DOCUMENT RESUME

ED 450 534 EC 308 292

AUTHOR Nover, Stephen M.; Andrews, Jean F.
TITLE Critical Pedagogy in Deaf Education: Teachers' Reflections on Creating a Bilingual Classroom for Deaf Learners. Year 3 Report (1999-2000). USDLC Star Schools Project Report No. 3.
INSTITUTION New Mexico School for the Deaf, Santa Fe.
SPONS AGENCY Western Illinois Univ., Macomb.; Office of Educational Research and Improvement (ED), Washington, DC.
ISBN ISBN-0-9668769-2-X
PUB DATE 2000-09-30
NOTE 109p.; For other project reports, see ED 426 568 and ED 438 634.
CONTRACT R203A70030-99
AVAILABLE FROM For full text: http://www.starschools.org/nmsd.
PUB TYPE Reports - Research (143) -- Tests/Questionnaires (160)
EDRS PRICE MF01/PC05 Plus Postage.
DESCRIPTORS *American Sign Language; *Bilingual Education; *Deafness; Elementary Secondary Education; *English (Second Language); Inclusive Schools; Inservice Teacher Education; Instructional Effectiveness; *Language Acquisition; Longitudinal Studies; Mainstreaming; Postsecondary Education; Residential Schools; *Teaching Methods
IDENTIFIERS *Deaf Culture

ABSTRACT

This report covers year 3 of a 5-year longitudinal study that is applying a bilingual language approach to development of American Sign Language (ASL) and English language and literacy skills in deaf learners. Specifically, the report describes how 45 teachers and mentors in five residential schools participated in inservice training on the use of bilingual and English as a Second Language (ESL) methodologies and practices with deaf children. Teachers kept written reflective logs as they participated in weekly seminars for 24 weeks. Conclusions of the project to date support a dual language developmental bilingual approach in ASL and English but do not support the mixing of languages as in a sign-supported speech environment. Implications of the project include increased use of bilingual and ESL methodologies in inservice teacher training and a closer attention to background variables of deaf students as they affect language learning. Conclusions also suggest that many public school programs are failing deaf students and exacerbating their language delays, that schools for the deaf need to reform their language teaching and learning environments, and that widespread mainstreaming of young deaf children without ASL and deaf culture support is not working. Six appendices provide teaching training syllabi, questionnaires, and other project related materials. (Contains 52 references.) (DB)

USDLC Star Schools Project Report No. 3

YEAR 3 REPORT (1999-2000)

CRITICAL PEDAGOGY IN DEAF EDUCATION:

TEACHERS' REFLECTIONS ON CREATING A BILINGUAL CLASSROOM FOR DEAF LEARNERS

Stephen M. Nover, Ph.D.
New Mexico School for the Deaf

and

Jean F. Andrews, Ph.D.
Lamar University

September 30, 2000

The United Star Distance Learning Consortium, Inc. (USDLC) Star Schools Project is pleased to disseminate the information and perspectives contained in this report. The findings, conclusions, and opinions expressed herein are those of the authors and do not necessarily reflect the views of USDLC or the New Mexico, Texas, Kansas, Illinois, and Eastern North Carolina Schools for the Deaf.

ISBN 0-9668769-2-X

This report may be copied for limited distribution. To receive the first year (1997-1998) report, the second year report (1998-1999), or additional copies of this (1999-2000) document, please see www.starschools.org/nmsd.

Stephen M. Nover, Language Planner and Star Schools Project Director
New Mexico School for the Deaf
1060 Cerrillos Road
Santa Fe, New Mexico 87503
V/TDD: (505) 827-6739
FAX: (505) 827-6684
E-Mail: snover@nmsd.k12.nm.us

Cover Design: Center for the Application of Information Technologies at Western Illinois University

First Printing, 500 Copies
Printed in the United States of America

This publication is based on work sponsored wholly or in part by the Office of Educational Research and Improvement, U.S. Department of Education, under Grant Number R203A70030-99. The content of this publication does not necessarily reflect the views of OERI, the Department of Education, or any other agency of the U.S. government.

Table of Contents

List of Tables

Acknowledgments

Much our work on the Star Schools Project and in the schools for the deaf would not have been possible without the financial support of the Western Illinois University through the Office of Educational Research and Improvement, U.S. Department of Education, and the efforts of the project staff, school administrators, and participating teachers. Dr. Vicki Everhart, Ms. Mindy Bradford, and Ms. JoAnn Hurley have provided insightful suggestions to improve the quality of the Star Schools' Third Year Report. Although they are not responsible for the contents of the report, their contributions are gratefully acknowledged. The following schools and individuals comprise the third year participants of the Star Schools project.

New Mexico School for the Deaf Star Schools Project Staff

Dr. Stephen M. Nover, Project Director	Dr. Vicki Everhart, Assistant Project Director	Ms. Mindy Bradford, Document Development Coordinator

School Administrators

New Mexico School for the Deaf Dr. Madan Vasishta, Superintendent	**Texas School for the Deaf** Ms. Claire Bugen, Superintendent
Kansas School for the Deaf Mr. Gerald Johnson, Superintendent	**Illinois School for the Deaf** Ms. Joan Forney, Superintendent
Eastern North Carolina School for the Deaf Dr. Thomasine Hardy, Director	

Participating Teachers

New Mexico School for the Deaf (NMSD) Mechelle Disch, Mentor Kathy Glyer, Mentor Mary Martone, Mentor Kim Burkholder Jennifer Herbold Dana Lachter Shelly Milliorn Lisa Pershan Carrie Nichols Pamela Martinez Natalie Williams	**Texas School for the Deaf (TSD)** Betty Bounds, Mentor Avonne Brooker-Rutowski, Mentor Johnett Scogin, Mentor Gary Stein Donna Altuna Joey Austin Carmen Bone Sandra Kimball Laura Davis Barbara Vinson Gina Wood
Kansas School for the Deaf (KSD) Pam Shaw, Mentor Nancy Eades, Mentor Sandie Kelly, Mentor Kacee Jones Lori Earls Julie Conradi Donna Heincker Nancy Milner Anne Drake Larry Finn Carol Busch	**Illinois School for the Deaf (ISD)** Mary Anderson, Mentor Paula Chance, Mentor Nancy Kelly-Jones, Mentor Kathryn Surbeck, Mentor Barb Ward Angie Titus-Hughes Aimee Vieth Colleen Keithley Kathryn Mansell
Eastern North Carolina School for the Deaf Cindy Decker-Pickell, Mentor Steve Witchey, Mentor Kara Baldwin Sue Weber Lisa Horne	**(ENCSD, cont.)** Diane Wright Kim Hutchens Susan Daniel Marie Dickinson

Introduction

Many deaf and hard of hearing children primarily use vision to process language. These children can easily acquire American Sign Language (ASL) as their dominant language and then develop English language and literacy by building on their ASL language foundation (Chamberlain, Morford, & Mayberry, 2000; Prinz, 1998; Wilbur, 2000). Additionally, hard of hearing students who begin learning English as a first language can benefit from learning ASL as a second language to enhance their language skills and increase their accessibility to world knowledge (Grushkin, 1998).

We see such bilingual development as a means for deaf and hard of hearing students to acquire and learn two languages so that their (visual) learning strategies are maximized. We are attempting to broaden the language acquisition and learning approaches to teaching deaf students by developing an ASL/English bilingual approach that uses both languages.

Also included in the overall ASL/English bilingual approach is a more narrow component, ESL (English as a Second Language) or an English-only approach. This approach may be helpful for some deaf learners in guiding them to attend to English linguistic forms and meaning of content. We recommend that an effective ESL approach be used only after students have a firm grasp of ASL as their first language. Depending on the teachers' language goals and students' needs, teachers can utilize ASL/English bilingual language methods or monolingual methods when appropriate: either English-only techniques (e.g., print, speech, audition, and lipreading) or ASL-only techniques. We do not recommend excluding the ASL/English bilingual approach as is the case with sign-supported speech approaches or in oral/aural classrooms.

Providing opportunities for deaf learners to acquire and develop ASL and English language and literacy skills is the focus of this five-year longitudinal study. Recent interest in bilingual and ESL methodologies with hearing children, as well as use of technology in the classroom (e.g., computers, multimedia, videoconferencing), has motivated us to investigate how we can increasingly and consistently encourage deaf children to acquire, learn, and use two languages (ASL and English) through similar methodologies and technology support. The goal of ASL/English bilingual instruction in Grades K-12 is to provide linguistic, cognitive and affective support to deaf and hard of hearing students as they learn both ASL and English while socially interacting with others and engaging in their academic study.

In this Year 3 report, we describe how teachers in five schools participated in two levels of training and how they learned to apply these bilingual and ESL methodologies and practices with deaf children in their classrooms. We present teachers' experiences as they grew in knowledge and use of techniques in bilingualism, ESL methodologies, first and second language acquisition, and literacy and language learning theories.

Content of the ASL/English Bilingual Staff Development Training

During Level 1 (12 seminars), the teachers critically reviewed the current research on bilingual/ESL education, culture, the deaf bilingual child, first and second language acquisition and learning, language use, and language teaching. In Level 2, (12 seminars), the teachers critically reviewed, discussed, and applied ideas from current research in these areas:

1. codeswitching
2. using language modes
3. setting up learner-centered lessons
4. attitudes toward bilingualism

5. bilingual programs and models
6. the politics of bilingualism
7. case studies of diverse deaf learners and their different routes to bilingualism
8. models of second language acquisition
9. applying Jim Cummins' (1984) notions of "social language" and "academic language" to language learning with deaf students

(See Appendices A and B for copies of the syllabi, reflective log questions, and readings.)

During each seminar, the mentor(s) and teachers used critical pedagogy techniques (Wink, 2000) such as identifying (naming), reflecting upon and discussing (acting on) their language beliefs and practices while learning about the current literature in bilingual, first and second language learning, and literacy practices. The teachers also applied the Engaged Learner's Model (Jones, Valdez, Nowakowski, & Rasmussen, 1996) which helped them reflect on their own language teaching practices. During the weekly seminars, teachers drew upon the current research in language and literacy practices to collaborate, brainstorm, and solve problems, while addressing the needs for establishing and developing a contemporary perspective and vocabulary for educators of deaf students. Teachers also brought to the discussions their authentic classroom experiences, relating the readings to their own professional lives as well as the language learning struggles of their students. Teachers used multiple disciplines to link and bridge subjects, themes, and the use of new technologies in the classroom. They explored performance-based assessments of students and teachers by developing rating scales for codeswitching and ASL/English bilingual programs. Teachers also applied "engaged learner" techniques with their students and described this process in their reflective logs.

Technology offers unique ways to present the two languages (ASL and English), and teachers in this project increased their use of classroom technology. They used

PowerPoint, SmartBoards ™, LCD projectors, and a variety of software programs such as Aspects, ASL/English videotapes, and CD-ROMs. These technologies enabled teachers to present both languages—ASL and English—in the classroom. The teachers also increased their use of email and email attachments. All teachers' reflective logs were sent by electronic mail to the Project Director and staff. The web page for the project was expanded. Videotapes of teachers applying bilingual teaching strategies were collected, and project staff developed a demonstration videotape featuring the mentors explaining the seven principles that are essential for successful bilingual language learning (Freeman & Freeman, 1998). Contact the Project Driector for a copy of the videotape. (See Appendix A for a description of the seven principles.)

Throughout the three years of the project, our training using the ASL/English bilingual framework has gone through four revisions with teachers at five schools experimenting with bilingual and ESL language teaching and language learning ideas and techniques. Table 1 provides a breakdown of the participant groups.

