Chapter II

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2.0 INTRODUCTION

The review of related literature is a crucial step which invariably minimizes the risk of dead ends, rejected topics, rejected studies, wasted efforts towards approaches already discarded by previous investigators. This chapter presents the literature review related to non-verbal communication and relevant to the present study. The significant sources of literature explored for this study are journals, newspapers, theses, dissertations, research papers, articles and most significantly, the internet. The investigator has attempted to briefly summarize the findings of related studies and try to find the trend of research in this area and research gaps as it emerges from those studies.

Review of three areas of related studies was considered relevant to the present study. The following areas of related literature were examined and presented as follow.

1) Overview of non-verbal communication

2) Components of non-verbal communication

3) Non-verbal communication and classroom instruction

2.1 OVERVIEW OF NON-VERBAL COMMUNICATION

The first scientific study of non-verbal communication was Charles Darwin's book *The Expression of the Emotions in Man and Animals* (1872) (as cited in Anderson, 2001). He argued that all mammals show emotion reliably in their faces.

Studies now range across a number of fields, including, linguistics, semiotics and social psychology.

Non-verbal messages often work in concert with verbal messages. While the complementary ability of non-verbal cues is significant, several studies advocate the role of non-verbal communication in the process of communication. The perusal of the following studies reveals this.

Galloway (1972) reported in his article that by improving non-verbal skills, teachers learn their own behavior and its meanings to students, and they learn to observe and detect non-verbal information from students. He also stated that non-verbal training and skill development are in the beginning stages and mentioned the difficulties faced by the researchers to study and analyze the non-verbal data – (i) when to look (ii) what to look for and (iii) how to observe. He has indicated the implications of non-verbal communication for teacher education by stating that the teacher educator enhances the study of pedagogy when studies of non-verbal cues are included in the curriculum. Analyzing the influences and effects of non-verbal information has significance for better understanding the nature of teaching and learning.

Mehrabian (1972) investigated the decoding of consistent and inconsistent communication of attitudes in facial and vocal channels. He found that within a two-channel communication process, 41.4% of the message was decoded via facial expression and 19.3% was decoded via vocal channels, supporting the theory that non-verbal—in this case, facial—messages have a stronger effect than vocal messages. Moreover, the non-verbal aspect of this research continues to support

findings that 93% of one's face-to-face communication is non-verbal. This established a foundation supporting the dominance of the non-verbal message.

Hinton (1985) reported in his article that when two people say something or, just as importantly, say nothing, communication is taking place. No matter how one may try, one cannot not communicate. Activity or inactivity, words or silence, all have message value: they influence others and these others, in turn, cannot not respond to these communications and are thus themselves communicating. Moreover, an understanding of non-verbal cues affords the instructor the ability to stay away from non-verbal cues that can hinder learning.

Tickle-Degnen and Rosenthal (1987) conducted a meta-analytic study that demonstrates the effect of non-verbal behavior, measured at the molecular level, on the positivity component of rapport. They reported that non-verbal communication is a "correlate, determinant, and consequence of rapport" and identified that direct body orientation, forward lean, mutual gaze, smiling, and gestures all convey feelings of positivity in interactions. The study also mentioned that the positivity correlates of rapport would be behaviors, such as smiling and head nodding, that indicate participant liking and approval of one another. The coordination correlates, on the other hand, would be those behaviors that signal that the participants are "with" one another, functioning as a coordinated unit, such as postural mirroring and interactional synchrony. The conclusions regarding these correlates were based primarily on a qualitative review of the published literature, but also, for the positivity correlates, on the preliminary results of a quantitative review of the literature.

Couch (1993) has discussed in his article about non-verbal communication and its implications and relevance for teachers. The first form of non-verbal language is proxemics, which describes the physical arrangement of space within a classroom and the space we allow between ourselves and others. The second form, coverbal behavior, describes physical movement, such as gestures, eye movements, and posture. The third, paralanguage, is a way of classifying verbal non-language, such as voice tone, rate of speech, pauses, disfluencies, and non-language sounds. The implications of non-verbal behavior are important to classroom teachers. Students can infer from non-verbal language that a teacher is warm and caring, empathetic, and enthusiastic. By modeling certain non-verbal behaviors, teachers can demonstrate the code of conduct they expect in their classrooms. Finally, non-verbal language can indicate the teacher's expectations for students.

