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A Study on the Learning Styles of Limited English Proficiency Students

Linda J. Clay

Grand Valley State University

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A STUDY ON THE LEARNING STYLES
OF LIMITED ENGLISH PROFICIENCY
STUDENTS

By Linda J. Clay

Summer 2001

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Linda J. Clay
TABLE OF CONTENTS

CHAPTER ONE: THESIS PROPOSAL

Problem Statement ........................................................................................................ 1
Importance and Rationale of Study ............................................................................... 2
Background of the Study ............................................................................................... 4
Statement of Purpose ................................................................................................... 7
Limitations of the Thesis .............................................................................................. 8
Summary ....................................................................................................................... 9

CHAPTER TWO: LITERATURE REVIEW

Introduction ................................................................................................................... 11
Understanding the Diverse Features of Learning Styles ............................................. 11
Influence of Cultural Considerations on Learning Styles ............................................. 18
Accommodations for Learning Styles ........................................................................ 26
Summary ....................................................................................................................... 39

CHAPTER THREE: THESIS DESCRIPTION

Introduction ................................................................................................................... 40
Subjects ......................................................................................................................... 41
Design of Study ............................................................................................................. 41
Procedure ....................................................................................................................... 41
Instrumentation ............................................................................................................ 42
Data Collection ............................................................................................................. 42
Data Analysis ................................................................................................................. 43
Results .......................................................................................................................... 43
Discussion ...................................................................................................................... 46
Verbal/Linguistic Learning Style ................................................................................ 46
Auditory Learning Style ............................................................................................. 49
Bodily/Kinesthetic Learning Styles ............................................................................ 49
Spatial/Logical/Mathematical Learning Styles ........................................................... 50
Cognitive and Affective Learning Styles ................................................................... 51
Interpersonal and Intrapersonal Learning Styles ......................................................... 52
Field Independence versus Field Dependence Learning Styles ............................... 53
Musical Learning Style ............................................................................................... 56
Implications .................................................................................................................. 57
Teacher Learning Style Surveys ................................................................................ 58
Instruction and Assessment ......................................................................................... 61
ABSTRACT

Limited English Proficiency (LEP) students are not attaining academic success in public schools. Enrollment of Hispanic students is increasing, but at the same time assessment of their work shows little achievement. A crucial issue in the education of language minority students is how they learn. This thesis examines their learning style preferences through data gathered from student and teacher surveys and then correlates it to existing research. The conclusion drawn is that Hispanic LEP students are not being taught in their preferred learning styles and that the primary manner of verbal/linguistic instruction used in schools is a deterrent to successful learning. Recommendations for instruction and assessment are given.
CHAPTER ONE: THESIS PROPOSAL

PROBLEM STATEMENT

Every student uses his or her own unique learning style. Often students use a combination of them. However, quite often the student is not aware of specific styles of learning. In addition, teachers will many times teach to a specific style that may not be most suitable for students. During my tenure of teaching English as a Second Language in Michigan and Minnesota I observed many instances where Limited English Proficiency (LEP) students struggled in a classroom because the teacher did not accommodate them. In the worst cases they were assigned a seat at the back of the classroom and simply given a dictionary to help them. All too often the minority student is ignored, and as long as there are no discipline problems, will occupy their desk for the entire school year while learning very little. All teachers, whether they are ESL, bilingual, or mainstream, need to be aware of the learning styles of all their students. According to Ely and Pease-Alvarez (1996), “it is...the teacher who is perhaps the most important catalyst in bringing about the learners’ self-awareness, and it is the teacher who may be in the best position to empower students by showing them how to empower themselves.”

However, some teachers are ignoring the fact that language learners use different learning styles and strategies and apply specific actions and behaviors that help them learn. Teachers do not always consider these styles in writing daily lesson plans. Textbooks engage the visual learner, but fall short in accommodating other
styles. In my school, a Language Arts program was adapted that supposedly offered accommodations for ESL students. One of the biggest suggestions was to offer these students easier-reading trade books suitable for two grades below the class level. For some of my monolingual Spanish students, these were of little help because they could not read any English, yet alone an “easier” one. Because the mainstream classroom teacher uses materials with a more linguistic and analytic approach, there is less opportunity for LEP students to succeed.

IMPORTANCE AND RATIONALE OF STUDY

Many teachers believe that all children learn a language in the same way. Textbooks and curriculum materials are written with a similar structure; that is, reading, answering questions and completing comprehension exercises. This method may work for some students, but not for others. I believe that students both learn and acquire language. The analytic student, who takes a part-to-whole approach in learning, will respond well to the approach of most textbooks. However, the global student, who sees language learning as moving from whole-to-part, acquires language through many alternative ways. It is necessary to consider both methods because students will vary in their approach. Teachers need to realize that their LEP students do not learn and acquire language in the same way. It is important for me to research these areas of learning styles and to share this information with my fellow educators.

In conversations with mainstream, and even some ESL and bilingual teachers, I sometimes hear that a particular student is not learning English fast enough. The
fact that the primary emphasis on an LEP student's education is to learn English first does not change the fact that different students will learn in different ways. If all educators would be cognizant of different learning styles and incorporate them into their daily lesson plans, the issue of how fast a student learns would not be important. The realization that all students learn differently would negate the emphasis on a strict timeframe for learning. This thesis will discuss the various methods and influence of time in learning.

In our own Grand Rapids Public School district and throughout the U.S. there exists a wide gap both in educational attainment and earnings between Hispanic and non-Hispanic students. Demographics tell us that Hispanics are the fastest growing minority group, and in fact, will become the nation's largest minority group by the year 2020 (Wells, 1989). However, we also know that this ethnic group has the lowest graduation rate. According to the U.S. Census Bureau (2000), for Hispanics 25 years old and over, 43.9% did not graduate from high school. This compares to 15.7% for whites and 23% for blacks. In addition, those who did not complete high school earned an annual average of $15,832.

Many mainstream teachers have not had any courses in language acquisition or ESL methods. Often teachers are not comfortable with LEP students in their classes and do not know what to do with them. Some schools merely add the child to their count and then wait until he or she transfers out to a different school, often when the caregiver gets a new job or the family must move to different housing. The child is not given the opportunity to explore his or her own learning style. When our
students experiences several moves in school, and are never taught to their particular learning style, they will always struggle to learn.

The goal of an ESL teacher is language acquisition for all students. It is imperative that learning styles be considered as a valuable construct of this process. Reid (1998) writes that “in an effective classroom, everyone – teacher and students – learns, and that learning about learning styles is essential in order that all students have equal opportunities to use their strengths to learn.” In my teaching experience I encountered students who have several different learning styles, or who can adapt to another style with a little bit of coaching. It is up to the teacher to recognize students’ learning styles and guide students to use them. In doing so, students will be more prepared for learning. This thesis will be a valuable tool for mainstream and ESL/bilingual teachers to help them realize the impact of knowing and teaching to different learning styles to all students.

BACKGROUND OF THE STUDY

I taught English as a Second Language for five years and am pleased with the successes of my LEP students in acquiring English but concerned about their failures. I do a basic ESL pull-out program and because of this have a great deal of interaction with my students’ mainstream classroom teachers. Quite often our conversation centers on why some of our LEP students have a difficult time in comprehending a lesson. The reason is not totally their lack of English language skills. They have not fully developed their cognitive skills, even though they have made great strides in
attaining proficiency in English. I believe that successful students bring to the classroom, or are able to develop, effective methods for learning the language.

LEP students are bilingual students. In my school, the second languages of my students are predominantly Spanish and also Albanian. Within the Grand Rapids Public School system, the principal languages of LEP students are Spanish, Vietnamese, Bosnian, Albanian/Yugoslav, French Creole and Oromo/Somalian.

Historically, there were many bilingual schools in the United States in the mid-1800's including German/English, French/English and Spanish/English schools (Freeman and Freeman, 1992.) In 1968 Congress passed Title VII of the Bilingual Education Act as an amendment to the Elementary and Secondary Education Act of 1965. In the court decision of *Lau v. Nichols* in 1974 a ruling was given that all students not proficient in English be given equal opportunities to learn.

According to the most recent “School Information Profile” from Grand Rapids Public Schools (GRPS), there is a significant high school drop-out rate of Hispanic students. The report lists the following percentages of drop-out rates for Hispanic students: ninth grade, 36%, tenth grade, 17%, eleventh grade, 14%, and twelfth grade, 18%. Using these percentages for a hypothetical freshman enrollment of 100, only 41 students would graduate.

The GRPS “Bilingual Education Program Evaluation Report” for the 1999-2000 school year cites, “Bilingual students at several language centers have over the past several years consistently demonstrated achievement losses, based on annual pre/post MAT Reading Test results.” The report states further that the proportion of
graduating students who received bilingual services and who qualified for a state-endorsed diploma in reading, math, writing, and science were "considerably lower than that of other district students." Clearly, there is a need to consider ways to better instruct LEP students and develop an awareness of their learning styles.

*Lau v. Nichols* was important because of the issues of equality versus equity. The suit was brought by on behalf of 1800 non-English speaking Chinese students against the San Francisco Unified School District. At issue was the importance of equity and equality. The Supreme Court ruled that by merely providing students with the same facilities, textbooks, teachers, and curriculum did not comply with federal law. Justice Douglas, in delivering the opinion of the Court, stated,

"Basic English skills are at the very core of what these public schools teach. Imposition of a requirement that, before a child can effectively participate in the educational program, he must already have acquired those basic skills is to make a mockery of public education. We know that those who do not understand English are certain to find their classroom experiences wholly incomprehensible and in no way meaningful." (U.S. Supreme Court, *Lau v. Nichols*.)

This decision resulted in the development of a testing program for students to determine their English proficiency and to place them in appropriate bilingual or ESL classrooms.

I teach at Stocking Elementary School. The Hispanic population numbers over 50%, compared to almost 25% four years ago. If classroom teachers better knew the learning styles of their Hispanic students, they would be more successful in presenting lessons that would be learned and understood by these children. I observed situations where a teacher has lower expectations of LEP students and will
sometimes excuse them from an assignment, thinking they are incapable of completing it.

According to Lewelling (1991), "LEP students have been identified as a group at risk of academic failure." Many stereotypes exist in the school community.. Among these stereotypes are judgments such as, "Don’t push them." or "They can’t do it.” In my school this year the teachers of the sixth grade LEP students wanted to excuse them from doing required projects. Often LEP students are considered to be illiterate, when in reality many are quite proficient in their native language while working hard to learn a second language. We have in place a system to educate our LEP students but are not succeeding with many of them in their education. Lewelling (1991) concludes, “For these students to achieve their full potential, a strong commitment must be made to their educational needs and futures.”

STATEMENT OF PURPOSE

This thesis will examine the impact of learning styles and their use by LEP school-aged children to determine their impact to proficiency in learning English as a second language. It will focus on three areas. First, it will present an overview of the various theories and studies of learning styles and multiple intelligences. Second, it will review the culture and preferred learning style of Hispanic students. Third, it will research the implications of these styles for both the student and the teacher, and give suggestions to teachers for accommodating different learning styles in the classroom.
Therefore, in an effort to better understand how LEP students best learn, and a desire to share this information with my fellow professionals, I researched on the learning styles of LEP students. In addition, this thesis will suggest several activities that could be used by teachers with LEP students in their classrooms.

LIMITATIONS

This thesis will be limited to learning styles as they impact the learning of LEP students at the elementary level, grades kindergarten through six. Surveys were given to students in these grades because that is the population I service at my school. Students’ ages range from eight to thirteen years old. Both boys and girls participated.

Responses from teachers on questionnaires came from males and females teaching ESL and bilingual education. Neither the secondary nor the adult student will be included in this discussion, although its relevance may apply also to these levels.

Research and surveys was limited to the Hispanic student. Countries of origin include Mexico, Honduras, Guatemala, Puerto Rico, Cuba, the Dominican Republic and Argentina and the United States. The first language for all of these students is Spanish.

The students’ proficiency in Spanish (L1) differs significantly. Some only speak Spanish, while others read and write the language with high proficiency. All the students have been in either a bilingual education or English as a Second
Language program since enrolling at Stocking School. The length of time in school in the United States ranges from two months to five years.

Generally, the students have not been exposed to technology before enrolling in a US school and are illiterate in computer use. Many have learned a great deal since their arrival. There are computer literacy programs for kindergarten and first grade students, but none for second through sixth grade.

Most of the students are from a low socioeconomic class. Many live in apartments with two or three other families. Usually one or both parents work in factory, restaurant or landscaping jobs. There are no LEP students with disabilities at my school.

There are limitations on the length of time of this research. Student and teacher responses were gathered over a four-week time period. Analysis and additional research occurred during a second four-week time period, and construction and writing of this thesis transpired during the final four weeks.

SUMMARY

As described in this chapter, LEP students do not learn in only one style. This thesis will research the impact of learning styles on student performance. Quite often teachers are not aware of these differences and it is the intent of my research to explore these varied areas. This research is important because many Hispanic students in the Grand Rapids Public School system and throughout the US are showing poor results in proficiency testing, and have not achieved adequate progress.
The Bilingual Education Act of 1968 mandated equal educational opportunities for LEP students and the *Lau v. Nichols* decision in 1974 affirmed this. There still remains question of equity versus equality in ESL education. Research suggests that being aware of, and teaching to, the learning styles of LEP students will produce positive results.

As you have seen in this chapter, the sources will define and analyze learning styles and relate their importance to the second language learner. A literature review of significant sources will be presented in the following chapter.
CHAPTER TWO: LITERATURE REVIEW

INTRODUCTION

This chapter provides a literature review of sources pertaining to learning styles and their impact on the Limited English Proficiency (LEP) student. The following are the three topics of organization: Understanding the Diverse Features of Learning Styles defines and analyzes the various aspect of the topic, Influence of Cultural Considerations on Learning Styles discusses minority cultures, focusing on the Hispanic ethnicity, and Accommodations for Learning Styles in the Second Language Classroom offers suggestions and ideas for curriculum development, assessment, and environmental adjustments.

UNDERSTANDING THE DIVERSE FEATURES OF LEARNING STYLES

Writing in A Critical Dictionary of Educational Concepts, (1990), Barrow and Milburn offer several definitions of learning, and discuss what is involved in the total process. The authors state, “To learn is to acquire understanding of something that one did not have before (p. 178).” They fuse together the terms learning and acquisition as being independent of each other. As this thesis will report, there is not just one process of learning. According to the authors,

All acts of learning must involve the acquisition of some new ability or understanding because that is part of the meaning of learning – but what is involved in learning must be partly dependent on what is being learned (p. 179).
They discuss the importance of using both the cognitive and the affective domain in learning. Equally important is the teacher's role to establish the best environment to learn.

Having a firm understanding of the process of learning will be very beneficial to this research. As we explore the various styles of learning and intelligences, we must keep in mind the basic process of learning and the skills needed to successfully engage the learner both cognitively and affectively.

Dunn and Dunn expand this definition of learning. Over 25 years ago, they published their first research on learning styles. They have continued their research and have published several books, articles, and journals. In Educator's Self-Teaching Guide to Individualizing Instructional Programs (1975), they define learning style as

The manner in which at least 18 different elements of four basic stimuli affect a person's ability to absorb and to retain information, values, facts or concepts. The combinations and variances in these elements suggest, perhaps, that no two people in the entire world learn in exactly the same way, just as no two people think exactly alike (p. 75).

The Dunns' research will be a key construct of this thesis. Not only have they established various stimulants and corresponding elements, they have also used them in numerous studies with a diversity of students. They have published a Learning Style Survey for students in grades three through twelve which would be a valuable instrument for many ESL and bilingual teachers to use with their students.

One of the most widely-read authors on learning styles is Gardner, the developer of the theory of Multiple Intelligences (MI). These intelligences are
similar to talents used in learning. They are important in discovering and understanding how our students learn. Gardner, writing in *The Unschooled Mind*—How children think and how schools should teach (1991) defines the components of his Multiple Intelligences:

1. Language/linguistic
2. Logical/mathematical analysis
3. Spatial representation
4. Musical thinking
5. Bodily/kinesthetic
6. Interpersonal
7. Intrapersonal

He advocates that his MI theory should be the basis of learning in all schools and all curricula.

Various constructs and interpretations of Gardner’s MI theory will be analyzed throughout this thesis. Educators have adapted his methods of analyzing students’ learning styles. More specifically, ESL researchers devised several learning style surveys based on MI to be given to second language students. There have been numerous books and teacher guides to incorporate his ideas. We will see how this movement in second language learning from a principally verbal style to a much more diverse approach has been recommended with success by many researchers.

When we think of learning styles we recognize that the process of learning is a very complex. In *Principles of Language Learning and Teaching* (1994), Brown suggests that when someone becomes bilingual his total life is impacted. He writes that

Becoming bilingual is a way of life. Your whole person is affected as you struggle to read beyond the confines of your first language
and into a new language, a new culture, a new way of thinking, feeling and acting. Total commitment, total involvement, a total physical, intellectual, and emotional response is necessary to successfully send and receive messages in a second language (p. 1).

Knowing this, it is imperative that the second language teacher ask questions about language learning. Brown suggests we should examine how learning takes place, how we can ensure success in language learning, and what the optimal interrelationship is of cognitive, affective, and physical domains for successful language learning.

Brown raises several important issues for the second language teacher. Our students come to us as a total assembly of many assorted parts. We need to look at the whole entity and also the various sections that together mold them into a language student. This research will investigate issues of various learning styles that will help to answer the questions posed by the author. We will see that as Brown asserts, there is more than one style used in learning.