ASL/English Bilingual Framework

In our first- and second-year reports (Nover & Andrews, 1998, 1999), we described the ASL/English bilingual staff development model (see Table 2: Language Teaching Model).

The model outlines the 10 skills for the child in acquiring, learning, and using ASL and English. It also features the eight skills involved in an ESL approach for students who have developed a strong first language foundation (ASL) and are ready to receive more intense English instruction (e.g., linking computers together in a class and

providing all instruction in English). (See first- and second-year reports for a detailed description of this model with examples at www.starschools.org/nmsd).

Table 1: The Development and Refinement of Levels 1, 2, 3, and 4 of the ASL/English Bilingual Staff Development Training (1997-2001)

Year 1: 1997-98	**Year 2: 1998-99**	**Year 3: 1999-00**	**Year 4: 2000-01**	**Year 5: 2001-02**
1st group: Levels 1 & 2 (NMSD, TSD)	1st group: Levels 3 & 4 (NMSD, TSD) 2nd group: Levels 1 & 2 (KSD)	2nd group: Levels 3 & 4 (KSD) 3rd group: Levels 1 & 2 (NMSD, TSD, KSD, ISD, ENCSD) Summer Mentor Work group—revised Levels 1 & 2	4th group: Levels 1 & 2, (TSD, ENCSD) 3rd group: Levels 3 & 4 (NMSD, TSD, KSD, ISD, ENCSD) Summer Mentor Work group—revised Levels 3 & 4 Mentor Workshop—5 participating schools receive training in Levels 1 & 2	4th group: Levels 3 & 4, (TSD, ENCSD) 5th group: Levels 1 & 2, (5 new schools) Data collection on background variables and SAT scores Mentor Workshop—5 participating schools receive training in Levels 3 & 4

Table 2: Language Teaching Model for Deaf Students (Nover, Christensen, & Cheng., 1998, p. 68)

Bilingual Approach (ASL dominance and codeswitching)	**English as a Second Language (ESL) Approach (English only and no codeswitching)**
ASL signacy abilities 1. Watching or attending 2. Signing *English literacy/oracy abilities* 1. Fingerreading 2. Fingerspelling 3. Reading (English text) 4. Writing (English text) 5. Typing (English text) 6. Lipreading 7. Speaking 8. Listening (when appropriate)	*English literacy/oracy abilities* 1. Fingerreading 2. Fingerspelling 3. Reading (English text) 4. Writing (English text) 5. Typing (English text) 6. Lipreading 7. Speaking 8. Listening (when appropriate)

The ASL/English bilingual framework provides teachers with a model to begin thinking about and constructing language learning lessons based on the deaf child's two languages—ASL and English. This model also emphasizes the importance of Deaf culture. The model differs from traditional methodologies, which for many years have focused on English while excluding ASL. Those traditional, monolingual approaches often used only oral/aural English or sign-supported speech. We are not opposed to monolingual approaches but believe them to be useful only after a firm language foundation is established in ASL. Our ASL/English bilingual model or developmental bilingual approach does provide an ESL component (to be used only after ASL is firmly established as a first language) to enhance deaf students' competence in the eight languages skills listed in Table 2.

In our Year 1 and 2 reports, "Critical Pedagogy in Deaf Education," we argued for the advantages of the developmental bilingual language approach over the oral/aural and sign-supported approaches (see Table 3 for a summary of this discussion).

The Need for Educational Reform in Residential Schools

A major focus of this project has been to address the need for educational reform in language teaching pedagogy within residential schools for the deaf. We were guided by questions such as: How can we provide quality instruction in both ASL and English? How do the two languages build on each other and thereby increase the language learning opportunities of deaf students in acquiring and learning languages? Theories in bilingualism, first- and second-language acquisition, and language and literacy development provided us with a framework to investigate these issues in relation to deaf students' dual language learning.

Table 3: A Comparison of Monolingual and Bilingual approaches (adapted from Rolstad, 2000, pp. 5-6)

English-Only Mainstream Monolingual (oral/aural) No signing	**English-Only Monolingual/Bimodal in sign-supported speech environments**	**Developmental Bilingual Language**
1. ASL not valued, stigmatized.	1. ASL slightly valued with borrowed ASL lexical signs for artificial manual codes.	1. ASL and English fully valued.
2. No formal ASL development.	2. Minimal ASL grammar development.	2. Long-term (ASL and English) development.
3. Goal: Proficiency in English. Assimilation in mainstream (subtractive).	3. Goal: Proficiency English. Assimilation in mainstream (subtractive).	3. Goal: Proficiency and literacy development in both languages: ASL and English (additive).
4. Hearing English-speaking peer presence but little meaningful interaction in the mainstream.	4. Limited cross-age peer interaction with fluent ASL users.	4. Development: presence of cross-age peer ASL and English users.
5. Ethnolinguistic diversity not acknowledged, stigmatized.	5. Ethnolinguistic diversity possibly affirmed.	5. Ethnolinguistic diversity celebrated between ASL and English languages.
6. Deaf identity and culture not affirmed. Low deaf identification, negative self-concept, low ethnic tolerance, decreased academic performance, English monolingualism.	6. Deaf identity and culture possibly affirmed with presence of deaf adults as teachers, aides, administrators; low deaf identification; low self-concept; decreased academic performance; English monolingualism; underdeveloped English literacy.	6. Own deaf identity and culture affirmed, high deaf identification, positive self-concept, high ethnic tolerance, increased academic performance, bilingual in ASL and English.

In each Star Schools report, we have addressed key issues related to bilingualism and deaf education. Some of these issues arose from our own experiences as teachers and researchers. Other issues emerged from teachers sharing their classroom experiences with each other during the training. During Year 3, certain issues continually arose in discussions related to semilingualism, trilingualism, the role of speech in bilingual education, the special case of the hard of hearing student, codeswitching, the discomforts of marginality many deaf adults and students feel in the hearing world, and the mixing of

the two languages. These issues were addressed thoughtfully by the teachers in their reflective logs. These reflective logs contain "teacher vignettes" that can be viewed as models of how to set up a bilingual classroom.

Methodology

Two questions guided this study: (1) What do teachers think about theories of bilingualism, second language acquisition, and language and literacy development? (2) How do teachers apply bilingual and ESL methodologies?

Backgrounds of the Teachers and Mentors

Teachers from five residential schools for deaf students were involved in Year 3 of this study. The New Mexico School for the Deaf (NMSD), the Texas School for the Deaf (TSD), the Kansas School for the Deaf (KSD), the Illinois School for the Deaf (ISD) and the Eastern North Carolina School for the Deaf (ENCSD) participated. Thirty-two teachers and 13 mentors (n = 45) participated in Year 3 of the project. Most teachers and mentors were female and white. Teachers worked in classrooms with deaf students ranging from parent-infant programs to high school, with the majority of participating students in the elementary grades (see Table 4). More than half of the teachers were younger than 40 years of age. More than two-thirds of the teachers had masters degrees, primarily in deaf education. Other majors included reading, elementary education, psychology, special education, and second language acquisition. About half of the teachers had taught fewer than five years, and one-fourth had more than 20 years of teaching experience. The majority of teachers had state teaching certification, and about one-fourth had Council on Education of the Deaf (CED) certification.

Table 4: Background Variables of the Mentors and Teachers Participating in Year 3 of the Star Schools Training (1999-2000) (n = 45)

Teachers' Background variables	**N**	**%**
School		
NMSD	9	18
TSD	11	24
KSD	8	18
ENCSD	9	20
ISD	8	18
Gender		
Female	42	93
Male	3	7
Grade Level Taught[1]		
0-3/preschool/Kindergarten	8	18
1-3rd grade	8	18
4-5th grade	10	22
6th, 7th, 8th grade	8	18
High school	2	4
Other[2]	5	11
Hearing Status		
Deaf	19	42
Hearing	26	58
Ethnicity		
Hispanic	2	4
White	43	96
Age		
20-30	15	35
31-40	10	23
41-50	13	30
51-60	5	12
College Degree		
BA	14	31
MA	31	69
Ph.D.		
# Yrs Teaching Experience		
0-5	20	50
6-10	4	10
11-20	6	15
21-30	10	25
Certification		
State	38	84
National (CED)	11	24

[1] Some teachers taught more than one grade level
[2] Other included curriculum director, evaluation specialist, administrator, and elementary dorm parent.

From the group of 32 teachers, we selected excerpts from their reflective logs that best exemplified how the teachers thought about and applied bilingual methodologies to teach language using ASL and English.

Data Collection

The written reflective logs of the participating teachers made up the database. We collected reflective logs for one full year. Excerpts that reflected both thinking about, as well as the application of, bilingual methodologies were selected and noted. Also noted were innovative ways technology was used to teach the two languages—ASL and English. These excerpts from teachers' reflective logs can be used as models for other bilingual teachers working with deaf students.

The Context

Teachers met in weekly seminars led by at least two mentors. Teachers completed reading assignments and then wrote reflective journals in response to questions designed by the Project staff and mentors. Mentors developed lesson plans, PowerPoint presentations, and seminar activities for the teachers that best fit the needs of the teachers and students at their schools. In the Fall of 1999, teachers went through Level 1 of the ASL/English bilingual staff development training, and in the Spring of 2000, teachers went through Level 2 of the training (see Appendix B for Level 1 syllabus, readings, and reflective log seminar questions; Appendix C for Level 2 syllabus).

In the next two sections, teachers share their experiences about how they set up bilingual classrooms for their deaf students. In this report, we focus only on Levels 1 and 2 of the training at the five site schools: NMSD, TSD, KSD, ISD, and ENCSD.

Teacher Reflections

Level 1 Overview: Bilingualism Within a Whole-to-Part Philosophy

1.1. Overview of the training.

In the first seminar, the mentors gave the teachers an overview of the Level 1 training: the expectations, syllabus, and the articles and books for the assigned readings (see Appendix B for Level 1 syllabus).

1.2 Deaf children are bilingual and bicultural.

In the second seminar, teachers read and responded to Grosjean's (1996) article, "Living with Two Languages and Two Cultures." Grosjean explained why he thought deaf children were bilingual and why they should be raised with sign language as their primary language with the majority language (in written modality) as their second language. Teachers also read Kannappell's (1989) article, "An Examination of Deaf College Students' Attitudes Toward ASL and English." Teachers then responded to their thoughts and feelings about themselves, their students, and their school environment as they related to bilingualism.

One deaf teacher discussed her bilingual background.

> I was born hearing but become deaf at the age of 13 months from spinal meningitis. I use ASL as my first language because I grew up with a deaf family. . . . English was my worse nightmare because I've always struggled with my writing and reading skills. . . . I wasn't aware I was learning two languages . . .. I always thought ASL was the same as English. . . . It took me quite some time to realize that I was bilingual, using ASL as my first language and switching to English while communicating with hearing people.

Teachers also reflected on their deaf students' bicultural identity.

> The need for students to have a bicultural identity and reject the other culture seems to be very important. Students, teachers, staff, all need to respect each others' culture—not reject one as better than the other. I have

> not always seen that. . . . Barbara Kannapell's [1989] article illustrates difficulties that deaf students face in developing an identity with many diverse factors—parents—hearing/deaf, school —mainstreamed/residential, teacher attitudes, hearing loss, etc. I learned that language choice can play a part in identity choices for deaf people. . . . I feel that attitudes toward languages can be expressed subtly. As I reflect on my own attitude toward ASL and English, I need to make sure that I don't send the wrong messages to the students.

Teachers also commented on the language learning challenges of the hard of hearing child who learns English as a first language and ASL as a second language.