O'Hair & Ropo (1994) reported in his article that communication is vital to the teaching process. He has mentioned four major functions non-verbal communication serves in educational contexts – expressing emotions, conveying interpersonal attitudes, presentation of one' personality, accompanying verbal communication. He has presented a framework of non-verbal teaching with five major components – paralanguage, facial expression, eye and visual behaviour, gesture and body movement and space. He has described and discussed each of these components in relation to an instructional communication context and diversity in education. He has drawn twofold conclusions in his article (a) understanding diversity requires emphasis on non-verbal communication and (b) teacher education programs must incorporate non-verbal communication research and practice into the curriculum. He has stated that the challenge for teacher educators is to integrate and apply non-verbal

communication theory and research to help prepare pre-service teachers for multicultural classrooms. He has also designed Non-Verbal Teacher Education Model to assist teacher educators in meeting the challenge.

Grahe and Bernieri (1999) examined the relative impact different channels of communication had on social perception based on exposure to thin slices of the behavioral stream. Specifically, we tested the hypothesis that dyadic rapport can be perceived quickly through visual channels. Perceivers judged the rapport in 50 target interactions in one of five stimulus display conditions: transcript, audio, video, video and transcript, or video and audio. The data demonstrated that perceivers with access to nonverbal, visual information were the most accurate perceivers of dyadic rapport. Their judgments were found to covary with the visually encoded features that past research has linked with rapport expression. This suggests the presence of a nonverbally based implicit theory of rapport that more or less matches the natural ecology, at least as it occurs within brief samples of the behavioral stream.

Blatner (2005) stated briefly, how something is expressed may carry more significance and weight than what is said, the words themselves. Accompanied by a smile or a frown, said with a loud, scolding voice or a gentle, easy one, the contents of our communications are framed by our holistic perceptions of their context. Those sending the messages may learn to understand themselves better as well as learning to exert some greater consciousness about their manner of speech. Those receiving the messages may learn to better understand their own intuitive responses—sometimes in contrast to what it seems "reasonable" to think. Part of our culture involves an unspoken rule that people should ignore these non-verbal elements— as if the

injunction were, "hear what I say, and don't notice the way I say it." These elements are often ignored in school or overridden by parents, so the task of incorporating conscious sensitivity to non-verbal communications is made more difficult. Non-verbal communication occurs not only between people, but also internally. People grimace, stand in certain postures, and in other ways behave so as to reinforce to themselves certain positions, attitudes, and implicit beliefs. Unconsciously, they suggest to themselves the role they choose to play, submissive or dominant, trusting or wary, controlled or spontaneous. Thus, a therapist can use non-verbal behavior to diagnose intrapsychic as well as interpersonal dynamics, and individuals can be helped to become aware of their own bodily reactions as clues to their developing greater insight.

2.2. COMPONENTS OF NON-VERBAL COMMUNICATION

The previous information has only begun to address the role that non-verbal communication plays in the process of communication. In fact, non-verbal cues enhance communication through complementary expression, which leads to a better-rounded interpretation process between sender and receiver. The following studies reflect upon the components of non-verbal communication.

Hall (1966) (as cited in Anderson, 2001) mentioned in his study that American middle class society has established four categories of personal space articulating the fluctuating levels. These levels include: (i) Intimate space reserved for close relationships, sharing, protecting, and comforting (ii) Personal space, ranging from one and a half to four feet, reserved for conversations between friends (iii) Social space, ranging from four to twelve feet, reserved for interaction between strangers,

acquaintances, and between teacher and student (iv) Public space, ranging from twelve to twenty-five feet, mostly used for one-way communications, i.e., lectures and performances.

