ABSTRACT
         Noting that educators are surrounded by a vast array
of communication processes that involve many avenues of expression,
this booklet argues that nonverbal communication is an often ignored,
but powerful, aid that can be used to enhance the learning
environment. Following an introduction to the subject of nonverbal
communication, the booklet examines the research concerning the topic
and provides suggestions for teaching techniques based on the
research. Specific areas of nonverbal communication discussed in the
booklet include facial expressions, eyes, vocal intonation, touching,
body postures and movements, dress, and use of space. (FL)

Nonverbal Communication

by Patrick W. Miller

Note

The opinions expressed in this publication should not be construed as representing the policy or position of the National Education Association. Materials published as part of the What Research Says to the Teacher series are intended to be discussion documents for teachers who are concerned with specialized interests of the profession.

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12

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CONTENTS

INTRODUCTION

Do your actions speak louder than your words in the classroom? Can you tell when students understand the lesson presented? These and other questions might be easier to answer if teachers were more aware of the myriad of nonverbal behaviors exhibited in the learning environment. Teaching success is based on how well subject matter is communicated to students. This is nothing new; what is often new is how teachers communicate. The process of education is determined by the process of communication (123).*

Without uttering a single word, teachers and students constantly send messages to each other. In fact, they send and receive nonverbal cues several hundred times a day—consciously and unconsciously (21, 109, 15, 99). Communication, the major ingredient of education, is composed of two dimensions—verbal and nonverbal (97, 1). Eclectically, nonverbal communication has been defined by many educators, psychologists, anthropologists, and sociologists as communication without words (21, 71, 84, 109, 43, 53, 105, 7, 6, 100, 108). The messages include overt behaviors such as facial expressions, eyes, touching, and tone of voice, as well as less obvious nonverbal channels such as dress, posture, and spatial distance between two or more people (85). It has even been stated that "everything communicates," including material objects, physical space, and time systems (54). Although we can turn off verbal output, we cannot turn off the nonverbal—even silence speaks (71).

> He that has eyes to see and ears to hear may convince himself that no mortal can keep a secret. If his lips are silent, he chatters with his fingertips; betrayal oozes out of him at every pore. (38, p. 94)

Nonverbal behaviors can be amazingly quick and subtle (105, 69, 56) or very explicit (95, 69), they can either support or contradict the verbal message being transmitted (100, 77, 1, 69, 82).

Humans use nonverbal communication for the following reasons:

1 *Words have limitations*

   Although through the use of words we are able to communicate far better than many animals, there are still numerous areas where we communicate more effectively nonverbally. For example, most of us find it difficult to explain the shape of something or to give directions without using hand gestures or head nods. Similarly, we express our personalities nonverbally, enabling others to form clear impressions of us, which they ultimately use to direct their responses

4   *Numbers in parentheses in the text refer to the Bibliography beginning on p 29

2. Nonverbal signals are powerful.

Because nonverbal cues primarily express inner feelings, they generally evoke immediate action or response. Verbal messages deal basically with the outside world; therefore, first we consider the information and then we explore its implications. Action is immediate only when well-trained individuals receive commands or orders.

3. Nonverbal messages are likely to be more genuine.

Except for facial expressions and tone of voice, we cannot control nonverbal behaviors as easily as spoken words. Moreover, we can control some signals, such as pupil dilation and perspiration, only by modifying the emotional state, which is far more difficult than modifying the body message.

4 Nonverbal signals can express feelings too disturbing to state.

Social etiquette limits what we can say, but nonverbal cues can communicate our thoughts. In interpersonal relationships, it would be improper to tell other people we don't like them or that we think we are better than they are, both of which sentiments we can express nonverbally. Conveniently, though, if we do not verbalize our feeli ɔ, we can freely change our minds without having committed ourselves.

5 A separate communication channel is necessary to help send complex messages.

In addition to expressing feelings and other personal information, nonverbal actions greatly aid the verbal communication process. Vocal intonation alone tells us when a speaker has finished a sentence, what is most important in the speech, and even when the speech has ended. Listener feedback, if vocalized, would be a hodgepodge of interruptions and doubletalk A speaker can add enormously to the complexity of the verbal message through simple nonverbal signals. (4)

Our early ancestors likely communicated first through the use of gestures These ancient communication channels might have included such nonverbal behaviors as pointing toward game, grimacing to show anger, and perhaps laughing to indicate delight (119). Not until recently, however, has research seriously considered the implications of nonverbal communication (69). Even though verbal communication in many respects is taken for granted today, effective comunication still requires both the verbal and the nonverbal. Spoken messages require cognitive processing, whereas nonverbal actions bypass conscious analysis and evoke immediate response (4). These two channels can

5

work simultaneously, thus supplying nonverbal emotional feedback during the exchange of cognitive information (91). Some research in communication suggests that more feelings and intentions are sent and received nonverbally than the total combined effort (56, 47, 81). Dominance of nonverbal cues over verbal messages is also reported in counselor/client relationships (118), where clients use these cues to judge the counselor's warmth and empathy (111). It has even been suggested that only 7 percent of a message is sent through words, with the remaining 93 percent sent through facial expressions (55 percent) and vocal intonation (38 percent) (82). Words are accented and punctuated by body movements and gestures, while a myriad of expressions are emitted by the fac- (86). Thus nonverbal and verbal messages are intertwined as inseparable parts of human communication.

Why, then, if nonverbal communication is vitally important, has it been so long ignored and greatly underestimated? Probably the most influential deterrent has been the human emphasis on verbal prowess. Other "more primitive" expressions have somehow been considered second class. More easily understood is the very nature of nonverbal communication Gestures, body movements, and the like are tools we have developed because words were not as effective. Therefore, trying to write or talk about them seems curious and difficult (92).

It is important to be aware of the dominance of the nonverbal message If there is incongruity between the verbal and the nonverbal, the nonverbal will win hands down (42, 99). Also, the validity and reliability of verbal messages are checked by our nonverbal actions (123). Again, if a discrepancy exists, the nonverbal will dictate.