> "Most studies look at ASL as the dominant language and English as a second language or visa [sic] versa. What about the child caught in between?"

Teachers became more aware of what languages their students were using, as reflected in the comments of this teacher.

> I have a class of very bright 4th grade students. I see them daily with each other. I also see them use ASL with me, but not as completely or fully as they do with their peers. I see them converse with me using codeswitching, comfortable going from one language to the other. I also see them occasionally in a more hearing situation using more English and English signs than normal. In this setting they seem more comfortable, not only from talking to people they don't know as well, but from using a language in which they are not as fluent. . . . I see varying degrees of skill in their written English, but I don't see this affecting the codeswitching from one language to another when they are conversing with me.

After this seminar, teachers became more aware of definitions of bilingualism and biculturalism and began to observe and reflect on their students' use of the two languages. Teachers became aware of the diversity of language learning needs of their students—some needed more ASL or L1 development; others needed more English development. Some children with special needs were found to benefit from bilingual instruction (their signing looked more ASL-like).

1.3 Deaf bilinguals best acquire two languages in an additive setting.

In the third seminar, teachers read Krashen's (1995) chapter on bilingual education and second language acquisition theory. They also studied Fradd and McGee's (1994) work on "additive" and "subtractive" bilingualism. Additive bilingualism occurs when a second language is learned by an individual without detracting from the maintenance and development of the first language. In contrast, subtractive bilingualism occurs when a second language is learned at the expense of the first language and gradually replaces it (Baker & Jones, 1998). Teachers also read Skutnabb-Kangas (1981) on educating minorities using bilingualism.

Teachers discussed the disadvantages of a subtractive bilingual environment.

> Subtractive bilingualism . . . the student may experience gaps in the second language development because he is not able to develop . . . the foundation of the first language. . . . This creates a gap in both first and second languages because he verbally uses his first language properly, but lacks the training necessary to build a strong foundation in that language . . . the subtractive language learning environment takes away the first language and does not recognize the culture.

Teachers also discussed the advantages of an additive bilingual environment.

> Additive bilingual education provides educational settings in which students are able to study subject matter in their first language (ASL) while their weaker language (English) catches up . . . we have signs and alphabetic letters printed everywhere to create an additive bilingual language learning environment. Also, we have our "speech" teacher in the classroom to work with groups or individuals instead of the "pulling out" method. The student will be at ease learning speech language because he/she feels comfortable learning in the environment where sign language is still being used (for support).

Here are other examples of teachers' thoughts on additive bilingualism.

> Within the middle school, there are many examples of additive bilingual education. First of all, our Integrated Communication Studies class uses additive education on a daily basis. During this class, students are currently focusing on Deaf Studies and ASL. They are creating poetry

> using ASL numbers and handshapes. This is the primary focus; however, students are required to write the English equivalencies. In addition, students are required to write goals for this project, what they did, and then what they learned from the project. Students proofread their work before writing a final copy. This allows the students to start with the concept in their first language, and then change that thought into English. Then they go back and make appropriate corrections, focusing on grammar and mechanics.
>
> Additive bilingualism lets students use both languages for instruction, socialization, and assessment. It also allows students to develop cross-cultural understanding, and involves families in the student's education. I feel that this approach will help students develop self-esteem and pride.

But teachers also recognized the difficulties in quality instruction in both English and ASL in the additive bilingual environment.

> In the classroom, teachers control the learning environment, and have a tendency to communicate mostly in ASL, leaving little time for students to acquire English skills. Therefore, our students do not leave our classrooms as fluent English users. We "expose" our deaf students to English all day long, but apparently that is not enough to cause "the input to turn into intake." How do we make "active" the use of the second language?
>
> I do think students would benefit more from getting subject matter first in ASL. Unfortunately, this is not always feasible. Many of the teachers do not use ASL fluently. Also, many of our hard of hearing students that [sic] come from a public school setting depend on speech and sign together. I sometimes find it difficult to use ASL and to make sure these students understand at the same time.

Teachers also expressed concern that some of their students were semilingual or weak in both languages.

> The transfer of home language skills to the target language is the basis of most of the bilingual strategies. Perhaps we need to look at deaf students as a special case within bilingual education. Bi-bi approaches can be used, but students may need an additional phase in their education process, one in which a base language is acquired.
>
> It seems that most of our students come to school without a strong first language and sometimes with very little exposure to print. Then we as

teachers are expected to teach them the age appropriate standard course of study.

With both of these articles I felt a sense of frustration when reading them. They both apply to teaching language to a child who already has a first language to help learn the second. The problem that I would like to address is: How do I teach language to a child who has no expressive language to help him/her build a second language? Many of our students arrive with minimal expressive communication skills.

The issue that concerns me is that many of the students I work with are "semilingual" and that it has to be a school-wide involvement in order for the program to succeed.

It takes more than 6 years to develop proficiency in English, regardless of which of the three approaches/features is used and that the students tend to fall behind when they are quickly switched to English instruction. That's probably why many of our deaf students are so behind in learning English as their second language. They have not developed a primary language in the first place to make it a foundation for learning a second language. That's why many of our deaf students are semilingual and still read below their age appropriate level.

Teachers also discussed their more effective methods of developing their students' second language.

Students can learn to use their first language to develop a second language rather quickly if it is done in a non-threatening environment with unlimited exposure and opportunties to practice and develop both L1 and L2. . . . In my class, "Maria's" mother approached me at the beginning of the school year and asked me to criticize every English error her daughter made. Although I understood her request, I explained to her that I do not take that approach for two reasons: first, it can be very harmful to the child's self-esteem and . . . it will limit her creativity. . . . I choose to model language in a non-threatening way that still provides my students with constant exposure to grammatically correct English. For example, if a child writes in a journal: "me finish touch store yesterday," I might respond by saying, "I went to the store yesterday too. I bought food for dinner". . . . This type of modeling and expansion is effective rather than destroying the child's work with red ink.

1.4. Deaf bilinguals benefit from ASL and English language learning strategies.

In this seminar, the teachers continued their discussion of bilingual and second language theories, giving examples of ASL and English language learning strategies they observed their students using. Teachers studied Krashen's (1995) five hypotheses of second language acquisition: acquisition and learning, natural order, monitor, the input hypothesis, and the affective filter hypothesis. Teachers also read Ewoldt's (1993-1994) article on language and literacy from a deaf perspective and Padden's (1996) chapter on the early bilingual lives of deaf children. Teachers then applied Ewoldt and Padden's articles to their observations of themselves and their deaf students using fingerspelling, ASL, and English language strategies.

One teacher commented on Krashen's (1995) Affective Filter hypothesis[3] and how this related to her students' negative attitudes and low motivation to learn English.

> Not all learners learn in the same way, and I have found that many of my students seem to fit in the Affective Filter Hypothesis, negative feelings towards the English language, along with low motivation and self-confidence undoubtedly affect my students' ability to learn the language.

A teacher commented on the language use of their hard of hearing students who are learning ASL as a second language.

> Another student I have who is 4 years old and hard of hearing uses her language base in English to produce further concepts in ASL. If she does not understand a specific concept in ASL, I pull her aside and speak to her in English and she frequently codeswitches from spoken English to ASL with her voice off. She rarely uses English in signed form. She separates the two. English is spoken, and ASL is signed with voice off.

[3] Baker and Jones (1998) defined Krashen's (1995) Affective Filter hypothesis. "Associated with Krashen's Monitor Model of second language learning, the affective filter is a metaphor which describes a learner's attitudes that affect the relative success of second language acquisition. Negative feelings such as a lack of motivation, lack of self-confidence, and learning anxiety are like a filter which hinders and obstructs language learning" (p. 698).

Other teachers commented on their use of fingerspelling and how children responded to it.

> I have begun to use more and more fingerspelling in my class and have watched the children attempt to fingerspell the word without first knowing each letter. They see the fingerspelled word as an entire sign with specific handshapes and movements. . . . I can use visual strategies to help the students . . . come up with the correct spelling of a word.

Teachers also commented on their use of ASL strategies to teach English.

> I often take an idiom . . . [and] write it on the board. I will ask the students...to try to figure out what it means. . . . I will ask the students to sign the phrase word for word. When it obviously doesn't make sense they begin signing in more ASL structures and we begin discussing the meaning of the words and how they can relate it to a concept. . . . For example, the word 'blast' when stating "I had a blast at the party!" I will ask the students to sign blast . . . [and] they begin seeing the relation of "blast" with big, then fun . . . and the concept clicks as they see/envision the "real world" relation of "having a blast."

> I see a lot of ASL syntax in my students' writing and I do not believe this is necessarily a bad thing. They can learn to differentiate between the two languages.... I have found that giving language mini-lessons are [sic] necessary, but not in a specific sequence.

And still other teachers commented on how students use a combination of strategies: ASL, inventing signs as placeholders while reading, fingerspelling, writing, and using context clues and translation from ASL to English to learn language.

> A . . . strategy that I have seen quite often is when children spell a word to themselves several times before writing it down, or once they have written it down, they check it to be sure it is spelled correctly. In a test situation, a student will often spell inside their desks or inside an article of clothing they are wearing to make sure no one can see it. . . . An English strategy that I have observed would be where the child may know only the beginning of a word and then look it up in the dictionary. Another example of an English strategy: as we do a daily math word problem on the overhead projector, the students have the opportunity to first work out the problem at their desks. The student who has it right gets the opportunity to come up front and explain it to the class. When they go to the board, they read the story-problem in English and then translate it into ASL. To make sure they understand the problem they sign it (when

feasible) without the numbers, only the problem/story situation. On one such occasion a student got the answer right, but when he got to the ASL translation, it didn't make sense to him. There was an unknown word in the story problem. Here the context clues helped him figure out the word's meaning and he was able to comprehend and explain the rest of the problem to the class.

I see students using different learning strategies in my class. A student was reading instructions on a worksheet. He asked me if it meant this and then repeated the instruction in ASL. This was a way for the student to internalize the instructions given in the language with which he was more skilled and comfortable, yet showed he was acquiring the understanding of the written English. It was exciting to see the student change the English to ASL himself, rather than just ask me what he was supposed to do. I have also seen many of my students fingerspell the word to themselves several times. This is like the hearing child that spells aloud the word to himself to help him remember and familiarize himself with a new word. This helps him remember the meaning the next time he sees the word or wants to use the word himself.

An ASL strategy I have observed in a few of my students in our birth to three years program is invention of signs. Oftentimes when a young child sees an object or an action that describes what he/she wants to explain to another person, but does not know the formal sign, he/she will invent a sign or an action that describes that thing. This demonstrates a deaf child's innate ability to learn ASL because it is his/her natural language.

An ASL strategy I have observed in one of my students is of retelling a story that was read aloud to him. Through the use of ASL, he was able to express his interpretation of the story and it showed that he understood the story with his descriptions of the characters and the events that took place in the story when retelling. He used a lot of facial expressions expressing emotions of the characters and the climax in the story. An English strategy I have observed in one of my students is using picture clues to aid with reading the print in books. It is evident that she knows that there is a relationship between the pictures and the print in most of the books she has read, especially many young deaf readers who are semilingual. It shows that the majority of deaf students rely on visual cues to aid with their reading since their base language (ASL) is a visual language.

I see many examples of daily ASL learning strategies and English learning strategies. I think the most obvious is a student's ability to retell a story in ASL and then write it in English.

Students participate well in read-aloud activities. These activities are done either in ASL or Contact English. I have observed that students remain

> attentive and glued to their seats when the read-alouds are given in ASL. From time to time teachers sign a few sentences—one teacher in ASL and another in contact English. Students are able to tell what languages each teacher uses and describe how they know the differences. They often prefer ASL to English.