Language learning is discussed by Lightbown and Spada (1998). They suggest in their book How Languages Are Learned that the process of second language learning is progressive and that learners pass through sequences of development. In addition, they dispel some myths of language learning: first, that language is learned mainly through imitation, when in fact, learners create their own styles of learning; second, that people with high IQs are good language learners, but in truth, learners have a wide variety of intellectual abilities; and third, motivation is
the most important factor in learning a language, however, there are differences in aptitude and style of language learning.

In dispelling these myths and suggesting that language learning is progressive, Lightbown and Spada clearly give relevance to the importance of learning styles. Later in this thesis the importance they give to students using a variety of styles will be highlighted. Equally important to remember is that the learner's particular characteristics weigh more heavily than other factors. It will be essential to dispel the myths they discussed about language learning with current research from the field.

Another aspect of learning styles focuses on field independence versus field dependence. Ehrman (1998) discusses in Chapter 7, "Field Independence, Field Dependence and Field Sensitivity in Another Light" of Reid's Understanding Learning Styles in the Second Language Classroom the differences between these factors. Ehrman believes that the "field independence - field dependence construct is a work in progress" (p. 62). Often these aspects will change depending on the context of the particular task of a lesson. Ehrman questions the constructs of these processes.

There is confusion about whether field independence - field dependence is a style or an ability, whether it should include personality factors or refer strictly to cognitive functioning alone, whether field dependence is the absence of field independence or a processing style in its own right. (p. 62)

When educators try to assess a student as being field independent or field dependent it can be a difficult, although very valuable, task. In doing my research for my thesis I surveyed students on this point, and asked ESL and bilingual teachers to rate their students as well. Ehrman's article will be very helpful to keep in mind as
the results of these surveys are discussed later in this thesis. It is a valuable consideration to second language teachers in writing lesson plans and developing curriculum.

Field independence and field dependence are important aspects of learning style, however, Oxford believes that cooperation versus competition are also essential. In an ERIC Digest article, “The Role of Styles and Strategies in Second Language Learning,” (1989) the author asserts that these have been only lightly studied as a dimension of style in the language learning field. Quite often a teacher will frequently use competitive activities as a methodology in second language instruction, but rarely use cooperative learning. Oxford believes that cooperative learning is essential, stating

In studies where students were taught specifically to be cooperative, results revealed vast improvement in language skills as well as increased self-esteem, motivation, altruism, and positive attitudes toward others.

Oxford thinks that in learning styles there is a tendency to seek situations compatible with your own pattern and to use certain styles while avoiding others. This becomes very important when choosing cooperative learning as a methodology.

Oxford deems learning styles to be very important in language learning. Many researchers agree with the importance of cooperative learning and this issue will be discussed further in the third part of this section on Accommodations for Learning Styles in the Second Language Classroom. We will also see further evidence that teachers tend to use those styles with which they are most comfortable
and avoid those that do not suit them. The risk in doing this is that the learner’s particular style becomes secondary to that of the teacher.

The second language teacher has an extremely important role in learning. Reid is the editor of *Understanding Learning Styles in the Second Language Classroom* (1998). This author believes that teachers are “perceptual learning styles researchers” and discusses the fact that in the last 10 years many teachers have become learning style researchers in their classrooms (p. 18). Reid states,

Gathering background knowledge, administering various learning style surveys, and using those survey results, teacher-researchers raise student awareness about the existence of learning styles, refocus and expand their teaching styles, help students experiment with extending their learning styles and improve the English classroom learning environment. (p. 15)

Reid’s research will be helpful to encourage teachers to do research in their second language classes. It is vital to not only understand the learning styles of students, but also ensure that they (1) be aware of how they learn, and (2) know that they can expand their learning styles to include others. This thesis will discuss the ideas that students differ in their styles of learning and will use various methods depending on the task. Reid’s research will emphasize the ways teachers become more aware of how to help students expand on this knowledge.

Reid has made us aware of the importance of recognizing learning style differences and encouraging our students to stretch their limitations. Tyacke (1998), writing in Chapter 4, “Learning Style Diversity and The Reading Class: Curriculum Design and Assessment” of Reid’s *Understanding Learning Styles in the Second Language Classroom* agrees that learning styles are complex and may change
according to the educational goal. Tyacke also agrees with Reid that educators are also classroom researchers. In order to further identify how students learned, the author developed the "Tyacke Profile Styles" based on a study conducted of with LEP students. Based on this research, the author classified these students into four categories: (1) the studier, (2) the diverger, (3), the explorer, and (4) the absorber (p. 38).

Tyacke's research is important to this paper for several reasons. First, we have a clear example of what can be done by a teacher to better know the students in class. Second, it gives us a better dimension of the variety of styles that exist among our second language students. Third, we can see that learning styles are complex, and that the overall learning profile of a student may be difficult to analyze. With the survey results I will use in my research, we will see some of the same conclusions.

INFLUENCE OF CULTURAL CONSIDERATIONS ON LEARNING STYLES

Almost 30 years ago Saville-Troike (1972) authored several articles and books on bilingual education. In Classroom Practices in ESL and Bilingual Education, Saville-Troike raised numerous issues concerning minority students including the stereotyping that we still hear about today. The author discusses the popular belief that "to be different is to be deprived" (p. 8). This concept stems from the opinions of some who do not recognize the culture of a minority group child, and because he is lacking in standards of middle-class behaviors and speech forms he is labeled as "non-verbal." The discussion continues with this analysis.
The low expectations generated by this deficit theory contribute to children’s failure, which may in turn be interpreted as evidence for their deficiency rather than evidence for weakness in the theory. This is a vicious circle in education which can do irreparable damage to children. The deficiency model in education can best be understood as a form of stereotyping, defining a group in terms of what it does not do, prejudging as well as describing (p. 8).

Such stereotyping of minority students has repercussions in the classroom. Barriers are built which inhibits communication, and more importantly, the student’s self-image is affected negatively.

It is precisely these judgments that become a deterrent to second language learning. If a classroom teacher insists on using only linguistically-based materials, worksheets, and drills, many students will be doomed to failure. It is only when we move away from stereotyping and move toward teaching to the diverse learning styles of our minority students that we will experience success in our teaching and success in our students’ learning. This thesis will offer several suggestions for classroom accommodations.

Leung (1994), wrote on this topic in “Culture as a Contextual Variable in the Study of Differential Minority Student Achievement” published in The Journal of Educational Issues of Language Minority Students. The author states that an explanation of the role of culture on achievement has consumed a great deal of time in the last decade, but there still exists fragmentation with the research. Leung suggests that culture needs to be considered at two levels: one, psychocultural incompatibility and two, sociocultural effect. LEP students are accused of being genetically and intellectually inferior to whites. The author proposes that the
measurements used for testing were not standardized using Hispanic participants. Also, the bases of these judgments were related to the "nonstandard" (to the white culture) ways displayed by the students. In US culture the belief exists that the real members of the American society are the ones who speak English and demonstrate characteristics of Western Europeans. If these influences are allowed to continue to exist they will, according to Leung, "serve to systematically alienate different minority groups' participation in the mainstream, including the school experience" (1994).

Leung's analysis fits well into the focus of this thesis. We must recognize and accept the diverse cultures of our LEP students. We must also realize that their learning style might not emulate the analytic, verbal, linguistic-based programs offered by our schools in both instruction and assessment. If we fail to do this language-minority students will continue to fail.

Once we recognize the cultural differences of our LEP students and their impact on language learning we must then take steps to ensure that we respect and acknowledge their home languages and cultures in the classroom. A discussion on learning styles must also include home culture. Sota, Smrekar and Nekcovei address this issue in their article "Preserving Home Languages and Cultures in the Classroom: Challenges and Opportunities" published by the National Clearinghouse for Bilingual Education (1999). The authors believe that

...the fact that so many children in our classrooms represent multiple languages and multiple cultures is not a grim reality offering only challenges, but rather a unique opportunity to exchange valuable wisdom among learner, families, educators, and
communities. Nor does such diversity threaten the cohesiveness of our nation and its democratic ideals; the diverse intergenerational wisdom shared by culturally and linguistically diverse families can support and strengthen America's goals.

The article continues by suggesting several measures that second language teachers could incorporate into their classrooms to enhance cultural diversity. They include providing many opportunities for children to communicate, planning authentic activities, organizing the physical environment to reflect cultural diversity, building lines of communication between school and community, and becoming an advocate for supporting cultural issues in schools.

The authors suggest incorporating several changes that not only support cultural diversity, but also recognize the differences in learning styles in second language learners. Their proposals are very important to this thesis because in recognizing our students' cultures, we are also providing adaptations for them to learn in several different ways in our classrooms. Children will be able to value and appreciate their own and their classmates’ family identity and respect the diversity of others.

In “Myths and Misconceptions About Second Language Learning” published in the ERIC Digest (1992), McLaughlin dispels several myths about the second language learner. These myths are:

1. Children learn second languages quickly and easily.
2. The younger the child, the more skilled in acquiring L2.
3. The more time students spend in a second language context, the quicker they learn the language.
4. Children have acquired an L2 once they can speak it.
5. All children learn an L2 in the same way.
McLaughlin suggests that teachers should not expect miraculous results from second language learners and, even though they are expected to learn English quickly, the home language is very important in content areas. The author discusses a cultural difference between mainstream children who are accustomed to an analytical approach to instruction where language functions are used to convey information and control social behavior, and LEP students who are more accustomed to non-verbal communication, observation, and supervised participation. In addition, many language minority students are used to learning more from their peers than adults.

We need to be aware of these differences as we develop curriculum and organize lesson plans. If we as teachers are not cognizant of such cultural differences, our expectations of our students will be negatively influenced. As we look at differences in learning styles in this thesis, we will consider those diverse cultural disparities.

In “Academic Achievement in a Second Language” published in the ERIC Digest (1991), Lewelling discusses a situation that often occurs when LEP students demonstrate competence in oral communication. They are quickly mainstreamed into the regular classroom, but do not have the cognitive ability to overcome difficulties in understanding and completing regular academic schoolwork. It is essential to monitor the progress of a LEP student, and understand that it may take four to seven years for complete mastery of English. Equally important are successful program models that enable students to use their own styles in learning a second language.
Lewelling puts forth an argument against hastily dismissing our LEP students out of our ESL/bilingual classrooms. As will be reported in this thesis, the teacher must not only encourage students to use their individual styles, but also stretch their skills to develop more cognitive-based competencies also. This is vital if we are to measure our students' success in several content areas that require different learning styles.

Wells, in "Hispanic Education in America: Separate and Unequal" published in the ERIC Digest (1988), believes that although the United States government supports desegregation and equality education for all minorities, the Hispanic student continues to attend segregated schools that do not prepare them to succeed in today's predominantly non-Hispanic society. Most of them go to schools in urban areas where, according to Wells, their curriculum, and teacher expectations for them, are often of a considerably lower level. Wells asserts that even the system of bilingual education segregates Hispanic students from the others. In Grand Rapids Public Schools we have several schools designated as "language centers" where bilingual/ESL classes are offered to students who are bused from their neighborhoods to another school. Once they arrive at the language center they are segregated into a classroom with other second language students. The school system wants to promote its bilingual program, but takes away the students' opportunity to be integrated into their own neighborhood schools.

Wells' article is very valuable in providing a picture of how many school systems treat their second language learners and the stereotypes that exist. Their only
accommodation is being put into a segregated class. This thesis will discuss that knowledge of our students and their learning styles will help to dispel the current stereotypes and inefficient manner of educating them. The most important issue is how best to teach to every one of our students.

Dunn has collaborated with Griggs (1996) in a study of Hispanic students. Results were a compilation of results from Dunn’s Learning Style Inventory (LSI). Reporting their findings in an article in ERIC Digest, “Hispanic-American Students and Learning Style,” the authors suggest that Hispanics are united by customs, language, religion and values, and that one of the strongest traits is family commitment that involves loyalty and a belief that a child’s behavior reflects on the honor of the family. This attitude of cooperation and concern for others contrasts with the United States emphasis on individualism and competition.

We can take this information and use it to formulate suggestions for activities for Hispanic learners. It will definitely help us know our students better. It will become a general frame of reference for classroom activities and environment. Knowing the elements of Hispanic learners will help to dispel the stereotypical myths about their inability to learn.

In Con respeto: Bridging the distances between culturally diverse families and schools (1996), Valdés looks at how Hispanic children develop literacy skills outside the school setting and how family environment prepares children to survive and succeed both within the family structures and in the community. Valdés believes that educators do not have an understanding of the issues and complexities of their
lives and efforts to increase parental involvement in schools are not based on sound
knowledge about the characteristics of the families” (p. 31). Hispanic parents believe
that their part in educating their children should be focused on teaching respect for
others, good manners, and a strong work ethic. Taking time to listen to their children
read or to help them with their homework would take time away from all the work
that needs to be done to maintain the household such as cooking, housework, errands
and other chores.

Valdés described a situation that I experienced in my teaching in Grand
Rapids. At conferences with parents the first question everyone asks is always about
the behavior of their children in my class. They are pleased to hear that their child
listens politely and shows respect to everyone, and will offer to do whatever they can
if they learn their child does not demonstrate good citizenship. It is important for
educators to keep our students’ culture in proper perspective to the curriculum. We
must first know our students before we teach them. It is essential to maintain cultural
awareness in establishing our learning goals for our students.

We saw from Saville-Troike, Dunn, Griggs and Valdés that the culture of our
students is a very important consideration when evaluating learning style. Zentella
(1998) is a bilingual educator who also supports this idea. In Growing Up Bilingual
the author encourages educators to “incorporate the students’ linguistic, cultural, and
essential cultural practices and bodies of knowledge and information that households
use to survive, to get ahead, or to thrive” (p. 279). Zentella urges teachers to teach
from strengths by building upon what students know to say and do, and encourage
them to use their own learning styles to attain proficiency. However, the author admonishes us for becoming too mainstream and teaching all students the same way in stating, “The narrow norms of one cultural group and class cannot be the yardstick against which others are measured. A collection of standard features must not be equated with intelligence, commitment to education, or morality” (p. 279).

Zentella’s warning serves as a caution to all second language teachers who may think they are teaching with a multicultural, diverse, approach, when in reality they harbor negative feelings toward their students. This thesis will continually underscore that it is the teacher’s responsibility to recognize and teach to students’ various learning styles. In Zentella’s words, “Blaming linguistic and cultural diversity (for our students’ failures) is a smokescreen for the fact that the U.S. has not resolved fundamental inequalities. The root of the problem lies in an inability to accept an expanded definition of what it is to be a U.S. American today” (p. 286). It is imperative that ESL teachers develop an awareness of the cultural influences of their students and change their teaching style to reflect the differences.

ACCOMODATIONS FOR LEARNING STYLES IN THE SECOND LANGUAGE CLASSROOM

As we have seen, a variety of learning styles and multiple intelligences exists that give students many opportunities to learn. Also, we know that as teachers we must develop sensitivity to the cultural constructs of our students and that our Hispanic students tend to use certain learning styles. We now need to consider what
we need to do within our classroom to provide the best environment to accommodate the diversity of our students.

In the article “Empowering Culturally and Linguistically Diverse Students with Learning Problems,” published in the *ERIC Digest* (1991), Cummins suggests that a positive attitude and self-concept are necessary ingredients for achieving maximum learning potential. Believing that parent involvement is necessary, the author thinks there must be a willingness on the part of the school to promote parent collaboration. In addition, Cummins describes the two major styles of teaching: the transmission model and the interactive/experiential model. The second model would best accommodate individual students’ learning styles because it encourages genuine dialogue, integration of language across the curriculum and collaborative learning.

Although Cummins’ article focused on the bilingual student with disabilities, this analysis of classroom environment can be used for all LEP students. If educators pull away from the teacher-dominated approach to one that involves all students, a more positive learning environment will be created. In addition, we as educators need to be advocates for improved collaboration with our minority families. Being cognizant of cultural differences and willing to make allowances for all learning styles will ensure greater success for our second language students.

We must realize that it clearly our responsibility to establish a positive environment for learning. However, as stated by Hsueh-Yu Cheng and Banya in Chapter 9, “Bridging the Gap Between Teaching Style and Learning Styles” in Reid’s *Understanding Learning Styles in the Second Language Classroom* (1998) this
responsibility must also be shared with the students. We must be aware of our
teaching style as well as our students' learning styles. If we realize there is a
difference between the two, we need to integrate more teaching styles into our
classroom. Students, in being aware of their own styles, should be able to choose the
appropriate one to use in different learning situations. At the same time, teachers
should encourage students to stretch their styles to become empowered to use a
variety of styles. They need to be guided by the teacher to leave their "comfort zone"
and open themselves up to use options in learning. Finally, students need to learn
"tolerance in the ambiguity in second language learning, so they will be able to adjust
their styles" (p. 83).

These authors clearly define the roles and responsibilities of both teacher and
student in the classroom. Their suggestions are very important, because without the
mutual understanding and cooperation of both, any attempt at discussing, using or
changing learning styles will not be successful. A second language teacher may be
very enthusiastic about affecting a change, but such an activity cannot be totally
teacher-directed. Without empowering our students, we probably will not succeed.
We must always start with our learners, their culture, and educational experience.
The authors' premise that teachers and students must share the responsibility for
resolving learning style differences is key to the research of this thesis. No change in
the classroom, regardless of how creative and resourceful it might be, can occur
without this student-teacher cooperation.
Oxford and Green suggest that teachers use a language learning history to create student awareness and understanding of learning styles. Writing in the TESOL Journal, Autumn 1996, in the article “Language Learning Histories: Learners and Teachers Helping Each Other Understand Learning Styles and Strategies,” the authors believe that students should be given the opportunity to tell stories of their previous language learning experience. The teacher can lead a brainstorming session that asks questions about individual student preferences and experiences. This activity is followed up by “think-pair-share” where students first discuss their answers with a partner, and then the pairs form groups to compare answers. A whole class discussion ends the activity. In addition the teacher can share personal language learning experiences with the class to ease possible student apprehensions.