Wise men read very sharply all your private history in your look and gait and behavior The whole economy of nature is bent on expression. The telltale body is all tongues. Men are like Geneva watches with crystal faces which express the whole movement (29, p 409)

A large number of professionals—e.g., television directors, symphony conductors, and football referees—employ a multitude of nonverbal behaviors in a systematic manner to convey messages (115). Advertisers and actors have long been aware of the integral part nonverbal communication plays in TV commercials (61). Engineers and designers, too, express in nonverbal terms, such as drawings, many of the creative thoughts which they cannot express in words (33). Teachers also have an entire repertoire of nonverbal behaviors simultaneously communicated through other senses that affect students, both positively and negatively.

All teachers should be aware of nonverbal communication in the classroom for two basic reasons. (1) to become better receivers of student messages, and (2) to gain the ability to send students positive

signals that consequently reinforce learning—and, at the same time, to become more adept at avoiding negative signals that stifle learning (71, 97).

All communication requires two people—a sender and a receiver. In the teaching profession, one of the most difficult aspects of the job is listening to and understanding student wants and needs. For instance, when deciding what should be included in a course of study, most curriculum experts advocate student input (18, 121). The problem, however, is that students are often not heard (verbally and nonverbally) concerning what should be taught. Worthwhile objectives, that otherwise might have eluded the teacher, can be discovered by simply becoming aware of student interests and needs.

Being a good message receiver requires more than just listening to words. Much is communicated by nonverbal means (109), such as feeling and values (37). Thus, to be a good receiver of student messages. a teacher must be attuned to many of these subtle cues (87).

Consider for a moment that you were required to teach a course by telephone. Imagine how difficult it would be! A teacher needs students almost as much as they need a teacher. It would be impossible to assess our teaching methods and strategies without the nonverbal dialogue that goes on in the classroom. Smiles, frowns, nodding heads, and other not-so-obvious cues can all be aids to instruction. Teachers need to be alert to students' facial expressions. Such facial cues are often useful as a feedback device about the delivery of a lesson. indicating whether to slow down, speed up, or in some other way modify the presentation (101).

The second reason for becoming familiar with nonverbal communication is to become better senders. Just as it is important to be good receivers, so is it important to develop nonverbal "sending" skills. Not only are teachers often unaware of children's nonverbal behaviors, but they may also be oblivious to nonverbal messages they relay to students (95) It has been contended that 82 percent of teacher messages are nonverbal, while only 18 percent are verbal (50). Widely used messages sent by teachers to positively and negatively reinforce pupil behavior includes smiles of approval, winks, scowls, and the "evil eye" (114). There are many other less common methods of communication, however. Touch, for example. is often overlooked as a means of transmitting a message. A pat on the back can demonstrate approval, whereas a slightly firmer pat on the head might bring a student to attention

Verbal communication permits instantaneous feedback, whereas nonverbal acts do not (42. 46). This is where the difficulty lies. We can hear ourselves speak and make corrections, if necessary. We cannot see our own nonverbal messages, however, so we must rely on our instincts and understanding of nonverbal communication. We all know the right and wrong things to say to students. generally taught by

7

teacher-training institutions and learned from past classroom experiences. Consequently we would never think of calling a student ignorant. Yet it is-possible to belittle a student through any number of detrimental messages without uttering a single word.

Knowledge is transmitted through effective communication and nurtured by skillfully sending and receiving messages in a variety of situations (60). Just as academic skills are developed by praxeological means, so, too, must nonverbal behaviors be developed and practiced. These behaviors include fostering positive characteristics, mannerisms, actions, and habits, as well as overcoming negative ones that depress an atmosphere for learning (49).

The following suggests a continuum model for judging teacher nonverbal behavior with pupils. It is based on ten dimensions ranging from encouraging to restricting (39, 40, 41 44, 45).

DIMENSIONS OF TEACHER NONVERBAL BEHAVIOR

Encouraging		Restricting
Congruity	⟷	Incongruity
Responsive	⟷	Unresponsive
Positive Affectivity	⟷	Negative Affectivity
Attentive	⟷	Inattentive
Facilitating	⟷	Unreceptive
Supportive	⟷	Disapproving
Intimate	⟷	Distant
Inclusive	⟷	Exclusive
Free Time	⟷	Restricted Time
Open Space	⟷	Closed Space

Congruity Incongruity refers to the consistency of verbal and nonverbal elements communicated by the teacher. Congruity occurs when the nonverbal supports and reinforces the verbal message. a mixed message or incongruity exists when there is a discrepancy or contradiction between these two channels.

Responsive Unresponsive refers to modifications in teacher behavior as a result of student feedback. A responsive act occurs when teacher reactions or responses are appropriate to nonverbal student feedback (e g , altering the instructional delivery pattern because of student misunderstanding of lesson content) Unresponsive acts are identified by lack of teacher responsiveness to student feedback, either by ignoring or being insensitive to student actions

Positive Negative Affectivity refers to the expressions exhibited by the teacher to reinforce student behaviors. Positive affective expressions include warm feelings, high regard, cheerful enthusiasm, and acceptance Negative affective expressions are

8

conveyed through aloofness, coldness, low regard, and indifference or rejection.

Attentive/Inattentive refers to teacher ability to listen to student messages. Attentiveness implies listening with patience and interest; inattentiveness implies disinterest in student talk or lack of encouraging the expression of ideas.

Facilitating/Unreceptive refers to teacher response to pupil needs and/or problems. A facilitator encourages students to share problems and responds positively to their urgencies. An unreceptive teacher openly ignores a student question or request, or possibly responds in an inappropriate manner.

Supportive/Disapproving refers to actions exhibited by the teacher to reinforce or thwart student behavior or pupil interaction. Supportive teacher behaviors include exhibiting encouragement and giving praise, while disapproving actions convey dissatisfaction, discouragement, or punishment of student behaviors.

Intimate/Distant refers to types of contact between teachers and their students. Intimacy is characterized by the presence of a psychological and physical closeness; distance by the absence of physical contact, by withdrawal, or the "cold" treatment.

Inclusive/Exclusive refers to nonverbal behaviors exhibited by the teacher to include or exclude students. Inclusion is evident where mutual glances and acknowledgement foster communicative exchange. Exclusion suggests a denial to recognize or an ignoring of student presence.

Free Time/Restricted Time refers to the use of our time with others. This includes not only the quantity of time, but also the quality.