One teacher mentioned how her students used lip movement strategy while reading.

> One of my profoundly deaf students, although he himself does not possess intelligible speech skills, signs with good lip movement related to the speech of the word. He then uses this skill when reading an unfamiliar word by "sounding it out" with lip movements. For example, he tried to read the word, "shout." I watched him stop, mouth the word "shoot," and sign, "shoot," (shooting a gun). He looked at me knowing he was incorrect (using his contextual knowledge for the meaning of what he was reading). I then mouthed the word correctly and with the look of revelation on his face, he signed, "shout."

Another teacher commented on how she taught an English grammar lesson by comparing the English grammar to ASL grammar.

> I was presenting information on the four basic types of written English sentences: demonstrative, interrogative, imperative, and exclamatory. I wrote the following examples on the board: The dog is ugly. We looked at the punctuation and then tried to sign it as a "demonstrative sentence"—with appropriate body language and facial expression. Then I changed the sentence to: The dog is ugly! The students explored ways to change their signs/expressions to reflect the change in punctuation. Then I asked each student to sign the concept (the dog is ugly) in some way, changing the message from the previous students' examples. We tried developing written English sentences such as: The dog is UGLY! The dog is very ugly. The dog is the ugliest. The poor dog is ugly. The dog really is ugly. We discussed the difference in word usage, punctuation, etc. for the English messages and the difference in sign, body language, and facial expression for the ASL message.

1.5. Learning two languages takes time for deaf bilinguals because they learn languages by using ASL and English in social and academic settings.

Teachers read McLaughlin's (1992) myths related to learning a second language and discussed how learning a second language is not simple, but rather a complex

process. They also described activities that would give students opportunities to use ASL and English in both social and academic contexts. After reading about the time required to learn a second language (Fradd & McGee, 1994; McLaughlin, 1992), teachers applied this information to the time frame of deaf children's language learning.

Teachers also discussed the process of translating and codeswitching, very advanced skills in cognitive development. Oftentimes, very young students are not ready to translate English into ASL. A better strategy for young children is to have the teacher sign (read) the book to the student(s) and ask the student to re-tell the story in ASL.

Teachers discussed how the use of translation strategies depends upon the teaching goal. Teachers discussed the benefits of reading a whole story initially in order to give students the full context of the story or idea before analyzing the smaller parts (e.g., sentences, phrases, words) (see Dr. Laurene Gallimore's [2000] diagram in Appendix D). Teachers discussed the mistake of assuming that simply giving deaf students an ASL translation of an English text guarantees their comprehension of the English. There is a need for an instructional bridge between the printed English and the ASL translation. It is also important for kids to see reading strategies modeled for them.

Here are teachers' responses to language learning myths discussed by McLaughlin (1992).

> A myth . . . children have acquired a second language once they can speak it. It mentioned that children need five to seven years to master cognitive language skills for the regular English curriculum rather than to master oral communication skills. It applies to deaf children also. . . . The child might be a good conversationalist and seem to be comfortable with spoken English but actually have difficulty with written English.
>
> Another myth . . . that all children learn a second language in the same way or at the same time. I agree that is a misconception because all children have different learning styles.

> Barry McLaughlin's [1995] article on the myths of second language learning made many good points. I have to admit that prior to reading the article I subscribed to some of the myths and misconceptions myself. It was reassuring to know that second language learning does not come easily or quickly. I have always assumed that children could learn a language faster than an adult could. I agree that incentive and motivation do play a part in learning a second language. Unless there is an incentive to learn the language there will rarely be sufficient effort. It usually does not come from peers, since most students use ASL in most communication situations (social or academic).

Teachers also learned that it takes time to acquire a second language. Here are some of their comments on how they used this information in their instruction.

> Fradd [and McGree, 1994] discusses the length of time involved in acquiring a new language. She mentions that it only takes about 2 years for second language learners to acquire English at the social conversational level, yet it takes longer for them to obtain such a level of mastery at the academic level. . . . Enhancing academic English is also a heavy part of our curriculum. We constantly connect things to print in our classroom. When they learn new vocabulary words, I often use a sandwiching technique where I fingerspell the word, show them the sign, show it to them in print, and then fingerspell the word and sign it again. This is an excellent way to use bilingualism in the classroom, and it provides my students with a better foundation for understanding.

> McLaughlin [1995] points out that it may take 4 to 6 years for students to acquire the level of language proficiency that is necessary for understanding instructional uses of the language. This has significant implications for our work with deaf and hard of hearing students. First of all, it supports our use of both ASL and English throughout the grades. It suggests that students at my level ($1^{st}/2^{nd}$ graders) are not ready to use English as a means for obtaining all of their information. Although they should be exposed to English as a source of information, they need support of their first language for understanding the information. As students spend more years exposed to English, they hopefully become more able to use and understand English in the instructional context.

One teacher commented on the limited English input deaf students typically have and how this might affect their learning English. Another commented that many students reach junior high without a strong first or second language.

> The 4 to 6 years that both McLaughlin [1995] and Fradd and McGee [1994] mention as the time necessary for learning a second language may be extended even longer for deaf students. Because deaf students typically have more limited input/intake opportunities with English (they can only access it through print), this seems logical.
>
> The article, "Length of Time in Acquiring a Language," was about how long it takes for immigrants arriving between ages of 8 and 12 with age-appropriate literacy in their home to acquire English . . . 4 to 7 years . . . most children arrive here at the age of 5 with no home or base language. They need much more extra time to build a base language and then learn English as their second language. We need to work together to overcome this gap. They often reach middle school or high school with limited proficiency in English.

Teachers came up with many ideas about how to provide deaf students with ASL and English learning opportunities in both social and academic contexts.[4] Here are some teachers' ideas for creating opportunities for social and academic ASL and English.

> Read the newspaper . . . summarize it in ASL . . . brainstorm and write responses on the board in English . . . students write notes to each other. . . . I will sign a story and students will write a summary of my signing.
>
> Fingerspelling the English word after signing the ASL sign . . . expose students to English in print while reading storybooks in ASL . . . use natural fingerspelled loan signs whenever possible . . . have students share their personal news with the class in ASL and write their news on a piece of large paper in English.
>
> Social ASL is fairly easy to incorporate into the day, since my classes enjoy chatting with each other so much!. . . . My classes spend most of their day using social ASL. . . . In literacy, we are currently reading two novels, Sarah, Plain and Tall and The Little Prince. During class, we will read together and then discuss it in ASL. This is using both academic English and ASL. Their responses are written in English, and students take notes on what is happening in the stories, which is discussed in ASL.

[4] Jim Cummins (1984) made distinction between social and academic language in his BICS and CALP models, a theory well known to students of bilingual and ESL education. BICS and CALPS are defined by Baker and Jones (1998, pp. 698-99): "BICS or Basic Interpersonal Communication Skills refers to everyday communication skills that are helped by contextual supports. CALP or Cognitive/Academic Language Proficiency refers to the level of language required to understand academically demanding subject matter in a classroom. Such language is often abstract, without contextual support such as gestures and the viewing of objects."

> In my classroom for general discussion and instruction, we use ASL to the best of my ability. Concepts are introduced, stories told, experiences shared in ASL. My students are becoming more comfortable and adept using ASL themselves. After a story has been introduced and told in ASL, we read the story together in English. One way I know if the student is learning new vocabulary and understands the content is the way he signs what he reads. I expect phrases such as 'right way' or 'paid the price' to be signed according to the context and not the signed English version. My students are becoming more and more skilled and learning more and more vocabulary. During English, we do a lot of writing and expressing ideas.
>
> Since deaf children learn visually and most early reading tends to be based on sight words, it is prudent to introduce print very early. Parents and early educators should point out sight words while signing books to young, pre-reading deaf children. For example, when reading a book about dogs, the signer should call attention to the printed word each time it appears, and associates it with the picture, the sign, and the fingerspelling. I also think labeling of objects in the child's daily environment is important.

1.6. Deaf bilinguals benefit from exposure to ASL and English using a variety of bilingual and second language teaching orientations.

When examining the history of foreign and second language teaching, teachers learned there are a variety of orientations (i.e., assumptions about language learning and teaching), each with its own methodologies, that have guided teacher practice for years (Freeman & Freeman, 1998). It is important for teachers to adapt their lesson methodology to fit their instructional context (i.e., setting and students) because no one method fits all contexts. The context of a class should determine the orientation and method (Bialystok & Hakuta, 1998). The project realized the importance of providing teachers of deaf students with a variety of second language teaching orientations to fit the context of their lessons. We explain these orientations below, and readers can refer to Freeman and Freeman's Chapter 1 for details.

The "grammar-based orientation" focuses primarily on the rules of written language and includes methods such as grammar-translation. The "communicative

orientation" focuses on communication with native speakers and includes the Direct Method (students make direct associations between objects and/or concepts and the corresponding words in the target language). The "empiricist orientation" emphasizes using the language in interactive situations and therefore focuses on listening and speaking the language before reading and writing it. Methods here include the Audiolingual Method (development of oral language skills through repetitious conversational drills), the Notational-Functional Method (practicing syntactic patterns while focusing on practical uses of social and written language), and the Suggestopedia Method (taking into account the physical and social needs of the students by using art, drama, and physical exercise, as well as traditional methods to teach a second language). The "rationalist orientation" emphasizes the learner's role and how the learner naturally (often subconsciously) figures out and internalizes the surface structure (rules) of a language without explicit instruction. Four methods associated with the "rationalist orientation" are the Silent Way (students are responsible for their learning, and the teacher is silent much of the time after modeling a language structure), Community Language Learning (students form a learning community and work together repeating to each other language prompts from the teacher), Total Physical Response (students respond physically to commands like "raise your right hand" in the second language), the Natural Approach (based on the premise that we "acquire" rather than "learn" a second language through receiving comprehensible input), and the Cognitive Academic Language Learning Approach (CALLA) (developed to teach content to second language learners using grade appropriate content, academic language development, and instruction in learning strategies). Finally, the "sociopsycholinguistic approach" takes the

learner from "whole" to "part" and centers learning around the child in meaningful situations. Methods here include Problem Posing (teachers help children pick a social problem that relates to them and, in their second language, they discuss possible solutions) and Content-Based Language Teaching (teaching a language by teaching an academic subject). Teachers recognized that many of these orientations were based on the child's ability to hear (for example, in the skill areas emphasizing oral language). Thus, teachers discussed how they could use these teaching orientations visually using ASL and English print.

Here are some teachers' comments on how they used these language teaching orientations.

> I feel that the orientation I most often use with my deaf students is the sociopsycholinguistic approach. It is important to teach students through questioning. For deaf students this should be done "orally," using ASL, and in print. I try to use questioning as part of my classroom on a regular basis. This allows the students to process information in a different way.

> I have used the communicative orientation when I do written conversations or other ways of communicating only in written English. My purpose is to place students in a situation where they have to use English to communicate and can't fall back on their ASL skills. It is also an attempt for me to encourage students to use English directly rather than associating it with signs and trying to translate it.

> I used Suggestopedia to help students to understand a theme called "Bats" posted all over the classroom and posters and much information about bats. They studied this theme during the last three weeks of October. They also developed a book. They played games related to the facts about bats. They went on a field trip to see where bats live. We worked together to develop a bulletin board in the hallway.

> I feel I have used the sociopsycholinguistic orientation when working with 0-3 children who are deaf and hard of hearing . . . the tenets of Piaget, Vygotsky, Chomsky, and Halliday can be applied to the cognitive and communicative development of young deaf and hard of hearing children.