Hodge (1971) stated that the eyes are the most obvious and dominant communication attribute of the face. They continuously provide a constant channel of communication. Because humans are visually oriented, eye movement and its focus on objects and other people reveal a large amount of information. When two people reach eye contact, they are searching for information as well as committing themselves to communication. Although eye contact does not have as many expressions as a person's face, when complemented with facial expressions and other non-verbal cues, it gives an instructor a more complete picture of student's feelings and perceptions.

Burgoon and Hoobler (2002) have defined seven classes of non-verbal codes present in interpersonal communication: 1. Kinesis: bodily movements, gestures, facial expressions, posture, gaze, and gait; 2. Vocalics or paralanguage: pitch, loudness, tempo, pauses, and inflection; 3.Physical appearance: clothing, hairstyle, cosmetics, fragrances, adornments; 4. Haptics: use of touch, including frequency, intensity, and type of contact; 5. Proxemics: use of interpersonal distance and spacing relationships 6. Chronemics: use of time as message system, punctuality, lead time, etc.; 7. Artifacts: manipulable objects and environmental features that may convey messages.

Hargie & Dickson (2004) has mentioned four territories to describe territoriality as one of the components of non-verbal communication i.e. proxemics. These territories

are : (i) Primary territory: this refers to an area that is associated with someone who has exclusive use of it. For example, a house that others cannot enter without the owner's permission. (ii) Secondary territory: unlike the previous type, there is no "right" to occupancy, but people may still feel some degree of ownership of a particular space. For example, someone may sit in the same seat on train every day and feel aggrieved if someone else sits there. (iii) Public territory: this refers to an area that is available to all, but only for a set period, such as a parking space or a seat in a library. Although people have only a limited claim over that space, they often exceed that claim. For example, it was found that people take longer to leave a parking space when someone is waiting to take that space. (iv) Interaction territory: this is space created by others when they are interacting. For example, when a group is talking to each other on a footpath, others will walk around the group rather than disturb it.

Blatner (2005) stated in his study that psychotherapists, group leaders in management training, patients themselves, and people in personal growth programs all can benefit from learning about the nature and impact of non-verbal communications. In this study he reviewed the major categories of this dimension of interpersonal behavior — (i) Personal Space: This category refers to the distance which people feel comfortable approaching others or having others approach them. (ii) Eye Contact: This rich dimension speaks volumes. Eye contact modifies the meaning of other non-verbal behaviors. (iii) Position: The position one takes vis-a-vis the other(s), along with the previous two categories of distance between people and angle of eye contact all are subsumed under a more general category of "proxemics" in the writings on non-verbal communications. (iv) Posture: A person's bodily stance communicates a rich variety

of messages. (v) Paralanguage: "Non-lexical" vocal communications may be considered a type of non-verbal communication, in its broadest sense, as it can suggest many emotional nuances. (vi) Facial Expression: The face is more highly developed as an organ of expression in humans than any other animal. (vii) Gesture: There are many kinds of gestures and these, too, have many different meanings in different cultures, and what may be friendly in one country or region can be an insult in another. (viii) Touch: How one person touches another communicates a great deal of information: Is a grip gentle or firm, and does one hold the other person on the back of the upper arm, on the shoulder, or in the middle of the back. (ix) Locomotion: The style of physical movement in space also communicates a great deal, as well as affecting the feelings of the person doing the moving. (x) Pacing: This is the way an action is done. (xi) Adornment: Our communications are also affected by a variety of other variables, such as clothes, makeup, and accessories. (xii) Context: While this category is not actually a mode of non-verbal communication, the setting up of a room or how one places oneself in that room is a powerfully suggestive action.

2.3 NON-VERBAL COMMUNICATION AND CLASSROOM INSTRUCTION

Research dating from 1967 to the present suggests that communication research and theories should be applicable to current practices of instructional delivery. Since it has been established that the use of multiple communication techniques enhances instructional delivery, and that non-verbal cues can complement other communication techniques, the past studies in this area provide a framework for the pursuit of the present study.

