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# PROFESSIONAL DEVELOPMENT: THE USE OF NONVERBAL COMMUNICATION DURING CLASS LECTURE

*by Dustin York*

## **Abstract**

Teachers' nonverbal communication has a vital role within the classroom environment. This literary review examined (1) a historical perspective of teachers' nonverbal communication, (2) the relationship between students' perceptions of their learning and teachers' nonverbal communication, (3) the relationship between standardized measurements of student learning and teachers' nonverbal communication, and (4) the relationship between students' perceptions of teacher credibility based on the teachers' nonverbal communication. Findings in the literary study suggest that teachers' nonverbal communication is beneficial to students' academic success. This review has outlined elements of nonverbal communication a teacher could use to benefit student learning. Using the findings of this literature review, school administrators, higher education faculty, K-12 teachers, and professional development officials will find data that could assist their academic teaching.

## **1. Introduction**

*Listen to Dustin York discuss the current literature on nonverbal communication and the impact on student learning, Maryville University.*

The purpose of this research was to provide K-12 teachers and higher education professors with past evidence concerning the impact nonverbal communication has on student learning. Within this literary review, research in the area of teachers' nonverbal communication and student learning will be examined in a number of areas.

Nonverbal communication accounts for over half of spoken messages per a number of previous studies (Barnum & Wolniansky, 1989; Fromkin & Rodman, 1983; Mehrabian, 1981; Pease & Pease, 2004). Therefore, one can theorize that if utilized effectively, nonverbal communication along with verbal communication could positively affect student learning. Miller (1998) stated:

Body postures and movements are frequently indicators of self-confidence, energy, fatigue, or status. In the classroom, students keen to receive body messages of enthusiasm and boredom about the subject matter being taught can sense confidence or frustration from the unconscious behavior of the teachers. (p. 18)

A number of areas are important to consider when interpreting the importance of teacher nonverbal communication. Categories discussed in this research include: history of nonverbal communication and student learning, nonverbal communication's effect on perceptions of learning and standardized measurements of learning, nonverbal communication's effect on teachers' perceived credibility, and learning effective nonverbal communication.

## 2. Nonverbal Communication and Student Learning, a Historical Perspective

There has been previous research on the role between teachers' nonverbal communication and student learning since the early 1970s (Anderman & Kaplan, 2008; Andersen, 1979; Andersen, Norton, & Nussbaum, 1981; Christophel, 1990; Frechette & Moreno, 2010; Gorham, 1988; Gorham & Zakahi, 1990; Kearney, Plax, & Wendt-Wasco, 1985; Leathers & Eaves, 2008; Mackay, 2006; Plax, Kearney, McCroskey, & Richmond, 1986; Powell & Harville, 1990; Richmond, 1990; Richmond, Gorham, & McCroskey, 1987; Sanders & Wiseman, 1990; Sime, 2006; Teel, 2011; Woolfolk, 1978). There are two founding researchers who began the trend of nonverbal communication in education: Mehrabian and Andersen. Mehrabian (1961) was the first to study the significance of nonverbal communication in the classroom environment. Andersen (1978) then took Mehrabian's findings and further associated them to the teachers' presentation style.

These two researchers coined the term immediacy, which describes physical and psychological closeness a student feels with a teacher. Nonverbal communication immediacy techniques include: body lean, eye contact, smiling, physical closeness, head nods, hand gestures, and vocal expressiveness (Andersen, 1979; Andersen, Andersen, & Jensen, 1979; Burgoon & Hoobler, 2002; King & Witt, 2009; Knapp & Hall, 2010; Patterson, 1973; Teel, 2011; Witt & Schrodt, 2006).

Mehrabian (1961) and Andersen (1978) believed nonverbal communication immediacy played an essential role in the classroom setting. These researchers felt students held a more positive perception of their teacher and the class when teacher immediacy was present.