> I have often focused on how to use language skills in practical situations . . .how to read/write/speechread phrases commonly used in a variety of everyday situations. For example, if the student is at McDonald's, common phrases might include: May I take your order? What kind of drink would you like? Your total is . . . and others. I use this orientation especially with students who are very delayed or have academic disabilities (learning disabled, mentally retarded, etc.). I have also found that starting with situations my students have experienced many times and have a great deal of familiarity with help them to be more successful.

Teachers also discussed the meanings of ESL (English as Second Language) and EFL (English as a Foreign Language) terminology and methods and applied these concepts to deaf children. Teachers described how they viewed their deaf students in comparison to students in an ESL or EFL environment.

> I feel that most deaf students are similar to EFL students because they are only taught English in the classroom whereas their home environment does not provide communicative access. They are limited to learning English as a second language because most deaf students come from hearing families who don't sign fluently with each other. In addition, radios and televisions are not always accessible for deaf students to acquire English.
>
> Deaf children being taught English as a second language are exposed to English daily through reading and writing, in and outside of the classroom. The primary language ASL is heavily relied upon to teach grade level concepts in the curriculum. In the classroom, deaf children have the opportunity to compare ASL and English as two separate languages. As educators, we would like to believe that the exposure to English is great, but it is not necessarily true. Teachers need to evaluate how much time is really being spent in both languages, and how we can increase exposure to English. . . . The key is motivation or the wanting to learn English.
>
> The deaf student is a mixture of the ESL and EFL student. The deaf student is bombarded with printed English, i.e., signs, reading material, TV captions, TTY. This gives a motivation for English acquisition. Even though the deaf student sees the printed language, he is similar to the EFL student because he does not hear the language. He does not hear the daily social usage and therefore doesn't acquire the rules of the language without being formally taught.
>
> In public, deaf children see people talking orally and get very little information out of spoken language. They depend greatly on writing or

> interpreting services if available. The only times they see English is through reading, writing, and close-captioning on TV. They see English for a few hours on a daily basis.

1.7. Deaf bilinguals benefit from being taught subject content through English as a Second Language strategies.

Teachers discussed the advantages of teaching English though content and applied ideas and strategies for English as a Second Language (ESL) and English as a Foreign Language (EFL) to teaching deaf children. In addition to discussing the 12 language teaching methods (described above), teachers also developed activities for each. Here is what teachers wrote about teaching language through content subject matter.

> The advantages of teaching English through content to deaf students is giving the students information they read to learn. It also helps the students to develop skills for having informal and formal conversations with his/her peers and staff.
>
> Students are more likely to understand the language if it is attached to concepts and ideas in which they are studying and related to their life . . . to learn language that is already integrated into a content students are familiar with.
>
> The biggest challenge of teaching language through content is finding age-appropriate novels.
>
> Teachers are able to build English skills on background knowledge that deaf students already have. The English language is presented to deaf students in context rather than in fragments such as vocabulary lists. Finally, teaching English through content areas allows deaf students to acquire the language in a more natural way.
>
> One of the challenges this approach presents with deaf students in an ESL/EFL setting is that it is difficult to present all content information and discuss it through writing alone. Because English is only fully accessible to deaf students through writing, the entire lesson would have to be written, including student discussions . . . technology such as Aspects and e-mail is making this approach more feasible.

Teachers also commented that teaching language through content helps to make the lessons more relevant and meaningful for the student as well as motivating them to learn English.

> Teaching language through content is important and necessary for the child to see how English works in its whole . . . in math, for example, my sixth grade students select a question they are interested in and develop a survey. They then survey the other students and develop graphs displaying the results of the survey.
>
> Advantages of teaching English through content to deaf students are many. First and foremost, using content that is relevant and interesting to the students boosts their motivation and gives them a reason to learn the English related to the content. Also, teaching through a cross-curricular theme allows for more repetition of vocabulary and concepts. It also controls vocabulary so that the students do not have a separate list of words to learn for each subject. I have found that my students learn and retain vocabulary and the related concepts better when, for example, their science word is also a reading and spelling word.
>
> Using content to teach English helps to make language relevant to life. Deaf students who have been presented content area in ASL then use English to relate to content (writing about or reading about content subjects) are using English in an authentic task.
>
> I think the greatest advantage of teaching English through content is that English is presented in a meaningful way.

1.8. Deaf bilinguals acquire ASL and English social and academic language proficiency using bilingual and second language teaching techniques.

Teachers discussed Barnum's (1984) article supporting bilingual education for deaf children. They also discussed two types of language proficiency—language used for informal social purposes, as in conversations, and language used in formal, academic settings, as in studying from textbooks. Language proficiency types have been conceptualized by Jim Cummins (1984) in his BICS/CALPS model (BICS: Basic Interpersonal Communication Skills and CALP: Cognitive Academic Language

Proficiency). Teachers also discussed how to increase social use of English and academic uses of ASL.

These comments from teachers discuss the time it takes to learn social ASL compared to the time it takes deaf students to learn academic English and the benefits of having acquired ASL.

> Deaf students are able to acquire conversational skills using ASL in less time as compared to acquiring English which involves academic language. I find that to be very true of deaf students. They need a lot of extra time and years in acquiring and mastering English. Many of our deaf students come to school at the ages of 5 to 7 so that means by the time they reach fourth grade, they are even much further behind compared to their hearing peers. Many hearing families do not sign to the deaf child so they reach school with limited knowledge of any kind of language. Many of them are semilingual so it makes a lot of sense that they need a lot of extra time in acquiring a first and second language. It makes it even more difficult for our deaf students to follow the public school curriculum at an appropriate age/grade level.

> For BICS - ASL, deaf children will use this language proficiency with another student in the classroom, on the playground, and with their family members at home. . . . For CALP - ASL, deaf children will use this language proficiency in the classroom when signing to their teacher and classmates.

This teacher pointed out that deaf children typically have few opportunities to learn English socially and ASL academically.

> According to Collier (1995), academic language takes 7 to 10 years to acquire . . . deaf students need lots of opportunities to have social ASL. They have very little opportunities to use English socially. They have limited opportunities to use ASL academically and have lots of difficulty comprehending English academically.

The process of acquiring a first or second language, according to Freeman and Freeman (1998), involves moving from "whole" to "part." In the development of both speech and writing, children begin with the whole and later develop an understanding of the parts. Parts are harder than the whole because they are more abstract. The whole

provides the context for the parts. Traditional approaches to reading begin with the small parts and build up to the whole even though recent research shows children start with the whole, then gradually build up the parts (see Chapter 3 in Freeman and Freeman, 1998). With this information, teachers discussed a whole-to-part technique called "preview-view-review." For example, first teachers give an overview in ASL, then view the lesson in English (reading or writing), and then review the lesson in ASL. Or the teacher might preview the lesson in English (reading or writing a summary in English), view the meaning in ASL (teacher gives ASL translation), and lastly, review by writing a summary of the lesson.

Here are ideas from the teachers using this codeswitching strategy.

> Teaching whole to part to deaf students is necessary and useful because they are more able to gain knowledge than if they learned from part to whole. Using ASL to read a story as a whole and then teach its parts can help to target specific reading skills. It makes it more meaningful to our deaf students if they gain background knowledge. They will be less frustrated and be more able to acquire language more naturally in both areas: conversational language and academic language.

> One of my examples of the Preview, View, Review activity that I use with preschoolers is described below. PREVIEW: Tell a story of the Rainbow Fish in ASL (primary language). VIEW: After the students dictate the story of the Rainbow Fish through their drawings, I write down their expressive part on their drawings in English (second language which is English). REVIEW: I interpret the written part of their expressive part in their primary language (ASL). In addition, I review the story and ask questions.

> Social Studies class . . . I presented a newspaper story regarding a DWI situation. . . . I asked the students what the term DWI means. Students affirmed they did not know. . . . I expanded the term into Driving While Intoxicated, then I rewrote the abbreviated term. . . . I continued with a brief summary about the man whose record reflected he got the 21st DWI. . . . I gave them copies of the article to read. . . . I allowed them to share and discuss with each other. . . . I asked them to write down what can driving while drunk do to you. . . . They were split into two groups. . . . They wrote everything down. . . . I put up poster paper where they wrote a

list of what drunk driving can do to you. . . . They expressed in ASL from their notes.... Everyone understood the content of the notes. . . . Then I threw them the question, what can we do about it? . . . . They said . . . a strong firm law . . . roads would be safer . . . I thought this approach/topic was motivating and effective.

Currently in reading class, students are reading Sarah, Plain and Tall. Before beginning reading, we discussed that in this story, the main character, Sarah, is from Maine, and she misses it very much because she moved to the Plains. We then compared and contrasted Maine with Kansas, using ASL. View: after this introduction and building of background knowledge, the students began reading. Review: this occurred when the students finished a chapter, we reviewed it together in ASL to check for comprehension.

In science, I preview most topics by using ASL to summarize the concept/content. Included in the summary are pictures, videodisc slides, and sometimes acting out the concept. It is important that students have a clear background understanding of the content in ASL prior to viewing it in English . . . after I have finished the preview the concept should be clear in the students' minds. Then they are reading to view the concept in written English. Activities I use to view the material in English include reading the chapter in the textbook, reading a written summary of the chapter, answering written questions over the concept, writing a summary of the concept. Following the viewing of the lesson will be a summary in ASL. I recently did an activity that fit this model. We were studying the food chain so I brought in owl pellets for the class to examine. First we saw a film on owls, their characteristics and how pellets are formed. Following the film I summarized it with a discussion in ASL. I also brought in models of owls and a sample of different pellets. Then in partners, the students dissected the pellets—classifying the different skeletons they found. Following all of those preview activities we shifted to English. The class read several articles on owls, highlighting the relevant information and organizing it into an outline. Then they wrote a one-page paper on owls using the writing process. We summarized the activity by inviting the class of first grade students to the room where my students explained in ASL about owls and how pellets are formed. Then the younger students and older students discussed owl pellets together, discussing what they found. This summarizing activity in ASL reinforced the concept and developed expressive ASL at the same time.

Cinderella stories from different cultures. Preview in ASL. Give an overview. Discuss with the students our version of Cinderella. Read the story aloud. Point out the key features of the story. View the story in English. Divide the students into two groups. Ask each group to create a Venn diagram that compares and contrasts the three Cinderella stories (in

> writing). The students are to use the books to highlight specific examples. Review in ASL. Pull the groups together. Discuss the two Venn diagrams that groups have developed. Point out similarities and differences. Lead the class in creating one final Venn diagram.

1.9 Deaf bilinguals learn best in learner-centered lessons.

Teachers discussed how to set up learner-centered classrooms using Freeman and Freeman's (1998) principles described in Chapter 4. Examples include lessons that move from "whole" to the "part," draw on students' background and/or interests, include meaningful content, use signed and written language modes, develop both social and academic language, and support the students' first language and culture. Here are some related teachers' comments.

> This year most if not all of my writing comes from my Science or Social Studies curriculum. I watch as we go through the different curriculum topics, and if I see a topic that stirred a lot of interest, I will design a writing project around that topic. We recently studied endangered species. I asked the students to pick a plant or animal that was endangered, research it, and design a poster about that animal. When the students had the opportunity to pick the animal they were interested in, the end result was much better than if I had picked the animals for the kids.

> We also recently made a newsletter or book about a project we undertook to help another school. [In ASL], the students planned what was needed to be done, how to earn the money, count the money, shop, pack and mail. I took pictures of each step. These were put on the computer into a book or magazine form. The students then wrote about what was happening in each picture. They had a lot to say and used very good language because they had experienced this personally and were very excited to write about an experience of which they were proud. These books were then shared with other students, classes, and their families.