Love and Roderick (1971) suggested that educators who use non-verbal cues consciously are more effective than those who do not use non-verbal cues in their teaching. They developed an awareness unit targeting ten categories of teacher non-verbal behaviour. The unit consisted of having teachers (a) read about non-verbal behaviour (b) observe a video tape of another teacher and attend to that teachers' non-verbal behaviour in a general way (c) learn to recognize the ten categories of non-verbal behaviour more specifically (d) practice the non-verbal behaviour in small role playing groups (e) and then practice the behaviours in a real setting. They stated that they pilot tested this awareness unit (they do not report details about the pilot study) stating merely that teachers use more categories of non-verbal behaviour on the post test compared to the pre test. Authors concluded that bringing the non-verbal communication of teachers to the level of conscious awareness could make possible the analysis and understanding of the non-verbal dimension in classroom communication.

Kleinfeld (1972) study looked at the effects of instructor warmth and physical proximity by administering an adult intelligence test to fifteen Alaskan native high school students. In administering the exam, the examiner sat sixty inches away from the students while displaying a businesslike manner. Three weeks later, components of the exam were re-administered randomly; some students were sent to a "warm" testing environment and some to a "cold" testing environment. The warm environment consisted of the teacher sitting thirty inches away, at right angles and at the same level with the students. The examiners also smiled frequently when proctoring the exam. The cold testing environment consisted of the teacher sitting eighty inches away, standing upright, and not smiling. In analyzing the test results,

there was significant change. The test scores of the students in the warm environment improved, while the scores from the students in the cold environment remained the same or declined.

Lewis & Smith (1977) gathered the research available on teacher non-verbal communication and investigated the merits and limitations of instruments on non-verbal communication. The critical analysis of evaluative instruments related to non-verbal communication in this study included the instruments developed by Galloway, Love and Roderick, Victoria, Civikly and Cheffers. The study suggested that the researchers such as Galloway and Cheffers had defined non-verbal behaviours in their instrument in such a way as to make them overlapping while other researchers had defined non-verbal behaviours in subjective terms. The instruments were reported lacking the proper directions for use. There were some general recommendations in the study stating that 'at university level, inclusion of non-verbal theory courses in the education curricula, of communications courses for teachers, or even of general communications courses may stimulate greater awareness; when different communication systems interact in the congruent state, non-verbal communication systems represent the dominant source of meaning; the facial-vocal combination of conveying emotional messages is more accurate than the vocal, gestural or gestural-vocal modes; the non-verbal systems of communication seem to be far more effective than the verbal in building empathy, respect, and a sense that the communicator is genuine.

Middleman & Hawkes (1992) conducted a study to explore the differential effects of three values of non-verbal component of communication upon the disadvantaged

children and upon the middle and lower middle socio-economic groups who populate the suburban schools. This study was a field experiment conducted in an inner city and in a sub-urban elementary school. Children were tested in the group situations rather than individually. This study measured responses of children in terms of three tasks that emphasized – accuracy in following directions, accuracy in hearing & extracting information from a verbal text and amount of words produced in a required essay. The data was collected using a typology of non-verbal cues (developed from review of relevant research findings) from a total sample of 180 children in 6 treatment groups of 30 each.

Bancroft (1995) reported that non-verbal communication in the classroom can produce subtle non-verbal influences, particularly in the affective domain. In Suggestopedia, double-planeness (the role of the environment and the personality of the teacher) is considered an important factor in learning. Suggestopedic teachers are trained to use non-verbal gestures in their presentation of the lesson material and pantomime to suggest the meaning of new words in an unknown language. Positive facial expressions, eye contact, and body movement are used to project self-confidence and competence. Verbal and non-verbal behaviors are harmonized so that students receive the same positive message of support and encouragement on both the conscious and unconscious level. Voice qualities of the teacher and environmental factors are also emphasized in the suggestopedic method. Number of students, seating arrangement, wall colors, physical distance between teacher and student(s), and lighting are all considered. Suggestopedia incorporates the main elements of modern, Western non-verbal communication theory, although there is no evidence that its developer, Georgi Lozanov, was influenced by it at the institute in Sofia, Bulgaria.