Engaging students in creating and sharing their language learning histories will create a sense of bonding and classroom community. The teacher will be able to understand what the students have experienced previously in language learning. Individual learning styles become evident, and can be useful for lesson planning. The authors’ suggestions fit nicely into creating a positive environment for second language learning.

Freeman and Freeman confirm the necessity to encourage a variety of learning styles. In Whole Language for Second Language Learners they state, “We want to celebrate diversity of all kinds, including diverse ways of learning” (p. 145). They advocate a whole language approach to second language learning that should be
approached in each of the four learning modes: listening, speaking, reading and writing. By using Gardner’s Multiple Intelligences, the teacher can center instruction on the learner. Because many students are global learners, whole language activities will engage them in meaningful and purposeful activities. The Freemans conclude

Research on learning styles tells us how certain groups interact socially. When teachers adopt classroom practices congruent with social practices in the community, students have much greater school success (p. 146).

The Freemans’ approach to second language teaching offers us some constructive ideas. Many of our students are not analytical, nor can they succeed in classroom practices that are linguistically-based. A global, whole language emphasis will better engage our learners to participate. Their ideas on using all four modes of learning in the classroom nicely complements the idea of also accommodating their learning styles.

We have seen the importance of both the role of the teacher and the student in creating a positive environment in the classroom where diverse learning styles can be used. Now we will look at the next step.

Gardner’s MI theory is very important to the ESL classroom because we work with a wide range of learners. Christison, in an article entitled “Teaching and Learning Languages Through Multiple Intelligences” published in the TESOL Journal (Autumn 1996), writes that “using Gardner’s MI theory is very important to second language teachers because of the diversity of our students” (p. 10). The author believes it is the teacher’s responsibility to create student awareness of their own intelligences. This can be accomplished by first using a student inventory to
create a better understanding of how MI can be used in the classroom. Then, the author suggests strategies to use in lesson planning for MI including procedures to awaken, amplify, teach and transfer the intelligence. The article gives further explanation and interesting suggestions and activities incorporating all of the intelligences. They are very practical and will be helpful to the ESL teacher to establish the understanding and application of MI theory in the classroom.

Christison also provided an additional overview and suggestions in Chapter 1, “An Introduction to Multiple Intelligence Theory and Second Language Learning” in Reid’s Understanding Learning Styles in the Second Language Classroom (1998). The author believes that we can use MI theory to nurture intelligences in many different ways to create an individualized learning environment. With an understanding of MI we can identify activities we use in the classroom and categorize them, track what we do in lesson planning and teaching, and analyze our teaching according to the different intelligences used during the week. Finally, we can expand our teaching to include more varied activities to address the different intelligences used by our students. We can also use MI in assessments. Christison suggests several ways of using MI to create assessments in the classroom.

Incorporating Christison’s suggestions about using MI theory in our classrooms will enable teachers to reach a variety of students with diverse learning styles. If we use the suggestion to write and review lesson plans based on MI, we will be able to more clearly see how they are used in our classroom. Many teachers have good intentions of using MI, but may still end up favoring their preferred one,
and ignoring others, possibly also ignoring the students with that particular style. Equally important is the assessment portion of our classes. Not only do we need to consider MI in teaching our lessons, but also in our assessment of a particular task. Christison’s valuable recommendations should be considered by all ESL teachers when planning their weekly lessons.

Some researchers have begun to explore how consideration of student learning styles could improve the teaching of writing. Jones, in “Action Research, Learning Styles, and EFL/ESL Writing” published in the ERIC Digest (1998), describes the results of an action research study on LEP students to determine the best uses of activities for learning styles for writing. Jones believes that not only should teachers match student learning style preferences with teaching, but also challenge students to master new ways of learning. Jones, like Christison, gives several ideas and suggestions for ESL teachers to use in their classroom that incorporate each intelligence.

Jones’ research is very useful to teachers who want to teach writing, but are struggling to also accommodate learning styles. We are given excellent examples of classroom activities that will work with second language students.

Simpson also wanted to design a writing assignment that would engage the use of all the multiple intelligences. In an article appearing in the TESOL Journal, (Spring 2000), “Promoting Multiple Intelligences in the EFL Class,” the author describes a two-step process to use. The first activity is to make your students aware of the seven multiple intelligences. The second activity is to introduce activities
using MI. Like Christison and Jones, Simpson gives several activities to be used to strengthen the students’ understanding of each intelligence.

Simpson’s article reinforces both understanding and application of the seven multiple intelligences in the second language classroom. Even though most teachers understand what they are, students may not fully comprehend what they are or how to use them. By using the suggestion to first engage students in a discussion of how they use MI, and then leading them through several activities, the ESL teacher will ensure the successful application of MI theory in the classroom.

Multiple Intelligences Activities (1996) is a very comprehensive manual for incorporating many multiple intelligences into your classroom. Wilkens begins with an overview of the seven intelligences and then discusses the effect of the teacher’s preferred intelligence on teaching. The book includes teacher checklists for lesson planning and hand-outs and letters to parents. A chapter is devoted to each of the intelligences with corresponding suggestions for activities to be used. The checklists, charts and activities are all reproducible.

Wilkens’ guide is very informative. The information is presented in a clear and concise manner. Many resources in this study have emphasized the importance of a teacher understanding their own style of learning before using MI in the classroom. The surveys and checklists in this book offer many opportunities to do this. The author’s suggestions will be documented further in the Chapter 3 of this research.
Integral to the choices of learning options is classroom collaboration for group work. Group work can be organized in pairs, a small group, or an entire class. However, often students have no previous experience with working in groups and may be uncomfortable collaborating with others.

Kinsella (1996) in her article “Designing Group Work that Supports and Enhances Diverse Classroom Work Styles” published in the Autumn 1996 TESOL Journal, and Kinsella and Sherak in Chapter 10, “Designing ESL Classroom Collaboration to Accommodate Diverse Work Styles from Understanding Learning Styles in the Second Language Classroom (1998) discuss collaborative learning. They offer several recommendations for the second language teacher to incorporate into the classroom. The authors support group work in that it not only promotes a wider range of communicative functions, but it also helps students develop their subject area knowledge. Students working in groups may learn new material more efficiently and at the same time strengthen interpersonal relationships. As mentioned previously, the teacher must effectively guide second language students through group work, because not everyone embraces collaborative learning.

Kinsella and Sherak are strong supporters of establishing a collaborative classroom. They underlie their beliefs with practical advice that will help the second language teacher. Their analyses are very important to this study because even though most Hispanic students tend to favor group work, they need the structure and organization that the authors suggest. This research will recommend the use of group
work in the ESL classroom, but will use the suggestions given to ensure the activity is successful.

Consideration should be given when designing assessments for LEP students. August and Hakuta, in *Educating Language-Minority Children*, (1998) believe that even though a variety of educational approaches have been established for second language learners, there is still much to be done. They write

> Schools engage in a number of practices that favor the status quo by enabling middle and upper class English speaking students to progress through an educational pipeline that is often inaccessible to low income ethnic minority students, including those who are limited English proficient (p. 35).

They describe a mainstream bias in formal testing because very few language minority student have been used in normed samples.

Assessment is a vital component of the ESL classroom. As we are consider learning styles in this thesis, we must also keep in mind the impact of assessment of our second language learners. August and Hakuta’s research will be very useful in designing a complete program for the ESL teacher.

Tannenbaum, in an article in the *ERIC Digest* (1996), “Practical Ideas on Alternative Assessment for ESL Students” suggests several alternative assessments for ESL students. The author believes that assessments must meet the following criteria

1. Focus on documenting individual student growth over time, rather than comparing students with one another.
2. Emphasize students’ strength rather than weaknesses.
3. Concentrate on learning styles and cultural backgrounds
Tannenbaum’s suggestions will be detailed later in this research. Clearly, the author’s premise agrees with the basis of this study. Needs and learning style of the individual student must be the emphasis of all assessment measures. As we consider the data gathered from students and teachers in Chapter 3, we will be apply to apply Tannenbaum’s suggestions for curriculum and assessment planning.

Geisinger and Carlson have similar views to Tannenbaum. They have authored an article published in the ERIC Digest (1992) entitled “Assessing Language-Minority Students.” Their points of discussion include: understanding the role of culture, evaluating and selecting tests, determining the validity of those tests, and administering tests. As was previously presented in the Influence of Culture on Learning Styles section of this literature review, cultural elements may be judged negatively with respect to assessment. An ESL teacher should ensure that in evaluating and selecting tests that they be normed using mainstream as well as language-minority students. In addition, separate evidence should document the reliability and validity of the test scores of LEP students.

Because assessment is such an essential component of second language instruction, anything used by the ESL teacher should be evaluated in the methods the authors suggest. This presents a challenge, however, because most assessments are not normed with LEP students. We should not only integrate the learning styles of our students in curriculum planning, but also in their assessment. The authors’ practical suggestions for assessing LEP students will be considered later on in this thesis.
Hainer, Fagan, Bratt, Baker, and Arnold (1999) wrote an article for the National Council of Bilingual Education Program Information Guide Series. In “Integrating Learning Styles and Skills in the ESL Classroom: An Approach to Lesson Planning” the authors discuss several approaches involved in learning. They describe four types of learners: (1) innovative, (2) analytic, (3) common sense, and (4) dynamic. Their thorough analysis is very detailed. In addition the authors offer several lesson plans, all of which are organized using the criteria of motivation, concept development, practice, and application.

The suggestions of Hainer, et al., are very useful for the second language teacher in first, understanding the types of learning styles in the classroom, and second, organizing effective lesson plans. One of the greatest challenges we face is how to construct material that will apply to the diversity of our learners, and these authors give us some constructive ideas.

Enright (1991) wrote “Supporting Children’s English Language Development in Grade-Level and Language Classrooms” in Teaching English as a Second or Foreign Language, edited by Celce-Murcia. According to Enright second language learners must “continuously and actively engage in purposeful interactions with speech and print in the second language environment in order to create and use new meanings in the new language.” (p. 386). Essential to these interactions are the factors of collaboration, purpose, interest, experience, support, variety, and integration. The author suggests several ideas for curriculum and classroom development to support these interactions.
Enright's analysis will be very beneficial when this paper correlates student preferences in learning with suggestions for classroom use. We must be aware of the many avenues to second language learning and adopt those that will work best with our students.

ESL teachers must also consider the classroom environment and its affects on second language learners. If we incorporate group work, we must also provide a suitable seating arrangement for our students. Several other factors may impact our students’ performance. Dunn, writing in an article entitled “Redesigning the Conventional Classroom to Respond to Learning Style Differences for Inter-Ed (Winter, 1988) discusses various environmental considerations within our classrooms. The author suggests that second language teachers consider types of seating, room arrangement, illumination, temperature, noise and length of time given to complete assignments. Dunn gives several recommendations to accommodate these differences within the classroom.

Dunn's recommendations take us a step further in teaching to the needs of our students. Although it may be impossible to incorporate them all into our classroom, we need to consider which ones we might be able to accomplish. The physical environment of our schools can be very constraining or uncomfortable for some of our students. If we are aware of the particular preferences our students have, we may be able to enhance their learning to ensure greater success for them. The specific recommendations of the author will be incorporated into Chapter 3 of this research in giving suggestions for ESL teachers to use in their classrooms.
SUMMARY

In Chapter Two I presented abstracts from literature written on learning styles and multiple intelligences, the cultural influence of the second language learner, and recommendations for incorporating learning styles into the second language classroom. We saw evidence of the diversity and complexity of learning styles. Also, the role of the ESL teacher was assessed as crucial in affecting a change to accommodate students' various learning styles. In Chapter Three I will present the findings from a survey on learning style preferences I administered to 79 students and discuss the results of a questionnaire on learning styles given to teachers. I will conclude with a more extensive discussion of classroom applications to use and draw conclusions based on the research and results of collected data.
CHAPTER THREE – THESIS DESCRIPTION

INTRODUCTION

Every year the Grand Rapids Public Schools enrolls more and more language-minority students. This trend is evident both on a local and national level. Hispanics are the fastest growing minority group in the U.S. However, while minority enrollment is increasing, student academic performance is very poor (Wells, 1988). Nationally, the graduation rate of Hispanics is less than 60%, compared to 86% for non-Hispanics. Clearly a problem exists. LEP children are often enrolled in schools where content area is taught through a verbal, analytical style (McLaughlin, 1992 and Leung, 1994). Little consideration is given to the diversity of learning styles of LEP students. An awareness and understanding of learning styles, both by the teacher and the students, will positively impact the second language classroom and ensure greater success to the language minority learner.

This chapter looks at data collected from student and teachers about learning styles and student interests. The results of the data were correlated with research published on learning styles and second language learners. In conclusion, suggestions are given for accommodating learning styles in the second language classroom.
SUBJECTS

The data were gathered from students and teachers of Stocking Elementary School. I administered the survey both in bilingual classrooms and in my ESL classroom. Seventy-nine students in grades three through six participated. Their English proficiency ranged from monolingual Spanish (Lau A) to fully bilingual with English as their prominent language (Lau D). The students did not reveal their names on the surveys but did provide demographic data. Participants came from seven different countries; Mexico, Honduras, Guatemala, Puerto Rico, Cuba, the Dominican Republic and Argentina. They were from nine to thirteen years old. There were 37 girls and 42 boys who participated. In addition, seven ESL and bilingual teachers from the Grand Rapids Public School system participated.

DESIGN OF STUDY

Procedure

The students completed a survey called Learning Style Questions. They answered 25 questions by circling “yes”, “sometimes” or “no.” The questions were written in English. Because I was aware of the different linguistic abilities of each student, I allowed those who were more proficient in English to read the questions silently and answer them. For those who could not yet read or understand English, I read the question first in English, and then in Spanish. Directions were given in both English and Spanish.
Instrumentation

The 25 items in the Learning Style Questions survey for students included all areas of multiple intelligences and learning styles: verbal, auditory, logical/mathematical, musical, bodily/kinesthetic, interpersonal, intrapersonal, field independence, field dependence, and analytic and global processing (see Appendix A).

In addition to completing the questionnaire, my sixth-grade ESL students completed an Attitude Inventory (see Appendix B). I was interested in seeing how they would answer questions based on their feelings and perceptions, and how they might relate to school and learning.

The third component of my research was giving a “Learning Styles and Student Performance” survey (see Appendix C) to bilingual and ESL teachers. Each of the teachers also completed a “Learning Style and Multiple Intelligence Profile” (see Appendix D) for five of their students. This data focused on the same criteria as the individual student surveys. The teachers’ responses, as well as information from the thirty-five student profiles, is summarized and discussed in this paper with application to current research.

Data Collection

All of the data were gathered during the months of May and June, 2001. I administered the student questionnaires first and then the interest inventories either in their bilingual classrooms or in my ESL class. I gave the surveys and profiles to the
teachers to complete and return to me anonymously in a stamped, self-addressed envelope.

**Data Analysis**

Answers to the student questionnaires were tabulated collectively and percentages were computed for each answer. The teacher surveys were also tabulated in the same manner. Results of the student interest surveys and student profiles were recorded and summarized. Significant results of all this information will appear in graph form in this thesis (see Appendices E – L).

**RESULTS**

My interest in gathering this information came after reading extensively on the importance of the role of second language teachers in knowing the learners in their classroom. As stated by Tyacke (1998), "If, as both research and teacher experience indicate, style preferences cause learners to reach to the language-learning context in significantly different ways, then we, as language teachers, must make allowances for such differences (p. 34). Tyacke's statement is the core for the purpose of my research. It is the teacher who must determine the learning styles of the LEP students, and then provide meaningful ways to achieve success for them to learn English."
Tyacke warns us of possible problems we may incur in identifying the learning styles of our students. It is very important that we recognize them as they apply to our classroom. They are:

1. Learning styles are complex and the overall learning profile of a student may be difficult to analyze.
2. Students may use different learning styles in different contexts, depending on its value to the educational goal.
3. A methodological bias may exist, imposed by the teacher or educational system favoring one kind of learner over the other. (p. 35).

We need to evaluate the variety of learning styles that each of our students possess. My survey was the first step in this process. The teacher evaluations gave me additional input. Recognizing the importance of identifying learning styles is crucial. What Saville-Troike (1972) stated almost 30 years ago is as true today as it was then:

Placing children with varied background and needs in the same classroom by no means implies that they should have exactly the same classroom experiences. All teachers should strive toward meeting the individual needs of students and should adjust to varied rates of learning and levels of interest (p. 9).

Clearly, all second language teachers need to heed Saville-Troike’s advice with their LEP students. The first step to take in discerning the interests of our students is to find out about their individual learning styles. That was the reason for creating and administering my survey.

This thesis examines the impact of learning styles on second language learning. According to Brown (1994) second language learning is a complex process and involves an infinite number of variables. Brown defines language as “systematic
and generative, visual and vocal, arbitrary symbols used for communication in a speech community” (p. 5). The author describes learning as “an acquisition of information, implying memory, practice and a change in behavior” (p. 7). Many researchers and educators have taken the terms “language learning” a step further and developed modes and criteria for practical usage.