Teachers also discussed McLaughlin's (1995) article on principles for developing a second language. Here are some of their comments.

> Bilingualism should be fostered and both languages should be encouraged and valued . . . identify and use codeswitching . . . be aware of students' experiences . . . use language to communicate meaning . . . there are many ways that I do this in the classroom that includes role-playing, modeling

correct language use through journals, using books that have patterns, using language that is 'input plus one,' as well as maintaining a language-rich environment.

. . . the second principle, there is an ebb and flow in children's bilingualism: it is rare for both languages to be perfectly balanced. This is really important for deaf children. The students coming to my class have varying degrees of both ASL and English. Just because the students are deaf does not mean that they have fluent ASL. It also does not mean that they understand my ASL fluently. It is important for me to remember to use lots of questioning [to check] for comprehension. It is also important for me to remember that all kids do not have equal English skills. As a math and science teacher it is more important for the students to include appropriate content than perfect English.

I like the principle children should be encouraged to experiment with language . . . it is okay to take risks . . . create an environment where students are able to feel success.

The concept of making students feel like writers is terrific, along with the idea of the writers (publishing) corner.

Principle four emphasizes the importance of codeswitching. I can easily apply this in my classroom, not only in my own communication, but also in my acceptance of students. If a student tends to write in ASL word order, I can use this as a basis to compare and contrast ASL and English while helping her revise her writing using English structures. Students need to be aware that ASL and English are different grammatically and this kind of visual comparison can help make this clear to them. I can also use code-switching while incorporating and explaining English idioms and expressions in my lessons.

1.10. Deaf bilinguals learn best when lessons have meaning and purpose.

Teachers read Chapter 5 by Freeman and Freeman (1998) which described how to develop meaningful, purposeful, and risk-free language lessons. They contrasted these kinds of lessons with an autobiographic story of a deaf adult who was raised in an oral/aural environment where he was not able to relate spoken language to written language.

Here are teachers' comments about meaningful and purposeful lessons.

> For my students to find the meaning, set purposes, claim ownership and take risks in my classroom, I often try to relate the IEP to the students' hot issues of the week. . . . The hot issue of that week was Pokemon and the students were frenzied about it. That week, I asked the students to describe one of the Pokeman characters. Student #2, who usually writes no more than five sentences in the essay, wrote a full page describing a Pokemon character. Student #2 often paused and asked me to help her write a word, as she did not know the word for the sign she was able to sign. I would go to the board and write the word. This method helps the writer and his/her classmates learn the vocabulary when learning through using the language. With understanding the vocabularies, they will be able to learn, learn through and learn about the second language by reading and writing.
>
> Writer's workshop . . . students find meaning and claim ownership because they are telling their own personal stories and making books that . . . they authored themselves. . . . They take risks as they attempt to use both languages. . . . They are supported in taking those risks by working in small groups or with a partner.
>
> I began to think of different activities I could use in my classroom in which the students could find meaning, set purpose, claim ownership, and take risks. The first activity that I would use with my students would be to have them write reaction papers. For example, after the students go on a field trip or attend a special school assembly, I could add closure to the activity by having them write a reaction to it.
>
> I still do structured language activities on various grammatical structures (verbs) as mini-lessons. But when I do make sentences or plan activities I try to use authentic sentences, which tie to the students' semantic base.

Next, teachers reflected and commented on a deaf adult's story of growing up using the oral or speech-only method. In the article, Nover and Moll (1997) described how Nover was not allowed exposure to ASL until age 17 and how his oral education affected his educational experiences. Nover gave an account of how he missed out on many interactive opportunities, like asking questions of family members or seeking and giving information. He also missed conversing over the telephone, discussing ideas, playing with language, having books read to him, acting out social roles, telling stories

and jokes, laughing, discussing problems, creating solutions to the problems, and obtaining information from the radio or television.

Teachers commented on Nover's language experiences and contrasted his school experiences with the meaningful and purposeful methods explained by Freeman and Freeman (1998).

> I was enrolled in a preschool oral program when I was two to four years old. My dad took some home movies while I was attending that school. It emphasized speech and speechreading and did not include a lot of activities that had meaning, and it was teacher-centered. . . . After meeting a deaf adult who advised them to enroll me at a deaf school, I entered kindergarten. . . . My parents said that they saw a world of difference as soon as I learned to communicate using sign language when I was four years old. I was not a frustrated child who had temper tantrums anymore. I was calmer and happier when I was able to communicate so my parents decided to learn sign language.
>
> I can identify with many of the experiences that Nover mentions here. I had the language skills to compete in a public school, but not the social or academic knowledge. I can remember being elected to represent my class in the student body government. To put it simply, I can remember entering the room with the other kids, watching the body language of the speakers, and watching the room so I could vote for the same thing for which most of the other kids were voting. What they were voting on wasn't important. Just getting through the meeting without looking stupid was what counted.
>
> In Nover's language learning experiences, he did not have any opportunity to acquire the second language at an early age, as he was not able to relate words in spoken language to written language. He did not know what he was learning. Yet, his teachers drilled him to focus on the spoken language. His teachers taught him from part to whole. Unlike the students in the Freeman chapter, Nover was not able to use his own communication method (gestures). This method restrained him from learning a second language in the early years.
>
> His speech training used the bottom-up approach. The lessons were meaningless and out of context for Nover. Teachers taught part to whole, focusing on sounds before words, words before sentences, then sentences before paragraphs.

> The language learning experiences described by Nover in his article differ greatly from the approaches discussed by Freeman and Freeman chapter. Until Nover was seventeen years old, all of the lessons that he was being taught in school had absolutely no meaning or purpose for him. He was often confused by the purpose of print and unaware of the meaning of connected words. He struggled in oral programs that suppressed his desire to use gestures and pointing as a means of communication. His expressive language consisted of nothing more than the ability to copy meaningless sentences and phrases, and he had no sense of an internal language. . . . He did not have a firm grasp on any kind of language, academic concept or abstract thinking until he was introduced to sign language at the age of seventeen. . . . Without auditory input, it is outrageous for us to believe that our students can develop higher level cognitive skills through the use of English alone.
>
> Nover's experience was very much like being given pieces of a 100,000 piece puzzle with no edges and no box with a picture. Mine was more like being given a 1,000 piece puzzle with edges and pictures on the puzzle box. The end result, the final pictures (products) are the same, but it took him much longer to get there.
>
> Nover's early language development missed a critical component—that of meaningful interaction. Humans develop language as we mediate contact in our social world . . . need for early, accessible language for deaf students.

1.11. Deaf bilinguals need opportunities to use ASL and written English during social interaction.

Teachers recognized the importance of facilitating both academic and social language interactions in ASL and English. Teachers mentioned that deaf children most often used ASL for social reasons and used English primarily for academic purposes. Teachers saw the need to provide more school opportunities for deaf children to use their written English in social settings. Similarly, they discussed how children could further expand their use of ASL socially as well as to include using ASL in academic settings.

Here are some comments on developing English and ASL socially and academically in interactive settings.

One way to facilitate this and to encourage Deaf culture is to allow students to chat with each other using TTYs. Another tool that my students have enjoyed is the use of personal e-mail accounts. They have the freedom to discuss topics of interest with their peers, yet they are required to use their social and academic English skills at the same time.

The facilitation of ASL as an academic language can be accomplished through the use of cooperative learning groups where the students have the opportunity to interact with each other and engage in the learning process. The use of student presentations, storytelling, panel discussions, and role playing opportunities are engaging learners because they have the ability to interact and learn from their peers.

A major way to increase English in the home and in the dorm...encourage children to use the TTY . . . conversational English . . . always have closed caption on television...using the Internet and e-mail . . . use ASL . . . allow students to use ASL for group discussions to explain concepts we are studying . . . students use ASL when doing projects and presentations . . . use ASL to share their written stories or present projects.

Use ASL . . . have discussions on abstract concepts . . . discuss "what if" questions . . . discussions on current events . . . use figurative speech . . . have discussions based on ASL and English expressions such as "fight for our rights" . . . videotape signing presentations and ASL poetry/stories.

To increase opportunities for English use in interactive settings, I could send home ideas on a weekly or monthly basis. These suggestions could relate to our themes or book of the month. Some ideas that come to mind are making grocery lists using words and pictures, coupons, household chore charts for everyone, a family calendar with upcoming events, using notes as reminders, using the TV guide to find favorite programs, closed captioned TV and moves, TTY calls to friends, following a recipe, writing invitations and thank-you notes, play games, fingerspelling names and foods. I could offer home visits to discuss, demonstrate how to incorporate English into family routines.

Another example of academic ASL in my classroom is the Artist Study we are currently doing in my writing class. Each student has a specific artist they are researching and writing about. The information they find will be shared with the rest of the class in ASL. Students will share the style of the artist, such as Impressionist, Surrealist, or Realist. These terms are new for the students, so they will have to learn enough about the style to share it with other students.

I know I have been guilty of teaching English in a boring fashion or "drill and kill." Now, I have tried to gear my teaching and lessons to what the

students' interests are and what they like so that learning can become more self-motivating for them.

Play Scrabble and Crossword games, make a family scrapbook about activities at home and at school, give child a personal calendar to write down important information, keep a daily journal or diary . . . keep track of daily accomplishments, plan and write menus together, take pictures for a photograph calendar, make a chart for daily brushing of teeth, take a written inventory of how many games, toys or videos they have on the shelf, make a schedule of times to watch TV programs during the week, make plans for a summer trip by following a map, researching places to visit along the way, writing postcards to friends on the trip . . . endless ideas for combining family/dorm interaction and learning English print at the same time. Not only do these activities help to increase the knowledge of English, but also they help build relationships as well.

Activities to facilitate ASL as an academic language: book talks with ASL presentation, interaction between students in discussions of the book is a way to focus on academic ASL . . . they are discussing characterization, plot, setting, problems, solutions, beginning, middle, and endings of each book along with the genre . . . using academic ASL to discuss how to set up writing and publishing a "What's up in the sixth grade" newspaper project.

Reading a book at the dorm. An older student can read the book to, or with, younger children helping them by interacting with them in their discussions and predictions of the stories. In the same manner at home, older siblings, or neighbor children, may be involved with younger children by reading to them and reading with them.

Facilitate ASL as an academic language: the kindergarten kids and I will work on "letter identification." First, I will challenge the students to think of a letter in the alphabet that is most commonly used in their first names, their last names, and their middle initials. Asking them to predict what letters they think will be most popular will help them to understand how some letters are used more than others. Then we will have an ASL discussion on our findings, using ASL as our mode of discussion.

Other opportunities for English in an interactive setting could be linked to applications of technology. Students can use the Internet to communicate both socially (pen pals) or academically (research a topic). Captioned TV is also a technology application which increases receptive English. In the classroom, we use the writing process and as part of that process, students edit other students' writing. Journals are still used to write back and forth between teacher and student which is a social application. As a teacher I use a science journal where students write to me for a variety of purposes:

explain the concept, did you agree with, why did that happen? What would happen if . . .

I think I probably facilitate ASL as an academic language more than I realize. One activity that comes to mind is reading our story. I put the story on the overhead after having told the story to the students using ASL. The students then take turns reading the English and practicing the correct way to sign the information so the meaning is correct.

When you are reading a book first read it in ASL and then go back and explain the English phrases and new vocabulary. When you begin a unit and go on a field trip the kids will get more out of the lesson if it is done in ASL and then when you come home use the pamphlets that were provided to teach the vocabulary, or use the picture and write about what the class saw.

