

**,ADAPTING TEACHER COMMUNICATION
TO STUDENT LEARNING STYLES,**

MASTER'S PROJECT

**Submitted to the Department of Teacher Education
University of Dayton, in Partial Fulfillment
of the Requirements for the Degree
Master of Science in Education**

by

Kristine Nilsen Crawford

University of Dayton

Dayton, Ohio

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TABLE OF CONTENTS

	Page
APPROVAL PAGE	i
Chapter	
I. INTRODUCTION	1
Problem Statement	
Procedure	
Definition of Terms	
Assumptions and Limitations	
Results	
II. REVIEW OF LITERATURE	6
III. PERSONAL RESEARCH	16
Exhibit A	
Exhibit B	
Exhibit C	
Exhibit D	
Exhibit E	
Exhibit F	
IV. PRACTICAL APPLICATIONS	31
V. CONCLUSION	39
APPENDIX	41
A. Letter to Parents	
BIBLIOGRAPHY	42

CHAPTER I

INTRODUCTION

Unknowingly, teachers speak several different languages throughout the school day. At times they are speaking the language of their students, at times they are not. The purpose of this project is to provide teachers with more opportunities to communicate effectively with their students. The solutions to this communication problem lie in the theory behind a counseling technique called Neuro-linguistic programming. The theory states that each person has a dominance that is revealed through their word choices in spoken language. The dominances are in three forms (or combinations thereof): auditory (hearing), visual (sight) and kinesthetic (feeling). Counselors have reported success when they are able to assess a client's dominance and communicate with them through that channel (Lewis and Pucelik, 1982). This researcher has utilized the underlying assumptions of this theory, yet applied it in a group setting rather than one-on-one as in a counseling relationship. The researcher has demonstrated how Neuro-linguistic programming can help teachers by enabling them to choose words to appeal to all forms of communication dominance.

Traditionally, the dominance most appealed to in educational techniques was the visual form (Stonehouse and Woerner, 1983). In recent years, teaching methods have

shown more consideration for individual learning styles. Some of these methods are complex and time-consuming for the teacher. The design this researcher has proposed, however, awakens the common sense instincts of the teacher so that the adaptation is simple and quite natural. It is simply a matter of saying the same thing three different ways.

The simplicity and sensibility of the design is what appealed to the writer. Many educational reformers start out well-intentioned only to conclude with well-researched, well-organized methods that are unrealistic to implement. Most teachers have several methods for teaching the same concept. Neuro-linguistic programming makes use of this natural ability by explaining why certain methods work with certain students. By way of practical application, the researcher has enabled the teacher to recognize the following:

1. the three dominances and their characteristics
2. awareness of one's own dominance
3. assessment of student dominance
4. the adaption of spoken language to suit the dominances of students

By accomplishing the objectives listed above, this project has provided teachers the opportunity to spend more hours of the school day speaking the same language as their students.

Problem Statement

The purpose of this project is to suggest practical

applications of this theory that will enable teachers to adapt their communication style to more closely match the learning style of their students. To aid educators in discovering these learning styles, an assessment procedure has been developed and discussed at length.

Procedure

Subjects

The subjects consist of two groups: the teachers who will be using the practical applications of the theory, and the students they will be using it with. The students are of elementary school age and cross several socio-economic levels.

Setting

The practical applications are most useful in a classroom setting. The classroom used for assessment purposes in this project was a fifth grade class of 26 students located in rural central Ohio.

Data Collection

The researcher has devised an assessment tool to enable teachers to assess student dominance. This has included personal interviews recorded on audio tape. Personal interviews have been followed up with written questionnaires. The writer has also used books, periodicals, and personal experiences as well as recordings of lectures on the subject of Neuro-linguistic programming.

Format

The project has defined the three dominances and described the characteristics associated with each. It has enabled the teacher to assess his or her own dominance as well as that of their students. The project has provided examples and methods of adapting one's language to include all three dominances.

Definition of Terms

1. Neuro-linguistic programming - a technique that combines the study of non-verbal feedback and language patterns to improve communication.
2. Dominance - the prevalent communication style of an individual. There are three basic types:
 1. Auditory - those who learn best through verbal instruction and sound.
 2. Visual - those who learn best by observation
 3. Kinesthetic - those who learn by doing
3. Preferred Representational System - a synonym for dominance.
4. Block - a negative indicator of dominance. (The one it is not)

Assumptions and Limitations

The project has assumed that each person has a dominance and that it is revealed through language. It is

assumed that the teacher is able to assess and use this knowledge and that it can be generalized to other classroom settings.

Results

The results of this project have been presented in several forms. There are some tally sheets and sample assessments included as well as an audio taped interview. All data has been interpreted and explained by the researcher, and is presented as suggestions for teaching in the Practical Applications section (Chapter IV of this project).

