Selectivity and Communication

Students learn what they choose to learn, not what we choose for them to learn. That means we need to figure out how to get them to choose to learn the same things we choose to teach them. That is the critical challenge all teachers must face.

Getting through to students is not an easy task under the best of circumstances. Even if we have a highly motivated student who really wants to learn what we want to teach, the odds are still against success unless we can win the "selectivity battles" we face. The noise in the receiver, which we noted in our model of the instructional communication process (Figure 1.1), is not there because the student wants it there; it is there because the student is a human being (McCroskey & Wheeless, 1976).

Human beings are information processors. That is, messages do not simply go directly from their source to the mind of the receiver; they go through a reception and processing system. Most messages do not get through that system at all. Those that do may be modified greatly before the meaning they are meant to generate is stored in the receiver's mind. That meaning may be only remotely related to the meaning the source was attempting to communicate.

In a very real sense, trying to get our messages to produce student learning is like trying to make our way through an obstacle course. The obstacles are the various types of selectivity, as illustrated in Figure 6.1. We must overcome each obstacle in turn, for at any point our message may be blocked from stimulating the meaning we want to communicate. If we fail to recognize an obstacle, or to deal with that obstacle, our instructional goals will be missed.

As indicated in Figure 6.1, there are four types of selectivity that can directly interfere with initial learning: selective exposure, selective attention, selective perception, and selective retention. A fifth type of selectivity may occur even after initial learning has occurred: selective recall. We will look at each of these in turn.
Selective Exposure

Selective exposure refers to a person’s conscious or unconscious decision to place her- or himself in a position to receive messages from a particular source. We all engage in this type of behavior every day. When we choose a television channel, we have selectively exposed ourselves. Even if we just turn on the TV and watch whatever is on the channel to which it was tuned by someone else, we have selectively exposed ourselves, for we chose not to change the channel.

Students sometimes have the option of choosing what classes they want to take. If we teach an elective course, we can reasonably assume that the students in the class will be more motivated to learn in that class than students in required courses would be. And, by the way, why is it that we have required courses such as English, foreign languages, or math? Is it because we think such classes would be good for the students? Not really. That would be a good reason for offering the classes, but in fact the reason we require them is that we don’t think the students would selectively expose themselves to those courses otherwise.

Students sometimes have a choice of different teachers for the same course, particularly at the college level. In such cases, the student can choose to selectively expose her- or himself to one teacher and not to others. This makes some teachers uncomfortable or even jealous of other teachers. Teachers who are regularly selected are often described in negative ways by their less-frequently-selected colleagues. Since one teacher is more popular than another, the popular teacher must be doing something dreadful, or so the rumors typically go.

If we are going to control students’ selective exposure behaviors and use them to our advantage in enhancing the students’ learning, we need to understand what factors lead to exposure decisions. Let us consider several.

Proximity

That which is immediately available is most likely to be chosen. Universities have learned that classes offered in student dormitories are very popular. Even if it is not precisely what the student wants, its proximity makes it likely to be chosen. A large proportion of young people attend colleges within a few miles of their homes. While cost is an important consideration, another important factor is that the school is close to home and easy to get to. If a student needs an answer to a question, a peer sitting close by is closer than the teacher and is more likely to be asked the question.

Involvement

The more important a topic is to a person, the more the person is likely to expose her- or himself to messages on that topic. Sixteen-year-old students are likely to be very involved in getting their driving licenses. Hence, they are likely to selectively expose themselves to a driver education course or to reading a booklet on the information one needs to pass the license examination. Although a basketball
player may have low involvement with English, he or she is likely to be highly involved with basketball practice. Attendance at English class is not as probable as attendance at basketball practice, and if there is a conflict between the two, we can be virtually certain of which one will be selected for exposure.

Utility

Things that are seen as immediately useful are more likely to be selected for exposure than those that have little immediate utility. If a student has a test in math tomorrow and one in history next week, if he or she is going to study tonight, odds are that it will be on math, not history. This applies to various other types of subject matter as well. That which the student sees as useful in life now, rather than in some distant future time, will draw much more exposure.