One of the most prolific research teams in the area of learning styles is Dunn and Dunn (1975, 1988, and 1996). They believe that learning style consists of four stimuli with 18 different elements. The following is a listing these stimuli and the corresponding elements for each one (Dunn & Dunn, 1975):

1. Immediate Environment: sound, light, temperature, classroom design
2. Emotional Make-up: motivation, persistence, responsibility, structure
3. Sociological Reaction to People: peers, self, pair, team, adult, varied
4. Physical Being: perceptual, intake, time of day to learn, mobility (p. 75)

The learning styles developed and researched by the Dunns are as diverse as each one of our second language learners. These students come to our schools from different countries and varied learning experiences.

Gardner (1991) developed a different method of defining learning styles when he created his theory of Multiple Intelligences (MI). These intelligences are: verbal/linguistic, logical/mathematical, spatial, musical, bodily/kinesthetic, interpersonal and intrapersonal (p. 12). Many researchers and educators use these seven intelligences to develop lesson plans and curriculum. This thesis includes some of these suggestions.
Another way to describe the second language learner is using the terms field independence and field dependence. A field independent learner can distinguish the parts from the whole, can easily concentrate on something, and is competitive and self-confident. A field dependent learner looks at the total picture and is more socialized, interpersonal, and compliant (Brown, 1994 and Ehrman, 1998).

Barrow and Milburn (1990) remind us that everyone receives and processes information differently. They suggest that we consider the conditions when our students learn most effectively. When I designed my student survey I included questions that were indicators of the Dunn’s learning style components, Gardner’s Multiple Intelligences, and field independence and field dependence. In addition, the surveys and student profiles were also comprised of questions based on these criteria.

DISCUSSION

Verbal/Linguistic Styles

Less than one-third (30%) of students indicated a preference for a verbal/linguistic learning style on the survey (see Appendix E). This intelligence requires cognitive skills that they may not yet have in English. I observed in my classroom this year that my students least prefer this style.

However, one of the problems in schools today is on the emphasis of visual and verbal delivery systems such as lectures, worksheets, written papers and graphic organizers (Christison, 1996). Schools may think that LEP students have gained proficiency in English because of high scores in oral assessment, but, as McLaughlin
(1992) cautions us, we need to be aware that these language minority students may have language problems in reading and writing that are not apparent if their oral abilities are used to determine their proficiency. Leung (1994) believes that if our schools continue this tendency toward verbal and analytical approaches to thinking and problem solving, the LEP student will quite possibly fail in school. The previously presented statistics of high student failure can be attributed partly to the verbally-based assessments.

In spite of the fact that many LEP students do not succeed as well in verbal activities, our school curriculum, even that of ESL classes, continues to be based on the written word in textbooks. According to Kinsella and Sherak (1998) many ESL textbooks “do not provide a forum in which all students, regardless of their learning strengths, will be engaged and productive” (p. 94). Lewelling (1991) also asserts textbooks that contain context-reduced language will provide limited contextual information or extralinguistic support for our students.

We see in classrooms today various traditional activities such as reading a passage in a text, answering questions about it, writing a paragraph for review, and taking a spelling quiz based on new vocabulary. August and Hakuta (1998) believe that such linguistically-based activities have a mainstream bias against language minority students because of problems with English vocabulary and grammatical structure. It is not difficult to understand why 70% of the students I surveyed did not have a preference for a verbal learning style. We set these students up for failure when we only use these activities.
McLaughlin (1992) writes that families from minority backgrounds have different ways of communicating and using language. US schools emphasize the language functions of deduction and analysis that predominate in mainstream families. In language-minority families there is not as much use of language in information testing through questions that characterize the teaching-learning process that we find in both urban and suburban middle class homes.

In addition, according to Valdés (1996) parent support and involvement in verbal/linguistic activities is very difficult for language-minority families. The majority of our parents do not speak English. The Hispanic culture believes that education at home should stress respect and values, not the middle class focus on schooling and learning. It is almost impossible for students to get help at home if their teacher assigns a homework project involving reading, writing, and analytical reasoning.

It would be much better if teachers gave students alternative methods to use. Lightbown and Spada (1998) believe that

Certain ways of approaching a task are more successful for one person than another and that when learners are given some freedom to choose their preferred way of learning they will do better than those who find themselves forced to learn in environments where a learning style which does not suit them is imposed as the only way to learn (p. 41).

The student profiles completed by the teachers observed verbal/linguistic ability in 50% of the students. This total was higher than the students’ preferences. I think that because many teachers emphasize this intelligence in class they see more
evidence of its use. Teachers have been trained in an analytically, deductive style and will often teach in the same manner in which they learned.

**Auditory and Bodily Kinesthetic Styles**

In contrast to a verbal style of learning, 57% of students preferred auditory learning styles and 58% preferred bodily/kinesthetic styles (see Appendix F). In my ESL class, and in other bilingual classes I observed, most of the content is taught and practiced in an auditory manner. Sound discrimination is one of the first things practiced by LEP students. They practice basic, survival phrases in English. Poems, chants and rhymes are all used for the auditory learner. Zentella (1998) recommends that one way of facilitating students to use English is to get them to talk more. The author states that “to stimulate purposeful communication, teachers should de-emphasize unnatural repetition drills, fill-in sheets, and decontextualized lessons on punctuation and grammar” (p. 280).

Griggs and Dunn (1996) in their research on learning styles of Hispanic-American students found that their greatest strength in perception is kinesthetic and students preferred an informal seating arrangement that allowed for mobility in the classroom. A survey conducted by Reid (1998) on second language learners found that the majority of them preferred kinesthetic learning. Wilkens (1990) states that kinesthetic learners enjoy building, touching and gesturing and can learn through role play, drama and sports and games. Given the popularity of these activities in my
classroom, it is easy to see how many of my students prefer a kinesthetic learning style.

**Spatial and Logical/Mathematical Styles**

LEP students have a tendency toward achievement in the domains of logical/mathematical and spatial domains. Over two-thirds (69%) of students I surveyed expressed a preference for these areas. Teachers reported that twenty-one of thirty-five students (66%) demonstrated preference with these learning styles (see Appendix G). The mainstream teachers of my ESL teachers almost always tell me that our students do very well in math. In fact, many are at the top of their class. They are able to bring past educational experience in math into the classroom.

Saville-Troike (1975) reminds us that even though our second language students do not demonstrate proficiency in linguistic abilities they come to our classroom with many highly developed skills. This author states

> One must keep in mind that second language learners are neither dumb nor stupid. They merely lack facility to communicate freely in the language. They do not know certain cultural clues and symbols, but they have logic, life experiences, previous educational experience, emotions, preferences, problems and skills (p. 66).

I saw evidence many times with my students that although they are not yet proficient in verbal/linguistic skills, they are very accomplished in the logical/mathematical and spatial intelligences.

Cesar was a sixth grade student of mine. He would frequently talk with me about working out math problems with his dad. Cesar’s dad could not speak English,
but helped his son in math. In fact, Cesar was delighted when his dad shared with him an innovative procedure to solve a problem and he proudly demonstrated this procedure in class to us.

Equally talented was Jorge, another sixth-grader. Jorge spent all his free time drawing. He was very skilled in pencil sketching. Jorge’s drawings revealed another side of him that was not evident in the daily schedule of academics. He was extremely proud of his Mexican heritage, and expressed a deep religious conviction. One of the best projects for Jorge this year was his creation of a three-dimensional science project. Jorge’s mainstream teacher was very perceptive in making allowances for Jorge’s preferred learning style to complete a unit assessment.

Wilkens (1996) suggests that learners who prefer logical/mathematical and spatial preferences in learning styles will demonstrate strengths in working with numbers, patterns and graphs, puzzles, computers, color and design. Educators will be able to successfully engage their LEP students if they offer these choices in learning style in the classroom.

Cognitive and Affective Styles

If we are to understand learning styles completely, we must consider the principles of cognitive and affective styles. According to Oxford (1989) a cognitive style involves processing new information, analyzing and classifying, while an affective style is linked to emotions or attitudes. Barrow and Milburn (1990) define the cognitive domain as one of memory and reasoning and using problem-solving,
comprehension and recall. The affective domain focuses on attitudinal, emotional development and interests and values. Brown (1994) believes that second language learners will use both styles. The author states

Learning styles mediate between emotion and cognition. People's learning styles are determined by the way they internalize their total environment, and since that internalization process is not strictly cognitive, we find that physical, affective, and cognitive domains merge in learning styles (p. 105)

Brown, in research completed with various ethnicities, concludes that, "The Hispanic orientation is more affectively centered with a passive, relational, and intuitive view" (p. 166).

**Interpersonal and Intrapersonal Styles**

Two domains of learning style that are influenced by affective factors are interpersonal and intrapersonal intelligences. Simpson (2000) gives definitions for these two styles

1. Interpersonal intelligence is the ability to recognize how others feel and to respond appropriately, or to have good people skills.
2. Intrapersonal intelligence is the capacity to recognize one's inner thoughts and feelings and to respond appropriately to that understanding (pp. 30-31).

Wilkens (1996) writes that interpersonal intelligence involves one's ability to deal with other people with strengths in perception and feelings. The author defines intrapersonal intelligence as self-knowledge and the ability to identify one's own feelings and moods.
These two intelligences were equally ranked at 64% each on the student survey questions (see Appendices H and I). My observations of students conclude that they do demonstrate the ability to use both intelligences. They are very introspective in processing and reacting to information. They readily share their strengths and weaknesses and have set personal goals for accomplishment. On the other hand, these students love to spend time with friends, helping them in class and working in group activities. Many participate on a sports team at school. They are very social, both in the classroom and on the playground.

The second language teachers ranked interpersonal over intrapersonal skills by two to one (83% to 43%) in their student profiles (see Appendix H and I). Our students really excel and demonstrate their interpersonal skills at every grade level. One of the most positive examples of this occurs when a new LEP student enrolls in school s/he is immediately welcomed by other students. My students always tell me when there is a new student in school. They are eager to ensure that the new student become acclimated as soon as possible to their new school.

**Field Independence versus Field Dependence Styles**

Second language learners can be field independent or field dependent. Ehrman (1998) defines field independence as the “ability to distinguish and isolate sensory experiences from the surrounding sensor input” (p. 63). Field independent learners are task oriented rather than people oriented. They interact with others in a cool, rather than warm, way. Ehrman defines field dependence as the absence of field
independence. The author describes the field dependent learner as being interpersonally oriented, compliant and dependent on external structure.

Brown (1994) analyzes field independent learners as competitive and self-confident. They are often “more successful in second language learning” (p. 107). On the other hand, field dependent learners are much more socialized and tend to derive their identity from persons around them. Oxford (1989) writes that field independent learners can more easily separate key details from a complex background and are strong in analytical reasoning, but field dependent learners have a more difficult time performing these tasks.

Brown (1994) contends that the success of field independent and dependent learners depends on the type of assessment used with them. Field independent students will perform well with drills, exercises and tests, while field dependent students do better in natural, authentic, face-to-face communication. According to Leung (1994) schools have a tendency to teach toward field independence rather than field dependence learning styles and incorporate more competition than cooperative experiences.

Closely related to field independence and dependence is analytical versus global processing. Oxford (1989) contends that a second language learner’s style could be better described using global versus analytic instead of field independence versus dependence. Global versus analytic is similar to the constructs of left and right brain hemisphere functioning. The left hemisphere is logical, analytical,
mathematical and linear while the right hemisphere is visual, auditory, holistic, and emotional. Brown (1994) compares the two in stating:

...intuitive observation of learners and conclusions of studies of both hemispheric preference and field independence show a strong relationship. Thus, in dealing with either type of cognitive style, we are dealing with two styles that are highly parallel (p. 110).

Brown offers an observation about teaching LEP students: "By appealing too strongly to left-brain processes, past methods were inadequately stimulating important right-brain processes in the language classroom" (p. 109).

Many researchers in this study believe that the Hispanic student tends to demonstrate greater learning preferences for global, field dependent, right-brained processing. (Grigg & Dunn, 1996; Zentella, 1998; Brown, 1994). In my survey 64% of students favored field dependence but only 35% preferred field independence (see Appendix J and K). This data supports the conclusions of previously discussed research. The student profiles by the teachers revealed that 70% of their learners preferred field dependence but only 30% preferred field independence. It is significant that both the student surveys and teacher profiles both agreed on the strengths and preference of field dependence/global/ right-brained processing. This points to the need for our schools to adapt more activities to accommodate this learning style in the curriculum. We would benefit from Kinsella's (1996) suggestion to schools:

Knowledge of students' learning and work styles can thus help us to design curriculum with an equitable range of activities that enable all students to be comfortable as learners, while also stretching them to remain and persist confidently with new tasks and groupings (p. 30).
Musical Style

Students who prefer a musical style like to sing, hum, play instruments, and generally to respond to music (Wilkens, 1996). Music is a natural component to kinesthetic learning as well as interpersonal learning styles. Music is used to get students relaxed, motivated and ready for a lesson. It can be performed in the students’ native language or English (Enright, 1991). My students enjoy learning songs in English and teaching me songs in Spanish. Many songs we sing in our classes have accompanying hand and body motions to engage the learners kinesthetically. As previously discussed, Hispanic students prefer an informal classroom arrangement and the opportunity to move around. Music can be a “universal language” to assist LEP students in learning English. As Enright (1991) states in referring to the importance of music in the classroom, “ESL students are more likely to learn English in addition to content when they engage in activities centering on one or more of these kinds of authentic uses of speech” (p. 387).

Judging from my own students’ interest in music, it was no surprise to me to discover that 68% of the student surveys indicated a preference for a musical learning style (see Appendix L). However, it was a surprise to learn that teachers ranked only 32% of students showing musical preferences. Possibly this could be explained by the lack of time devoted to music in the classroom. Organized music instruction is only scheduled for 30 minutes per classroom every other week in my school. It is up
to each individual teacher to incorporate more time for music in the classroom which is sometimes a difficult task to do.

Implications

According to the results of surveys administered to 79 students, the greatest preferences in learning styles were spatial, logical/mathematical, musical, field dependent and interpersonal and intrapersonal. The student profiles completed by second language teachers indicated that the majority of observed students tended to prefer interpersonal, bodily/kinesthetic and linguistic learning styles. Even though these were the predominant learning styles, the surveys and profiles showed that every style and intelligence is used by one student or the other, and that students use a variety of styles in the classroom. If we consider Gardner’s established seven different intelligences, Dunns’ eighteen variations of learning style, plus field independence/dependence, global versus analytical processing, and left and right brain hemispheres, we have an abundance of modes and methods our students can and do use to learn English.

Oxford (1989) states that our learning styles encompass not only cognitive style, but also attitudes and interests and the tendency to seek situations compatible with our own style and avoid those that are not. The survey findings indicate that indeed this is happening in my school. As educators, we must remember that the success of our students depends on many factors. Hainer, Fagan, Bratt, Baker and Arnold (1990) in analyzing LEP students remind us that their academic success is
influenced by emotional, biological, psychological and cultural factors. It is important for second language teachers to provide learning experiences that are assessable to all students with all learning preferences. We need to build on their experience of learning through preferred styles while at the same time extend the range of styles available to them.

Clearly it is the teachers' responsibility to know their students' learning styles and adapt their teaching styles accordingly. I will discuss accommodations for the classroom later in this chapter. Freeman and Freeman (1992) clarify the teacher's responsibility with learning styles in the classroom:

We want to center instruction on the learner, and that means being sensitive to the ways of learning that students bring with them to school. We want to celebrate diversity of all kinds including diverse ways of learning, and help our students develop cognitive flexibility, the ability to learn in different ways in different situations. We can do this by using a variety of teaching methods and giving students choices in what they learn and how they go about learning it (p. 145).

If we want to ensure the success of our LEP students it is imperative that as second language teachers our focus is on our learners. It is apparent that what is happening in schools today is not working with language-minority students. We have failed them in the classroom by following a curriculum that does not make allowances for diversity of learning styles.

Teacher Learning Style Surveys

Thus far, I have discussed the results of the student surveys and the teacher profiles of students. Another component in my research was a Learning Styles and
Student Performance questionnaire given to second language teachers. The twenty-five questions on the survey addressed identifying learning styles, students' use of them, the effect of classroom environment on learning, and the teacher's responsibility (see Appendix C). Seven teachers participated in the survey. The answer choices were: strongly agree, agree, disagree and strongly disagree.

Six of the teachers (86%) agreed or strongly agreed that teachers should administer a learning styles survey to their students at the beginning of the year to find out their strengths and weaknesses and to encourage their students to use their preferred learning style. Cheng and Banya (1998) believe that teachers need to make a conscious effort to be aware of their students' learning styles and make sure that students are also conscious of how they learn. Kinsella and Sherak (1998) also advocate that surveys be given at the beginning of the year to give students an opportunity to respond to their preferred approaches to learning. They recommend that the teacher follow up this activity with a class discussion on learning styles. We can learn a substantial amount of information from these surveys that will not only help us identify our students' preferences, but also aide in our classroom planning. According to Kinsella (1996), "Knowledge of students' learning and work styles can help us to design curricula with an equitable range of activities that enable all students to be comfortable as learners, while also stretching them to remain engaged and persist comfortably with new tasks and groupings" (p. 30).