CHAPTER II

REVIEW OF LITERATURE

Neuro-linguistic programming evolved, rather than developed, as a theory for improving communication. This study of verbal and nonverbal communication grew from the observations of two therapists in the early 1970s. Richard Bandler and John Grinder modeled teachers and counselors who were able to bring about rapid change in their students or clients. Based on their observations of these "therapeutic wizards" (Bandler and Grinder, 1979, p.3) they proposed that most individuals process information through five sensory systems: auditory, visual, kinesthetic, gustatory, and olfactory (Dilts, Grinder, Bandler, Bandler, and Delozier, 1980). In this culture the first three systems are the ones primarily used. The theory suggests that each person has a preference for one of these systems over another, but that others may be preferred depending on the situation. The founders of Neuro-linguistic programming as a theory believe that the most effective counselors they observed were those who were able to match the preferred representational system of their clients. In this chapter, the researcher has explored the uses of Neuro-linguistic programming in the counseling field, has discussed the criticisms of the theory, and has summarized the present and future applications of the theory.

In the field of counseling, Neuro-linguistic programming has enjoyed immense popularity. Counselors are receptive to techniques they feel will give them much-needed rapport with clients. In his book, Meta-Cation, Sid Jacobson recalls turning to the use of Neuro-linguistic programming when counseling a withdrawn client named Josh.

I knew that if I could pace, or adequately match, some portion of Josh's ongoing experience continuously for a few minutes, I would get a level of rapport adequate for my purposes...To put it another way, if I could convince him that we were on a similar wavelength for at least some of the time, he would be more open to me. (Jacobson, 1983, p.19)

Jacobson goes on to describe how he matched Josh's language, diction, and body posture to create a feeling of empathy with Josh. This is a crucial element to counselors, as they feel a relaxed client will be more receptive to suggestions for treatment. In Neuro-linguistic programming, this matching of language is known as "predicate matching" since it most often involves the use of specific verbs and adjectives. For example, when a client uses a verb such as "feel" (kinesthetic) it is important to speak in that same modality to ensure a predicate match. The modality that the predicates chosen by the client seem to indicate is known as the preferred representational system. The suggestion that trust in a relationship will be enhanced if the counselor matches the preferred representational system of his client was examined in a study by W. C. Falzett (1981). In his study Falzett had counselors predicate match or mismatch

with volunteer female college students. The students' preferred representational system had been determined by a study of eye movements. (A basic tenet of Neuro-linguistic programming states that specific eye movements are indicative of visual, auditory or kinesthetic thoughts. This tenet is examined more thoroughly in this chapter). After completing a matching or mismatching interview with a counselor, the subjects were asked to rate the counselor in the Trustworthiness scale of the Counselor Rating Form. The results indicated a significantly higher level of perceived trust when counselors matched systems with their clients. It was concluded from this study that the use of matching sensory modality predicates enhances counseling due to the trust relationship.

The importance of trust in the counseling relationship is echoed in the book Magic Demystified by Byron A. Lewis and Frank Pucelik. The authors explain that each representational system has its own "language". Someone with an auditory preference may say "I hear what you are saying" rather than "I see your point" which is a more visual response. Kinesthetics, meanwhile, might respond with "I grasp your meaning". Lewis and Pucelik state that:

By being able to understand and speak to a person using his own 'language', you heighten the sense of rapport between you and pave the way for the trust that is so important to any close relationship. (1982, pp. 41-42)

After a brief discussion of the use of Neuro-linguistic

programming in marriage counseling, the authors continue to emphasize the importance of matching language preferences to aid in communication:

The sooner you begin to match the client's predicates, to speak his own language, the more rapidly the therapy can progress. This is true in any situation where a close relationship is being fostered...The ability to adapt your own language to the predicates of others is as important in a close intimate relationship like a family as it is in situations where people must work together. (p. 46)

The ability to establish rapport with a client is of utmost importance in a counseling relationship. The theory of Neuro-linguistic programming has achieved success and popularity in the counseling field because it offers yet another way of establishing that crucial level of trust. Proponents of the theory say it is simply another method for counselors to use. Bandler and Grinder (1979, p. 18) stated that "We're not offering you something that is true, just things that are useful...we're only interested in what works." In his review of 15 studies, Christopher Sharpley, a critic of Neuro-linguistic programming, suggests that Bandler and Grinder's claim has yet to be verified. (Sharpley, 1984).

Christopher Sharpley wrote a review of research on predicate matching and the preferred representational system in 1984. His findings were published in the April issue of the Journal of Counseling Psychology. In it he reviewed 15 studies, each performed to evaluate one of the basic tenets

of Neuro-linguistic programming. The results of his review suggest that there is little supportive evidence for the use of preferred representational systems. His criticisms are of two ideas: the existence of a preferred representational system, and, if it exists, the method by which it should be identified.