Open Space/Closed Space refers to travel routes and territorial rights in the classroom. Student accessibility to the space and territories of the school and classroom fosters openness; whereas denying access to these areas restricts

Generally, future teachers receive no formal training in nonverbal communication (55, 49, 42, 108, 95). Suggestions to improve teacher training programs include the use of model tapes to illustrate various appropriate and inappropriate nonverbal behaviors (35). Commonly, we learn nonverbal communication shortly after birth and practice and refine it throughout our lives (15, 1, 56). Before language emerges, infant behaviors communicate (9). As children we first learn nonverbal expressions by watching and imitating, much as we learn verbal skills (76) Young children know far more than they can verbalize 9

(116, 95), and are generally more adept at reading nonverbal cues than most adults because of their limited verbal skills and their recent reliance on the nonverbal to communicate (72, 71). As children develop verbal skills, nonverbal channels of communication do not cease to exist. Rather, the nonverbal messages become entwined in the total communication process (129). These learnings are fundamental because emotional meanings may be communicated through nonverbal channels (61).

When teachers exhibit verbal messages that conflict with nonverbal messages, students become confused, and this confusion often affects their attitudes and learning. Recent evidence from clinical and neurosurgical research indicates that the left hemisphere of the brain is involved primarily in verbal and other analytical functions, while the right hemisphere is responsible for spatial and nonverbal processes (96, 66). If conflicting messages are communicated to these two hemispheric modes, each hemisphere emphasizes only one of the messages and omits information from the other (99). It is very important that teachers understand this concept. If learning is to take place, students must be able to rely on teachers as a credible source for information (75).

RESEARCH HIGHLIGHTS

Pygmalion in the Classroom, considered one of the most intriguing and controversial publications in the history of educational research, supports the premise that, in fact, teacher expectations (manifested nonverbally) can foster academic achievement. This classic study involved administering a relatively unknown IQ test to elementary school children in a low socioeconomic area. After testing, prospective teachers received a list of students' names identified as high scorers. In reality, these students were chosen at random, not as a consequence of the test results. The teachers were told to expect a great increase in intellectual performance from them. Ironically, at the end of the school year, these students did make sharp increases on IQ test scores (106).

Obviously, these teachers did not tell students they expected higher performances, but they may have conveyed such messages nonverbally through facial expressions, gestures, touch, spatial relationships (130). These subtle nonverbal expectancy behaviors may have been all that was needed to change the students' self-image, motivation, or achievement (11).

Another study was of volunteers recruited to tutor elementary school children. The tutors were told the experiment involved testing the psychological effects of lighting, and that they were to present a five-minute lesson on home and family safety. The tutors were also

10

read a statement about students' ability, classifying them as bright, control, or dull. After this brief explanation, each tutor was individually led into a room in which to present the lesson to the elementary child. In fact, the study did not measure the effects of lighting (which was only necessary to videotape the lesson), but, rather, if teacher expectancies (conveying preconceived notions about intelligence and motivation) affected the tutors' nonverbal behaviors.

After evaluation of the videotapes by trained raters, it was concluded that tutors in the microteaching lesson exhibited patterns of nonverbal behavior toward students classified "bright" that were different from those exhibited toward students serving as the control and students termed "dull." The nonverbal behaviors displayed to "bright" students included touching, close proximity, forward body lean, eye contact, more gestures, approving head nods, and positive facial expressions (11).

Such findings point out the need for teachers to be more conscious about prejudging students before they have had a chance to prove (or improve) themselves. Despite efforts to be unbiased, fair, and just, one may have preconceived opinions about certain students, gained either from colleagues or "hearsay." When a student has been labeled a troublemaker, for example, there is a need to be especially alert to nonverbal messages and not be waiting to jump on any misconduct.

Even professionals trained to objectively administer tests can be influenced by the case histories of their subjects. A study attempting to support this premise asked 32 practicing psychologists to evaluate the videotaped administration of an intelligence test to children. Prior to evaluation, each psychologist received a case history of the child suggesting that the child was either bright or dull. Analyses of the psychologists' evaluations showed that these case histories significantly affected their judgments (63).

Physical closeness has also been shown to be a nonverbal component that can affect test performance of certain cultural groups. In a study investigating teacher warmth and physical proximity, a school counselor administered the Wechsler Adult Intelligence Scale to 15 Alaska Native high school students. Giving the tests in the usual fashion, the examiner sat 60 inches from the subjects and displayed a businesslike manner. Three weeks later, parts of the test were readministered with seven students randomly assigned to a nonverbal warmth group and eight students to a nonverbal cold group. In the warmth condition, the examiner sat 30 inches from the subjects, at their level and at right angles to them, and smiled frequently when giving the test. In the cold condition, the examiner remained 80 inches from the subjects, stood, and did not smile. Analyses of change scores were significant: subjects in the warmth condition gained points and subjects in the cold condition remained constant or lost points (67).

Sheer physical appearance can also influence teacher expectations 11

One study asked teachers to evaluate students' intellectual potential based on report card grades, verbal descriptions, and a picture of an attractive or unattractive student. Even ough the demographic-information was the same for both types of students, teachers evaluated the attractive students more favorably (12). In addition, experimental studies indicate that such expectations can be communicat d nonverbally (10), creating many pedagogical implications.

In another experiment, teachers received a report containing pictures, with names and ages, of both male and female students fictitiously said to be involved in a school disturbance. Previously, adult raters had judged each picture either attractive or unattractive. Each teacher was asked to read the report, evaluate the seriousness of the disturbance, and give a general impression of the student involved. When the disturbance was mild, the physical attractiveness of the student did not affect the teacher's reaction. When the misconduct was severe, however, teachers discerned that the behavior of unattractive boys and girls was chronically antisocial. Ironically, teachers did not usually give this judgment for serious misconduct reported on the part of attractive students. They tended to view the att active students as normal, and blamed the misbehavior on their having a bad day (19).

Without words, teachers communicate how they care about students, what is expected of them, and a great many other things to which they would never verbally admit. Omission of nonverbal behaviors also communicates crystal-clear messages. Conside or a moment teachers who repeatedly provide positive reinforcement to a few selected students; the remaining students also receive feedback—perhaps, in such cases, a negative message (100). Students know when something bothers their teachers, whom they like or dislike, and a surprising amount of other information teachers think they keep to themselves (71, 47, 100, 98).

Be aware, though, that much of the literature on nonverbal communication leaves the impression that all nonverbal cues (e.g., crossed legs, head nods) have implicit meanings. This impression is erroneous because the meanings depend upon when and where the cues are exhibited (37, 127). Not all nonverbal behavior is significant; in fact, no single gesture conveys a true meaning of a situation (81, 62, 72).

