learning his vocabulary.

It should be apparent from the above list that not all the factors which contribute to "psychological bigness" are bad qualities. Teachers should have expertise in their area and facility with language. We want it clearly understood that we are not encouraging teachers to appe : less competent than they are to reduce their "psychological size". We are suggesting that teachers should be aware of how they come across and how their style is received by students. Teachers who want more student involvement and feedback can encourage this by displaying a warm friendly attitude, showing regard for the opinions and ideas of their st· 'ents, encouraging talk among students. Also, teachers should be alert to and try to decrease their use of sarcasm and punitive remarks.

THE TEACHER'S STYLE AND EXPERIMENTATION

Each of us is different and unique as persons and teachers. This is very important for each of us to remember in considering the relationships between communication and learning, one/two-way communication, and psychological size discussed in the sections above. The task for the individual teacher is to weave an elegant integration of self, subject matter, and approaches to teaching and learning. As our individual teaching style develops and matures it must provide room for our particular brand of humor and eccentricities. In the process we must deal with such questions as: 1) What amount of time should be devoted to humor? 2) Whose needs are being filled, mine or the students'? 3) How disruptive are his eccentricities and could/or should I try to change them? and 4) How does my behavior effect what students learn?

Since we believe effective teaching involves learnable skills we favor experimentation with our teaching style. While our personalities are probably open to only limited change, our teaching style is certainly subject to change and modification. Through the exercise of skill and insight, experimentation with our teaching style and classroom approaches can be facilitated in a number of ways: One is through dialogue with our students in which we ask them to help us assess their own learning, the effectiveness of our teaching style, or the effectiveness of a particular approach being used. This process can occur face-to-face or via the use of anonymous questionnaires. The questionnaires offer somewhat more security for the student as well as the teacher who would like

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some time alone to think about student comments before reacting to them.

A second approach involves the use of video tape to analyze our classroom manner, lecture style, or interaction with students during discussions. It is difficult to conduct a class and simutaneously video tape it. Therefore a technician or colleague is needed to record the class for later review. A review of a class can be done privately or along with a colleague. A private showing offers more security while the presence of another teacher, or student offers the possibility of a different perspective and/or helpful ideas.

A third way to improve our teaching is to observe the classes of others who are considered to be especially effective. While some teachers will object to having visitors in their classes, most won't if visitation privileges are requested ahead of time. Similarly it is possible to ask an experienced teacher to observe and consult with us on a class session.

A fourth aspect of experimentating with our teaching style is to alter our approaches from lectures to discussion or vice versa, from student projects to case histories, from book reports to research projects and so on. Too frequently we choose approaches like the man who wanted to visit all the bars in New York and stopped at the third one because he liked it. Expanding one's teaching resources requires conscious and active exploration. Also, what didn't work for us when we were starting out may now be effective after more experience in teaching.

SUMMARY

This paper has attempted to spell out some of the relationships between communication and learning, differences between one and two-way communication, and the impact of psychological size. The importance of integrating individual teacher style with the above concepts has been stressed. We have taken the position that effective teaching involves skill and therefore can be learned. Several suggestions for experimentation and review of one's teaching style have been offered.

As a final comment we would like to offer a caution. Blatant deviations from the "conventional" behavior of teachers in a department or from the "conventional" expectations of students does not make sense to us. Both teachers and students seem to react best when experiments are limited in scope or time and/or introduced gradually. For example, students and instructors can feel shaky with an experiment which gives the students more influence, control or responsibility all at once. It can happen,

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and does, that some or all students in a class do not know how to use free-
dom. Rather than total freedom we favor the negotiation of contracts which
specify limits and outcomes. Satisfactory completions of contracts can then
lead to expanded ones.

The teacher who wants more two-way communication with students needs to
recognize that a class starts out as a collection of individuals and evolves
into a social system during the term. Trust, accommodation, and respect for
individual ideas must be nurtured by the teacher and developed over time.
One way to tell you are being successful in creating two-way communication
is when students start to question your ideas and start to take issue with
each other in an open non-gamesmanship manner.

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