Another method to use to identify our students' learning styles is to administer a language learning history to students. With this activity the students answer
questions based on their previous language learning. Oxford and Green (1996) suggest that the teacher lead a brainstorming session with students to formulate questions. The following are examples of questions for a language learning history:

1. Where did you learn English in the past?
2. How long have you been learning English?
3. How do you like to learn?
4. Do you like to study by yourself or with others?
5. Describe a good experience you had learning English.
6. What was a bad experience?
7. What advice would you give to language teachers?
8. What advice would you give to language students? (p. 20)

Teachers can share their own language learning experience with students as a way of modeling the process for the class. The authors write:

At this point the teacher often shares his or her own language learning history with the group, either orally or in writing, sparing no details and including even the times of seemingly tragic embarrassment. (pp. 20-23).

I found that when I relate personal stories about my own language learning I engage my students’ interests. Often they feel more relaxed to contribute to the conversation when they hear that their teacher has made mistakes and has been confused about the peculiar nuances of a foreign language. They become the experts in Spanish for me and are happy to oblige when I need help with a Spanish word.
Instruction and Assessment

All (100%) of the teachers disagreed or strongly disagreed that students learn information in the same way and believed students change their learning styles during the course of the school year. We must know who our student are, recognize their strengths and encourage them to adapt their learning styles to different experiences in the classroom. Tannenbaum (1996) encourages second language teachers to emphasize their students’ strengths, or what they know, rather than their weakness, or what they don’t know. Once we identify our students’ preferences we can design effective instructional methods. Dunn and Dunn (1975) recommend “materials should be introduced through each individual’s strongest perceptual sense and reinforced through supplementary ones” (p. 89).

It is learning styles that clearly influence the outcome of whether our LEP students succeed or not in class. Our acknowledgement of their diversity is essential. Oxford (1989) maintains that these language learning styles appear to be among the most important variables that influence the performance of our students in a second language.

As previously discussed, neither school curriculum nor textbooks provide for differences in learning styles. All (100%) of the teacher responses strongly agreed or agreed to this. Christison (1996) states that in using only the current methods of visual and verbal clues, “teachers can miss the elusive qualities of learning demonstrated by some of our ESL/EFL students who are not strongly verbal or visual” (p. 10). I observed the frustrations of both second language and mainstream
teachers in working with LEP students. Our schools today simply do not recognize that language-minority students are not equipped to readily adapt to textbooks and testing based solely on visual and verbal delivery systems. We are shortchanging these students and setting them up for failure. Unless we alter our methods this adverse situation will continue. Teachers with LEP students can begin in their own classroom to introduce alternative methods of learning. I will offer suggestions of accommodations to use later in this chapter.

The student surveys revealed learning style preferences toward bodily/kinesthetic, field dependence and a global, right-brained, interpersonal approach. According to the Dunns (1975 and 1988) and Griggs and Dunn (1996), such preferences impact the physical environment of the classroom. They maintain that our Hispanic learners tend to prefer a more informal seating arrangement with allowances for movement and mobility. They respond positively to a bright environment with stimulating activity centers. The teacher surveys concur on the constructive effect of these criteria. They all (100%) agree an informal seating arrangement that promotes group work is ideal, rather than one where students sit in straight rows. Ninety percent agree on the importance of bright, stimulating colors and classroom decorations.

I noticed these preferences in my ESL classroom. My students are happiest and work the most productively when they are seated in an arrangement that gives them the opportunity to face and interact with each other. The emphasis is taken off me, the teacher, and centered on them, the students. Often I become a part of this
seating arrangement and sit down in an empty desk among the rest of the students. In addition, I noticed that my students are stimulated by the manipulatives and decorations in the classroom that become a part of their learning style.

The teachers’ profiles of students did not rank musical intelligence as a strong learning style preference observed in their students (33%). As indicated previously, this may be because of the lack of time and facilities for music activities within the school day. However, in their Learning Styles and Performance surveys six of the seven teachers strongly agreed or agreed that their students participate more when they incorporate rhythm and movement into their lessons, and also that playing music in the classroom strongly benefits the students’ performance. Dunn (1988) agrees with these observations that our global Hispanic learners “think more lucidly with sound – music or background talking” (p. 38). Gardner (1991) also included musical intelligence as one of his learning theories.

In all of my ESL classes, regardless of the students’ level of proficiency, music is a fun and stimulating activity. I always play classical music softly in the background. My students expect this addition of music, and if I forget to turn on the radio, they remind me to do so. I find that especially for my brand-new students who know very little English, music is the universal language. They show little inhibition in participating when we sing or chant a song together. If the song also has motions, then the kinesthetic learner will be engaged as well. When we sing a song in Spanish, my students are delighted to be able to use their first language in school, and feel even more a part of the whole group.
All of the teachers (100%) strongly agreed or agreed that the time of day for instruction impacts student learning style and performance. In their research on Hispanic American students, Griggs and Dunn (1996) found that these students peak in the late morning and afternoon. The implication here for teaching is to structure our classroom instruction to accommodate this preference.

The responsibility of educators in recognizing and teaching to LEP students' preferred learning styles is essential. Zentella (1998) tells us, "Teachers are urged to teach from strengths by building upon what their students know how to say and do and upon the various ways in which children learn in order to make them proficient in others which are indispensable in the dominant society" (p. 279). According to Tyake (1998), "Recognizing learning style differences is only the first stage, however. Teachers must also provide appropriate learning paths in terms of syllabus design, choice of materials and alternative assessments of proficiency" (p. 34).

Teachers strongly agreed or agreed (100%) to the survey questions that suggested integrating different learning styles into lesson plans improves student interest and performance. They also believed (100%) that assessment should incorporate multiple learning styles. Effective assessments for LEP students, however, are not always available for us to use.

August and Hakuta (1998) discuss the problems of assessment for language-minority children. If standard assessments based on verbal/linguistic ability are used, there are "potential validity and reliability problems for English language learners" (p. 41). Geisinger and Carlson (1992) claim that tests for LEP students should be...
properly developed, normed, reliable and validated. The problem, according to all these researchers, is that thus far there has not been adequate numbers of language minority students included in reliability and validation testing. Only limited evidence exists to address these criteria.

August and Hakuta (1998) describe student assessment materials as being biased against language minority students. These biases are:

1. Norming bias: Small numbers of minorities are included in the samples for reliability and validation.
2. Content bias: The test content and procedures are a reflection of the dominant culture’s standards of language function and shared knowledge of behavior.
3. Linguistic and cultural bias: There are adverse effects with timed testing, difficulty with the English vocabulary and an impossible situation of detecting what bilingual students know in their two languages (p. 41).

These biases all negatively affect our second language learners and are a detriment to their learning.

Tyake (1998) suggests that we should be more flexible in our assessments and include a variety of procedures. This author maintains that we should provide “test types and test items that allow for different style accessibility” (p. 44). Tannenbaum (1996) recommends that our focus for LEP students should be on documenting their individual growth over a period of time, rather than constantly comparing students to one another.

An effective way of testing our students is using authentic assessments. August and Hakuta (1998) give the following suggestions as recommendations for this type of assessment:
1. Oral interviews
2. Story retelling
3. Simulations
4. Directed dialogues
5. Picture cues
6. Teacher observation checklists
7. Student self-evaluations
8. Portfolios (p. 42)

In using these methods we avoid the mainstream biases of current established testing and obtain a more complete evaluation of our students' abilities. The authors present one caveat to these methods. "Authentic assessments are both more difficult to administer and less objectively scored than traditional assessments, but they do reflect the important view that language proficiency is multifaceted and varies according to the task demands and content area domain" (p. 42). Tannenbaum (1996) also believes that these alternative assessments can hold great promise for our LEP students, and even though they present challenges to us in development and administration, the benefits are great for both teachers and students.

Summary of Student and Teacher Surveys

Thus far, I have analyzed the results of student learning preference surveys, teacher profiles of observed learning styles and teacher surveys on learning styles and performance with respect to existing research. Student' results indicate a preference for bodily/kinesthetic, spatial, logical/mathematical, field dependent musical and inter/intro personal learning styles. Teacher observations rank interpersonal, bodily/kinesthetic and verbal/linguistic as the most preferred by their students. Teachers agreed that students should be encouraged to use their own learning styles,
that lesson planning, assessment and classroom design should incorporate various learning styles, and that textbooks are not written to accommodate diverse learning styles. My research clearly demonstrates that students have definite preferences for learning, and often prefer using different ways to learn. Teachers agree that recognition of learning styles is important and adopting lessons to diverse intelligences is essential. At the same time, they recognize that current educational materials are geared mostly toward the verbal/linguistic student. If we are to successfully teach to our second language students we must change our curriculum to meet their needs. To improve achievement in our LEP students, it is imperative that schools institute these changes.

**Cultural Impact**

The next section of this research examines cultural issues that impact the education of language minority students. Findings from the Attitude Inventories (see Appendix B) given to sixth graders are discussed along with existing research in the field.

As stated by Soto, Smrekarand and Nekcovei (1999), “Our willingness to view children’s home language and culture as an important resource is an opportunity to enhance our nation’s mission for a democratic society.” It is essential that we recognize and include in our curriculum the diverse element of our students’ culture.

According to Leung (1994) the search for an explanation of just what the impact of culture is on our LEP students’ achievement has been given much attention.
I find that in many conversations with families of my language-minority students, it is very clear that they fully support schools and know the importance of education on their children's future. The father of one of my sixth grade Hispanic students told me that he never attended any school while growing up in Mexico, but was making sure that all five of his children would complete their education in Grand Rapids. These parents want a better life for their children. Leung (1994) believes that language minority groups view schooling as a connection to attaining benefits in society such as finding good jobs, making money and being successful. The majority of my students (70%) described school on their Attitude Inventory in terms of being "good, fun, important and cool."

If we are to embrace the culture of our LEP students it is very important for us to encourage their families to participate in school planning and activities. According to Cummins (1991) in spite of parents' high aspirations for their children, they do not know how to help them academically. Cummins recommends that teachers work to communicate regularly with parents, either by writing in their home language themselves, or enlisting the help of other teachers, paraprofessionals or parents who might be able to help. I saw evidence of this during the past year at my school. Mainstream teachers took great efforts to enlist the help of bilingual teachers to translate letters and information that was sent to the homes of their LEP students.

Although the results of the Attitude Inventories indicated positive opinions about schools, none of the students viewed reading as a favored activity. In describing how they felt when they had to read, they used words like "scared,
nervous, and angry.” In research discussed previously, LEP students struggle in school with these activities that are verbal/linguistic. Second language teachers are facing a real dilemma in that curriculum and assessments generally are organized with this mainstream approach. Zentella (1998) warns us

We may satisfy ourselves that the primary responsibility of education is to stress the code of wider communication, standard English, and mainstream language genres. But the traditional approach has been found wanting for mainstream as well as non-mainstream students, causing expensive special education programs to proliferate. Unless schools change radically, we lost the opportunity to teach large numbers of diverse children in the ways in which they excel, and which help build a more just society (p. 284).

Another area significant to cultural understanding of Hispanic students on the Attitude Inventories focused on what they liked to do for a “good time.” All of the answers (100%) indicated activities that included being with others. Examples of these that were given are “parties, school, sports, friends and families.” In addition, when asked to describe something they could not understand, or what makes them feel badly, 70% of the answers involved sociocultural relations. Examples of their answers are “why people are mean, why people fight, getting in trouble with my family, why people talk about me, problems with my friends.” These answers support research by Griggs and Dunn (1996) on Hispanic students. They found that they are field dependent, interpersonal and do best when working with others.

A third important factor was that 70% of the responses indicated the importance of family relationships. They wrote that they most worried about their family. Also, they wished their moms and dads would not as much so they would be
able to spend more time at home. They indicated that parental approval was very important and wanted their parents to feel proud of them.

Quite often in class this year my students shared family stories with me. They let me know about birthdays, weddings and other celebrations in their family. We talked about family members still in Mexico or Honduras and plans for family reunions. It was essential to them their classroom behavior was acceptable to me and that I would impart positive comments about them at conferences. I was always delighted to meet nearly all of the parents of my students at conferences, in addition to aunts, uncles, grandparents and friends who all came along.

According to Griggs and Dunn (1996) Hispanic Americans are united by customs, language, religion and values. The authors state that even though there is great diversity among all Hispanics

One characteristic that is of paramount importance in most Hispanic cultures is family commitment, which involves loyalty, a strong support system, a belief that a child’s behavior reflects on the honor of the family, a hierarchical order among siblings, and a duty to care for family members.

Valdés (1996) writes that the Mexican culture has clearly defined roles for each family member. The family unit is very strong and supportive and the adults are the cultural mediators in their children’s lives and a great influence on their learning.

To promote greater achievement with our LEP students we can clearly see that acknowledgement of culture is essential. We must realize that our Hispanic families support our efforts in educating their children, but often do not know how to help their children. It is our responsibility to communicate with them as much as possible.
Recognition of our students' preference in engaging in activities that promote group interaction is vital. We see in the Hispanic culture that social involvement is very important. Finally, we must be aware of the magnitude of family relations with our LEP students. They are concerned and sometimes worried about their families. Recognition and respect from their family members is essential to them. When we become aware of all of these cultural factors we will better know our Hispanic learners. In so doing, we can more effectively design classroom learning and assessment activities that will ensure greater achievement and thereby help to promote success in their attainment of educational goals.

Classroom Accommodations for Learning Styles

Once we recognize the need to include learning styles as an integral part of our classroom instruction, and we develop an awareness of the cultural diversity of our students, we need to determine how and what we will do in lesson planning. Hainer, et al. (1990) assert that how to improve delivery of our instruction has been one of our major concerns as we come face-to-face with the ever growing and ever changing LEP student population. Freeman and Freeman (1992) also believe that "teachers and administrators want to do what is best for all children, but frequently they are unprepared for students who come from different cultural and linguistic backgrounds and do not speak English" (p. 5).

The first activity many researchers recommend is to determine just what learning style we as teachers prefer and which ones we currently use in our second
language classrooms. Christison (1996) suggests that we identify all the activities we use in class and categorize them. We can track what we are doing in our lesson planning and teaching by using a chart or a checklist with each intelligence listed. Wilkens (1996) adds

It is helpful to identify intelligences within ourselves and to understand how these intelligences are manifested in order to fully recognize them in our students. Understanding our own intelligence also helps us to concentrate on those areas that might be low for us but are necessary for some of our students (p. 7).

Christison (1996) proposes that we chart activities over a two-week period. Then we will be able to take steps to incorporate what we didn’t use into our lesson plans.

The preferred learning styles of teachers affect their teaching. Wilkens correlates the seven Multiple Intelligences with approaches to teaching. They are:

1. Verbal/linguistic learner: stresses a curriculum based on language—reading, writing and speaking, but will need to make allowances for other learner preferences.
2. Logical/mathematical learner: concentrates on concepts that are logical and abstract, but will have to accommodate the artistic learner.
3. Visual/spatial learner: will create visual, creative, artistic opportunities, but will need to build in activities for the linguistic learner.
4. Bodily/kinesthetic learner: will have a room full of things to manipulate and encourage movement, but will be a challenge to the logical, intrapersonal learner.
5. Musical learner: tends to have a relaxed atmosphere with emphasis on musical and rhythmic activities, but needs a balance for those not musically inclined.
6. Interpersonal learner: generally uses cooperative learning where students interact, but will need to cultivate respect for the introverted student.
7. Intrapersonal learner: will not be used as much in class, but rather for personal times. This learner will have more understanding for students who have trouble functioning in groups (p. 10).
Once we have determined our own learning styles, the next step is to administer a survey or questionnaire to our students. One of the most widely used instruments was the "Learning Styles Inventory" developed by the Dunns. It is a 100-item survey and it attempts to identify a wide range of environmental, emotional, sociological and physical learning style preferences. Many other surveys are also available, or a teacher could use self-created materials. (See Appendices N, O and P.)

The next step is teaching your students about learning styles. There are many ways to do this by incorporating different learning styles in your instruction. An initial activity to begin this instruction is to create a problem and brainstorm as many solutions as possible. The class can be divided into groups with each group given a different learning style to use in solving a problem. (Christison, 1996) A sample question could be, "What could you do to help someone who has lost money?"

Simpson (2000) suggests beginning a unit on learning styles by first creating a visual diagram resembling a pie or pizza with each piece labeled as a different learning style. Students can see words and symbols to depict each one. Simple questions accompany the illustrations to further explain them such as, "Can you speak and write? (linguistic), "How much is two plus two?" (logical), and "Can you draw a picture of a flower?" (spatial). If we present learning styles in a very informal, comfortable manner, students will be more at ease in learning them.

Another suggestion is to write a letter to parents explaining multiple intelligences to them, and informing them that their child's class will be using several ways to learn during the school year. This activity reinforces the need to include our
LEP parents in our planning and keep communication open between home and school.

We can create centers in our classrooms to promote each intelligence. Wilkens (1996) gives the following examples of types of centers.

1. Verbal/linguistic: a writing and listening center with story starters and writing tools.
4. Musical/rhythmic: music listening and tools for creating music or lyrics.
6. Interpersonal: games area or activities involving two or more students.
7. Intrapersonal: a simple quiet corner where students can work in solitude (p. 9).

There are many things that we can do in the physical layout of our classrooms to accommodate individual differences in our students' choices in learning. Depending on their preferences we can rearrange seating into small groups, change lighting, add music, control temperature, and make allowances for time requirements. Dunn (1988) proposes several things we can do to our classrooms to appeal to various preferences and types of learners.