Last Friday, my students were treated to two books presented in ASL. They were fascinated and wanted more. I would like to develop a storytelling time to facilitate using ASL as an academic language initially within our classroom.

One way deaf students can use ASL academically is to discuss books they have read or have been reading using ASL. Deaf students can also use ASL to discuss and learn about content information. In a social studies class for example, students can use ASL to give a presentation related to a topic they have researched or learned about. In group activities, such as preparing a project or a report, students can use ASL to discuss the topic before writing a report in English or creating their project.

Parents or dorm parents can label common items in the house or dorm, giving students the printed English with which to identify the object. Parents and dorm parents can write out menus for the children, so instead of telling children what is for lunch or dinner, the children can read it on the menu.

1.12. Reflections

As part of the last seminar, teachers were given opportunities to reflect on the whole process of the training at Level 1. Here are some of their comments.

The first level has helped me to internalize and become more comfortable with some of the research/theories/applications of second language learning and of language learning in general. As I have internalized this information, I have started to be more conscious of explaining the two languages to my students. We often talk about how English and ASL are

the same or different. We model and practice translating between the two languages during reading and writing. I have made a point of discussing the languages with my two deaf aides in the presence of the students so they can see there are different ways of signing the same English sentences, can start to understand the process of moving from one language to another, can appreciate that different people have different skills in each language, etc.

Many strengths . . . primary being that it allows us time to think about bilingualism and what it really means for our students.

Positive discussions, and encouragement/positive feedback . . . read articles that made sense and applied them in my classroom.

This project has impacted me . . . students will learn in a nurturing environment where they can feel good about themselves . . . when they take ownership in the learning process. . . . This project has made me rethink some of the methods and materials that I have been using.

To me, the greatest strength has been the weekly meetings. . . . They have given me a chance to express my opinions.

I think the biggest effect that the readings and participation in the seminars have had on me is that I take a lot more time to reflect on what I have taught and what I plan to teach. . . . I am trying to make sure that I give my students more choices.

I am trying to help my students compare and contrast ASL and English to help them develop their own understanding of the differences of the two languages.

Level 2 Training Overview: The Application of Bilingual Methodologies

In Level 2, teachers continued the training by focusing on the application of bilingual/ESL methodologies to their classroom work. In the first seminar of Level 2, teachers discussed what activities enhanced language learning through bilingual and ESL approaches. [5]

[5] For definitions of bilingual and ESL approaches related to deaf students, see Critical Pedagogy in Deaf Education: Year 1 Report at www.starschools.org/nmsd.

2.1. Deaf bilinguals use language lessons that follow a developmental bilingual model for language teaching.

In Level 2's first seminar, teachers read Freeman and Freeman's (1998) Chapter 7 which suggests that language learning lessons should contain all four language modes: listening, speaking, reading, and writing. For hearing language learners, reading, writing, music, drama, and art can help them develop the languages they are learning. The same factors that help develop oral language can help the student develop written language. Traditionally, oral language has been stressed when learning a second language, but Freeman and Freeman recommended that writing be introduced as early as possible in the second language classroom. Teachers then studied the model for deaf students' language learning proposed by Nover et al. (1998) who illustrated the modalities: signacy, literacy, and oracy (see Table 2). Teachers developed activities that enhanced language learning abilities using the bilingual approach and ESL approach (see Table 2). Here are some of the teachers' ideas on developing language utilizing the different modes and language skills.

> The bilingual approach involves the ten language skills related to both ASL signacy abilities and English literacy/oracy abilities. To develop skills via a bilingual approach, activities where students have the opportunity to interact with each other via discussions and interviews could be very effective. Everything should be related to print as much as possible, and the use of lipreading, speaking and listening should also be incorporated. Recently, the third grade students were learning information on a unit on disabilities. As part of our course of study, we took a field trip to the Texas School for the Blind. The students read books about blind people, but their knowledge was enhanced when they had the opportunity to interact with students who are blind. It was fascinating to see our students fingerspelling into the hands of a blind young man who was learning sign language to communicate with a friend of his who is deaf. Many of them used speech or an interpreter to further enhance their communication with the blind student. After seeing a variety of things on this field trip, the students came back to the classroom and we discussed what we learned while at the Texas School for the Blind. Then the

students had the opportunity to write about their adventures and explain what it would be like to experience blindness. After that, they had the opportunity to go on trust walks with each other, where one student led another student who was blindfolded. In all, the series of activities that were student-centered and hands-on were used and both ASL and English were incorporated in the activities.

Here is a teacher's story about her preschool children.

Circle time . . . the children sit in a circle and each child has the opportunity to share their news (signacy) and write their names on a large piece of paper (literacy) . . . children observe their classmates and teachers sharing their news in ASL (signacy. . . . They also share their own news using signs, gestures, and pointing to object they are talking about. . . . Each student writes their name daily either on their own or using a model.

In addition, this teacher shared these ideas with older children.

During journal time . . . the students describe what they have written or drawn with the teacher using ASL, gestures, and pointing (signacy) . . . . The students draw pictures and write their names (literacy) . . . incidental exposure to lipreading (oracy).

And in science class.

Developing language using an ESL approach (English only) can be seen as students work on research papers or projects. The students were presented with a question(s) related to a specific topic. The students would then research the questions by reading books, journals, the Internet, etc. From their readings, they would write on note cards or graphic organizers and expand their notes into a written report. While there could be some ASL along the way, the majority of the time the students are using English only.

To enhance their English literacy abilities, students could practice spelling vocabulary words with a partner. This is using their fingerreading and fingerspelling skills. Students can use their reading skills during reading class by completing their reading assignment, which may be a certain chapter in a book or an article read in class. Then, students can respond to the reading by writing in their response journals, which may done on the computer, thus using both writing and typing at the same time.

One can use the bilingual approach in many different kinds of language activities. For example, while learning about different cultures, the teacher and students would use signacy skills and fingerspelling/fingerreading to discuss the cultures and reading and

> writing to learn more about the cultures from books, the Internet, magazines, etc. Later, the class could develop a short skit about the cultures to demonstrate what they learned. In preparing the skit, they would need to use signacy skills and fingerspelling/fingerreading to discuss their skit, and reading, writing, and typing to prepare the script. During the presentation of this skit, signacy skills and fingerspelling/fingerreading would be used, as well as reading if any visual aids with text are included. Depending on the make-up of the class, all stages of this activity (discussion, learning, scriptwriting, and performance) could also include speechreading, speaking and listening.
>
> Both signacy and literacy are used during the Writer's Workshop. Students use literacy when they write their first draft. During the individual conferences we discuss through sign language. . . . They revise and rewrite the second or final draft . . . and then they type their final drafts using the computer. They publish their own books and read aloud to their classmates or students outside of their classrooms.

The use of ASL as a language of instruction has been questioned for not having lexical signs that correspond to every English word. However, in any translation situation between two languages, there is not always a one-to-one correspondence. Deaf adults and teachers know how to teach multiple meanings of English words through ASL (Andrews, 1997; Andrews & Akamatsu, 1993; Wilhite, 1997). Here is one teacher's explanation of how she could lead her children to understanding the multiple meanings of English words through using fingerspelling and fingerreading, reading and writing, speaking and listening and ASL (watching and attending) (refer to Table 2 for the model illustrating the 10 language skills).

> [when] teaching multiple meanings for English words . . . the teacher would first show the written word (example: get) to the students and ask them how to sign it. The student may use different signs, at which time the class could discuss the different meanings (example: to arrive, to become, to take or receive something, to understand). The students could sign examples of usage of that word, which the teacher could write in English on the board (The boy got to school late. It is getting dark. Please get your pencil. Do you get the idea?). If the students all initially use the same sign for the word, . . . the teacher could write the sentences using the word differently on the board, and ask the students to read and sign the

> sentences. This could lead to a discussion of the correct meanings and signs for the word . . . students could do a worksheet on which they read definitions and sentences . . . write sentences using the different meanings of the word. . . . . This bilingual activity includes: watching/attending, signing, fingerspelling, fingerreading, reading, writing, and possibly lipreading, speaking and listening.

Teachers also discussed ESL activities where students are linked to computers in the classroom, and they write out conversations to each other.[6] Teachers also discussed some other ideas to promote English using various techniques.

> Fingerspelling and finger-reading spelling/vocabulary words. Students can read stories and write responses to stories. Students can type letters to each other. Students can lip-read vocabulary words.

2.2. Teachers can promote bilingualism for deaf students to parents, other teachers, and administrators.

In Level 2's second seminar, teachers discussed how they would explain the importance of bilingual education to parents.[7] This project provides teachers with the knowledge and concepts to explain how their deaf students can learn two languages that mutually build on each other.

Here are some teachers' comments about how to inform parents about bilingual education.

> I would talk with the parents about the importance of developing a language through which to think, express feelings, and explore life. I would talk about how cultural identity and language are connected and how important it is to have the means to communicate and to have a good sense of self worth. I would stress that the acquisition of English, the deaf child's second language, is a slow process but one that will only occur with a strong first language.

[6] "Aspects" is a software program for collaborative writing, editing, and discussion in the classroom. It uses English and writing for all levels, from preschool to high school. A demo can be downloaded (www.grouplogic.com) or phone 800-476-8781.

[7] See also Nover and Andrews (2000) for questions parents ask about bilingual education for deaf children related to family issues and language issues. These articles also can be found on the web at www.starschools.org/nmsd.

> I would start by telling them that a bilingual approach does not favor one language over another, but uses the native language to help build the second language. Students' learning gaps in the second language are filled in with support in the first language. Students who acquire academic concepts in their first language can more easily transfer concepts in the second language. Giving students access to information in their native language helps build higher level thinking and problem solving skills. Giving students access to information in both languages helps give students a positive self-concept, self-esteem, and builds pride in their native cultures.
>
> Yet another important issue is the involvement of parents. If the parents can be involved and be participants in the decision then everything will go much smoother. The school in Denmark was very lucky that the parents not only supported it, but also were the ones who broached the subject in the first place. Parents are just like everyone else. They want to be involved in decisions that will affect them and their children. If we can include them and get them excited about a bilingual school, half the battle will have been won.
>
> The same reasons for using bilingual education with hearing students also apply to deaf children. Teaching students through ASL gives children the opportunity to learn about the world around them, including academic content. They learn problem solving and thinking skills in the language that is fully accessible to them while they are learning to read and write in English. This learning can then be translated to English. Concept development in a first language is especially important for deaf children because it is the primary support they have for learning to read and write.

Teachers also discussed how deaf adults and children often feel the "discomforts of marginality" when trying to communicate and cope in a hearing society (Emerton, 1998). Teachers discussed how they could promote cultural/linguistic self-awareness, self-esteem, and empowerment in their bilingual classroom to alleviate the feeling of marginality.

> I think there are both direct and indirect ways of promoting cultural/linguistic awareness, self-esteem, and empowerment with deaf students in the bilingual classroom . . . having access to deaf staff on a daily basis, inviting Deaf community members to informally share storytelling with students, having Deaf community members . . . share their talents/skills as they coordinate with classroom themes and units . . . celebrate Deaf Awareness Week, and study historic deaf figures . . . teach

students that ASL is a true and full language . . . a language they should be proud of . . . chart student and family deafness . . . read books about kids and adults who are deaf.

Ideas for self-awareness: invite deaf adults, Deaf literature by deaf authors, ABC signing stories, buddy classes with junior high or high school students paired with elementary age students, formal instruction about the history of the deaf in the curriculum, famous deaf people, successful deaf adults as role models, use both ASL and English in class setting, invite deaf individuals to class, videotapes of ASL stories.