On the subject of the existence of the preferred representational system, Sharpley reviewed a study by L. Birholtz (1981). In this study, 27 college students were asked to describe positive and negative life experiences. The descriptions were audio-taped. The students also completed a self-report of their preferred representational system. For the interview, results indicated that there was one preferred mode for all subjects, and that was kinesthetic. There was no correlation between this result and that of the self-reports. The same results were obtained after one week, however. Sharpley concluded that this finding offers some support that persons possess a preferred representational system, and that the system is stable over one week.

The majority of research reviewed by Sharpley dealt with the measurement of preferred representational systems. His findings lead him to be most critical of the use of eye movements as an indicator of thought. Tenets of Neuro-linguistic programming are that visual components of thought can be identified by upward eye movements, auditory

components by lateral and downward left-directed eye movements, and kinesthetic thoughts are identified by downward right-directed eye movements. Sharpley reviewed a study by L. Owens (1977/1978) in which the researcher attempted to find a correlation between eye movements, verbalizations, and self-report in reference to preferred representational systems. His study of 128 undergraduate psychology students yielded no significant correlations. Other studies by Beale (1980/1981) and Thomason, Arbuckle, and Cady (1980) revealed some faults of using eye movements as an assessment tool. Beale's study found that eye movements were in an upward direction regardless of stimulus changes in sensory content. Similarly, Thomason et al reported results that showed most eye movement responses were visual. Finally, a study by Hernandez (1981) led Sharpley to believe that analyzing eye movements is not an adequate indicator of thought. The study involved testing for congruity between eye movement responses to statements previously coded as auditory, visual or kinesthetic. While visual statements showed significant correlations with visual eye movements, only half of the auditory statements resulted in auditory eye movements, and none of the kinesthetic statements correlated with kinesthetic eye movements. From these results Sharpley concluded that "the usefulness of eye movements to identify the preferred representational system...is seriously in doubt" (Sharpley,

p.242). The authors of "Eye Movements as an Indicator of Sensory Components in Thought" (Journal of Counseling Psychology, July 1987) refute this claim by stating that Bandler (1978) and Dilts (1983) agree that eye movements should not be used to determine an individual's preferred representational system. Their reasoning is slightly different, however. Neuro-linguistics believe that eye movements can indicate the way a person receives and accesses information, so that there may indeed be "mixed signals" that are interpreted. For this reason it would not be adequate to use eye movements as an indicator of preferred representational systems since the observer may be seeing the individual's attempt to translate information that is received to information that is delivered. After reviewing this research, the writer has decided not to include an assessment of eye movements in personal research (Chapter III of this project). The research has been rather convincing that this method is not an accurate measure of preferred representational systems.

Despite criticisms of the theory, researchers agree that Neuro-linguistic programming as a theory is not without merit. In fact, critics each conclude their discussions with a call for more information rather than a declaration to dismiss the notion altogether. In their review of research authors Buckner, Meara, Reese and Reese (1987) state, "Future researchers can best serve the psychological

community by...exploring the Neuro-linguistic approach to counseling..." (p. 287). This writer has attempted to answer that call by exploring the implications of this technique, as well as conducting personal research for the purpose of enabling others to apply this theory.

As stated earlier, there are merits to the theory of predicate matching in Neuro-linguistic programming. Perhaps one of the most important is the awareness that individuals process information in different ways. This diversity of information processing has great implications for the field of education. In his book Master Teaching Techniques, Bernard Cleveland writes:

The connection between teaching and learning is greatly facilitated by our ability to be aware of and to understand what is happening to ourselves and to our students as we interact. (p. 25)

A growing body of research indicates that when teachers recognize the differences in styles of learning, and attempt to adjust teaching strategies to meet those differences, the results are phenomenal. In their study of ten secondary schools in nine different states, Rita Dunn and Shirley Griggs reported increased achievement across-the-board without exception when students' learning preferences were the determinants of teaching styles (1989). In a more informal manner, the same researchers also reported increased enthusiasm among the teaching staffs at each school! Also, in his review of research on learning styles William Stewart quotes a study by Hodges (1983, p. 17) in

which the following is noted: "Learning styles research has revealed that students learn faster and with less effort when they are taught through their individual learning styles..." (p. 371).

There has been countless research, workshops and inservices for teachers to learn how to vary their teaching strategies to accommodate the variety of learning styles in their classrooms. David Jay Helm comments about this subject in his article printed in the Winter 1989 issue of Education. He writes:

It is now time to propel the facilitation of learning into the Twenty-first Century with the most exciting instructional technique to be devised in decades." (p. 254)

The technique he refers to is Neuro-linguistic programming. He states that "NLP is a positive alternative to enhance the total learning experience" (Helm, p.254).