Data collected from a study by Burgoon and Hoobler (2002) found five significant nonverbal encoding and decoding skills that related to interpersonal communication:

1. Nonverbal communication encoding and decoding skills are correlated to personal popularity, attraction, and psychosocial well-being.
2. Nonverbally skilled communication senders are more successful in influencing and deceiving other people.
3. Encoding and decoding nonverbal communication skills are related to gender.
4. Encoding and decoding nonverbal communication skills are not related to race, education, and intelligence, while occupation, training, and age are related.
5. There is a modest relationship between senders who are good at encoding nonverbal communication also being good at decoding. (p. 241)

To add to this, Hybels and Weaver (2004) delineated four functions of nonverbal communication. First, nonverbal communication is unique to culture; perception of nonverbal communication can differ between cultures where the act is present (p. 171). Next, verbal and nonverbal communication messages may conflict with each other; positive word choices can be contradicted by negative nonverbal communication (p. 172). Next, the majority of nonverbal communication operates at a subconscious level; people often do not consciously control their nonverbal communication actions (p. 174). Finally, nonverbal communication reflects feelings and attitudes; nonverbal communication can describe the sender's feeling in a message better than spoken words (p. 175).

While studying these four functions of nonverbal communication, there are poor nonverbal communication elements that higher education teachers need to be mindful of (Kroehnert, 2006). Kroehnert (2006) mentioned five nonverbal communication errors commonly demonstrated by teachers:

1. Poor personal habits (individual ticks or habits)
2. Continually stiff
3. Blocking or touching their face
4. Over-exaggerated hand gestures
5. Tapping or shaking legs and hands (pp. 151-153).

Teachers' nonverbal communication has been linked to stronger student perception in a number of other empirical studies. Norton's (1977) research concluded that perceived teacher effectiveness and the teacher's communication style were strongly correlated. Utilizing proxemics (use of space), and paralanguage (use of voice fluctuation)

positively affected teachers' nonverbal communication. Lesikar and Flatley (2005) stated:

Paralanguage is the communication effect of the speech, pitch, volume, and connectivity of spoken words. Are they fast or slow? Are they high pitched or deep? Are they loud and forceful or barely audible? Are they smooth or disjointed? These questions are examples of the types you would ask to analyze the nonverbal symbols of paralanguage. The symbols become a part of the meaning that is filtered from a spoken message... Depending on the circumstance, a person's voice may or may not be consistent with the intended word meanings. But you should make every effort to avoid inconsistencies that will send a confusing message. Consistency among the words you choose and how you deliver them to create clear meaning should be your goal. (pp. 425-427)

Researchers believe proxemics is another influential tool in nonverbal communication (Anderson, 1999; DeFleur, Kearney, & Plax, 1998; Devito, 2009; Leathers & Eaves, 2008; Miller, 1998; Richmond & McCroskey, 2004). Miller (1998) stated:

The most advanced curriculum and the highest hopes have little chance of success without a supportive physical learning environment. In order to foster productive communication in the classroom, teachers must allow for flexible changes that are beneficial for group interaction. It should be noted, however, the appropriate spatial distances and arrangements are limited by a myriad of variables, including the conversational topic, the nature of the relationship, and the physical constraints present in the classroom. (p. 11)

Another element that showed to encourage effective nonverbal communication was specific facial expressions, otherwise known as kinetics. Research confirmed that facial expressions are the most important type of nonverbal communication (Tubbs & Moss, 2006), which make facial expressions key to listeners' perception of the speaker.

Hand and arm gestures are also defined as kinetics. Although hand and arm gestures received much less empirical research than facial expressions, research has found hand and arm gestures to be a beneficial component of effective nonverbal communication (Hietanen, Leppänen, & Lehtonen, 2004). Utilizing each of these nonverbal attributes (hands, arms, voice, space, eyes) is essential for a successful learning environment. Chesebro et al. (1992) stated, "effective communication between teachers and students is the essence of effective instruction" (p. 354).

A study lead by Hogan and Stubbs (2003) asked students at a university how likeable their professor was after just a few seconds of the first impression. Students who found the professor friendly in the introductory seconds found the entire class throughout the semester more enjoyable than did the students who stated they did not like the professor after the first impression.