Still in its infancy, nonverbal research has been overshadowed by the popular attention given its old sibling, linguistic research (51). Connoisseurs of the subtleties of nonverbal behavior of others and self recognize the multidimensionality of nonverbal experiences and analyze these cues within the context of various settings (37). Increasing our awareness of our own nonverbal behavior requires practice and patience. As we work to improve nonverbal actions, our goal should be to foster positive characteristics, mannerisms, actions, and habits as well as to overcome negative ones that depress an atmosphere for learning (88).

AREAS OF NONVERBAL EXPRESSION

Facial Expressions

The old adage "A picture is worth a thousand words" well describes what is meant by facial expressions.

Facial appearance—including baldness, gray hair, wrinkles, muscle tone, skin coloration, and eye color—offers enduring cues that reveal information about one's age, sex, race, possibly ethnic origins, and status. A less permanent second set of facial cues—including length of hair, hair style, cleanliness, and facial hair—all relate to an individual's concept of beauty. A third group of facial markers are momentary expressions that signal our emotions (58). These expressions are registered by muscle movements that cause changes in the forehead, eyebrows, eyelids, cheeks, nose, lips, and chin (27). Among such examples are raising the eyebrows, wrinkling the brow, curling the lip.

Some facial expressions are readily visible, while others are so fleeting that they go unnoticed (27). Both types can positively or negatively reinforce the spoken word and convey cues concerning emotions and attitude (24, 26, 102). Next to words, then, the human face is the primary source of information for determining an individual's internal feelings (99, 70, 23). However, researchers cannot reach a consensus on the universality of any facial expressions.

Some physiologists contend that the face is capable of producing some 20,000 different expressions (70). Research has indicated that people in our culture display about 33 "kinemes" (individual communicative movements) in the facial area (7).

A man finds room in the few square inches of his face for all the traits of all his ancestors; for the expression of all his history, and his wants. (29, p. 411)

Facial expressions may be involuntary or voluntary. People generally don't think about how to move facial muscles when truly frightened. Thus the facial expression of fear is an example of an involuntary gesture. Facial expressions can also be voluntary, as when an individual wants to deliberately hide his/her feelings. Such expressions are controlled for a number of reasons, but they are often dictated by societal or cultural standards, or are a product of family rules. "Boys should never cry or look afraid" is a rule our society ingrains in its young (27).

Although research indicates that people of all cultures display similar facial cues for some emotions (e.g., happiness, fear, surprise), culturally learned rules often trigger different responses. In our culture, for example, a snake might stimulate reactions of fear or disgust. In another culture, however, the same reptile might elicit joy or excitement, as it might represent a culinary delicacy (58).

Often we try to hide feelings and emotions behind masks (28). No matter how sincere they might appear to be, these faces are often di- 13

rected only by societal norms; they cannot conceal true feelings. The frown, jutting chin, raised eyebrows, open mouth, sneer are all facial expressions that can betray us and ultimately broadcast our deceptions (24). All of us are capable of faking a happy or sad face, a smile or frown, but the timing inevitably gives us away. We cannot determine how long to keep it on or how quickly to let it go (15). Thus, when trying to deliberately deceive others, we speak at a slower rate, produce more speech errors, exhibit fewer head nods and more smiles (83).

Rosenfeld and his associates at Harvard University introduced a significant contribution to the study of nonverbal communication when they developed the most precise measure, to date, for determining a person's ability to understand facial, body, and vocal cues through 11 different channels of nonverbal communication. In preliminary testing, the Profile of Nonverbal Sensitivity (PONS) ascertained that females were more accurate at interpreting nonverbal cues than males; however, the margin lessened for males in certain occupations such as acting, psychiatry, art, designing, and teaching (104). Further research revealed, to the contrary, that teachers were *not* accurate in interpreting *student* facial cues when considering comprehension of material; it also suggested that teaching experience did not improve the ability to assess these nonverbal cues (64, 65).

A more specific instrument, the Facial Affect Scoring Technique (FAST), was developed and used to show the extent to which observers can recognize (decode) facial expressions of emotion. In both the theory and the instrument, the face was divided into three areas: upper—brows and forehead; middle—eyes, lids, and bridge of nose; and lower—chin, mouth, nose, and cheek. Combining the areas rather than considering individual components provided more precise information (25).

Eyes

The most dominant and reliable features of the face, the eyes provide a constant channel of communication (62). They can be shifty and evasive, conveying hate, fear, and guilt, or they can express confidence, love, and support (81).

> An eye can threaten like a loaded and leveled gun, or can insult like hissing or kicking, or, in its altered mood by beams of kindness, it can make the heart dance with joy. (29, p. 409)

Often referred to as the "mirrors of the soul," eyes serve as the major decision factor in deciphering the spoken truth.

> The eyes of men converse as much as their tongues, with the advantage, that the ocular dialect needs no dictionary, but is understood all the world over. When the eyes say one thing, and the tongue another, a practiced man relies on the language of the first. (29, p. 410)

Unlike other parts of the face, eyes can both send and receive messages (62) Except for extremely shy individuals, most people look for social acceptance by studying the eyes of others (81).

Eyes can also accurately indicate a positive or negative relationship. People tend to look longer and more often at those whom they trust, respect, and care about than at those whom they doubt or dislike (59, 85, 100, 20). Thus, eye contact is more evident with people around whom we feel comfortable than with those around whom we feel uneasy Normal eye dilation is not under the control of the individual (58) But when looking at something pleasing, an individual's pupils will measurably dilate, and when viewing something displeasing, the pupils will constrict (4). Personality characteristics such as introversion/extroversion may also influence eye behavior (70).

Eye contact can be manipulated, however, to open or close channels of communication Most hitchhikers, for example, realize that lengthening eye contact increases their chances of getting picked up. The restaurant patron needing service also knows the importance of catching the server's eye.

Eyes can be used as a good indicator of interest, or lack thereof, in a conversational topic (81) Eyes can be used to determine whom we talk with, for how long, and about what. In addition, these eye behaviors can control conversational roles—who is to speak and who is to listen Thus, visual cues act as monitoring devices that regulate, coordinate, and control succession of speech. When speaking, we usually maintain eye contact and flash visual signals when we want to emphasize a particular point. When listening, we communicate our level of interest in both topic and speaker by looking (104).