Additional research by Bandler and Grinder has shown that successful learners are those that are able to use all modalities and are able to move from one to another with relative ease. In addition, lack of success has been shown to correlate with the use of one representational system to the exclusion of the others (Dickinson and Stonehouse, 1981). It becomes important, then, for teachers to be able to encourage students to use several learning modalities as opposed to repeating unsuccessful strategies.

While teaching to a student's learning style has been shown to be effective, it is not the only way to achieve

success in learning. Teachers can also help students become better learners by assisting them in crossing modalities. These two ideas of teaching to individual preference while learning to adapt that preference can be meshed with one technique--Neuro-linguistic programming.

Learning is said to occur when there is a change in behavior (Arndt and Underwood, 1990). Behavior can be defined by communication (Helm, 1989). It follows that to change communication would be to cause learning to take place. By enhancing the communication skills of the teacher and student, Neuro-linguistic programming can cause learning to take place in an effective manner. Perhaps David Helm says it best when he writes, "NLP affords all individuals a true equality in the learning environment" (Helm, p. 254).

CHAPTER III

PERSONAL RESEARCH

The researcher has developed an assessment tool for identifying preferred representational systems in students. The assessment tool has involved personal audio-taped interviews, and written self-reports of preferred representational systems. The writer has also discussed the procedure followed, demonstrated how results were tabulated, as well as explained the results and suggested possible uses for the assessment process.

When studying Neuro-linguistic Programming it is tempting to try to discuss all aspects of the theory, as it is an exciting, fascinating topic. For practical reasons, however, it becomes necessary to limit the scope of the discussion. The writer has chosen to focus on word choice as a determinant of the preferred representational system. This means that the research has been centered on obtaining data concerning words (specifically verbs) that are said to be characteristic of one mode or another. (A sample word list is provided). Other researchers have explored the facets of eye and body movements, self-reports, or predicate matching as techniques for determining preferred representational systems. Past research has assumed that once the preferred representational system of an individual is discovered, all that remains is for the counselor to

address that system to experience success. In this writer's personal research there occurs an underlying theme: while it is helpful to know each student's preferred representational system, the emphasis is on the teacher's ability to make use of all three modalities to ensure a successful learning experience. It is the researcher's conclusion that a teacher can access all three systems by utilizing proper word choice techniques. This concept is discussed further in the Practical Applications section (Chapter IV of this project).

The researcher believed the best way to assess word choice would be through personal interview combined with results from written self-reports. The interview questions and questionnaire statements were developed, and the writer composed a letter to parents soliciting permission to interview their child. Parents were also provided copies of the questions, however the specific type of question (auditory, visual, or kinesthetic) was not indicated. (See Exhibit B and Appendix A). The letter was distributed to the parents of 26 fifth-grade students. Twenty-one responses were received. Twenty-one fifth-graders were interviewed and completed the questionnaire. The results reported in this chapter are based on those twenty-one responses.

The writer believed a personal interview would yield the most word choices to assess. Ten questions were

developed that were designed to allow for free response on the part of the student. The questions were carefully worded, and are listed for reference as Exhibit B. Questions 1 and 2 were asked in the kinesthetic mode, using the verbs "feel" and "grasping" in the predicates. Questions 3 and 4 were asked in the visual mode, using "see" and "notice" in the predicates. Questions 5 and 6 were asked in the auditory mode, using "hear" and "tell" as the verbs. Finally, the remaining four questions were designed to be unspecified, using non-specific verbs in their predicates. This was done to enable the student to respond freely in his or her preferred mode. The questions were asked in the same order, and all the interviews conducted were audio-taped (Exhibit A).

Each interview began in the same manner. The students were told they would be identified on tape by their first name and age. The interviewer followed this "script", being careful to use unspecified language:

When I begin the tape recorder I will say this is _____, age _____. I will then ask you ten questions. There are no right or wrong answers. If you have a question you may ask me. I will take notes during the interview because I need to remember certain words you use.

The interviews then proceeded in the exact order the questions are listed on Exhibit B. The researcher listed verbs chosen by the student that indicated a preferred modality. The researcher made notes of pauses as well as responses. According to John Savage, lecturer of Neuro-

linguistic programming, there is something called a "block" that happens when a question is asked in a mode the responder cannot (or will not) access (Savage, 1987). Blocks are considered to be significant in that they may indicate the system that is not preferred. This may help to arrive at the preferred representational system by the process of elimination. For the purposes of these interviews, a 3-5 second pause or an answer of "I don't know" was considered to be a block.