Reinforcement

People expose themselves to messages they believe will be consistent with their own beliefs. Democrats go to Democratic party rallies. Republicans go to Republican party rallies. When we attend athletic events, we sit on "our" side of the field, not "their" side. Pro-choice people listen to and read messages that support a woman's right to an abortion. Pro-life people listen to and read messages that advocate the abolition of abortion. In short, we all want to hear others present messages that agree with our own views, and we only infrequently choose to expose ourselves to messages that we know in advance will take positions with which we disagree.

Students will seek the advice of teachers they consider "with it" but will avoid hearing advice from those they see as out of date or out of touch with people their age.

Whatever the reason students engage in selective exposure, the bottom line remains the same: No exposure, no learning. Getting the student to be present and hear and see the message does not guarantee that he or she will learn from that message, but failing to get the student to be present does guarantee the student will not learn from it. Exposure is a necessary but not sufficient condition for learning.

Selective Attention

As the old saying goes, you can bring a horse to water (selective exposure), but you can't make it drink (selective attention). Students cannot always control the type of messages they are exposed to from teachers. Hence, when they are exposed to messages they would rather avoid, they may simply select to pay attention to something else. In a sense, all attention is selective. Everything in our students' perceptual world makes some demand upon their attention, but they cannot attend to everything at once. They may choose to attend to something other than our messages, or they may pay more attention to some of our messages and less to others.

A myriad of things in the normal classroom call out to students for their attention: other students, things going on outside the windows, things on the walls or posted on bulletin boards, the teacher's clothing, something on a nearby desk, the clock, and on and on. Many factors, then, determine what the student will pay attention to. Let us consider a few of those.

Attention Span

No matter what a student chooses to attend to, that attention can continue only so long. The time a person can spend attending to one thing is referred to as her or his attention span. How long that span will be depends in part on developmental factors. Young children typically have very brief attention spans, while adult attention spans are longer. No one, however, has an attention span that extends as long as the shortest of class periods. Attention spans are typically measured in seconds, not minutes. Students' attention, of necessity, will move from one thing to another during a class period. Any teacher who expects full and undivided attention for an entire class period is expecting the impossible. That is one reason that redundancy, which we discussed in Chapter 4, is so important. When we teach things redundantly, students may miss the point once while attending to something else but attend to it and learn another time.

Novelty

Things that are unusual attract attention. When someone who is not a regular member of the class (like the principal) enters the room, virtually everyone's attention is directed toward that person. Similarly, things that can be seen out a window often command attention because they are novel. The senior author recalls his attention once being drawn away from what he was teaching by a tree going past the windows of his classroom. While that would have been unusual in any circumstance, in this case, he was teaching on the fifth floor! Needless to say, the students' attention was also riveted on the tree. Everyone went to the windows to see the groundskeepers with a huge truck and crane slowly moving a tree that was at least 80 feet tall down the street to be planted in front of a new library building.

This example indicates that there are times when the teacher has no realistic hope of recapturing students' attention from truly novel events. To persist in teaching only guarantees failure. Fortunately, such extremely novel events happen rarely. However, events that are just "a little bit novel" are often enough to redirect attention. This presents the teacher with both a challenge and an opportunity. While uncontrolled novelty can pull student attention away from the teacher, intentionally introducing novelty can capture attention for the teacher. If the novelty is associated with the material being taught, it will facilitate learning.

Concreteness

Highly abstract material bores students, so they search their surroundings for other places to direct their attention. Concrete things or ideas, on the other hand, attract attention. Nothing will help students understand such abstract concepts
as freedom of speech or freedom of the press, and realize why people are willing to risk their lives to defend them, more than having the principal or school board impose censorship on the school newspaper by restricting what the students can include in it. Students who may have been so bored they were sleeping in political science class last week may be marching in front of the school this week. This is the difference between the abstract and the concrete in terms of their ability to capture attention.