Teachers can have individual contact with every student in the classroom through eye contact (62). Attitudes of intimacy, aloofness, concern, or indifference can be inferred by the way a teacher looks or avoids looking at a student

The level of credibility and honesty has been found to be related to the amount of eye contact exhibited by a speaker (5). Thus, if a teacher has eye contact with only a selected few alert and interested students, other students might consider this to be biased favoritism (100)

Direct teacher eye contact can also express support, disapproval, or neutrality Numerous evaluator specialists, for example, suggest that a stern look should be the first form of action taken by a teacher to handle obvious cheaters in a testing situation This direct eye contact usually serves as a powerful corrective measure in negating the nomadic eyes of the cheating student (30).

Students also quickly learn to understand specific eye behavior communicated by the teacher signifying the ending of a class period, a request for an explanation, and a great number of other messages (45). They know from experience to avoid eye contact when the teacher 15

poses a difficult question. The general rule is to look down at notes or stare at the desk to avoid opening the channels of communication.

Most experienced teachers are aware when students are bored with the subject matter being presented. Students' eyes often signal listening and nonlistening behaviors, thus transmitting subtle messages about their lack of attentiveness. Students who are constantly looking at the wall clock rather than watching and listening to the teacher may be indicating the need for a break, the dullness of the content, or a lack of teacher motivation and preparation. In any case, observation of student eye behavior can be used as a constituent in evaluating teacher performance.

Vocal Intonation

The adage "It is not what we say that counts, but how we say it" reflects the meaning of vocal intonation. Sometimes referred to as "paralinguistics," vocal intonation is probably the most understood (56) and valid area of nonverbal communication (22). It includes a multitude of components (e g., rhythm, pitch, intensity, nasality, and slurring) which elicit the "truth" of our message (59, 17). These vocal variations are fundamental components of expressive oral communication (61). If vocal information contradicts verbal, vocal will dominate (82).

The sound aspects of the voice can convey meaning beyond words, including information about individual attributes such as age, emotional state, or other personality characteristics. In addition, vocal qualities are often influential where prejudices against certain paralinguistic styles are evident, as, for example, a whining child. On the other hand, an unconscious bias of the listening public is a widespread positive prejudice in favor of men with low, deep voices with resonant tones, such as those qualities possessed by most male newscasters (119) Studies have also reported the use of vocal cues as accurate indicators of overall appearance, body type, height (73), and race, education, and dialect region (93).

Paralinguistic cues often reveal emotional conditions. (See Table 1) Differences in loudness, pitch, timbre, rate, inflection, rhythm, and enunciation all relate to the expression of various emotions (16).

Experimental findings suggest that active feelings, such as rage, are exemplified vocally by high pitch, fast pace, and blaring sound. The more passive feelings, such as despair, are portrayed by low pitch, retarded pace, and resonant sound (17). In addition, stress is often vocalized by higher pitch and words uttered at a greater rate than normal The reverse (e g , lower pitch, slower word pace) is likely during depression (56)

President Richard Nixon demonstrated the importance of paralinguistic communication when he sent transcripts rather than tapes of

16

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presidential conversations to the House Judiciary Committee in 1974. Committee members, questioning possible impeachment and trying to decide the veracity of the tapes' contents, complained that the "meaning" was not truly communicated because of the absence of voice modifications (59). Thus, vocal information—intonation, tone, stress, length, and frequency of pauses—is lost when speech is written, these two informational systems do not always communicate the same feelings (82).

Ironically, the same words or phrases can have many different meanings, depending on how we say them. Let's analyze the phrase, "Thank you." If sincere, it generally means an expression of gratitude, but if intoned sarcastically, it can insinuate an entirely opposite intention Or when a mother asks a child to apologize for some wrongdoing, she often stresses that the child "mean it." Thus, the mother expects more than the mere words, "I'm sorry," and listens closely for vocal intonation to support the sincerity of the message.

This powerful nonverbal tool can also readily affect student participation. Consider a classroom situation where the teacher asks a question and calls on one of the more talented students, who in turn answers the question correctly. Generally, the teacher responds with some positive verbal reinforcement enhanced by vocal pitch or tone, expressing the acceptance and liking of the student's answer (often accompanied by a smile or other forms of nonverbal approval). In the same situation, if the teacher called on a less talented student whose response was incorrect, not only might the teacher verbally reject the response, but he or she might also modify the future responding behavior of the less talented student because of the accompanying vocal cues.

Touching

Touching is an important aspect of our culture. Even a handshake will tell us much about another individual's character (81). The human skin has hundreds of thousands of submicroscopic nerve endings, serving as tactual receptors and detecting pressure, temperature, texture. pain. stroking. tickling (70).

Considered by many to be the most primitive form of communication (15), tactual sensitivity begins in childhood with a baby's first cuddling by its mother. and greatly contributes to the mental and emotional adjustment of the individual (70). In fact, traditional methods of birth are a shock because of the "coldness" of moving the infant from a warm, secure womb to a sanitary bassinet. This sudden assault after removal from the mother's body may be a serious mistake (90) New methods, such as Lamaze, that provide gentler transitions foster natural birth and emphasize the importance of touching Infants   17

TABLE 1

Characteristics of Vocal Expressions

Feeling	Loudness	Pitch	Timbre
Affection	Soft	Low	Resonant
Anger	Loud	High	Blaring
Boredom	Moderate to Low	Moderate to Low	Moderately Resonant
Cheerfulness	Moderately High	Moderately High	Moderately Blaring
Impatience	Normal	Normal to Moderately High	Moderately Blaring
Joy	Loud	High	Moderately Blaring
Sadness	Soft	Low	Resonant
Satisfaction	Normal	Normal	Somewhat Resonant

Rate	Inflection	Rhythm	Enunciation
Slow	Steady and Slight Upward	Regular	Slurred
Fast	Irregular Up and Down	Irregular	Clipped
Moderately Slow	Monotone or Gradually Falling	. . .	Somewhat Slurred
Moderately Fast	Up and Down; Overall Upward	Regular	. . .
Moderately Fast	Slight Upward	. . .	Somewhat Clipped
Fast	Upward	Regular	. . .
Slow	Downward	Irregular Pauses	Slurred
Normal	Slight Upward	Regular	Somewhat Slurred

19

touch themselves, finding comfort in the feel of their blankets and excitement in things warm and cold, smooth and rough (32).