To determine the preferred representational system as indicated by personal interview, the researcher set up a tally sheet (Exhibit D). The left column contains numbers representing the students. There are three columns to the right labeled "Auditory", "Visual", and "Kinesthetic". The researcher then listened to the taped interviews while reviewing notes of each interview. Tally marks were made in the appropriate column when words indicative of a certain modality were used (see word list, Exhibit C, for reference). Blocks were noted with horizontal dashes (-) in the appropriate columns. The column containing the most number of tally marks was considered by the interviewer to indicate the preferred representational system of that student. This is indicated on the sheet by highlighting. If a student contained an equal number of marks in two columns, both modalities were highlighted, and the student was considered to possess a combined preferred

representational system. The preferred representational system of each student as indicated by personal interview was transferred on to the Combined Results Sheet (Exhibit F) in the column labeled "Interview".

In addition to personal interviews, the researcher wished to obtain a written assessment of preferred representational systems. Therefore, immediately following the interview, each student completed a self-report in the form of a written questionnaire. Students were asked to select responses to five open-ended statements. The writer used unspecified language for the statements, but the responses were coded. All responses of "A" were auditory, while "B" responses were visual, leaving "C" responses as those of the kinesthetic mode. As with the interviews, the researcher also followed a "script" of instructions for each child:

Please write your first name and age on this paper. Read the statements carefully, and choose the answer that best describes you. You may choose more than one answer for each, but try to indicate a first choice.

Students completed the questionnaires quickly. Some indicated a desire to circle certain words or parts of answers and were permitted to do so.

To determine the preferred representational system as indicated by the questionnaire, a second tally sheet was set up, similar in format to the interview tally sheet (see Exhibit E). Numbers representing the students were listed on the left, with columns representing the three systems

listed on the right. Tally marks were made in the appropriate columns according to the coded responses. When more than one answer was given, the first choice was counted twice. Again, the column containing the most tallies was considered to indicate the preferred representational system of that student and was therefore highlighted. When an equal number of tally marks existed in two columns, the student was considered to possess a combined preference. The results of the self-report were transferred to the Combined Result Sheet (Exhibit F) listed in the "Questionnaire" section.

The Combined Result Sheet also lists the students' names at the left. To the right are three columns. The first two contain the preferred representational systems as indicated by Interview and Questionnaire. The third column is labeled "Agreement". This column indicates whether or not the two assessments met the same result. A plus sign (+) in this column is indicative of agreement, while a minus sign (-) indicates no agreement. Of the twenty-one student responses, 10 were in agreement and 11 were not. This does not indicate strong agreement between the two forms of assessment.

While the researcher would have hoped for more agreement in the results, it is not a surprising outcome. The writer has several possible reasons for the results obtained, as well as suggestions for increased agreement in

future studies.

First, there were a different number of questions asked. The interview had ten questions, while the questionnaire had five. It was believed by the researcher that more questions would be necessary in the interview to encourage free response. Possibly if the situation were reversed (interview with five questions, self-report with ten) or if there were an equal number of questions the results could be quite different.

In addition to containing different numbers of questions the two types of assessments asked their questions in different ways. The interview asked direct questions with no provided answers, while the questionnaire involved open-ended statements with answers provided. Perhaps if the questioning styles were more closely matched, the results would be as well.

Another reason for the lack of agreement between assessments can be found in previous research. In Chapter II of this project, a study by Birholtz (1981) was reviewed. The procedure followed in Birholtz's study was very similar to the one undertaken by this researcher. In both cases subjects were interviewed and audio-taped, then asked to complete written self-reports. Birholtz's study revealed that the interview portion yielded one preferred modality for all subjects and that was kinesthetic. This finding did not correlate with the results obtained from the self-

reports. Similarly, in this researcher's interview portion, 18 out of 21 students showed a kinesthetic preference. This finding does not agree with the researcher's questionnaire results of 8 out of 21 kinesthetic preferences. Birholtz's study yielded the same results after one week's time, however. This data led the researcher to conclude that the nature of the interview process itself may somehow encourage kinesthetically-worded responses. It would make an interesting topic for further study.

In summary, the researcher joins the ranks of many in being unable to develop the one assessment tool that would enable teachers to determine preferred representational systems. However, from all research, no matter how successful, some knowledge is gained. Throughout the interview and questionnaire process the researcher has analyzed more effective ways to accomplish this goal. The questions raised by the researcher through this process have been presented as reasons for non-agreement between results. Most importantly, however, is the conclusion that the non-agreement or agreement of results is not key to the basic effectiveness of teachers using Neuro-linguistic programming to enhance communication skills. It is the conviction of the writer that a capacity to utilize all three modalities through proper word choice ensures agreement with students' preferred representational systems. When the teacher uses auditory, visual, and kinesthetic language there is greater

probability of matching the preferred or combined preferred representational systems that exist in the classroom. In this way, the need for knowing each child's individual preferred representational system is eliminated. Knowing individual preferences is helpful in one-on-one situations, however, so the idea should not be dismissed entirely. The Practical Applications section of this project (Chapter IV) has taken the conviction of the writer, combined the theory of Neuro-linguistic programming, and has designed a practical method of using this knowledge effectively in a classroom setting.