1. Seating: use informal arrangements with bean bags, pillows or rugs.
2. Illumination: turn half of the lights off. Florescent lighting will stimulate analytic learners, but may agitate global learners.
3. Sound: play background music with no lyrics for globals who think more lucid with sound, but provide ear plugs for analytics who prefer quiet.
4. Persistence versus short attention spans: Structure lessons with variety, structure and different time allowances.
5. Sociological: let students complete assignments alone, in pairs, groups, or with the teacher.
Another factor to consider in lesson planning is our students' preferences for right and left brain hemispheric processing. As previously discussed in this paper, our Hispanic students generally demonstrate right-brained processing; that is, global, interpersonal, collaborative preferences. However, these preferences can vary with each learning experience so we need to include a representation of both in our planning. Hainer, et al. (1990) suggest that we follow four practices in each lesson which will address both left and right brain theory. The first practice we should do is motivate our students to engage them personally and actively in seeing the relevance of the lesson. Left mode students can create an experience, while right mode students will reflect on it. The second element of the lesson is to provide for concept development that will allow students to gain new knowledge and information. Left mode students present and develop theories while right mode students will integrate their reflections into concepts. The third element is practice that includes various types of exercises for students to try out what they have learned to make it more understandable. Left mode students will reinforce the lesson with new materials and right mode students will seek to personalize the information. The final component is application so students can see how the new material is applied to situations outside of the classroom. Left mode students will develop a plan for applying new concepts, whereas right mode students will do it and share it with others.

As we have seen in this thesis, our LEP students least prefer verbal/linguistic learning styles. However, there are activities that we can do in class to teach this domain and encourage our students to use it. Jones (1998) and Simpson (2000)
developed plans to integrate multiple intelligence activities into a writing assignment. The following is a summary of what we can do to teach paragraph writing to our students:

1. Linguistic: explain paragraph structure using outlines on board, checklists and worksheets.
2. Spatial: draw a picture of an object to illustrate the parts of a paragraph.
3. Interpersonal: share drawings with other students.
4. Bodily/kinesthetic: in small groups role play, come up with a physical activity to represent paragraph structure.
5. Auditory: class discussions, oral reports, conferences.
6. Logical/mathematical: create a word find or crossword puzzle using concepts of paragraph structure.
8. Intrapersonal: reflect in personal writings about paragraphs.
10. Individual: individual research, conferences, presentations.

We can provide many experiences to our LEP students to become more familiar with a style that is not a strong one with them. According to Jones (1988) it is worthwhile for teachers “to identify the learning styles and learning preferences of their students to develop activities that will better suit the needs of the local classroom.”

Because of their preference for interpersonal, global learning, our Hispanic learners enjoy working in groups. Students can learn new material efficiently by sharing with others. In my classes this year, the majority of my students did well with this activity. However, there are some students who prefer to work alone, and if we use group learning, then we must provide suitable structure so everyone will feel comfortable. Kinsella (1996) states that “Group work experiences cannot be limited to the students who already thrive in this active context for learning; rather, they
should be used to increase the possibilities of all students to learn how to learn more successfully" (p. 25). Kinsella and Sherak (1998) offer the following suggestions to ensure that all group members will have a meaningful experience:

1. Reassure analytical learners that all group members will be held responsible for contributing equally to the final project.
2. For global learners who have trouble getting started and staying on task, set up a schedule and determine the processes needed to complete the goals.
3. Create tasks that are suitable for interaction and collaboration.
4. Set up a variety of task types, requiring creative problem solving and application to group experience.
5. Provide ongoing motivation and support.

We can see that group activities in our classroom require a great deal of planning and structure to engage all our learners. They do provide a positive experience for our second language learners, however, and will benefit their achievement. We must be mindful of our role in group instruction and take steps to assess our effectiveness (see Appendix M).

Not only should we strive to include different learning preferences in our instruction, but also we should design our assessments to include a diversity of styles. Our LEP students respond more positively to authentic assessments. As reported by Wilkens (1996), "with a new way of teaching and learning should come a new way of assessing. We certainly would show ourselves in a poor light if we introduced our students to the wide variety of activities by which we can learn to solve problems only to turn around and test this knowledge and skill with the same limiting, traditional method of assessment (p. 15). Tannenbaum (1996) discusses the idea of alternative assessments and offers these strategies for second language teachers.
1. Physical demonstrations: gestures, and hands-one tasks to act out vocabulary, concepts or events.
2. Pictorial products: drawings, dioramas, models, graphs and charts
3. KWL charts: used to begin and end a study by answering questions “What I know, What I want to know, and What I’ve Learned.”
4. Oral performances: interviews, reports, and role plays
5. Oral and written products: thinking and learning logs, dialogue journals, audio or video cassettes.
6. Portfolios: audio and video taped recordings, writing samples, art work, conference notes, checklists, tests, and quizzes.

Using these authentic assessments will provide many advantages to our LEP students. They will be able to demonstrate to us what they know in a positive environment. They will be able to identify their own growth because these activities allow students to see the progress they have made, rather than offer a comparison with other students.

Summary

In this section we have seen that it is our responsibility as educators to create several different types of learning style activities for our LEP students who demonstrate diverse preferences. The first thing we should do is inventory our own learning style to see our strengths, and then improve upon our weaknesses. The next step is to introduce learning styles to students in simple ways that are understood by everyone. We need to be aware that not all students will feel comfortable with certain learning styles so it is imperative that we provide motivation and support. We may want to rearrange the physical layout of our classrooms to accommodate learning
style preferences. Our assessment measures must be authentic, rather than linguistically-based.

**Conclusion and Plans for Future Study**

Our Hispanic LEP students are not showing significant gains in classroom achievement, nor are they completing requirements to graduate from high school. Instructional methods and assessment measures in our school are constructed with a mainstream, verbal/linguistic approach. Existing research and results of my student and teacher surveys both agree that this is not the preferred learning style of our language minority students. Rather, their approach to learning involves an interpersonal, bodily/kinesthetic and field dependent approach. These students prefer collaborative learning rather than working independently. It is the responsibility of teachers to first, find out what their preference is to learning, and second, supplement their lesson plans to include learning styles they have not yet used. The next step is to teach learning styles to their students. A survey or questionnaire administered to their second language learners would report their tendencies and preferences. From the results of the surveys we can design meaningful learning experiences for our classroom. It is important to consider the cultural background of our students, and to engage in a meaningful communication with our minority parents. Not only should we center classroom instruction on learning styles, but also design authentic assessments. Assessments that are normed without using LEP students do not give a fair evaluation of the strengths and accomplishments of our students.
The research for this thesis has given me more insight into the environment of our language minority students, their backgrounds, preferences and strengths. I reflected on my own teaching style and now see that there are changes that I need to affect in my own classroom. I see my students differently. Also, I gained insight to the opinions and observations of my fellow ESL and bilingual teachers. We must all take strides toward making accommodations in our classroom, in lesson planning, and in creating assessments for our LEP students. Our educational system needs to spend less time and money on purchasing new textbooks, and more effort into providing for a quality, equal and equitable education for all students.

PLANS FOR DISSEMINATION

I plan to first share this thesis with my fellow teachers who provided valuable survey information for me. In addition, this will be a valuable tool for mainstream teachers to help them better understand their LEP student, and give them ideas on effective approaches to use in teaching. I want to make this research available to university students who are currently studying English as a Second Language so that they might learn about the students they will one day teach in their classrooms.

The research in my thesis will be very valuable to all schools in the GRPS district that are language centers. I plan to share my work with principals and bilingual and ESL teachers who work with LEP students. Also, I would like to share it with our Second Language Center, the bilingual/ESL department that oversees all language minority programs for the district.
Per the author's request, I will mail a copy of my thesis to Professor R. L. Oxford who wrote several articles that I used in this thesis. In addition, Oxford's Style Analysis Survey is included in the Appendix.

Finally, I will explore the possibility of sharing the research for my thesis with members of the TESOL community. The focus of this thesis on learning styles of the Hispanic student would merit interest as a presentation at the TESOL Annual Convention or be of value as an article published in the TESOL Journal.
REFERENCES


School Information Profile, (1999-2000), prepared by Accountability and Planning, Grand Rapids Public Schools, Grand Rapids, MI.

http://www.ncbe.gwu.edu/ncbepubs-directions/13.htm


APPENDIX A

Learning Style Questions

Part 1. Who are you? Answer each question.

Age _________ Grade _________ Country _________

Boy or girl _________ Years in the USA _________

Part 2. Fill in the circle next to the answer that is correct for you.

1. I remember things best by writing them down.
   0 Yes 0 Sometimes 0 No

2. I like to stand when I work.
   0 Yes 0 Sometimes 0 No

3. I prefer to listen to the teacher give directions rather than reading them.
   0 Yes 0 Sometimes 0 No

4. I like to listen to music when I am working.
   0 Yes 0 Sometimes 0 No

5. I prefer to work alone on a project.
   0 Yes 0 Sometimes 0 No

6. I prefer to work in a group on a project.
   0 Yes 0 Sometimes 0 No

7. I am good at sports.
   0 Yes 0 Sometimes 0 No

8. I like to do oral reports in class.
   0 Yes 0 Sometimes 0 No

9. I am a good speller.
   0 Yes 0 Sometimes 0 No

10. I like to help others in class.
    0 Yes 0 Sometimes 0 No

11. I like to finish a project first.
    0 Yes 0 Sometimes 0 No
12. I ask the teacher many questions.
   0 Yes  0 Sometimes  0 No
13. It is easy for me to understand how someone is feeling.
   0 Yes  0 Sometimes  0 No
14. I like to write poetry.
   0 Yes  0 Sometimes  0 No
15. I am very good at working puzzles.
   0 Yes  0 Sometimes  0 No
16. It’s hard for me to think when the classroom is noisy.
   0 Yes  0 Sometimes  0 No
17. I want my teacher to feel proud of me.
   0 Yes  0 Sometimes  0 No
18. It’s hard for me to keep my notebook neat.
   0 Yes  0 Sometimes  0 No
19. My favorite subjects are math and science.
   0 Yes  0 Sometimes  0 No
20. I like to study the meaning of words.
   0 Yes  0 Sometimes  0 No
21. I like working quietly in a journal.
   0 Yes  0 Sometimes  0 No
22. The computer lab is one of my favorite activities.
   0 Yes  0 Sometimes  0 No
23. I like to draw and make things.
   0 Yes  0 Sometimes  0 No
24. I make decisions based on how I feel.
   0 Yes  0 Sometimes  0 No
25. I make decisions based on details and facts.
   0 Yes  0 Sometimes  0 No

This survey was created by L. Clay to use for this thesis, May 2001.
APPENDIX B

Attitude Inventory

Directions: Complete the following sentences to express how you really feel. There are no right or wrong answers. Put down what first comes into your mind and work as quickly as you can. Complete all the sentences and do them in order.

1. Today I feel ________________________________
2. When I have to read I ________________________________
3. I get angry when ________________________________
4. I’d read more if ________________________________
5. My idea of a good time ________________________________
6. I wish my parent knew ________________________________
7. School is ________________________________
8. I can’t understand why ________________________________
9. I feel bad when ________________________________
10. I wish teachers ________________________________
11. I wish my mother ________________________________
12. People think I ________________________________
13. On weekends, I ________________________________
14. I don’t know how ________________________________
15. To me, homework ________________________________
16. I hope I’ll never ________________________________
17. I wish people wouldn’t ________________________________
18. Most brothers and sisters ________________________________
19. The future looks ________________________________
20. I wish my father ________________________________
21. I feel proud when ________________________________
22. I often worry about ________________________________
APPENDIX C

Learning Styles and Student Performance

1. Students should identify the type of learner they are so they can know their strengths and weaknesses.

   Strongly Agree  Agree  Disagree  Strongly Disagree

2. Students having multiple learning styles show more motivation for learning.

   Strongly Agree  Agree  Disagree  Strongly Disagree

3. A student may change his learning style during the course of the school year.

   Strongly Agree  Agree  Disagree  Strongly Disagree

4. Textbooks are written to accommodate students’ varied learning styles.

   Strongly Agree  Agree  Disagree  Strongly Disagree

5. All students learn information in the same way.

   Strongly Agree  Agree  Disagree  Strongly Disagree

6. Boys have different learning styles than girls.

   Strongly Agree  Agree  Disagree  Strongly Disagree

7. Socioeconomic factors influence a student’s learning style.

   Strongly Agree  Agree  Disagree  Strongly Disagree

8. My students participate more when I incorporate rhythm and movement into my lessons.

   Strongly Agree  Agree  Disagree  Strongly Disagree

9. Most of my students perform best when assessments include multiple learning styles.

   Strongly Agree  Agree  Disagree  Strongly Disagree

10. Students should be encouraged to use their preferred learning style.

    Strongly Agree  Agree  Disagree  Strongly Disagree


    Strongly Agree  Agree  Disagree  Strongly Disagree

12. Students learn better when classroom decorations are plain and unobtrusive.

    Strongly Agree  Agree  Disagree  Strongly Disagree

13. My students work better when their desks are arranged in traditional straight lines.

    Strongly Agree  Agree  Disagree  Strongly Disagree
14. My students work better when their desks are arranged in small groups.

   Strongly Agree    Agree    Disagree    Strongly Disagree

15. Time of day impacts student learning style and performance.

   Strongly Agree    Agree    Disagree    Strongly Disagree


   Strongly Agree    Agree    Disagree    Strongly Disagree

17. Incorporating different learning styles into lesson plans improves student interest.

   Strongly Agree    Agree    Disagree    Strongly Disagree

18. Teachers should use a learning styles inventory at the beginning of the year.

   Strongly Agree    Agree    Disagree    Strongly Disagree

19. Teachers should encourage students who specialize in only 2 or 3 learning styles to try different learning styles.

   Strongly Agree    Agree    Disagree    Strongly Disagree

20. Students perform better on tests when I am enthused about the topic I teach.

   Strongly Agree    Agree    Disagree    Strongly Disagree

21. Building cohesion in the classroom is important for classroom environment.

   Strongly Agree    Agree    Disagree    Strongly Disagree

22. Schools should conduct professional development training for teachers on the use of learning styles in the classroom.

   Strongly Agree    Agree    Disagree    Strongly Disagree

23. It is important for teachers to discuss children's learning styles with their parents.

   Strongly Agree    Agree    Disagree    Strongly Disagree

24. Teacher instruction should address all the different learning styles.

   Strongly Agree    Agree    Disagree    Strongly Disagree

25. All lessons should include the use of visual displays to reinforce key concepts.

   Strongly Agree    Agree    Disagree    Strongly Disagree

APPENDIX D

Mrs. Dzienski's Learning & Activity Center

STUDENT'S LEARNING STYLE & MULTIPLE INTELLIGENCES PROFILE INVENTORY, Etc.

The student prefers or does best when—

Multiple Intelligences Profile

<table>
<thead>
<tr>
<th>Appreciates</th>
<th>Performs</th>
<th>Creates</th>
<th>Innovates</th>
<th>Limited Interest</th>
</tr>
</thead>
</table>

- Bodily-Kinesthetic
- Interpersonal
- Intrapersonal
- Linguistic
- Logical-Mathematical
- Musical
- Spatial

Appreciates—Consistently demonstrates interest and enjoyment differentiates qualities.
Performs—Applies a given intelligence to recreate an exhibit or demonstration; solves problems in a given situation.
Creates—Applies a given intelligence to generate original works.
Innovates—Applies a given intelligence to develop unique solutions or prototypes (generally limited to 1-2% of the population).
Limited Interest—In the classroom, student displays limited interest at this time.