Fortunately, we do not have to create such emotion-charged issues as censorship of the paper to bring concreteness into the classroom. The key is to relate whatever you are teaching to the real-life experience of the learner whenever possible. This is not always easy, but most things worth teaching have some relationship to the concrete world, if the teacher will only look hard enough to find it.

Size

As a rule, bigger things draw more attention than smaller ones. When designing visual aids for instruction, then, bigger is better under most circumstances. Big maps, big pictures, and big graphs will grab attention.

Duration

Attention is directed to things that are moderate in duration. Lessons that are very short may be over before some of the students tune in. Similarly, those that go on for a long time may exceed the student’s capacity to stay with them. However, judicious use of breaks to allow students to attend to other matters may permit sufficient attention to be given to matters that take longer to teach.

Whatever the reason for the students’ use of selective attention, as we said with selective exposure, the bottom line is the same: No attention, no learning. Although attention is not sufficient to guarantee learning, the absence of attention will guarantee that learning will not occur. Attention is a necessary but not sufficient condition for learning.

Selective Perception

Perception is the process of ascribing meaning to messages. As we noted in Chapter 2, messages do not “carry” meaning. They stimulate meaning. What meaning is stimulated is a function of both the message and the receiver. Thus, in a sense, all perception is selective. The receiver must select, from all the possible meanings that could be ascribed to a message, the particular meaning that should be ascribed in the given instance. Hence, it is most likely that different receivers of the same message will ascribe different meanings to it. The challenge for the teacher is to get the student to ascribe the meaning of the teacher’s choice rather than some other meaning. This is more likely to happen when we can control factors that may lead to other perceptions, although it usually is not possible to control all of the possibilities.

Even if we get the student to expose her- or himself to our messages and to pay attention to those messages, the desired learning may not occur because the student may perceive the messages to mean something different than what was intended. A number of factors influence such perceptions or, at least from the teacher’s perspective, misperceptions. Let us examine several of these factors.

Ambiguity of Messages

Sometimes messages are very imprecise and open to misunderstanding. Use of words that can be interpreted in different ways can lead a student to select a meaning other than the one intended. Since language is inherently imprecise, careful choice of wording is very important if one hopes to avoid being misunderstood. Use of abstract rather than concrete words and phrases is particularly problematic. In general, the more concrete and specific a message is, the less likely it is to be misperceived; the more abstract a series of messages is, the more likely those messages are to be misperceived.

Lack of Redundancy

When a series of messages lacks redundancy, those messages invite misperceptions. Redundancy permits a second (or third, fourth, and so on) chance for the student to select the teacher’s intended meaning. Single messages are far more likely to be misunderstood than multiple messages directed toward stimulating the same meaning.

Lack of Schema

As we noted in Chapter 4, if students do not have appropriate schemas for the ideas that teachers introduce, they may not be able to cope with those ideas. When we hear an idea expressed, we search our schema systems for where the idea belongs. If we find no place at all, the idea will probably just pass on through the system and not really be perceived at all. If, however, we find a place that seems to be appropriate, even though it is not, we will select to perceive that idea as if it did belong there. Thus, we will have a perception that may be quite different from that which the person expressing the idea had intended. Thus, the child may perceive an “invisible nation” rather than an “indivisible nation” in the pledge of allegiance because the adult did not realize that the child was too young to comprehend what the words in the pledge were intended to convey. Once again, if we are to expect students to understand what we teach, we must be certain they have the necessary schema in place before we teach—or we must teach the schema.

Previous Experiences

We know the world through our experiences with the world. The experiences of a child in the 1960s are not the same as the experiences of a child in the early
twenty-first century. It is vital that teachers draw on the experiences of the learner, as opposed to their own experiences, whenever possible. There is almost always a generation gap between teachers and students, the exceptions most often being at the college level. The longer a teacher continues in the profession, the larger that gap becomes. Thus, each year it becomes both more important to strive to adapt to the experiences of one’s students and at the same time more difficult to do so.