EXHIBIT A

Audio cassette tape of personal interviews conducted during the weeks of February 4-8 and 11-15, 1991. Interviews were conducted in a school hallway at various times of the school day. For this reason, sound quality may vary.

EXHIBIT B

INTERVIEW QUESTIONS

1. How do you feel about school?
2. How well are you grasping the material?
3. Do you see any problems at school?
4. What kinds of things do you notice about our room?
5. Tell me what you like about school.
6. What kinds of things do you like to hear about school?
7. Is the material clear to you?
8. Are you having any special problems or difficulties in class?
9. If you wanted to change anything here, what might it be?
10. Is there anything special you'd like help with?

QUESTIONNAIRE

1. I make choices based on:
A. what sounds good B. what looks best C. what feels right
2. During arguments, I:
A. yell or cry B. make faces or frown C. feel bad or hit
3. I communicate best by:
A. what I say B. how I look C. feelings I share
4. It's easiest for me to remember:
A. what I heard B. what I saw C. what I touched
5. I concentrate best when:
A. it's quiet B. I'm by a window C. I'm in a comfortable position

EXHIBIT C

Verbs Categorized by Representational System

AUDITORY	VISUAL	KINESTHETIC	UNSPECIFIED
listen	see	feel	seem
hear	view	get	be
sound	look	grasp	think
tell	notice	hold	believe
ask	show	hit	understand
call	find	go	aware
yell	observe	fight	have
cry	spot	make	know
speak	find	do	appreciate
talk	stare	run	sense

EXHIBIT D
INTERVIEW RESULTS

STUDENT	AUDITORY	VISUAL	KINESTHETIC
1	-	- /	///
2	////	//	///
3	/	//	/////
4		//	//
5	//		
6		//	/////
7		//	////
8	////////	/	////////
9	////	- //	////
10	- //	//	//
11	/	/	/
12		/	///
13	-	-	//
14	/	- /	/
15	- -	///	/
16	-	/	///
17		///	///
18			//
19	///	/	/////
20		//	////////
21		///	///

EXHIBIT E
QUESTIONNAIRE RESULTS

STUDENT	AUDITORY	VISUAL	KINESTHETIC
1	//	/	////
2	////////	/	////
3	/	//	///
4	////	/	///
5	/	/	///
6	////	/	/
7	////	/	///
8	/	///	////
9	//	/	//
10	//	/	///
11	////	//	/
12	////////	//	///
13	///	/	/
14	////	/	/
15	////	//	/
16	///	//	
17	//	/	//
18	////		/
19	////	/	//
20	////	////	
21	//	/	//

EXHIBIT F
COMBINED RESULTS SHEET

STUDENT	INTERVIEW	QUESTIONNAIRE	AGREEMENT
1	K	K	+
2	A	A	+
3	K	K	+
4	V/K	A	-
5	A	K	-
6	K	A	-
7	K	A	-
8	A/K	K	+
9	A/K	A/K	+
10	V/K	K	+
11	A/V/K	A	+
12	K	A	-
13	K	A	-
14	A/K	A	+
15	V	A	-
16	K	A	-
17	V/K	A/K	+
18	K	A	-
19	K	A	-
20	K	A	-
21	V/K	A/K	+

CHAPTER IV
PRACTICAL APPLICATIONS

"Kids today just don't listen."

"My class is not very perceptive. They're just not observant."

"My students cannot grasp basic skills."

The above comments lack a specific reference because they cannot be attributed to just one individual. Rather, they are comments universally uttered in teacher's lounges across the nation. The comments represent the three communication tendencies discussed in detail in this project, and are stated in the following order: auditory, visual, and kinesthetic. Each comment assumes fault on the part of the student(s). While blame is not entirely that of the teacher(s), this researcher suggests a different approach. Instead of laying blame, the writer proposes that the above statements represent a communication mismatch that is quite easily alleviated. The steps to alleviate this universal mismatching involve awareness of preferred representational systems, the ways in which these systems are revealed in language, and the adaptation of language to increase success in matching systems. In this section of the project, the writer will implement the above steps by way of practical application. The use of preferred

representational systems will be discussed in reference to whole group settings, activities, and small group or tutoring settings, as well as suggestions for parents.