Multiple Intelligences Choices—When given a choice, the student typically chooses activities in the following—
Intelligences: Spatial Musical Bodily-Kinesthetic Linguistic Logical Mathematical
Student prefers to work: Alone With Others

Circle what applies to the student

<table>
<thead>
<tr>
<th>Type of Intelligence</th>
<th>Examples of Relevant Behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bodily-Kinesthetic: The ability to use one's body skillfully.</td>
<td>Dancing</td>
</tr>
<tr>
<td></td>
<td>Playing basketball</td>
</tr>
<tr>
<td></td>
<td>Performing pantomime</td>
</tr>
<tr>
<td>Interpersonal: The ability to notice subtle aspects of other people's behaviors.</td>
<td>Reading another's mood</td>
</tr>
<tr>
<td></td>
<td>Detecting another's underlying intentions and desires</td>
</tr>
<tr>
<td></td>
<td>Using knowledge of others to influence their thoughts and behaviors</td>
</tr>
</tbody>
</table>

Student's Name, etc.
<table>
<thead>
<tr>
<th>Intrapersonal:</th>
<th>Discriminating among such similar emotions as sadness or regret</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awareness of one’s own feelings, motivations, &amp; desires.</td>
<td>Identifying the motives guiding one’s own behavior</td>
</tr>
<tr>
<td></td>
<td>Using self-knowledge to relate more effectively with others</td>
</tr>
<tr>
<td>Linguistic:</td>
<td>Making persuasive arguments</td>
</tr>
<tr>
<td>The ability to use language effectively.</td>
<td>Writing poetry</td>
</tr>
<tr>
<td></td>
<td>Being sensitive to subtle nuances in word meanings</td>
</tr>
<tr>
<td>Logical-mathematical:</td>
<td>Solving mathematical problems quickly</td>
</tr>
<tr>
<td>The ability to reason logically, especially in mathematics and science.</td>
<td>Generating mathematical proofs</td>
</tr>
<tr>
<td></td>
<td>Formulating and testing hypotheses about observed phenomena</td>
</tr>
<tr>
<td>Musical:</td>
<td>Playing a musical instrument</td>
</tr>
<tr>
<td>The ability to create, comprehend, and appreciate music</td>
<td>Composing a musical work</td>
</tr>
<tr>
<td></td>
<td>Having a keen awareness of the underlying structure of music</td>
</tr>
<tr>
<td>Spatial:</td>
<td>Conjuring up mental images in one’s mind</td>
</tr>
<tr>
<td>The ability to notice detail of what one sees and to imagine and manipulate visual objects in one’s mind.</td>
<td>Drawing a visual likeness of an object</td>
</tr>
<tr>
<td></td>
<td>Making fine discriminations among very similar objects</td>
</tr>
</tbody>
</table>

**Accommodating Reading Styles**

**Students with Perceptual Strengths Can Easily:**

<table>
<thead>
<tr>
<th>Visual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recall what they see</td>
</tr>
<tr>
<td>Follow written or drawn instructions</td>
</tr>
<tr>
<td>Learn by observing people, objects, pictures, etc.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Auditory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recall what they hear</td>
</tr>
<tr>
<td>Follow spoken instructions</td>
</tr>
<tr>
<td>Learn by listening and speaking</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tactile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recall what they touch</td>
</tr>
<tr>
<td>Follow instructions they write or touch</td>
</tr>
<tr>
<td>Learn by touching or manipulating objects</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Kinesthetic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recall what they experience</td>
</tr>
<tr>
<td>Follow instructions that they perform or rehearse</td>
</tr>
<tr>
<td>Learn when engaged in physical activity</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Global</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tendencies</td>
</tr>
<tr>
<td>Often:</td>
</tr>
<tr>
<td>Make decisions based on emotions and intuition</td>
</tr>
<tr>
<td>Are spontaneous, random</td>
</tr>
<tr>
<td>Focus on creativity and inventiveness</td>
</tr>
<tr>
<td>Care less about a tidy environment</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Analytic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Often:</td>
</tr>
<tr>
<td>Make decisions based on logic or common sense</td>
</tr>
<tr>
<td>Plan and organize will</td>
</tr>
<tr>
<td>Focus on details and facts</td>
</tr>
<tr>
<td>Likes a tidy environment</td>
</tr>
</tbody>
</table>
APPENDIX E

Verbal/Linguistic Learning Style

Students

No Preference 70%

Preference 30%

Teacher Observations

No Preference 50%

Preference 50%
APPENDIX F

Bodily/Kinesthetic Learning Style

Students

No Preference 42%
Preference 58%

Teacher Observations

No Preference 43%
Preference 57%
APPENDIX G

Spatial/Logical/Mathematical Learning Styles

Students

No Preference 31%
Preference 69%

Teacher Observations

No Preference 65%
Preference 35%
APPENDIX H

Interpersonal Learning Styles

Students

- No Preference: 36%
- Preference: 64%

Teacher Observations

- No Preference: 46%
- Preference: 50%
APPENDIX I

Intrapersonal Learning Style

Students

Preference
64%

No Preference
36%

Teacher Observations

Preference
33%

No Preference
67%
APPENDIX J

Field Independence Learning Style

Students

Preference 35%
No Preference 65%

Teacher Observations

Preference 30%
No Preference 70%
APPENDIX K

Field Dependence Learning Styles

Students

No Preference 36%
Preference 64%

Teacher Observations

No Preference 30%
Preference 70%
APPENDIX L

Musical Learning Style

Students

Prefer 68%

No Preference 32%

Teacher Observations

Prefer 33%

No Preference 67%
**Instructor Self-Assessment Form:**

*Group Work Design and Implementation*

Kate Kinsella

<table>
<thead>
<tr>
<th>Instructor: __________________</th>
<th>Class: ________________</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date: ________</td>
<td></td>
</tr>
</tbody>
</table>

**Directions:** Rate yourself for each instructional behavior using the following scale:

<table>
<thead>
<tr>
<th>3 - Always</th>
<th>2 - Usually</th>
<th>1 - Sometimes</th>
<th>0 - Never</th>
</tr>
</thead>
</table>

1. I establish consistent routines and procedures for group work: e.g., roles, physical arrangement, grouping formations, reporting, processing, and assessment.

2. I prepare my students with vocabulary and language strategies necessary for the activity.

3. I select or design activities which lend themselves to group process, those which clearly necessitate task-based, active collaboration and invite multiple contributions.

4. I select or design activities with multiple parts, which allow students with diverse learning and work styles to draw upon their strengths.

5. I make explicit the purpose, procedures, and expected outcome of the group activity.

6. I select or design activities which require that students produce some form of meaningful and tangible final product.

7. I include, when possible, group work assignments which help to personalize the curriculum by relating it to the students' cultures, communities, daily lives, and interests.

8. I build in considerable context before presenting the assignment, using techniques which accommodate a variety of sensory modalities and information-processing strengths.

9. I relate the assignment to previous lessons and previous group activities.

10. I break a more complicated and challenging task into manageable, clearly delineated steps.

11. I give clear oral instructions for the assignment, accompanied by some form of visual aid; I write the assignment goals, time frame, and procedures on a handout, on the chalkboard, or on an overhead transparency.

12. I model the task or a part of the task, and check to see if all students understand the instructions before placing them in groups.

13. I establish a clear and adequate time frame for students to complete all parts of the task.
14. I explain the various group member roles with behaviors necessary for completion of the task.

15. If I assign students to groups or if I allow them to form their own groups, I have a clear rationale for the group formations.

16. When I form groups, I am sensitive to cultural and affective variables.

17. I encourage cooperation, mutual support, and development of group accomplishment.

18. I take a noticeably active, facilitative role while groups are in progress by providing feedback and guidance, and when necessary getting students back on track.

19. I save adequate time to process the completed small-group activity as a unified class, clarifying what was learned and validating what was accomplished.

20. I incorporate listening and responding tasks for students to complete during individual small-group reports, to facilitate task processing and ensure active learning and accountability: e.g., note-taking, oral summarizing, question formation.

21. I provide feedback to individuals and groups on their prosocial skills and academic accomplishments during and/or after completion of the small-group activity.

22. I ask students to assess their individual and/or small group performance by means of a manageable form, quickwrite, or journal entry.

23. I make sure that students see the connection between what was generated, practiced, or accomplished during a small-group activity and any follow-up individual assignment.

24. I incorporate regular and balanced opportunities for my students to work in class in varied groupings: independent, partner, small group, and unified class.

APPENDIX N

Perceptual Learning Style Preference Survey
Joy Reid

Directions: People learn in many different ways. For example, some people learn primarily with their eyes (visual learners) or with their ears (auditory learners); some people prefer to learn by experience and/or by "hands-on" tasks (kinesthetic or tactile learners); some people learn better when they work alone, and others prefer to learn in groups. This questionnaire has been designed to help you identify the way(s) you learn best—the way(s) you prefer to learn.

Read each statement on the following pages. Please respond to the statements as they apply to your study of English. Decide whether you agree or disagree with each statement. For example, if you strongly agree (SA), mark:

<table>
<thead>
<tr>
<th>strongly agree (SA)</th>
<th>agree (A)</th>
<th>undecided (U)</th>
<th>disagree (D)</th>
<th>strongly disagree (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Please respond to each statement quickly, without too much thought. Try not to change your responses after you choose them. Please answer all the questions. Then use the materials that follow the questionnaire to score your responses.

| 1. When the teacher tells me the instructions, I understand better. | SA | A | U | D | SD |
| 2. I prefer to learn by doing something in class. | | | | | |
| 3. I get more work done when I work with others. | | | | | |
| 4. I learn more when I study with a group. | | | | | |
| 5. In class, I learn best when I work with others. | | | | | |
| 6. I learn better by reading what the teacher writes on the chalkboard. | | | | | |
| 7. When someone tells me how to do something in class, I learn it better. | | | | | |
| 8. When I do things in class, I learn better. | | | | | |
| 9. I remember things I have heard in class better than things I have read. | | | | | |
| 10. When I read instructions, I remember them better. | | | | | |
11. I learn more when I can make a model of something.

12. I understand better when I read instructions.

13. When I study alone, I remember things better.

14. I learn more when I make something for a class project.

15. I enjoy learning in class by doing experiments.

16. I learn better when I make drawings as I study.

17. I learn better in class when the teacher gives a lecture.

18. When I work alone, I learn better.

19. I understand things better in class when I participate in role-playing.

20. I learn better in class when I listen to someone.

21. I enjoy working on an assignment with two or three classmates.

22. When I build something, I remember what I have learned better.

23. I prefer to study with others.

24. I learn better by reading than by listening to someone.

25. I enjoy making something for a class project.

26. I learn best in class when I can participate in related activities.

27. In class, I work better when I work alone.

28. I prefer working on projects by myself.

29. I learn more by reading textbooks than by listening to a lecture.

30. I prefer to work by myself.

Self-Scoring Sheet for Perceptual Learning Style Preference Survey

Directions: There are 5 statements for each learning category in this questionnaire. The questions are grouped below according to each learning style. Each question you answer has a numerical value:

<table>
<thead>
<tr>
<th>strongly agree</th>
<th>agree</th>
<th>undecided</th>
<th>disagree</th>
<th>strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>(SA)</td>
<td>(A)</td>
<td>(U)</td>
<td>(D)</td>
<td>(SD)</td>
</tr>
<tr>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

Fill in the blanks below with the numerical value of each answer. For example, if you answered strongly agree for statement 6 (a visual question), write the number 5 (SA) on the blank next to question 6.
Visual

6—5

When you have completed all the numerical values for Visual, add the numbers together. Multiply the answer by 2, and put the total in the appropriate blank.

Follow this process for each of the learning style categories. When you are finished, look at the scale that follows. It will help you determine your major learning style preference(s): score: 38–50

minor learning style preference(s): score: 25–37

negligible learning styles: score: 0–24

If you need help, please ask your teacher.

### Scoring Sheet

<table>
<thead>
<tr>
<th>Visual</th>
<th>Tactile</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>11</td>
</tr>
<tr>
<td>10</td>
<td>14</td>
</tr>
<tr>
<td>12</td>
<td>16</td>
</tr>
<tr>
<td>24</td>
<td>22</td>
</tr>
<tr>
<td>29</td>
<td>25</td>
</tr>
<tr>
<td>Total</td>
<td>x 2 =</td>
</tr>
<tr>
<td>Score</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Auditory</th>
<th>Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td>17</td>
<td>21</td>
</tr>
<tr>
<td>20</td>
<td>23</td>
</tr>
<tr>
<td>Total</td>
<td>x 2 =</td>
</tr>
<tr>
<td>Score</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Kinesthetic</th>
<th>Individual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>13</td>
</tr>
<tr>
<td>8</td>
<td>18</td>
</tr>
<tr>
<td>15</td>
<td>27</td>
</tr>
<tr>
<td>19</td>
<td>28</td>
</tr>
<tr>
<td>26</td>
<td>30</td>
</tr>
<tr>
<td>Total</td>
<td>x 2 =</td>
</tr>
<tr>
<td>Score</td>
<td></td>
</tr>
</tbody>
</table>

Major learning style preference(s) score: 38–50

Minor learning style preference(s) score: 25–37

Negligible learning styles score: 0–24

APPENDIX O

Academic Work Style Survey

Kate Kinsella

Directions: This survey has been designed to help you and your teacher better understand the way you usually prefer to work on assignments in class. Please read each statement; then, taking into consideration your past and present educational experiences, decide whether you mostly agree or mostly disagree with each statement.

<table>
<thead>
<tr>
<th></th>
<th>Agree</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. When I work on assignments by myself, I often feel frustrated or bored.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. When I work by myself on assignments (instead of with a partner or a small group), I usually do a better job.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. I enjoy having opportunities to share opinions and experiences, compare answers, and solve problems with a group of classmates.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. When I work by myself on assignments, I usually concentrate better and learn more.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. I prefer working on assignments in class with a single partner rather than with a group of classmates.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Most of the time, I prefer to work by myself in class rather than with a partner or a small group.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. I enjoy having opportunities to share opinions and experiences, compare answers, and solve problems with a single partner more than with a group.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. When I work with a partner or a small group in class instead of by myself, I often feel frustrated or like I am wasting time.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. When I work with a small group in class, I usually learn more and do a better job on the assignment.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Most of the time, I prefer to work in class with a single partner rather than by myself.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Most of the time, I prefer to work with a group rather than with a single partner or by myself.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. When I work with a partner in class, I usually learn more and do a better job on the assignment.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. I am more comfortable working with classmates when I can select the partner or group with whom I will be working.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Usually, I prefer that the instructor select the partner or the group of classmates with whom I will be working.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
15. Usually, I find working with a partner to be more interesting and productive than working alone in class. ___ ___

16. I prefer working in groups when there is a mixture of students from different backgrounds. ___ ___

17. I hope we will have regular opportunities in this class to work in groups. ___ ___

18. I generally accomplish more when I work with a partner on a task in class. ___ ___

19. I hope we will not do too much group work in this class. ___ ___

20. I prefer working with classmates from my same background. ___ ___

21. I hope we will have regular opportunities in this class to work with a partner. ___ ___

22. I mainly want my teacher to give us classroom assignments that we can work on by ourselves. ___ ___

23. Usually, I find working in a group to be more interesting and productive than working alone in class. ___ ___

24. Usually, I find working in a group to be a waste of time. ___ ___

25. I generally accomplish more when I work with a group on a task in class. ___ ___

**Directions:** Give yourself 1 point if you agree with the following survey items and 0 points if you disagree. Next, add the points under each heading. The greatest total indicates the way you usually prefer to work in class.

<table>
<thead>
<tr>
<th>Independently</th>
<th>With a partner</th>
<th>With a group</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. ___</td>
<td>5. ___</td>
<td>1. ___</td>
</tr>
<tr>
<td>4. ___</td>
<td>7. ___</td>
<td>3. ___</td>
</tr>
<tr>
<td>6. ___</td>
<td>10. ___</td>
<td>9. ___</td>
</tr>
<tr>
<td>8. ___</td>
<td>12. ___</td>
<td>11. ___</td>
</tr>
<tr>
<td>19. ___</td>
<td>15. ___</td>
<td>17. ___</td>
</tr>
<tr>
<td>22. ___</td>
<td>18. ___</td>
<td>23. ___</td>
</tr>
<tr>
<td>24. ___</td>
<td>21. ___</td>
<td>25. ___</td>
</tr>
<tr>
<td><strong>TOTAL</strong> ___</td>
<td><strong>TOTAL</strong> ___</td>
<td><strong>TOTAL</strong> __*</td>
</tr>
</tbody>
</table>

APPENDIX P

Style Analysis Survey (SAS):
Assessing Your Own Learning and Working Styles
Rebecca L. Oxford

Purpose: The SAS is designed to assess your general approach to learning and working. It does not predict your behavior in every instance, but it is a clear indication of your overall style preferences.

Timing: It usually takes about 30 minutes to complete the SAS. Do not spend too much time on any one item. Indicate your immediate response and move on to the next item.

Instructions: For each item circle the response that represents your approach:

0 - Never 1 - Sometimes 2 - Very Often 3 - Always

Complete all items. There are five major activities representing five different aspects of your learning and working style. At the end you will find a self-scoring key and an interpretation of the results.