Another aspect of experience relates to exposure to the subject matter itself. It is not uncommon, except at the lowest levels of education, for students to have previously been taught some of the content in any given field. If that experience was positive, the present experience is more likely to be viewed positively. If it was negative, the present learning experience may be judged that way also. In addition, the student may have learned something incorrectly before, either because of her or his misperceptions or because it was taught incorrectly. That information may get in the way of new information and may lead to selective perceptions that are not what the teacher intends. Encouraging student interaction in the instructional process is a good way to draw out such misperceptions so they can be corrected before the student files them away for future reference.

Expectancies and Biases

We will consider expectancies in more detail in Chapter 9. An expectancy is an anticipation of a future occurrence. A bias is an unjustified evaluation. All people, including students, have both expectancies and biases. They have expectancies for how teachers will behave and what they will say. And they have biases toward the subject matter being taught (for example, “I hate English, particularly poems!”). Even if the teacher does not behave in the expected way or say the expected things, it is likely that these expectancies and biases will influence how the teacher’s messages will be perceived. This is particularly true when the teacher and the student have little or no history of interaction. As the student gets to know the teacher better, the student’s expectancies may be modified to be more in line with this particular teacher’s normal behaviors. Similarly, initial biases may be put aside and replaced by an attitude toward the subject matter that reflects the way it is being taught in the specific class. As a result, it is a wise teacher who takes some time early in a course to work on developing positive relationships with the students so that this excess baggage of expectancies and biases will have less impact on the students’ perceptions of the teacher’s messages.

Selective perception is a difficult problem for a teacher to overcome, because it will always occur to some extent. If a student does not accurately perceive the content that is being taught, the intended cognitive or psychomotor learning cannot occur. Even after overcoming selective exposure and selective attention, instruction can fail because of misperceptions of content. One positive thing is that even if misperceptions occur, if they can be identified, they can still be corrected. Regular testing is the best way to determine that inappropriate perceptions have resulted in faulty cognitive or psychomotor learning. When such problems are identified, remedial instruction can be introduced to resolve those problems. If they are not identified, however, the mislearning will stay with the learner, and the instructional outcome may actually be worse than if no instruction had been attempted at all.

Selective Retention

Selective retention may well be the problem that frustrates teachers the most. Students are present; they pay attention, and, through interaction with them, we know they perceived what they were being taught. But a few days (or sometimes minutes!) later, they seem never to have heard of the ideas before. Selective retention refers to the decision to store or not store information in long-term memory. As with the other selectivity factors, this process occurs primarily at the unconscious level, but the selection is sometimes made consciously. Several factors are known to influence selective retention.

Lack of Highlighting

When important ideas are not highlighted by teachers, students often do not realize they are important. This is one of the reasons why providing students with learning objectives is such a good idea. Although this is only one of the many means of highlighting, it represents a very clear message to the student about what the teacher expects him or her to retain. When information seems to go in one ear and out the other, highlighting through objectives can serve as an effective earplug.

Lack of Redundancy

In general, the more we hear something, the more important we think it is. Redundancy capitalizes on this premise. Sometimes people simply do not think something is important until they hear it several times. For children, this concept is particularly important. In contrast to adults, children are exposed to vastly more new things each day. They cannot be expected to retain everything new they learn initially. If we expect a child to learn something, we need to teach it more than once, and in more than one way.

Lack of Schema

Schemas are very important to initial learning, and they are absolutely critical for retention. If there is no system for storage (schema) available, there will be no storage. It is like trying to store information on a computer with no hard drive. You turn it off, and the information is gone. The student’s schema is the hard drive. If it is missing or defective, retention will not occur. The reason so much of our
education is devoted to teaching students the same things they have been taught previously is that material is often not taught with retention in mind. Rather than simply assuming students will retain what they initially learn, it is critical that they be taught how to retain the information. It does not come naturally!

**Lack of Realistic Application**

Retention often depends on applying new information to real, present situations. Learning for some indefinite future use is particularly difficult. If we incorporate present experience into the teaching of new information, it is more likely to be retained. As the saying goes, children who see and hear, understand; children who do, remember.