Parents transmit feelings to an infant physically, not verbally. A parent can say to a baby, "I love you," but the words do not communicate. Babies are unable to talk and to understand words, but they can communicate most effectively and meaningfully what they feel. During these early stages of development parents must provide total loving and affection through tactual communication (104). The behavioral development of babies deprived of such experiences can be stunted (81), and a variety of health problems (such as allergies and eczyma) can result (90).

As the infant grows older, she or he still uses tactual experiences as a primary awareness tool to discover and learn until societal inhibitions are imposed to curtail or alter these behaviors (32). Until 10 to 12 years of age, children touch parents to express a close and dependent attitude, whereas they touch peers generally to express affiliation or aggression At adolescence, touching is reduced to the extent that little of it occurs between parent and child beyond their hands and arms (4).

In general, the meaning of touching differs depending on the situation, culture, sex, and age (124). Adults in our culture consider touching pretty much taboo. We tend to associate tactual experiences as private, and often go out of our way to avoid making physical contact with strangers. Our nontouching society directly relates to our concept of self; we feel that our bodies and clothing are "off limits" except under certain socially accepted conditions. These include sexual encounters with one's spouse; touching between parents and children up to adolescence; greetings and farewells with friends and relatives (e.g, handshakes and hugs); professional touching by doctors, dentists, tailors, and contacts in specifically designed encounter groups where the primary purpose is therapy (4).

In most human relationships, touching can give encouragement, express tenderness, and show emotional support. In our culture we often use touch as a symbol of socioeconomic status—superiors may touch inferiors, but the reverse is not likely (59, 15). For this reason, touching in a classroom situation becomes a delicate matter. If a teacher grabs the arm or shoulder of an unruly student, the teacher enters the student's space uninvited. Aside from embarrassment, the student may develop other negative feelings toward the teacher. More positively, however, touching can also be used as a reinforcer At times, a teacher can develop a closer relationship with students by invading their space A simple pat on the back for a job well done is a much used and usually accepted form of praise One study reports that when teachers exhibit such behaviors as touching and close body distance, as well as smiles of approval, small children tend to learn significantly more (68) As children grow older, however, these touching behaviors become less appropriate Since teachers are consi-

dered superiors in the classroom, they often initiate touching behaviors. Teacher judgment is the best indicator, as not all students will accept such tactual communication.

Body Postures and Movements

Kinesics refers to body movements (7) and movements communicate meaning (74). Our bodies elucidate true messages about our feelings which cannot be masked. We communicate by the way we walk, stand, and sit (58). When happy, we tend to walk vigorously; conversely, when "down in the dumps," we often slouch or possibly drag our feet (81). The power of body movements and postures is exemplified in foreign movies where English words are dubbed. No matter how well the words are synchronized with lip movement, the gestures and body movements are often awkward. The body tends to move in harmony with words. As they converse with each other, people are often in unison—frequently with similar postural configurations (91).

We express attitudes toward ourselves and others vividly through body motions and posture. Experimental findings indicate that postural relaxation of torso and limbs can denote status or strength in a relationship. One tends to be more relaxed with friends or when addressing an individual of lower status and less relaxed with strangers or when addressing an individual of superior status (85). Body orientation (the degree to which the communicator's legs and shoulders are in the direction of, rather than away from, the listener) also serves as an indicator of status or liking of the other individual. More direct orientation is related to a more positive attitude (85).

Because gestures are often comprehended more quickly than speech, they are therefore preferred when communication is essential, as in moments of stress. In addition, because such avenues of communication are visual, they travel much farther than spoken words and are unaffected by the presence of noise that interrupts or cancels out speech. Sometimes referred to as emblems, they can either add to or replace words (119).

Although the human body is fashioned similarly throughout the world, postural differences vary tremendously from culture to culture. While there are over one thousand different steady postures available to humans, the postural choices made are usually determined by cultural influences (70). People in our culture have a narrow postural vocabulary and therefore have a difficult time accepting postural changes found in foreign lands (91). For example, 25 percent of the world's population prefers to squat rather than to sit in chairs, which is an awkward position for us to accept. Supporting this theory:

Insofar as we know there is no body motion or gesture that can be regarded as a universal symbol. (7, p. 81)

21

Body posture and movements are frequently indicators of self-confidence, energy, fatigue, or status (58). In the classroom students, keen to receive body messages of enthusiasm or boredom about the subject matter being taught, can sense confidence or frustration from the unconscious behaviors teachers exhibit. Observant teachers can also tell when students understand the content presented or when they have trouble grasping the major concepts. A student slouching sends a very different message from one leaning forward or sitting erect.

Body movements and postures alone have no exact meaning, but they can greatly support or reject the spoken word (81). If these two means of communication are dichotomized and contradict each other, the result will be a distorted image and most often the nonverbal will dominate.

Dress

Charles Darwin refuted the notion that humans wear clothing mainly for protection from the elements (34). Often dictated by societal norms, the clothing we wear indicates a wide amount of information about ourselves It identifies sex, age, socioeconomic class, status, role, group membership, personality or mood, physical climate, and time in history (104) Although most of us are only superficially aware of the attire of others, clothing does communicate. Colors and fabrics are coordinated to send messages just as words are put together to form sentences (34). Dress can either alienate or persuade. Appropriate dress is a method of expressing respect for both the particular situation and the people in it, hence the need for Sunday clothes, work clothes, etc Overtly, as with the hippies of the 60's and 70's, attire can be used to demonstrate dissension or refusal to accept the status game (15)

Traditionally, dress was used to classify the sexes (34). In addition, distinctive costumes were worn to indicate rigid hierarchical groups (122) Today's changing Western culture does not follow these "tagging patterns." Historical dress once used to denote gender categories has been challenged by such styles as the female pantsuit. The business suit, once meant for the executive only, is now the appropriate dress for most of the business world Clothing can also be age-graded Some garments such as the miniskirt and bikini are appropriate for younger women and seldom worn by older women.

Much research has been completed about the effects of clothing on others Clothing can reflect the personality, attitudes, and values of the wearer Some people use clothing for decoration and self-expression, others are concerned with economy or comfort (58) Generally those who prefer dark colors and saturated tones are regarded as outgoing, sociable, and forward Those who prefer small patterned fabrics are characterized as wanting to make a good impression. Thus,

22

self-expression and ideal self-image are often vividly expressed by our selection of clothing (13).