Activity 1: How I Use My Physical Senses to Study or Work

<table>
<thead>
<tr>
<th>Item</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I remember something better if I write it down.</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>2. I take lots of notes.</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>3. I can visualize pictures, numbers, or words in my head.</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>4. I prefer to learn with video or TV more than any other media.</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>5. I underline or highlight the important parts as I read.</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>6. I use color-coding to help me as I learn or work.</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>7. I need written directions for tasks.</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>8. I get distracted by background noises.</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>9. I have to look at people to understand what they say.</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>10. I am more comfortable when the walls where I study or work have posters and pictures.</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>11. I remember things better if I discuss them out loud.</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>12. I prefer to learn by listening to a lecture or a tape, rather than by reading.</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>13. I need oral directions for tasks.</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>14. Background sounds help me think.</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>15. I like to listen to music when I study or work.</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>16. I can easily understand what people say even if I can’t see them.</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>17. I remember better what people say than what they look like.</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>18. I easily remember jokes that I hear.</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>19. I can identify people by their voices.</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>20. When I turn on the TV, I listen to the sound more than watching the screen.</td>
<td>0 1 2 3</td>
</tr>
</tbody>
</table>
21. I'd rather just start doing things rather than pay attention to directions. 0 1 2 3
22. I need frequent breaks when I work or study. 0 1 2 3
23. I move my lips when I read silently. 0 1 2 3
24. I avoid sitting at a desk when I don't have to. 0 1 2 3
25. I get nervous when I sit still too long. 0 1 2 3
26. I think better when I can move around. 0 1 2 3
27. Manipulating objects helps me to remember. 0 1 2 3
28. I enjoy building or making things. 0 1 2 3
29. I like a lot of physical activities. 0 1 2 3
30. I enjoy collecting cards, stamps, coins, or other things. 0 1 2 3

### Activity 2: How I Deal with Other People

For each item circle the response that represents your approach:

<table>
<thead>
<tr>
<th></th>
<th>0 – Never</th>
<th>1 – Sometimes</th>
<th>2 – Very Often</th>
<th>3 – Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I prefer to work or study with others.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. I make new friends easily.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. I like to be in groups of people.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. It is easy for me to talk to strangers.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. I keep up with personal news about other people.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. I like to stay late at parties.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Interactions with new people give me energy.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. I remember people's names easily.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. I have many friends and acquaintances.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Wherever I go, I develop personal contacts.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. I prefer to work or study alone.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. I am rather shy.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. I prefer individual hobbies and sports.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. It is hard for most people to get to know me.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. People view me as more detached than sociable.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. In a large group, I tend to keep silent.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. Gatherings with lots of people tend to stress me.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. I get nervous when dealing with new people.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. I avoid parties if I can.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. Remembering names is difficult for me.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Activity 3: How I Handle Possibilities

For each item circle the response that represents your approach:

<table>
<thead>
<tr>
<th>0 – Never</th>
<th>1 – Sometimes</th>
<th>2 – Very Often</th>
<th>3 – Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I have a vivid imagination.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. I like to think of lots of new ideas.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. I can think of many different solutions to a problem.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. I like multiple possibilities and options.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. I enjoy considering future events.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Following a step-by-step procedure bores me.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. I like to discover things rather than have everything explained.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. I consider myself original.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. I am an ingenious person.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. It doesn’t bother me if the teacher or boss changes a plan.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. I am proud of being practical.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. I behave in a down-to-earth way.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. I am attracted to sensible people.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. I prefer realism to new, untested ideas.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. I prefer things presented in a step-by-step way.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. I want a class or work session to follow a clear plan.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. I like concrete facts, not speculation.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. Finding hidden meanings is frustrating or irrelevant to me.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. I prefer to avoid too many options.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. I feel it is useless for me to think about the future.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Activity 4: How I Approach Tasks

For each item circle the response that represents your approach:

<table>
<thead>
<tr>
<th>0 – Never</th>
<th>1 – Sometimes</th>
<th>2 – Very Often</th>
<th>3 – Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I reach decisions quickly.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. I am an organized person.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. I make lists of things I need to do.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. I consult my lists in order to get things done.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Messy, unorganized environments make me nervous.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. I start tasks on time or early.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. I get places on time.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Deadlines help me organize work.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. I enjoy a sense of structure</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. I follow through with what I have planned.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
11. I am a spontaneous person. 0 1 2 3
12. I like to just let things happen, not plan them. 0 1 2 3
13. I feel uncomfortable with a lot of structure. 0 1 2 3
14. I put off decisions as long as I can. 0 1 2 3
15. I have a messy desk or room. 0 1 2 3
16. I believe that deadlines are artificial or useless. 0 1 2 3
17. I keep an open mind about things. 0 1 2 3
18. I believe that enjoying myself is the most important thing. 0 1 2 3
19. Lists of tasks make me feel tired or upset. 0 1 2 3
20. I feel fine about changing my mind. 0 1 2 3

Activity 5: How I Deal with Ideas
For each item circle the response that represents your approach:
0 – Never   1 – Sometimes   2 – Very Often   3 – Always

1. I prefer simple answers rather than a lot of explanations. 0 1 2 3
2. Too many details tend to confuse me. 0 1 2 3
3. I ignore details that do not seem relevant. 0 1 2 3
4. It is easy for me to see the overall plan or big picture. 0 1 2 3
5. I can summarize information rather easily. 0 1 2 3
6. It is easy for me to paraphrase what other people say. 0 1 2 3
7. I see the main point very quickly. 0 1 2 3
8. I am satisfied with knowing the major ideas without the details. 0 1 2 3
9. I can pull together (synthesize) things easily. 0 1 2 3
10. When I make an outline, I write down only the key points. 0 1 2 3
11. I prefer detailed answers instead of short answers. 0 1 2 3
12. It is difficult for me to summarize detailed information. 0 1 2 3
13. I focus on specific facts or information. 0 1 2 3
14. I enjoy breaking general ideas down into smaller pieces. 0 1 2 3
15. I prefer looking for differences rather than similarities. 0 1 2 3
16. I use logical analysis to solve problems. 0 1 2 3
17. My written outlines contain many details. 0 1 2 3
18. I become nervous when only the main ideas are presented. 0 1 2 3
19. I focus on the details rather than the big picture. 0 1 2 3
20. When I tell a story or explain something, it takes a long time. 0 1 2 3
SCORING SHEET

Activity 1: How I Use My Physical Senses to Study or Work
Add your score for items 1–10. _____ (visual)
Add your score for items 11–20. _____ (auditory)
Add your score for items 21–40. _____ (hands-on)
Circle the score that is the largest. If two scores are within 2 points of each other, circle both of them. If all three scores are within 2 points of each other, circle all three. The circle(s) represent(s) your preferred sense(s) for learning and working.

Activity 2: How I Deal with Other People
Add your score for items 1–10. _____ (extroverted)
Add your score for items 11–20. _____ (introverted)
Circle the score that is the largest. If two scores are within 2 points of each other, circle both of them. The preferred circle(s) represent(s) your preferred way(s) of dealing with other people.

Activity 3: How I Handle Possibilities
Add your score for items 1–10. _____ (intuitive)
Add your score for items 11–20. _____ (concrete-sequential)
Circle the score that is the largest. If two scores are within 2 points of each other, circle both of them. The preferred circle(s) represent(s) your preferred way(s) of handling possibilities.

Activity 4: How I Approach Tasks
Add your score for items 1–10. _____ (closure-oriented)
Add your score for items 11–20. _____ (open)
Circle the score that is the largest. If two scores are within 2 points of each other, circle both of them. The preferred circle(s) represent(s) your preferred way(s) of approaching tasks.

Activity 5: How I Deal with Ideas
Add your score for items 1–10. _____ (global)
Add your score for items 11–20. _____ (analytic)
Circle the score that is the largest. If two scores are within 2 points of each other, circle both of them. The preferred circle(s) represent(s) your preferred way(s) of dealing with ideas.

HOW TO UNDERSTAND AND USE THE RESULTS

Activity 1: How I Use My Physical Senses to Study or Work
In class: If you are a visual person, you rely on the sense of sight, and you learn best through visual means (books, videos). If you are an auditory person, you prefer listening and speaking activities (discussions, debates, audiotapes, role-plays, lectures). If you are a hands-on person, you benefit from doing projects, working with objects, and moving around the room (games, building models, conducting experiments).
On the job: If you are a visual person, you rely most on your sense of sight to gain knowledge or understanding (manuals, graphics). If you are an auditory person, you prefer to listen to information (meetings, tapes) rather than read it. If you are a hands-on person, you benefit most from getting involved in the information-gathering process (computers, research) or from doing projects, building things, and working with objects.

Anywhere: If two or all three of these senses are strong, you are flexible enough to enjoy a wide variety of activities.

Activity 2: How I Deal with Other People

In class: If you are extroverted, you enjoy a wide range of social, interactive learning tasks (games, conversations, discussions, debates, role-plays, simulations). If you are more introverted, you like to do more independent work (studying or reading by yourself or learning with the computer) or enjoy working with one other person you know well.

On the job: If you are extroverted, you enjoy a wide range of social and interactive tasks (meetings, discussions, teamwork). If you are introverted, you like to work independently (computers, individual projects) or enjoy working with one other person you know well.

Anywhere: If your scores are close, then you are balanced in the sense that you work easily with others and by yourself.

Activity 3: How I Handle Possibilities

In class: If you are intuitive, you are future-oriented, able to seek out the major principles of the topic, like to speculate about possibilities, enjoy abstract thinking, and avoid step-by-step instruction. If your preference is concrete-sequential, you are present-oriented and prefer one-step-at-a-time activities and want to know where you are going in your learning at every moment.

On the job: If you are intuitive, you like to plan ahead for creative, new directions (designing, overall planning) in a non-linear, flexible way. If you prefer a concrete-sequential approach, you want people to be able to depend on your abilities, are highly organized, prefer step-by-step work procedures, and like control.

Anywhere: If the two scores are close, then you can switch modes easily from intuitive to concrete-sequential.

Activity 4: How I Approach Tasks

In class: If your score is higher for closure, you focus carefully on all learning tasks, meet deadlines, plan ahead for assignments, and want explicit directions. If openness has a high score, you enjoy discovery learning (in which you pick up information in an unstructured way) and prefer to relax and enjoy your learning without concern for deadlines or rules.

On the job: If your higher score is closure, this means your work habits are very structured and serious, and you are oriented toward getting the job done on time or early. If your score is higher for openness, you are more relaxed and unstructured in your approach to work, and you don't care much about deadlines or regulations.

Anywhere: If the two scores are close, you have a balance between closure and openness; you enjoy the freedom of limited structure and can still get the task done before the deadline without stress.
Activity 5: How I Deal with Ideas

In class: If you are global, you enjoy getting the main idea, guessing meanings, and communicating even if you don't know all the words or concepts. If you are analytic, you focus more on details, logical analysis, and contrasts.

On the job: If you are global, you focus at work on the key points and are not as concerned about details. If you are analytic, you are a "detail person" who is known for being logical, and you are not as skilled with seeing the big picture right away.

Anywhere: If the two scores are close, you easily move from global thinking to analytic thinking and back again.

TIPS

Each style preference (within a given activity above) offers significant strengths in learning and working. Recognize your strengths and apply them often. Also, enhance your learning and working power by being aware of the style areas that you do not use and by developing them. Tasks that do not seem quite as suited to your style preferences will help you stretch beyond your ordinary "comfort zone" and expand your learning and working potential.

For example, if you are a highly global person, you might need to learn to use analysis and logic in order to work or learn more effectively. If you are an extremely analytic person, you might be missing out on some useful global characteristics, like getting the main idea quickly, and you can develop such qualities in yourself through practice. You won't lose your basic strengths by trying something new; you will simply develop another side of yourself that is likely to be very helpful.

If you aren't sure how to attempt new behaviors that go beyond your favored style, then ask your colleagues, friends, or teachers to give you a hand. Talk with someone who has a different style from yours, and see how that person does it.

Improve your learning or working situation by stretching your style!

Letter to Teacher Participants

TO: Bilingual/ESL Teachers
FROM: Linda Clay
DATE: 6/4/01
SUBJECT: Learning Styles of Bilingual/ESL Students

I am currently doing research for my Masters Thesis at Grand Valley State University on Learning Styles of Limited English Proficiency (LEP) students. I am interested in your opinion on this subject, as well as a brief diagnosis on some of your students.

I would greatly value your input for my research. Attached is a Learning Styles and Student Performance survey that I would like you to complete. Also, could you complete the Student’s Learning Style & Multiple Intelligences Profile Inventory for five of your students? Please use first names only on these forms.

This is a very busy time in our school year and I know your time is limited. I have included a stamped, self-addressed envelope for you to return these forms to me at your convenience.

I am very enthused about my research and will be happy to share it with you upon completion. Thank you very much for your help.
APPENDIX R

Principal Permission Letter

June 4, 2001

TO: Mrs. Debbie White, Principal
Stocking Elementary School

May I receive permission to conduct a study in our school using materials and summary data obtained from students' surveys and questionnaires? I will not be using any individual student data that could be traced to the student (such as copies of writing or test scores).

I plan to use student work in summary form only. If you have any questions about the study, please contact me at 977-0890. If you have any questions about the human subjects rights in the study, you may contact the Chair of Grand Valley’s Human Research Review Committee, Paul Huizenga, at 616-895-2472.

Linda Clay
Bilingual/ESL Support Teacher

Approved by: _______ ____________ (signature, position and date)
APPENDIX S

Grand Rapids Public Schools Permission Letter

June 4, 2001

To Whom It May Concern:

Linda Clay has the permission of the Grand Rapids Public School District to use and include the following materials in her Masters Thesis for Grand Valley State University:

1. Grand Rapids Public School District materials pertinent to her study and included in her Masters Thesis.
2. Materials created by Grand Rapids Public School staff which are pertinent to this body of work.
3. Materials developed by Linda Clay for this study.

All materials pertaining to Grand Rapids Public Schools as well as all materials produced by employees of the district may NOT be reproduced without written permission for the district.

Sincerely,

(Signature, Position, School District name)
APPENDIX T

Copyright Permission Letter

June 15, 2001

Prof. Rebecca L. Oxford  
Dept. of Curriculum/Instruction  
207 Graves Hall  
University of Alabama  
Tuscaloosa, AL 35487

Dear Prof. Oxford:

I am currently enrolled in the Grand Valley State University (GVSU) Advanced Studies in Education Program, and I am writing a thesis for the completion of my Master's in Education. My thesis is entitled "The Impact of Learning Styles on Limited English Proficiency (LEP) Students." May I receive permission to include in the appendices a copy of the following items printed in the book Understanding Learning Styles in the Second Language Classroom by Joy Reid?

Style Analysis Survey (SAS): Assessing Your Own Learning and Working Styles

Your signature at the bottom portion of this letter confirms your ownership of the above item. The inclusion of your copyrighted material will not restrict your re-publication of the material in any other form. Please advise if you wish a specific copyright notice to be included on each page. My thesis will be cataloged in the GVSU library and will be available to other students and colleges for circulation.

Sincerely,

Linda J. Clay  
126 Ivanhoe NE  
Grand Rapids, MI 49546  
Telephone: 616-977-0890  
Fax: 616-942-0515  
E-mail: lsclay@aol.com

Please return this signed form via fax to 616-942-0515.

PERMISSION IS GRANTED TO Linda J. Clay to include the requested materials in her GVSU Master's of Education thesis.

Name:  
Address: 4007 Beachwood Rd  
Date: 7/7/01  
University Park, MD 20782
APPENDIX U

Copyright Permission Letter

June 15, 2001

Prof. Joy Reid
E-mail: jreid@uwyo.edu

Subject: Copyright Permission

I am currently enrolled in the Grand Valley State University (GVSU) Advanced Studies in Education Program, and I am writing a thesis for the completion of my Master’s in Education. My thesis is entitled “The Impact of Learning Styles on Limited English Proficiency (LEP) Students.” May I receive permission to include in the appendices a copy of the following items printed in your book *Understanding Learning Styles in the Second Language Classroom*

Perceptual Learning Style Preference Survey

Your signature at the bottom portion of this letter confirms your ownership of the above item. The inclusion of your copyrighted material will not restrict your re-publication of the material in any other form. Please advise if you wish a specific copyright notice to be included on each page. My thesis will be cataloged in the GVSU library and will be available to other students and colleges for circulation.

Sincerely,

Linda J. Clay
126 Ivanhoe NE
Grand Rapids, MI 49546
Telephone: 616-977-0890
Fax: 616-942-0515
E-mail: lsclay@aol.com

Please return this signed form via fax to 616-942-0515.

PERMISSION IS GRANTED TO Linda J. Clay to include the requested materials in her GVSU Master’s of Education thesis.

Prentice-Hall, Inc.

Permission granted by: _____________________________

Title: _____________________________

Date: _____________________________
Dear Ms. Clay: I can't open your document on my home computer, but I plan a trip to Laramie within the next week, and I'll try there. Meanwhile, barring any really strange discoveries (-), you certainly have my permission to use my learning styles survey in your thesis. If that's what you're asking about.

Joy Reid

---Original Message---
From: Lsclay@aol.com
To: Joy M. Reid
Sent: 6/16/2001 5:49 AM
Subject: Copyright permission

June 16, 2001

Dear Prof. Reid,

May I receive your permission to use your work in my Master's Thesis?
Please refer to the attached document.

Thank you.

Linda Clay
<copyright.doc>
APPENDIX V
Copyright Permission Letter

June 15, 2001

Prof. Kate Kinsella
E-mail: katek@sfsu.edu

I am currently enrolled in the Grand Valley State University (GVSU) Advanced Studies in Education Program, and I am writing a thesis for the completion of my Master's in Education. My thesis is entitled "The Impact of Learning Styles on Limited English Proficiency (LEP) Students." May I receive permission to include in the appendices a copy of the following items printed in the book Understanding Learning Styles in the Second Language Classroom by Joy Reid?

Academic Work Style Survey
Instructor Self-Assessment Form: Group Work Design and Implementation

Your signature at the bottom portion of this letter confirms your ownership of the above item. The inclusion of your copyrighted material will not restrict your re-publication of the material in any other form. Please advise if you wish a specific copyright notice to be included on each page. My thesis will be cataloged in the GVSU library and will be available to other students and colleges for circulation.

Sincerely,

Linda J. Clay
126 Ivanhoe NE
Grand Rapids, MI 49546
Telephone: 616-977-0890
Fax: 616-942-0515
E-mail: lsclay@aol.com

Please return this signed form via fax to 616-942-0515.

PERMISSION IS GRANTED TO Linda J. Clay to include the requested materials in her GVSU Master's of Education thesis.

Name: Kate Kinsella, Ed.D
Address 844 14th Ave. Menlo Park, CA 94025 Date: 6/20/01
Linda:


Best wishes.

K Kinsella

on 6/16/01 4:57 AM, Lsclay@aol.com at Lsclay@aol.com wrote:

June 16, 2001

Dear Prof. Kinsella,

May I receive permission to include your work in my Master's Thesis? Please refer to the attached document. Thank you.

Linda Clay
ABSTRACT: Limited English Proficiency (LEP) students are not attaining academic success in public schools. Enrollment of Hispanic students is increasing, but at the same time assessment of their work shows little achievement. A crucial issue in the education of language minority students is how they learn. This thesis examines their learning style preferences through data gathered from student and teacher surveys and then correlates it to existing research. The conclusion drawn is that Hispanic LEP students are not being taught in their preferred learning styles and that the primary manner of verbal/linguistic instruction used in schools is a deterrent to successful learning. Recommendations for instruction and assessment are given.