Burroughs (2007) defined a teacher using nonverbal communication immediacy as one, "who seems relaxed, animated and vocally expressive during class lectures and discussion, moreover, this teacher smiles frequently, engages in a lot of eye contact and is generally perceived as friendly and approachable" (p. 456). Contrary to this type of instruction is the poor nonverbal communication teacher. Burroughs (2007) described this teacher as one "who seems tense, reserved, and vocally unexpressive during class lectures and discussions. Moreover, the teacher seldom smiles, avoids looking directly at students and is generally perceived as remote, aloof and unapproachable" (p. 456).

Leathers and Eaves (2008) studied the presence of a barrier between the teacher and students. The researchers found that eliminating a physical barrier such as a lectern or desk can positively affect communication with students, thus affectively utilizing proxemics.

Research has been conducted to study the effects of these nonverbal communication elements as they pertained to students' academic achievement. Teacher smiles, head nods, and eye contact have been associated with students seeking additional information about the lectured topic (Myers & Knox, 2001). Research showed that even though students received the same amount of information, depending on the level of teachers' nonverbal communication, students took it upon themselves to learn outside of the classroom (Myers & Knox, 2001).

These nonverbal communication elements from the teacher have also been associated with students verbally communicating more during class (Fusani, 1994). Class engagement can be infectious, thus encouraging students who would not regularly participate in class to join the conversation. This teacher-student connection has been studied in association to two learning ideas: students' perception of learning, and standardized measurements of learning (Fusani, 1994).

### 3. Nonverbal Communication's Effect on Perceptions of Learning

In this section, the relationship between teachers' nonverbal communication and students' perceptions of learning are outlined. This research has defined perceptions of learning as how students think they are learning from the teacher (Allen, Witt, & Wheelless, 2006; Andersen et al., 1981; Burroughs, 2007; Chesebro, 2003; Eadie, 1996; King & Witt, 2009; Richmond, McCroskey, Plax, & Kearney, 1986; Rodríguez, Plax, & Kearney, 1996; Teel, 2011).

There have been numerous research studies that directly correlated teachers' immediacy of nonverbal communication with constructing a positive teacher/student relationship in the secondary and college environments (Andersen, 1979; Andersen et al., 1981; Burroughs, 2007; Cheesebro, 2003; Chesebro & McCroskey, 2001;

Comadena, Hunt, & Simonds, 2007; Eadie, 1996; Kearney et al., 1985; Mackay, 2006; McDowell, McDowell, & Hyerdahl, 1980; Richmond et al., 1986; Rodriguez et al., 1996; Teel, 2011).

Mehrabian (1971) stated that nonverbal communication immediacy has a strong relationship between interpersonal relationships, "People are drawn towards persons and things they like, evaluate highly, and prefer; and they avoid or move away from things they dislike, evaluate negatively, or do not prefer" (p. 1).

Teachers who build a strong in-class relationship with their students, motivate those students to spend more time on class tasks, which expands their perception that they learned more (Rodríguez et al., 1996). Richmond (2002) stated that students feel much closer to an immediate nonverbal communication teacher, which promotes a positive teacher-student relationship.

Teachers' nonverbal communication immediacy has been found to construct four results (Mackay, 2006, p. 54). First, nonverbal communication was the primary indicator of the lesson's atmosphere for the day. This study stated that this atmosphere was established within the first few minutes. Second, after the atmosphere was established, the teacher's nonverbal communication provided a context to how students should act with each other and the teacher. Next, Mackay (2006) found that the teacher's proxemics, paralanguages, and kinetics convey their amount of confidence and control over the classroom. Finally, as students became familiar with the atmosphere of the class, their attitudes toward that class or teacher did not change unless changes occurred from the teacher. This research specifically anticipated a positive correlation between teachers' nonverbal communication and positive student change, but results occurred over time.