Areas which have a bearing on Lozanov's Suggestopedia and which are discussed are: paralanguage, kinesics, proxemics, environment, and oculesics.

Edwards (1997) conducted a longitudinal study from 1994 to 1997, on the effects of Cognitive Coaching, Non-verbal Classroom Management (NVCM) and monthly dialogue groups on teacher implementation of Standards-Based Education, teacher efficacy, school culture, teacher conceptual development, teacher empowerment, and other areas. Treatment and control groups came from matched low, middle, and high socioeconomic level high school articulation groups. A total of 247 teachers participated in the treatment group, and a total of 164 participated in the control group. The numbers of participating teachers varied over the three years of the study, with 138 treatment group teachers participating the entire three years, and 164 control group teachers participating the entire three years. The treatment group participants increased significantly compared with the control group in their use of Non-verbal Signals. At the end of the three-year project, when treatment group teachers were asked about their assessment of the impact of Non-verbal Classroom Management on their growth as teachers, the mean for the treatment group teachers was 6.23 (out of a 7-point scale). When asked about their assessment of the impact of Non-verbal Classroom Management on student achievement, the mean for the treatment group teachers was 6.6 (out of a 7-point scale).

Albers (2001) explored the use of non-verbal communication in the learning setting. He examined the relationship between the use of non-verbal communication and the willingness of audience members to participate in discussions outside the speaking setting. The sample for the study consisted of 108 undergraduate students in basic

communication and psychology courses, at a medium sized state college in northwestern Missouri. The instruments used for data collection were the 10 item Revised Non-verbal Immediacy Measure (This measurement has been shown to have a good validity coefficient) and a self- constructed scale called the Albers Scale of Extracurricular Communication. The research was conducted by first obtaining a videotape of an individuals giving a three to four minute speech on success after college, using very few of the non-verbal behaviors that have been considered to be immediate (i.e. eye contact, voice fluctuations, movement around the room, smile, and gestures). Then the person was taped again using the same speech, but with full use of these non-verbally immediate gestures. One condition was then shown to the participants in a class and they were asked to rate the individual's performance. This proceeded with each condition being shown to at least three classes.

He found that the use of non-verbally immediate behaviors can have a powerful impact on the attitudes of audience members towards a speaker. Also the relationship between the use of non-verbal communication and the willingness of audience members to participate in discussions outside the speaking setting was examined in this study. The results indicated a strong relationship between these two important variables. He further suggested that research should be done in this area to isolate out different parts of the non-verbal messages to see which may have the greatest strength. ·

Anderson (2001) examined non-verbal cues used by university professors when delivering instruction in a two-way video classroom. Descriptive observation of six instructors, each teaching five 50-minute lectures, produced the data for this preliminary study. The non-verbal cues were recorded using the Two-way Video

Non-verbal Cue Observation Instrument (TV-NCOI). The TV-NCOI consisted of seven non-verbal communication categories and 22 variables used to identify and quantify professor's non-verbal cue use in two-way video instructional delivery. Frequency response, common themes, and non-verbal cue delivery observations, collected by the TV-NCOI, were used to answer the research question - what non-verbal cues are used by university professors when delivering instruction in a two-way video classroom? The results suggested that professors in engineering and chemistry, the two focused disciplines, heavily used non-verbal cues when delivering instruction in a two-way video classroom. However, the majority of these cues have a technical delivery base. The traditional classroom non-verbal cues of board pointing, material pointing, and accent gestures are delivered via computer cursor, two-way video camera, and software applications in the two-way video classroom. More specifically, 87% on the non-verbal cues used in instructional delivery had a technological connection and only 13% of the non-verbal cues used were without a technical delivery base.