The comments uttered by teachers reveal an undercurrent of frustration. Since the majority of the teacher's day is engaged in speaking, it is quite possible that oral communication is the source of and solution to that frustration. Knowing that preferred representational systems exist, it is reasonable to assume that a number of each type (auditory, visual, or kinesthetic) would exist in each classroom. Instead of trying to determine each student's dominance and write individualized lesson plans it makes more sense to try to tailor lessons to include all three dominances at once. Ministers familiar with Neuro-linguistic programming have been trying this from the pulpit for years. They have included auditory, visual, and kinesthetic language in their sermons so as not to leave anyone out. Some even choose three differently dominant hymns to ensure maximum audience participation! Teachers can learn from preachers--use language to suit all three preferred representational systems. In other words, learn to say the same thing three different ways. Below is an example of a science lesson about planets being introduced by a teacher who is auditorily dominant. Words that reveal dominance have been underscored for emphasis:

I am going to talk about planets today. You'll hear about their distances from the sun, as well as learn

how to pronounce their names. I'll tell you a sentence that will help you remember the planets in order. We say it like this...

In addition to the teacher's word choices, the method itself is revealing of the preferred representational system. Using a sentence as a mnemonic device rather than a picture is an example of being auditorily dominant. If this particular teacher's classroom is made up of all auditorily dominant children, the lesson will proceed smoothly. However, it is highly unlikely that this is the case. It is unreasonable to assume that any classroom would contain children of all one dominance. The researcher suggests that mastery of the language used by each of the dominances enables the teacher to create more matches with student learning styles, and therefore, more successful learning. The previous auditorily dominant lesson can be modified to include the two other systems in the following manner:

Today's science lesson is about planets. Here is a space map showing you all nine of them. See their different shapes, sizes and colors? That will help you keep them straight. Put your finger on each planet while you hear me say its name. I'll teach you a sentence that may help you remember the planets in order. I'll write it on the board for those who wish to copy it down.

Note that the teacher in the example has not changed his or her own dominance, only the language used to teach. This introduction included visual language (showing, see) and activities (map, board work). There was evidence of kinesthetic language (keep, put) and activities (map, copying from the board). Of significance is the auditory

elements of the lesson. It was stated that the teacher was auditorily dominant. The teacher did not need to switch dominances to teach this lesson to all three. In fact, he or she was able to continue using the "sentence" method for remembering the planets (an auditory method) by simply adding the visual element of writing it on the board, and thereby allowing the kinesthetics to copy it down.

To apply the attributes of Neuro-linguistic programming to a group setting, therefore, requires very little additional time or training, and does not require a change of personality! Awareness of the representational systems and the way in which they are manifested in speech is the key. This allows the teacher to adapt his or her own speech to more closely match the individual representational systems in the classroom. Classroom activities can be organized to include all three systems also. This idea is not new to most teachers who have attended workshops on Learning Styles or Hands-on Activities. However, an "activity" often left out of the discussion is paper-and-pencil tests. Learning Styles workshop leaders are quick to discourage these kinds of tests in favor of more active, exploration-type evaluations. Those tests are wonderful in theory, and are even better if the teacher has unlimited time and resources. Unfortunately, that is not the case. Applying the principles of Neuro-linguistic programming to the classroom setting allows the teacher to work within the

realm of practicality. The teacher may still use paper-and-pencil tests (they are inexpensive and easy to administer) yet must carefully choose the way in which questions are worded. It is also important to vary the types of questions asked on the tests (multiple choice, matching, essay, fill in the blanks, etc.). The most important concept concerning Neuro-linguistic programming in the classroom is to focus on awareness rather than assessment of learning styles. Once the teacher is aware of simple methods of reaching the three modalities, the possibilities are endless. Teachers who genuinely wish to teach effectively will invent several simple ways to do so.

The ability to adapt communication to a learning style is important to classroom teaching, but it is especially helpful to teachers trying to individualize, or tutors working with one student at a time. Since Neuro-linguistic programming has its roots in counseling, it is proven to be effective for one-on-one situations. When helping individual students, it is important for the teacher or tutor to take their cue from the student's language. The following is an example where a student approaches the teacher for help with a math problem:

Student: I don't get this.
Teacher: Did you read the directions?
Student: Yes, and I just don't get how to do it!
Teacher: Watch what I do. It's a subtraction problem, 36-17. Can you see where to begin?
Student: Uh-uh. That's where I'm stuck.
Teacher: You have to change the 6 to 16, the 3 is reduced to 2, and now you can subtract.

The student in this example will probably return to the teacher's desk for help on the next several problems as well. The student was asking for help in the kinesthetic mode, using "get", "do", and "stuck" in his sentence predicates. The teacher was responding in a visual and somewhat unspecified mode. It is important to remember that this is not a poor method of teaching. In fact, if the student had asked, "Can you show me how to work this problem?" the teacher's visual language would have helped to ensure the student's success. Instead of poor teaching, the example illustrates a mismatch in communication. A tutor or teacher who is aware of preferred representational systems would help the same student in the following manner:

Student: I don't get this.
 Teacher: What don't you get about it?
 Student: Do I start with the 6 or the 3?
 Teacher: (putting student's pencil on paper) You start with the 6. Where do you go next?
 Student: Well, I have to borrow. (solves problem as they speak)
 Teacher: Right! Do you feel like you've got it now?
 Student: Yeah. In math you go right to left. It's backwards from reading.