Another study conducted by Houser and Frymier (2009) specifically studied the personal perceptions students felt when presented with a teacher with effective and poor nonverbal communication. These researchers found a relationship between the teachers' effective nonverbal communication and students' sense of confidence in the subject area; conversely, teachers' poor nonverbal communication lead to students' hesitation about the subject area (Houser & Frymier, 2009). Students' confidence toward the classroom environment increased perceptions of their own learning. If students feel confident about the subject matter because they formed a strong bond with the teacher, the students in turn feel as if they learned substantially more (Houser & Frymier, 2009).

The idea that students believe they learn more from a teacher they personally like is not a new hypothesis. Mehrabian (1981) stated, "people approach what they like and avoid what they don't like" (p. 22). One reason students believe they are learning more from an immediate nonverbal communication teacher is the link to student apprehension (Chesebro & McCroskey, 1998, 2001). Students who do not feel anxiety toward a subject, felt as if they would achieve academic success, thus if students feel comfortable in the learning environment, their perception of their own learning is greater (Chesebro & McCroskey, 1998).

A study conducted by Andersen et al. (1981) found significant information about perceptions of learning. In their study, 13 teachers taught 198 college students in separate classes; in each class, three trained observers rated the teachers' nonverbal communication immediacy. Following the lectures, students completed a survey on the teachers' communication style and an exam over the tested material. The survey data resulted in a strong correlation between effective nonverbal communication and students' perception of learning. However, their study found no significant correlation between nonverbal communication and standardized measurements of learning.

Some researchers (Eadie, 1996; Holden, 1997) argued that teachers' nonverbal communication immediacy is exclusively connected to students' perception of learning but has no relationship with standardized measurements of learning. Eadie (1996) stated:

Teachers who use nonverbal immediacy behaviors tend to build good feeling between themselves and their students, which motivates students to spend more time on the learning tasks, which, in turn, causes students to perceive that they have learned something significant. (p. 13)

Additionally, Holden (1997) researched the relationship between teachers' nonverbal communication and students' perceptions of learning and standardized measurements of learning. He taught the same exact class with two student cohorts; one class was taught for the entire semester with poor nonverbal communication behaviors while the second class was taught using effective nonverbal communication behaviors.

At the end of the semester, when students were asked via survey how much they felt they had learned from the class, results varied greatly (Holden, 1997). On a scale with 5 being the maximum, the poor nonverbal communication class survey averaged 2.93, while the effective nonverbal class averaged 4.05. This is consistent with the literature on students' perceptions of learning. Notably, there was no significant change in final class GPA between these two cohorts.

Although research has agreed that nonverbal communication affects how students perceive their own education, there is a lack of consensus regarding a relationship between nonverbal communication and standardized measurements of learning.

## 4. Nonverbal Communication's Effect on Standardized Measurements of Learning

In this section, the relationship between teachers' nonverbal communication and students' standardized measurement of learning are outlined. I have defined standardized measurements of learning as how much students truly learn from their teacher as measured by assessments (Andersen et al., 1981; Burroughs, 2007;

Comadena et al., 2007; Daniel, 2000; Eadie, 1996). This area of the literature does not support a unified idea as opposed to a student's perception of learning.

Christophel (1990) stated, "teachers can be active agents within the educational environment, capable of stimulating the development of student motivation toward learning" (p. 324). Christophel (1990) defined these active agents as teachers who utilize effective nonverbal communication immediacy in their classrooms. This theory is supported by a number of researchers including Daniel (2000) who stated, "teacher's nonverbal immediacy and cognitive and affective learning are related" (p. 64). Daniel (2000) defined perceptions of learning as cognitive learning, and standardized measurements of learning as affective learning.

Additionally, research conducted by Sime (2006) found a relationship between teachers' nonverbal communication and three specific areas:

Nonverbal communication can strengthen standardized measurements of learning.

Nonverbal communication supports teacher-student connections.

