Communication within an organization can be defined according to the three directions in which communication flows: downward, upward, or horizontally. Business communication also includes external activities in which interaction is either one way to two ways. This paper describes the differences between one-way and two-way communication systems and presents an exercise which demonstrates these differences, for use in the classroom. Using verbal directions, one class member describes the form of a nonrepresentational line drawing. In one case, no feedback is allowed from other students, who must render the drawing according to the directions. In another case, the student who describes the drawing may be questioned. Data collected indicate that, while two-way communication, in which questions are allowed, requires more time, a far greater degree of accuracy can be achieved. Class discussion can also illustrate that levels of frustration and confidence vary according to the type of communication system used. (KS)
The purpose of this communication is to present to you the method I use in the classroom; to increase student awareness of a ONE-WAY vs a TWO-WAY communication system, to permit the students to experience the problems encountered in both systems, to assist students to select the best system in a particular situation, and to provide the basis for a mid-term examination in communication theory.

The term "communication" can elicit a different mental image in different people. In order to discuss the communication process we must use a common definition. I define communication as "a process to transfer a mental image from a memory unit into the memory unit of a human receiver through an exchange of symbols so that the mental image in the mind of the receiver is identical to the mental image that the transmitter is scanning."

We are all aware of the many elements to be considered in the communication process such as: be correct, be concise, be clear, be complete, be concrete, be considerate, be courteous. We also recognize that to communicate effectively we must: examine the purpose of each communication, consider the setting for the communication, examine to the best of our ability the characteristics of our audience, be mindful of the overtones as well as the basic content of the message, be sure your actions support your communication, follow up your communication by being a good listener -- try to be understood but also try to understand.

It is a daily problem in business to communicate with persons within the organization as well as persons outside the organization. Communication within an organization can be considered according to the three directions in which communication flows: downward, upward, and horizontal.
But business communication also includes external activities. A business must purchase raw materials or finished products from other sources. It must sell its own products or services to intermediaries or the public. It must respond to consumer complaints. It must comply with numerous regulations established by all levels of government. It communicates with other businesses to cope with common problems through the Chamber of Commerce, trade associations or professional societies. All of these activities require communication which can be accomplished through a ONE-WAY communication system or through a TWO-WAY communication system. Now let us explore both systems.

Step 1
I use an overhead projector to present a pictorial diagram of a ONE-WAY communication system.

![Diagram of a ONE-WAY communication system]

The advantages and disadvantages of this system are discussed.

1. Communication flows only from the communicator to the receiver.
2. The communicator cannot determine the effectiveness of the communication.
3. There is a high probability of error.
4. The communication takes a minimum of time.
5. The communication is neat and orderly.
Step 2

The TWO-WAY system is presented in the same fashion.

![A TWO-WAY COMMUNICATION SYSTEM](image)

- Step 2
  - The time element is a factor to be considered.
  - Requires that both communicator and receiver be in the same place at the same time.
  - Possible interaction is very high.
  - A high degree of accuracy can be obtained.
  - A combination of verbal and nonverbal symbols is possible.

Step 3

I then summarize the activity by stating the conclusions from experimental research.

1. A ONE-WAY SYSTEM ACCOMPLISHES THE COMMUNICATION IN A SHORTER PERIOD OF TIME THAN A TWO-WAY SYSTEM.

2. A TWO-WAY SYSTEM PROVIDES A MORE ACCURATE TRANSMISSION THAN A ONE-WAY SYSTEM.
Step 4

The students have heard about and discussed the two systems but Dr. John Dewey said, "To know is to have experienced." Therefore, the next activity is to have the students replicate the experiment in class.

The students are told to observe the following factors during the experiment.

**ACCURACY:** What was the relative effectiveness of the two systems?

**FRUSTRATION:** How much frustration was developed by the two systems?

**CONFIDENCE:** How much confidence do the systems engender in the participants?

**TIME:** How do the systems compare in the amount of time required?

At this time I request a class member to volunteer to start the experiment in the ONE-WAY mode. If I do not get a willing respondent I use the ARMY method.

The volunteer is given the following drawing:
Each class member is given six 8 1/2" x 5 1/2" sheets of paper and is told to follow the instructions given by the volunteer. The objective is to complete the diagram being described as accurately as possible.