Stanulis & Manning (2002) has mentioned in his article that non-verbal behavior in the classroom plays a key role in developing and maintaining a healthy, productive environment where children are ready to take responsibility for learning. A teacher sends messages of approval or disapproval in the way that she maintains eye contact, controls facial expressions, and smiles. Tone of voice, posture, touching behaviors and gestures are also non-verbal behaviors teachers need to monitor and adjust. When there is a contradiction in the message sent people tend to believe non-verbal cues over verbal cues. Teachers need to be aware that even unintentionally, they are continually sending signals to students that indicate degrees of interest, enthusiasm,

and engagement. Since non-verbal behavior is often difficult to control, teachers deliberately need to monitor and verify that their non-verbal and verbal cues match.

Susan (2002) examined the nature of non-verbal teacher-student interaction in a second-grade inclusive classroom. The purpose of the study was to compare the non-verbal behaviors of children who are considered average in ability with those who are perceived as cognitively challenged, while they are engaged in general classroom instruction in both large and small group settings. The study also examined the non-verbal behaviors of one teacher as she interacted with a select group of students within the context of a naturalistic classroom environment. Data collection involved classroom observations--noting context, formal and informal discussions with the teacher regarding lesson instruction, student profiles, and overall study validity--and the videotaping of small and large group math lessons. Analyses indicated that the most common non-verbal behavior exhibited by both the special education students (SES) and general education students (GES) was "attending to procedure" under the category of Eye Focus. The SES varied more among themselves in the "verbal" eye contact category, and the "teacher" eye focus and "non-attending" subcategories that did the GES. "Verbal" eye contact and "attending to student" and "attending to procedure" in the Eye Focus category were the predominant non-verbal behaviors used by the classroom teacher. In most cases, the majority of non-verbal interaction occurred between students who sat in close proximity regardless of their cognitive ability. The small group setting lent itself to greater frequencies in each of the non-verbal categories for both GES and SES. The data from this study also indicated a relationship between teacher voice tone and effective classroom management. Teachers who consider possible non-verbal behaviors that engage all students may

increase their understanding of student learning as they attempt to meet the diversity in today's inclusive classroom.

Baylor, Soyoung, Chanhee, & Miyoung (2005) conducted experimental study to explore the effects of non-verbal communication (facial expression and deictic gesture) within procedural and attitudinal learning domains on attitude, learning, and agent perceptions. Participants in this study included 237 undergraduate students (32.1% male and 67.9% female) enrolled in a computer literacy course in a southeastern public university. This study employed a 2x2x2 factorial design, with knowledge domain (procedural, attitudinal), deictic gestures (presence, absence), and facial expressions (presence, absence) as the three factors. The participants were randomly assigned to one of eight conditions and participated as a required course activity. A three-way MANOVA was conducted to test the overall effects and a follow-up ANOVA was used for detecting each independent variable's effect. Results revealed an interaction effect between the knowledge domain of the learning module and the presence of agent facial expression, implying that students' attitudinal learning may be enhanced when agents have facial expressions. Results also indicated that participants rated the agent persona more positively when the agent had facial expressions (in either module). There was also a main effect indicating that the agent persona was rated more positively in the procedural module, perhaps because the agent's role was more as a conduit (e.g., directing student attention to interface features) rather than as a persuader in the attitudinal module. This also suggests that the domain of knowledge that agents portrayed impacts learners' perception of the presence of agents and the educational soundness of the agents' non-verbal communication. Consequently, instructional designers should consider the type of knowledge that they want to represent and transmit and then decide which type of non-verbal communication will effectively align with the type of knowledge. Overall, results

from this study provide practical knowledge about the design of non-verbal communication for pedagogical agents to achieve positive outcomes, for both procedural and attitudinal learning.

Darn (2005) has stated in his article that non-verbal communication has implications for the teacher as well as the learner. It is often said that one can always recognize a language teacher by their use of gesture in normal conversation, while it is certainly true that a system of gestures has evolved which allows a teacher to perform aspects of classroom management quickly, quietly and efficiently. Gestures for 'work in pairs', 'open your books', 'listen' and 'write' are universal, while individual teachers have developed non-verbal repertoires involving the use of fingers to represent words, expressions to denote approval/disapproval and gestures to indicate time, tense and other linguistic features, and hence systems for instruction, correction and management which well-trained learners respond to immediately. The effective use of non-verbal cues assists in a wide range of classroom practices by adding an extra dimension to the language.