Nonverbal communication sets a tone for the class, in terms of classroom management. (p. 112)

Unlike the studies by Andersen et al. (1981) and Holden (1997), Sime (2006) did find a positive correlation between teachers' nonverbal communication and students' standardized measurements of learning. One notable theory for this positive relationship was presented by Rocca (2004) which found that students' class attendance increased when the teacher utilized effective nonverbal communication. This increased amount of class time may result in positive standardized measurements of learning.

Another positive correlation between teachers' nonverbal behavior and standardized measurements of learning came from Nussbaum and Scott (1979) who found that a strong interpersonal relationship between a teacher and a student is a significant predictor of learning. If research agrees that nonverbal communication immediacy positively affects teacher/student relationships, one can see the correlation between that relationship and a predictor of learning.

Richmond et al. (1987) conducted a study that supported the theory that teachers' nonverbal communication affects students' standardized measurements of learning. Following two studies of a collective 719 undergraduate students, the study found that teacher paralanguages, facial expressions, and a relaxed body posture had the strongest impact on learning. Richmond and his colleagues (1987) determined that teachers' moderate nonverbal communication immediacy positively affected students' standardized measurements of learning compared to teachers utilizing poor nonverbal communication immediacy. Notably, teachers' moderate nonverbal communication immediacy and teachers' high nonverbal communication immediacy produced similar

results. Similarly, Miller (1998) studied the positive association between teachers' nonverbal communication and student success. Miller (1998) stated:

Teachers express enthusiasm, warmth, assertiveness, confidence, or displeasure through their facial expression, vocal intonation, gestures, and use of space. When teachers exhibit verbal messages that conflict with nonverbal messages, students become confused, and this confusion often affects their attitudes and learning. (p. 6)

Schonwetter (1993) found that teachers' effective nonverbal communication improved students' selective attention to the teachers' presentation. This selective attention could then be targeted toward the learning objectives of the lecture.

Additionally, Burroughs' (2007) study sought to find a correlation between teachers' nonverbal communication and students' standardized measurements of learning. His study recruited 564 undergraduate students from a mid-Atlantic university; these students completed a survey regarding perceptions of learning, which included two questions to assess standardized measurements of learning. The data derived from Burroughs' (2007) study established that teachers' nonverbal communication was related to both perceptions of learning and standardized measurements of learning.

In another study, a teacher reviewed six items during a short lecture (Kelley & Gorham, 1988). Following the lecture, a test was given to students, which required them to recall the six items. Kelley and Gorham's (1988) data found that the high nonverbal communication immediacy teacher received the highest average test score.

One study conducted by Comadena et al. (2007) specifically looked at the psychological attachment that was created between a teacher and the student based on nonverbal communication immediacy. This study found that nonverbal communication by a teacher in a classroom creates an intimate learning environment. Comadena et al. (2007) concluded that the intimate learning environment built from nonverbal immediacy resulted in student development of overall academic performance.

Allen et al. (2006) found similar results. Like other researchers, they found that teachers' nonverbal communication immediacy positively affected students' perceptions of learning. Allen and his colleagues further analyzed students' opinions about their own learning, and actual learning. This study concluded that effective nonverbal communication from the teacher initially resulted in an increased student perception of learning, which led to enhanced standardized measurements of learning (Allen et al., 2006).

A study conducted by Zekia (2009) also found data that reinforced the theory that teachers' nonverbal communication positively affected students' standardized measurement of learning. A total of 67 students were divided into two classrooms. One teacher used effective eye contact, mimics, and gestures, while the other teacher did not. Students were told to write a reflection after each class for two months. The results found that the teachers' nonverbal communication was related to student motivation and

concentration toward class material. Students in the effective nonverbal communication class exemplified higher success in standardized measurements of learning compared to the poor nonverbal communication class (Zekia, 2009).

Although there have been numerous studies that showed a positive relationship between teachers' nonverbal communication and students' standardized measurements of learning, there have also been studies criticizing the correlation (Andersen et al., 1981; Holden, 1997; Woolfolk, 1978).