Another study, attempting to discern variants in impression formation, indicated that photographic female figures with makeup, brightly colored dress, and high hemlines were perceived as sophisticated, immoral, or physically attractive by both sexes (particularly the male population). Such results imply that dress has a decided influence on impressions formed by others, especially the opposite sex (57).

The personal artifacts (makeup, jewelry, glasses) with which we choose to adorn ourselves also communicate to others something about our being. Glasses, for example, have stereotypically implied intelligence, honesty, and industriousness (120). More recent studies, however, have shown them to convey religiousness, conventionality, and little imagination (57).

An interesting study examined female subjects' descriptions of the characteristics of "popular women." They mentioned clothing only second in importance after personality, and physical appearance, which is obviously altered by clothing, third (125).

Because clothing affects others' perceptions of us, we often dress to "fit the part." These clothing cues, however, have very little effect on people with whom we are familiar. Thus, if we overtly alter our style of dress, people who know us usually think it a "mood," rather than a permanent change of personality or values (104).

We can consider our attire in theatrical terms. For example, the teacher (actor) must be costumed to fit the curriculum (play) and the classroom (setting). In order to establish credibility, the teacher should strive to appear comfortable and at ease in the role, thus removing some of the typical teacher/student barriers (80). Although outward appearance does not of course indicate one's knowledge, values, or philosophy, dress can communicate; but in most cases, it is only a veneer. Students see instructors based on their motivation, sincerity, and fairness; they will be fooled only momentarily by clothing. A Saville Row suit or Givenchy dress cannot turn a grouch into a lively, dynamic teacher. A smile is worth many times whatever one might pay for clothes (48).

Use of Space

The use of space (proxemics) is a subtle component of nonverbal communication that indicates territory to which we allow or deny access to other people or objects (32, 52). Hall identified three types of space

1. *Fixed-feature space* (immovable walls or partitions and objects)
2. *Semi-fixed-feature space* (big objects, such as chairs and tables)
3. *Informal space* (personal space around individuals). (52)

23

The findings and implications of a controlled experiment conducted nearly 25 years ago are still relevant to many classroom environments in today's schools. The study dealt with the effect of different aesthetic room qualities on students' rating of pictured faces based on dimensions of "energy" and "well-being." Subjects were placed in one of three rooms—one beautiful, one ugly, and one average. The beautiful room had two large windows with drapes, beige walls, indirect overhead lighting, and attractive furnishings; the ugly room had two half-windows, battleship gray walls, an overhead bulb with a dirty lampshade, and furnishings to give the impression of a dirty storeroom; the average room (a professor's office) had three windows with shades, battleship gray walls, indirect overhead lighting, and reasonably attractive furnishings. Subjects in the beautiful room rated the faces significantly higher than subjects in either of the other two rooms. Subject responses in the average room more closely resembled those in the ugly room than those in the beautiful room (79).

A followup study to determine if the results were long-lasting increased subjects' time in both the beautiful and ugly rooms from the original ten minutes to eight hours (four one-hour sessions and two two-hour sessions). The findings were dramatic: subjects in the ugly room had reactions of monotony, fatigue, headaches, irritability, and hostility; while subjects in the beautiful room responded favorably with feelings of comfort, pleasure, importance, and enjoyment for completing the assigned tasks (89)

The implications concerning fixed-feature spatial environments for today's classrooms are obviously important, considering that students spend about six hours a day, five days a week, forty weeks a year in these learning environments (103). Clearly, the physical classroom environment can create moods and establish how much interaction (communication) takes place (104).

Physical arrangement of furniture, such as chairs, desks, and tables, also dictates spatial boundaries and effectively communicates through subtle channels (113, 103). Most schools lack imagination and creativity regarding the elements that could easily be manipulated to make the learning environment more exciting (103). Despite many teaching innovations, most classroom settings remain approximately the same (117), with dark and dismal interiors (54, 69). Space in the classroom may also serve to indicate status, dominance, and leadership. A teacher's desk may act as a barricade to prevent students from entering her/his space, and thus inhibit interaction (75). Students frequently use space to send a message about their interest or preparation in a course by sitting in the front or back of the classroom

Researchers have found that straight-row seating, originally evolved to make optimum use of natural lighting from windows (112), greatly affects student involvement in the process of communication.
24 The location of students in typical straight-row seating is a major

factor in determining which students the teacher talks with and which students respond to the teacher (2, 112). With such an arrangement, student interaction is greatest in the front and middle rows, whether seating is imposed or self-selected (112).

A two-phased experimental study concluded that seating arrangements can also affect test performance. In the first phase of this experiment, 58 undergraduate students were allowed to choose their own seats in a classroom. Analyses of two tests administered to this group showed that students seated at the front of the classroom scored higher than those seated at the rear. In the second phase, 32 of the original group of students were selected and assigned seats in the classroom. After a lecture, students took an announced "pop" quiz based on the lecture content. Again, results showed that students seated at the front of the classroom performed better than those at the rear. High-ability students also performed well, regardless of their position in the classroom. However, low-ability students who were seated at the front of the classroom improved their performance (4).

From childhood we have learned the meanings of thousands of spatial cues (53). Most people in our culture have been reared with the understanding that a precise amount of space must exist when two people communicate. This personal "space bubble" changes size and shape, depending on the situation. Four categories of informal space have been established by our society's middle-class:

1   *Intimate*—This zone is reserved for close relationships, sharing, protecting, and comforting.

2   *Personal*—Informal conversations between friends occur in this 1½-to-4-foot zone

3   *Social*—An extended distance of 4 to 12 feet is generally acceptable for interaction between strangers, business acquaintances, and teachers and students

4   *Public*—Between 12 and 25 feet is the distance used for such one-way communication as exhibited by lecturers (52)

It might be noted that in an average arranged classroom, teachers and students are separated by 12 or more feet (36)

Whereas other cultures rely heavily on close proximity to decipher truth and honesty, our culture does not accept closeness except for intimate relationships. From early childhood, we have been taught to avoid body contact with strangers (53). Many nonverbal cues such as eye contact, body gestures, and facial expressions limit the space between individuals. Most of us tend to get closer to those we like, and maintain a greater distance from those we dislike or fear or who are in a superior status position (52, 85, 126). We also stand farther away from people with handicaps, people from different racial backgrounds, and authority figures (104)

25

The distance between teacher and students is a critical factor in the communication process. Teachers can easily transmit feelings of acceptance or rejection simply by the distance they maintain. They have "freedom of space" whereas students do not (113). Teachers, as well as others, have a tendency to "get closer" to students they like. A quick observation of a classroom situation will often identify the teacher's pets, as well as those students the teacher dislikes. To avoid accusations of favoritism, teachers should make a conscious effort to get within the space bubble of *all* students. By traveling freely throughout the classroom, they reinforce the concept of joint ownership (114).