Keidar (2005) has mentioned that the conscious employment of non-verbal language creates an effective communicative channel enabling the lecturer to link informative with emotional communication and facilitating the transfer of knowledge, which is thoroughly absorbed and digested as a result of the combination of the emotional and mental behavior of the students. Intelligent employment and correct coordination of posture, facial expressions, kinesics, proxemics, touch, paralinguistics, environmental communication and dress and extraneous appearance with the verbal content fortify and raise the value of the didactic material, assuring the success of a combined

operation. The conversion of emotional intelligence into a teaching aid equips the student with an understanding of the link between mind and emotion and of their combined activity.

Aloisio & Klinzing (2006) conducted six experimental investigations to test the effectiveness of a training program on the improvement of non-verbal skill and personality dimensions. The training components of the experimental groups consisted of theoretical knowledge, skill acquisition exercises (e.g., perceptual modeling), and practice in experimental settings with intensive feedback, and reflective discussions. The experimental relationships between non-verbal skill and personality dimensions were investigated using a posttest-only-control-group-design, with random assignments to the experimental conditions. In Study 1, 2, 5, and 6 the program was tested against a control group not having training at the time of the posttest. In Studies 3 and 4 the full program was tested against a comparison group having the training program without practical laboratory experiences. To assess the effectiveness of the program two criterion measures were employed. These measures were derived from two principal sources, the first being a test on non-verbal sensitivity the second being a laboratory performance test which provided estimates of trainees' behavior from self- and alter competence ratings. To assess the nature of relationships paper and pencil tests on "charisma"/expressiveness, directiveness, extraversion, locus-of control orientation, and self-efficacy were administered at the time of the posttests. Altogether 306 undergraduate student teachers and students studying pedagogy as a major in a large German University signed up to participate in the six experimental studies. Findings revealed considerable and statistical significant improvements for non-verbal decoding and encoding skills in all of the six studies.

The relationship of personality dimensions related to non-verbal skill revealed significant enhancements. Significant differences between the experimental and control groups were found for "charisma"/"spirit", extraversion, internal locus-of-control orientation, and the combined score: self-efficacy. Nearly significant results were found for overall competence and control beliefs.

Suri S. (2007) studied the effect of practice teaching programme on non-verbal communicative behaviour of pupil teachers. The objectives of the study were to study the non-verbal communication of pupil teachers at the onset of the practice teaching programme and at the time of completion of the practice teaching programme and to prepare the non-verbal classroom communicative behaviour profile of pupil teachers during practice teaching programme. The descriptive survey method was used for the study with the sample of 50 pupil teachers of the Faculty of Education, DEI selected randomly by quota sampling technique from 5 practice teaching centres. A self constructed observation schedule of non-verbal classroom communicative behaviour was used to collect data. The pre-test and post-test scores were compared to interpret the data. The results revealed that the pupil teachers did not significantly improved on all the aspects of non-verbal communication — artifacts, posture, kinesics, gesture, paralanguage, proxemics, haptics and chronemics. The results also indicated that the non-verbal communicative behaviour of pupil teachers was of average level.

Vandivere (2008) conducted a qualitative study and used a multiple case study methodology to explore the non-verbal communication behaviors and role perceptions of pre-service band teachers, and the extent to which these individuals found meaning and value in theatre seminars with respect to those factors. The informants

participated in three theatre seminars taught by theatre faculty at the researcher's university. The researcher collected data in the form of videotaped theatre seminar observations, videotaped classroom teaching observations, videotaped informant reflections of teaching episodes, online peer discussions and journaling, and informant interviews. Data were analyzed, coded, and summarized to form case summaries. A cross-case analysis was performed to identify emergent themes. The broad themes identified were past experience, adaptation, realization, and being aware. The informants found that the theatre seminars increased their awareness of non-verbal communication behaviors in the classroom, and had the potential to be meaningful and valuable with respect to their perceptions of their roles as teachers.