Kashinsky and Weiner (1969) found no correlation between vocal fluctuation of teachers and the academic performance of five-year-olds. Andersen's (1979) research also showed no significant effect of nonverbal communication on standardized measurements of learning, while having 18- 46% variance on students' perception of learning. According to Andersen (1979), his lack of correlation between effective nonverbal communication and standardized measurements of learning may have been due to the type of class in which the study was conducted. The testing sample was composed of communication major students who had already been exposed to the relevance of nonverbal communication (Andersen, 1979).

Additionally, Chesebro (2003) researched the correlation between teachers' nonverbal communication immediacy and students' perceptions of learning. The study was conducted with 196 undergraduate students from a large mid-Atlantic university. In this study, two variations of teachers' nonverbal communication immediacy were presented to students via videotapes. One variation included the teacher lecturing while making eye contact with the camera, using effective paralanguage, and kinetics. The other variation included the same teacher lecturing without making eye contact with the camera, not using effective paralanguage, and utilizing poor kinetics. The lecture was over a topic not covered previously in the class.

The results of this study showed a positive correlation between teachers' nonverbal communication immediacy and students' perceptions of learning. However, the data showed no correlation between teachers' nonverbal immediacy and students' performance on standardized measurements of learning (Chesebro, 2003).

Similarly, a study conducted by Frechette and Moreno (2010) looked at the relationship between teachers' nonverbal communication within the online environment at a southwestern American university. A cohort of 93 college students watched one of five lectures about the same material on a computer screen with one of these five teacher elements:

1. No teacher, just lecture audio
2. A non-animated teacher with audio
3. A teacher with effective facial nonverbal communication that lip-synched the lecture and utilized varied facial expressions

4. A teacher that only utilized hand and arm gestures, but did not fluctuate facial expressions or lip-synched

5. A teacher that utilized hand and arm movements, as well as lip-synched the lecture and used facial expressions. (p. 66)

Students then completed a pretest and a posttest over the presented material.

The results from this study showed no significant changes in standardized measurements of learning. Since the teacher was not physically in the room suggests a positive relationship between teacher nonverbal communication and standardized measurements of learning was lost in the absence of a physical teacher (Frechette & Moreno, 2010).

This literature review addressed inconclusive data of the relationship between teachers' nonverbal communication and students' standardized measurements of learning. While the review in the previous section stated an agreement within the literature about nonverbal immediacy's effect on positive student perception of learning, no such agreement is currently held for standardized measurements of learning.

## 5. Nonverbal Communication's Effect on Perceived Credibility

In this section, a literature review concerning students' perception of teachers' credibility correlated with their nonverbal communication immediacy will be covered. This research sought to compose literature about nonverbal communication's impact on perceived credibility with the thoughts that this perceived credibility impacts student learning.

Perceived teacher credibility by the student is an important element of that student's likelihood of learning. Researchers McCroskey and Young (1981) concluded, "Research generally has supported the proposition that source credibility is a very important element in the communication process, whether the goal of the communication effort be persuasion or the generation of understanding" (p. 57). As teachers actively pursue student understanding of course material, the teacher's perceived credibility should be highlighted. Although verbally explaining one's own credentials assists with building credibility, nonverbal communication throughout the teacher-student relationship may build a stronger confidence from the student toward the learning objectives (Pogue & AhYun, 2006).

Researchers studied the relationship between student success and teachers' perceived credibility according to their students (Andersen, 1978; Pogue & AhYun, 2006; Teven & McCroskey, 1996). Research has also found a positive relationship between teachers' communication and students' perceptions of those teachers' credibility (Chamberlin,

2000; Jaasma & Koper, 1999; Teven & Hanson, 2004; Teven & McCroskey, 1996; Thweatt & McCroskey, 1998).

Past research has found positive correlations between students' perceived credibility of their teacher and verbal communication (Beatty & Behnke, 1980). For example, teachers who consistently use positive word choices like "good" or continually use the same industry terminology are seen as more credible (Beatty & Behnke, 1980).