In the example above, the teacher stayed in the same representational system as the student, even to the point of using the same verbs. This allowed the student to concentrate on solving the problem, rather than the feeling of frustration that occurs with a communication mismatch. This student will probably not return to the desk for help, at least not for help with subtraction!

As the classroom and individual examples illustrate,

applying the principles of Neuro-linguistic programming is a matter of being aware, observant and responsive. Initially, the process of adapting one's language will take concentration. After some time, however, using this theory will become quite natural. The following steps sum up the application of these principles in the classroom setting:

1. Study the three preferred representational systems and their characteristics.
2. Know the common predicates (verbs) used by each.
3. Use verbs from each system in personal language.
4. When working with individual students, respond in the same representational system.

The one-on-one relationship described in the math example yields many other applications of this theory. Lewis and Pucelik realized this impact when they made the following statement which was quoted in Chapter II of this project:

...This is true in any situation where a close relationship is being fostered...The ability to adapt your own language to the predicates of others is as important in a close intimate relationship like a family as it is in situations where people must work together. (1982, p. 46)

In addition to being a useful tool in teaching, Neuro-linguistic programming has far-reaching implications for all situations involving effective communication. Being aware of the three representational systems and their characteristic predicates is the initial step to modifying one's own language to include others. The adaptation of language can be helpful to a teacher with a class full of students, a speaker to a large audience, or a preacher to a

congregation. It is also useful for a tutor with one student, a counselor with a client, or a parent with a child. It has been said that communication is the key to any successful relationship. With the application of the theories of Neuro-linguistic programming, teachers, speakers, preachers, tutors, counselors, and parents can consider themselves well-equipped to begin unlocking several doors.

CHAPTER V

CONCLUSION

In the early 1970s two therapists developed a theory that evolved into a counseling technique. The theory was called Neuro-linguistic programming which literally means "the language of the nervous system" (Savage, 1987). The therapists explained that individuals reveal a communication tendency through word choice. The verbs a person uses can determine whether he or she communicates most effectively by auditory, visual, or kinesthetic means. Counselors would become trained in this theory, and use it to establish rapport in a one-on-one relationship.

In early 1991 the writer studied this theory. While impressed with its benefits for the counseling field, the writer wondered whether the theory could be applied to a group setting, such as a classroom. Thus began the research, both documented and personal, to see if this was possible. Documented research revealed much about assessment and applications of NLP for counseling. Also, as with all theories, Neuro-linguistic programming has its share of critics, and those discussions were carefully studied as well. By way of personal research, the writer conducted two forms of assessment in her classroom. The procedure followed and its results are listed in Chapter III of this project. This personal research was perhaps the

most illuminating for the writer, as it answered some questions and raised others. The most important conclusion is that it is not necessary to have knowledge of the specific learning styles of each student in order to teach using the theory. Chapter IV of this project lists practical ways of using the theory to teach to all three communication tendencies.

In addition, the research raised questions about the assessment process. As stated in Chapter III, the interview procedure should be examined further as a method of assessment, due to its inherent kinesthetic nature. Also, the writer has focused much of this discussion on oral communication. The subject of written communication was touched upon with a discussion of test questions in Chapter IV. What are the implications of using Neuro-linguistic programming in written communication?

The answer to the above question may begin here, at the end of this project. The reader is encouraged to flip back through the pages, noting that the writer has taken care to unobtrusively incorporate auditory, visual, and kinesthetic language. This was done to speak to, enlighten, or connect with any type of reader.

APPENDIX A

Letter to Parents

January 29, 1991

Dear Parent(s),

As part of my research for my Master's Project, I would like to conduct audio taped interviews with each of my students. The interviews will consist of ten questions and a written multiple-choice questionnaire. All questions are listed on the next page. I am not testing intelligence or achievement levels. By analyzing word choices, I hope to determine each student's learning style; that is, the way in which they learn best. I would be happy to share my results with you in chart form. While I am hoping to have the opportunity to interview each of my students, your consent is desirable. Please check the appropriate boxes on the form at the bottom of this letter. Once it is signed, you may return it to school with your child. If you have any questions, please contact me through the junior high office at 756-9231. I am excited about this research, and I thank you in advance for your cooperation.

Sincerely,

_____ I do not wish for my child, _____, to be interviewed.

_____ My child, _____, is welcome to participate in the study.

_____ I am interested in the results of this study.

Signed _____

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