The most advanced curriculum and highest hopes have little chance of success without a supportive physical learning environment (103). In order to foster productive communication in the classroom, teachers must allow for flexible changes which are beneficial for group interaction. It should be noted, however, that appropriate spatial distances and arrangements are limited by a myriad of variables, including the converstional topic, the nature of the relationship, and the physical constraints present in the classroom (101).

With a minimum amount of effort, it is possible to make changes in the classroom that will positively affect the learning environment. Several general guidelines are as follows:

1. The classroom should offer a variety of stimuli.

2 The classroom should provide a secure, comfortable feeling.

3. The classroom should be adapted to fit the activity.

4. The classroom should give some privacy and individuality.

SUMMARY

Today's educators are surrounded by a vast array of communication processes that include many avenues of expression. Although a less understood form of transmitting messages, nonverbal communication is a powerful aid that must be recognized if the learning environment is to be enhanced to the fullest. Nonverbal expression of emotions, feelings, and attitudes is often more effective than verbal (91).

Every day we communicate through verbal and nonverbal channels. Even when listening, we can communicate a level of sincere interest in the topic being discussed (61). If effective communication is to be achieved in today's schools, it must be an open process where teachers and students possess the ability to accurately send and receive messages.

Part of the problem of classroom communication is teacher dominance of conversation, usually in forms of lecturing and giving direc-

26

tions (3), and the untrained ability to listen. Listening involves "an activity evidenced by movement on the part of the not-now-talking person. . . . To listen is to move, to be in motion for the words of the talker." (31) Perceptive talkers are simultaneously aware of the listener's nonverbal feedback and respond by adjusting their conversational speed, reexplaining, or even by changing the topic, stopping, or asking a question (61) Listening is a difficult art that must be nurtured through practice and patience. A good teacher is a good listener, not only to words being spoken, but also to silent messages that signal agreement/disagreement, attention/inattention, boredom/interest, and the desire of the listener (student) to be heard. Teacher effectiveness is generally characterized by showing enthusiasm, varying facial expressions, gesturing for emphasis, moving toward students, spending more time in front of the class than behind a desk or at the chalkboard, maintaining eye contact, displaying head nods, speaking with clear voice and varied intonation, correlating between verbal and nonverbal messages, and exhibiting a sense of humor (128).

To avoid any dogmatic evaluation of students' nonverbal behaviors, one final point needs to be made. No formalized reliable means have been developed that can be used to identify and interpret all nonverbal behaviors (21) Many student behaviors are autonomic, idiosyncratic, and ambiguous when considered out of context (110, 69, 71, 56). Nonverbal messages do not occur in discrete packages, but, rather, act in an uninterrupted flow of behavior (20). Thus, it is important not to jump to conclusions or make generalizations without considering three factors.

1. deviant behavior from a baseline,

2. cultural backgrounds, and

3. sex differences (22)

Deviant behavior refers to acts that vary from a standard pattern. For instance, it is more important to notice when a consistently good responder in the classroom is not following a usual pattern of frantically raising a hand to be heard than to notice that the individual raises a hand more often than others in the class. The lack of attempts to respond may convey more meaning than the usual hand raising. The critical point is not noticing the frequency of behavior, but, rather, identifying the discrepancies.

The second validity check on nonverbal communication should consider the individual's specific culture Nonverbal behaviors and their perceptions are different for many cultures (94). The ability to read or speak a foreign language does not guarantee an understanding of the cultural aspects that go beyond the lexical (91) What is correct in one country may not be considered appropriate in another (127, 7). Touching strangers, for example, is generally accepted in Italy, while

people in our country go out of their way to avoid being touched. Spatial distances preferred in our culture are not necessarily those preferred in other cultures (91). People in Arab countries maintain a closer proximity than would be considered polite in the United States. These and other differences relate to one's cultural background; hence it is essential to interpret them in such a light.

Teachers, administrators, and counselors must make personal adjustments to compensate for the cultural diversity found in classrooms. Obviously, cross-cultural differences found in Florida classrooms will not be the same as those found in New York classrooms. Those who teach or work in such culturally pluralistic situations need to become equipped with knowledge and empathy in order to correctly interpret the meaning of these nonverbal differences (51).

Teachers can discuss with new students and their parents which behaviors are acceptable and encouraged and which are unacceptable. Nonverbally, teachers can also show sensitivity by giving these students more time to answer, speaking clearly and slowly, and using such simple signs of approval as head nodding, keeping eye contact, and leaning forward Understanding students who have not fully mastered the English language can also be difficult, but this does not necessarily mean communication must cease. Teachers can try to paraphrase students' statements and then ask if the meaning is correct (128).

The third validity check on nonverbal communication should consider students' sex differences. Because of stereotyped upbringings of boys and girls, many nonverbal cues and behaviors could be misinterpreted Treated differently from birth, boys and girls begin to act differently in some ways While males are believed to be more aggressive, athletic, and mechanical than females, females are thought to be more conforming, quiet, and generally interested in scholarly activities Research has shown this to be fact in most cases (78). Teachers may, however, notice in some girls an aggressiveness which can be related to increased participation in sporting competition. Moreover, it is not at all uncommon to find boys who are much more interested in science or music than in playground activities.

Nonverbal expressions are often nothing more than habits exhibited by the sender Singly, they may not have implicit meaning and should not be considered out of context (56, 37, 107, 8) Although some nonverbal actions may be given more weight than others, oversimplifying the analysis of these behaviors should be avoided (70). Nonverbal awareness simply implies a conscious effort to employ all sense modes in receiving and sending messages. Insights into nonverbal communication not only heighten sensitivity to others, but inevitably strengthen an understanding of oneself as well. This connoisseurship of nonverbal behavior is a prerequisite of good communication between teachers and students, a basic goal of education.

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