This correlation posed enlightening information. Effective nonverbal communication's role in teachers' perceived credibility could ultimately increase student achievement (Kelley & Gorham, 1988; Nussbaum & Scott, 1979; Richmond et al., 1987; Schonwetter, 1993; Sime, 2006). A study by Martin, Chesebro, and Mottet (1997) found that high teacher's perceived credibility resulted in higher amounts of student motivation in the classroom. A study also found that teachers' perceived credibility caused students to rate the teacher and course higher on evaluations (Beatty & Zahn, 1990). Notably, low amounts of vocal variations had the most negatively impactful results on speakers' perceived credibility (Addington, 1971).

## 6. Learning Effective Nonverbal Communication

In this section, studies concerning the act of learning effective nonverbal communication are outlined. As discussed, nonverbal communication is necessary for effective communication (Chesebro, 2003; Houser & Frymier, 2009). It is not enough for teachers to speak clearly and use an effective outline for class lecture. If it is true that good teaching resembles theatrical performance (Kelly & Kelly, 1982), not all teachers have a background in such a presentation.

Unfortunately, learning new nonverbal communication skills is not an easy task (Cole, 2000; DePaulo, 1992). Cole (2000) stated that nonverbal communication immediacy is derived at the subconscious level. Because nonverbal communication is under little conscious control, it can be difficult to modify (DePaulo, 1992).

Recent studies shed light onto specific areas of nonverbal communication manipulation. Peterson's (2005) research study concluded that a small amount of body language training does result in positive nonverbal behaviors from participants. Some nonverbal communication elements are much more difficult to alter than others. Voice fluctuation, for example, can be improved through training, but is more difficult than other elements like hand and arm movements (Tubbs & Moss, 2006). Mason (2003) stated, "A speech delivered in a mono tone is not likely to be well received. Vary your tone and aim to achieve vocal clarity. Try and express your emotion with your voice... A lot of expression in the voice is a good thing" (p. 41).

Nonverbal communication during first impressions has shown to have a definite impact on relationships and can affect future interactions (Ambady & Skowronski, 2008).

People also often make strong inferences about others based on their initial nonverbal communication tendencies (Hall & Andrzejewski, 2008).

The face is the source of the majority of emotional information (Knapp & Hall, 2010; Leathers & Eaves, 2008; Richmond & McCroskey, 2004), which can support or harm relationship attachment. Teachers should be aware of their own facial expressions in order to nurture strong teacher-student relationships (Leathers & Eaves, 2008).

Ishikawa, Hashimoto, Kinoshita, and Yano (2010) conducted a study with 106 pre-clerkship medical students to determine if effective nonverbal communication can be taught successfully. The study directly looked at teaching people in the medical field better nonverbal communication while interacting with patients.

After a 3-hour training session on nonverbal communication, data were collected. The "group intended to pay more attention to nonverbal communication during the medical interview, suggesting that the intervention had increased their awareness of the importance of nonverbal communication" (Ishikawa et al., 2010, p. 861). These results were observed to be short-term. The researchers concluded, "Further, a single 3-h intervention might not be sufficient to change the nonverbal communication performance" (Ishikawa et al., 2010, p. 863). Future research needs to be conducted on successful forms of teaching effective nonverbal communication for long-term use.

## 7. Conclusion

The literature is expansive in the area of nonverbal communication within the classroom environment. As "student success is one of the primary concerns to educators" (Pogue & AhYun, 2006, p. 331), past research along with future research, specifically in efficient forms of teaching nonverbal communication may benefit professionals in the education environment.

This literature review has addressed research on nonverbal communication, specifically nonverbal communications effect on student perceptions of learning and standardized measurements of learning, the correlation between speaker credibility when associated with nonverbal communication, and learning effective nonverbal communication.

Research concerning the relationship between teachers' use of nonverbal communication immediacy during class lectures, and students' academic performance is beneficial to higher education (Comadena et al., 2007; Lemire, 2002). Effective lectures can improve the student learning experience (Maher, 2008). The literature points toward some areas where nonverbal communication immediacy can positively affect these in-class lectures.

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