2.4 OVERVIEW

The perusal of researches related to non-verbal communication revealed the dominance of non-verbal message over verbal message (Mehrabian, 1967; Blatner 2005). Studies on rapport examined how non-verbal cues play a significant role in developing high levels of rapport with individuals. In fact, psychologists assert that non-verbal communication plays a significant role in developing and judging levels of rapport (Grahe & Bernieri, 1999; Tickle-Degnen & Rosenthal, 1987). Furthermore, researches indicated that the major percentage of communication by classroom instructors is non-verbal (Anderson 2001).

This review of literature has also identified the components of non-verbal communication and its significance. Non-verbal communication techniques are complex and are further divided into the categories of proxemics, oculesics, haptics, chronemics, kinesics, paralanguage, artifacts, olfatics, posture and appearance (Hall, 1969; Hodge, 1971; Bowers & Flinders, 1990; Burgoon & Hoobler, 2002; Hargie &

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Dickson, 2004; Blatner, 2005). Research has established that these non-verbal categories play a significant role in instructional delivery (Kleinfield, 1972; Bancroft 1995; Albers, 2001; Susan, 2002; Darn, 2005; Keidar 2005).

In reviewing literature from 1967 to 2008 in the areas of non-verbal communication and classroom instruction, research has established a significant connection between the use of non-verbal cues in instructional delivery and its positive outcome (Hinton, 1985; Couch, 1993; O'Hair & Roppo, 1994; Edwards, 1997; Stanulis & Manning, 2002). Also studies indicate that the non-verbal skills can be cultivated with practice and one can improve non-verbal abilities (Love & Roderick, 1971; Baylor et.al, 2005). Research studies have also emphasized the need and importance of training in non-verbal communication (Galloway, 1972; Aloisio & Klinzing, 2006).

The studies reviewed indicated the tools that can be used to observe the non-verbal behaviour viz. a five-point rating scale including non-verbal cue categories (Love & Roderick, 1971), a typology of non-verbal cues (Middleman & Hawkes, 1972), a seven-point scale to assess the impact of non-verbal classroom management on student achievement (Edwards, 1997), non-verbal immediacy measure (Alber, 2001) and a set of other tools as evaluated in the study of Lewis & Smith (1977) like, Galloway's Observational procedures for determining teacher non-verbal communication, Cheffer's Instrument designed to expand Flander's Interaction Analysis System, Civikly's Teacher non-verbal coding system, etc.

The literature review revealed that until nineties very few experimental studies were undertaken in the area of non-verbal communication, the trend of experimental studies in the area of non-verbal communication was set in by mid of nineties. Also, some researches on the non-verbal communication touched its use for instructional

delivery, implying that non-verbal communication is apparent, but researcher did not come across the study on the impact of non-verbal communication of B.Ed. student-teachers on their classroom transaction. The non-verbal cue use is implied within these broad categories, but an implication of this important communication technique is not sufficient in the area of teacher education.

2.5 IMPLICATIONS FOR THE PRESENT STUDY

The remainder of this review of literature focuses on non-verbal communication, its components and its significance in instructional delivery. The stated findings make it hard to ignore the impact that non-verbal cues have on instruction delivery. The conclusions in the stated studies lead researcher to formulate the present problem. It gave the methodological insight and rationale for the present study.

Though the studies report that non-verbal communication play significant role in teaching learning process, the researcher did not come across the study wherein the impact of use of non-verbal skills by B.Ed. student teachers on their classroom transaction is reported. This study will attempt to add to the growing body of researches related to use of non-verbal communication in the pre-service teacher education programme.

Non-verbal cues influence communication, and communication affects instruction delivery. By studying impact of non-verbal skills used by B.Ed. student teachers in the classroom transaction, the teacher education community can gain understandings of the integration of these skills in the teacher education programme which in turn can add to the realm of material presented to student-teachers in our institutions.