The volunteer is told:
1. Turn your back to the class and do not make any motions visible to the class.
2. Study the drawing and tell me when you are ready to begin and when you have completed the description of the drawing.
3. I will time the presentation with a stop watch.

The volunteer then proceeds to describe the drawing to the class. After the presentation the class members are shown a transparency of the same drawing and are asked to indicate by raising their hand whether their drawing is an exact duplicate of the drawing presented on the transparency. A count of hands is taken and recorded. I use a transparency previously prepared with headings and columns and I enter the data with a grease pencil as the students make their presentations.

<table>
<thead>
<tr>
<th>STUDENT NO.</th>
<th>ONE-WAY SYSTEM</th>
<th>TWO-WAY SYSTEM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TIME</td>
<td>NO. CORRECT</td>
</tr>
<tr>
<td>101</td>
<td></td>
<td></td>
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<tr>
<td>102</td>
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</tr>
<tr>
<td>106</td>
<td></td>
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</tr>
</tbody>
</table>
Step 5

The experiment is continued by the same volunteer but using a new drawing and in the TWO-WAY mode.

The class members are told to turn over their sheet of paper and again follow the instructions of the volunteer. This time, because we are using the TWO-WAY system, they may ask the volunteer questions, talk to each other, or use any other means they wish in order to complete their drawing. But, they may not ask the volunteer to show them the drawing. Your objective is to reproduce the diagram as accurately as possible, so communicate as much as necessary to achieve this objective.

The volunteer is given the following drawing:

![Diagram](image)

The volunteer is told:

1. Face the class and use your best speech techniques.
2. You are not permitted to draw the diagram on the blackboard, trace the figure in the air with your fingers, nor show the group your diagram.
3. Tell me when you are ready to begin and again when you have completed the description of the diagram to the satisfaction of both yourself and the other class members.
4. I will time the presentation with a stop watch.
The volunteer then proceeds to describe the drawing to the class. After the presentation the class members are shown a transparency of the same drawing, and asked to indicate by raising their hand whether their drawing is an exact duplicate of the transparency.

A count of hands is taken and recorded.

Steps 4 and 5 are repeated by five more volunteers using ten different drawings in order to provide data from which we can determine whether our results lead to the same conclusions as those of the original experiment.

Step 6

The data I gathered during the experiment are presented to the class.

<table>
<thead>
<tr>
<th>STUDENT NO.</th>
<th>ONE-WAY SYSTEM</th>
<th>TWO-WAY SYSTEM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TIME</td>
<td>NO. CORRECT</td>
</tr>
<tr>
<td>101</td>
<td>2 min. 40 sec.</td>
<td>0</td>
</tr>
<tr>
<td>102</td>
<td>4 min. 37 sec.</td>
<td>2</td>
</tr>
<tr>
<td>103</td>
<td>7 min. 36 sec.</td>
<td>5</td>
</tr>
<tr>
<td>104</td>
<td>5 min. 32 sec.</td>
<td>8</td>
</tr>
<tr>
<td>105</td>
<td>4 min. 38 sec.</td>
<td>10</td>
</tr>
<tr>
<td>106</td>
<td>6 min. 28 sec.</td>
<td>9</td>
</tr>
</tbody>
</table>

Source: An actual class of 37 members.
The class then discusses the experiment in terms of the four factors: accuracy, frustration, confidence, and time.

The conclusions and summary we developed from this experiment are the same as those found by the authors of Management: An Experiential Approach.

Conclusions:
1. TWO-WAY communication is much more accurate than ONE-WAY communication.
2. TWO-WAY communication promotes a much higher feeling of confidence than ONE-WAY communication.
3. TWO-WAY communication has a lower frustration level, and this frustration is of a significantly different kind than that generated in the ONE-WAY system.
4. The TWO-WAY system takes appreciably longer than the ONE-WAY system.

Summary:
In general then it would seem that the ONE-WAY system is better for a manager if he:
1. is satisfied with a low accuracy
2. is not concerned about frustration, confidence, and morale problems in the organization
3. wants to keep the amount of time involved in communicating as low as possible
4. wants the process to appear neat and orderly

However, a manager would choose the TWO-WAY system if he:
1. wishes a high degree of accuracy
2. is concerned about having high confidence, low frustration, and high morale in the organization
3. is not concerned about the amount of time the communication process takes
4. is willing to pay the associated costs involved.

If you are interested in the way I use this process as a mid-term examination "WRITE OR PHONE."