**Primacy and Recency Laws**

Several decades ago, social scientists who were very interested in persuasion sought to determine whether things that were covered first (the primacy principle) or things that were covered last (the recency principle) were most remembered (Hovland, Janis, & Kelley, 1953). After many studies, it became clear that neither primacy nor recency had a universally stronger effect than the other. However, there was evidence that things presented either near the beginning or near the end of the message would be more readily perceived than things presented in the middle. The advice to teachers, then, is that what you want students to retain should be stressed at the beginning of the unit or at the end of the unit—or, better yet, at both the beginning and the ending.

The bottom line is that if you do not teach for retention, you are not likely to get retention. In Chapter 2, we noted that telling is not communicating. Telling is not teaching, either. Simply presenting information, no matter how clearly, will not ensure retention. Only teaching for retention can raise that probability.

**Selective Recall**

Selective retention and selective recall are often confused and sometimes thought to be the same thing. It is important to distinguish between these two forms of selectivity because they are quite different, though related. Selective retention has to do with the storage of information, while selective recall has to do with the retrieval of information. Of course, if information is not stored (retained) in the first place, it cannot be retrieved (recalled) later. However, the mere fact that something is retained does not necessarily mean it will be recalled at any given point in time. Have you ever had a hard time recalling something at one time but had it come back to you at another time? It was stored away in your brain at both times, but it was only retrieved once.

If a teacher wants to know whether instruction has been retained, he or she must be certain to test for recall of information in the way that the information was taught. Otherwise, the learner may have indeed retained the information but may not be stimulated to recall it because the testing procedure does not trigger recall from the place where the information is stored. When students say things like, "Oh, that is what you wanted to know. I didn’t understand the question," they may just be giving a lame excuse. More likely, however, what the student is expressing is that he or she was attempting to recall the information but couldn’t find it because he or she was looking in the wrong place. You can’t find what you stored in the garage if you are looking for it in all of the closets.

Sometimes we teach things that we expect students to generalize to another, new context. While this sort of generalization may occur by chance occasionally, one should not expect it on a regular basis. Such "transfer of training" has been the object of much research during the past century. It has been argued, for example, that if people study Latin, they will understand English better, or that if we teach people to give speeches without experiencing stage fright, they will overcome their general shyness. The research in this area suggests that expecting such transfer of training, or generalization of learning, is frequently no more than wishful thinking.

Transfer is likely to occur when what is learned in one context has virtually the same application in another context, and the learner recognizes that application (Bugelski, 1964). If a child learns to stand for the playing of the U.S. national anthem, we can expect the child to stand for the Canadian anthem only if the child knows two things: (1) a person should stand for all national anthems, and (2) what I am hearing here in Toronto is the Canadian national anthem. Learners need to be taught to generalize appropriately, or transfer should not be expected. If we only teach the student to stand for one anthem, we should not expect her or him to figure out that it is a rule for all anthems. Thus, if we ask a question like, "What should you do when you hear the song 'O Canada' in Canada?" we should not be surprised if the student responds with either, "Listen," or, "I don't know." We cannot expect any student to recall what was never taught. Even when it is taught, learned, and retained, it can still sometimes be difficult to recall.

Students only learn what they select to learn, and they only retain what they select to retain. Thus, for students to learn and retain information over time, teachers must gear their communication toward producing such effects. Students respond to the need for selectivity because that is the normal human response, not because they do not want to learn. It should be expected that the student will not know about the selectivity processes. It is up to the teacher to understand these processes and to prepare students to overcome them in the learning environment. If the teacher does not do this, who will?

**References**


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<td>attention span</td>
<td>The period of time during which an individual receives messages from a given source.</td>
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<td>expectancy</td>
<td>Anticipation of a future occurrence.</td>
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<td>involvement</td>
<td>The relative importance a topic is seen to have by an individual.</td>
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<td>selective attention</td>
<td>The degree to which a set of messages are selected to be received by an individual.</td>
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<td>A person's decision to place him- or herself in a position to receive messages from a particular source.</td>
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<td>The process of a receiver interpreting messages received from a source.</td>
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