I regularly discuss with my students ways ASL and English are alike and different. We practice signing the meanings of English sentences in ASL. Often when we do this, students observe me discussing with the deaf aides in the classroom which is the best way to sign the sentence in ASL. They observe that there may be more than one appropriate interpretation of the sentence. They have begun to suggest alternative ways to sign sentences in ASL themselves. We also discuss different signs for different words, including the signs that the students use at home. Through these kinds of activities, I have observed that students are gaining pride in their ability to move between two languages as well as gaining knowledge of how languages work.

I think it is also . . . being able to function as needed in both ASL and English. As Emerton put it so nicely, the bicultural deaf needs to be able to move back and forth between these groups with a minimum of interference and without the concomitant discomforts of marginality. To do this, it is important that the deaf learners have strong abilities in both English and ASL . . . achieved through bilingual/bicultural settings. The bilingual classroom allows and encourages the use of the deaf child's first language (ASL) to achieve academic success . . . children who feel good about themselves and their deafness grow up and can more easily function in the larger society; able to and feeling free to switch between Deaf and Hearing cultures.

In the classroom, I believe it is important to value the English language and ASL as equal languages. Some of our deaf children, even in the sixth grade, tend to want to isolate within the Deaf community and not associate with the hearing. To me this is a narrow view and will tend to lessen the experiences of the world within their reach. We as teachers need to reinforce to our children that it is acceptable to participate within both cultures without feeling they are being rejected by their deaf peers. We need to help our students not only have Deaf pride, but also to have pride in being bilingual persons. Our goal should be to enable our students to have the ability to go back and forth between two cultures: blending and participating in both cultures comfortably.

2.3. Deaf bilinguals learn when teachers have positive attitudes toward Deaf culture, ASL, and bilingualism.

In the third seminar, teachers discussed attitudes related to how deaf people have been treated in the educational system. As the speech and hearing sciences have dominated the education of deaf children for centuries, authors have coined words and phrases such as "audism," "hearitization," and "the hidden curriculum" to describe the discrimination and oppression deaf people have experienced in a hearing dominated world.[8] Teachers defined these concepts as they went through their readings and discussions and then discussed how they could address and resolve these issues within the school communities.

> Audism and hearization . . . are both terms that describe processes that deny the existence of, or depreciates the importance of deaf culture. Inherent in every situation (academic, athletic, and personal) are instances in which audism and hearization are prevalent. Among them are: teachers who stress that in order to learn English one must abandon all use of sign language, and quite possibly, dorm teachers who lack the experience with Deaf culture desiring deaf students to copy, emulate, or pattern themselves after hearing ethos and behavioral mores.
>
> Audism is the hearing way of dominating, restructuring and exercising authority over the Deaf community.
>
> One example of hearization that I have seen demonstrated several times is a teacher demanding a student to use signed English. For instance, a student may ask in ASL for a cookie by signing, cookie want cookie please? Often, teachers will correct the student by having them sign, may I have a cookie please? Instead of accepting the student's request in ASL as correct use of language other than English, the teacher forces the student to imitate an unnatural language behavior that she feels is more acceptable. A second example of hearization that I have seen displayed by the teachers in our school is demanding that a student use his/her voice while signing/communicating. Because ASL is a manual language only, requiring a student to use his/her voice while communicating also forces

[8] See Critical Pedagogy: Year 1 report for a detailed description of these terms (at www.starschools.org/nmsd). These words have been related to the concepts of "assimilation" and "ethnocentrism."

the student to use a language that he/she may not be comfortable with or is unnatural for the student.

When given tours of a school for the deaf, they frequently show a class of hard of hearing students who speak well. Some teachers and administrators think of ASL as a broken English and English is better than ASL. They also think Signing Exact English will help students become proficient in English (audism).

I think . . . hearization, audism, and the hidden curriculum can be resolved through educating the school community and parents about Deaf culture and American Sign Language in a way that is positive and non-threatening. I think it is important for those who work with the deaf to have already experienced and been involved with the Deaf community, have an understanding of Deaf culture, and also become knowledgeable and even fluent in American Sign Language. These should be preliminary requirements for working with deaf children.

I believe that in order to resolve hearization and audism issues in our school it is important to stress that there is variety in life. We must understand and recognize that the exclusion of one group, or culture, does not benefit anyone. I strongly believe in encouraging diversity, learning of others, and earnestly seeking to remove discrimination.

Respect for all students. Looking at the students as a whole and not evaluating them based on their English proficiency. It has to continue with respect for the student's most accessible language, often ASL. We need to realize that the goal of education is to help each student maximize his/her potential. We need to make sure our students understand that learning to read and write English is an important skill, not an identity.

2.4. Deaf bilinguals learn from instructional lessons that support their first and second languages.

In the fourth seminar, teachers discussed Freeman and Freeman's (1998) Chapter 8 on how to develop lessons that support students' first and second languages. Teachers also discussed Hansen's (1994) article on trends in the progress toward bilingual education in Denmark.

These are teachers' ideas on creating lessons that support deaf students' first and second language.

What features will promote successful deaf learners in a bilingual setting? Value and learn students' background and culture, teach to and from the experience of the students, emphasize the development of language and communication including writing and expressive sign language, use visuals and emphasize concept development, choose materials and design curriculum especially to provide all students with exposure to other cultures and people, create a student centered classroom, use videotapes by students to support academic learning and raise self-esteem.

Features I use . . . for dialogue journals, I will allow my student to tell me events that had occurred the previous day. I will repeat after them using fingerspelling and rephrasing in sign language. This way, the students know I am listening and for me to know they are paying attention to my rephrases in either English or ASL.

I will read the story by signing ASL, then pointing to words I am reading, then fingerspelling, then ASL.

To have strong ASL language support through the sixth grade. This means not only using ASL to learn content but also learning ASL grammar. . . . Teachers need strong preparation in how to develop a strong bilingual program. . . . Classes should be cognitively demanding and students need the opportunity to develop critical thinking skills. We need to teach our students to think.

The first is respect for the native language, or L1 of the deaf student . . . a second feature that will promote success is an additive bilingual program . . . both languages are valued and used . . . students need to receive content information in their L1 in order to help strengthen their abilities . . . L1 content learning also helps improve L2 language learning.

Here is a teacher's comments on the Hansen (1994) article.

The involvement of the parents made an impact on me . . . the willingness of the teachers to learn Danish Sign Language was also very important . . . the Minister of Education's acceptance of the results and willingness to implement bilingual education for deaf students with DSL as the first language!

2.5. Deaf bilinguals learn when teachers believe in them.

Teachers reflected on Freeman and Freeman's (1998) Chapter 10 that the concept "faith in the learner" (pp. 241-266) principle was the most critical. Teachers then described their teaching experiences in which teachers' attitudes toward students had

positively or negatively influenced them. Teachers then applied the Freeman andFreeman's seven principles of effective language learning to a unit they taught.

Freeman and Freeman's (1998) seven principles are

1. Learning proceeds from whole to part,
2. lessons should be learner-centered,
3. lessons should have meaning and purpose for students now,
4. lessons should engage students in social interaction,
5. lessons should develop both oral and written language,
6. lessons should support students' first languages and cultures, and
7. lessons should show faith in the learner to expand students' potential.

In applying the seven principles, I recently taught a lesson on molecular structure to a 6th grade Science class. I started with the whole, by building molecules using gumdrops and toothpicks. The students then put their molecules in-groups by discussing different ways the molecules could be classified—all in their first language, ASL. After we completed the lesson, the students wrote a summary in English with the intent of explaining the lesson to their parents or dorm parents in written English. Their homework was to teach the lesson to their parents using both ASL and English written summary. The parents/dorm parents then signed a paper indicating they understood the topic. This gave the lesson a meaning and purpose. Finally, just the fact that we deal with material this complex in 6th grade shows that we as a school and I as a teacher have come a long way. . . . We have faith the students can handle complex material when it is made accessible to them.

Another unit we did . . . Celebrating Diversity: A Multicultural Unit. . . . We had some Spanish students so one of the countries we studied was Mexico. We compared four different countries to the USA by homes, language, food, clothing and school. They had opportunities to learn new words in different languages. We also ate at several restaurants such as Chinese and Mexican. It was a very good experience for our students. I think the seven principles were used in these two units because they were able to take pride in their culture or become aware of other cultures.

A unit on famous Deaf Americans . . . **Whole to Part** . . . introduced the lesson through a discussion . . . students researched an individual deaf American . . . writing a biography . . . lessons should be **learner-centered** . . . discussed the difference between biography and an autobiography . . . students created an autobiography and a biography about another student in the class . . . students presented their reports orally . . . **lessons have meaning and purpose** . . . students choose a deaf American they had special interest in . . . **learning takes place in social interaction** . . .

> students interviewed each other . . . **lessons** . . . **include all four modes** . . . speaking (signing), reading, writing, and listening (attending) . . . students had to read and write to research . . . they had to sign their presentations . . . **lessons should support students' first language and culture** . . . included in Famous Deaf Americans unit . . . **having faith in learners** . . . activities were challenging for third graders . . . but they rose to the challenge.

2.6. The Deaf culture/linguistic viewpoint is an important part of the curriculum and classroom organization.

In the sixth seminar, the teachers discussed how the "deficit model" shaped their teaching and their training as teachers. The "deficit" or "medical model" espouses the idea that deaf children can be "fixed" or "cured" of deafness through assistive devices and oral/aural training. This view contrasts with the cultural/linguistic view that affirms the child's hearing loss and supports the use of ASL/English bilingualism.

Teachers read a chapter by Hakuta and Mostafour (1996) on the history and politics of bilingualism and biligual education in the U.S. and then related these facts to deaf education. Various comments and views emerged as the teachers reflected on how traditional deaf education practices shape the perceptions of various professionals, parents, and persons working with deaf students.

> 90% of deaf children come from hearing parents, therefore, the majority of the parents are hearing and often, they are not aware of Deaf culture and its primary language, ASL. Hearing parents often seek advice from medical professions when they first learn that their child is deaf. Chances that the medical professional will have a pathological view are very high. . .. Parents feel responsible for "fixing" their deaf child and tend to believe the pathological view.

> The deficit model has permeated education policy through our administration and those in power positions in a negative way. The majority of them come from monolingual backgrounds or have experienced a "sink or swim" approach in which they made it. Their empathy regarding educational policies and deaf education is not strong.

A pathological view of deafness was prevalent since we took courses like speech, audiology, and anatomy. There was no mention of Deaf culture, ASL or bilingualism.

The belief that using ASL in the classrooms will harm the process of learning English is a deficit philosophy that has permeated deaf education for a long time. Educators have regarded the students' native language and culture as a detriment to potential academic growth.

The deficit model has obviously permeated educational policy and practice in deaf education because the majority of professionals in the field are hearing individuals who are following the methods in which they were taught. This is evidenced by the emphasis on speech training, as well as the need to equate the teaching practices with those in the hearing schools.

Sadly, there is an undeniable tendency among policy makers and educators to regard students' native languages and cultures as obstacles to achievement, as academic deficits rather than as potential strengths to build upon.

I believe that there are many damaging assumptions taking place in deaf education. Policymakers, researchers, and practitioners do not have enough knowledge of how deaf children develop language. American Sign Language and Deaf culture have not been viewed positively by the society, which is due to lack of knowledge. A lot of decisions are made based on the pathological point of view, which has a big impact on how things are done in deaf education. Standardized testing is one of few examples that set deaf children to failure. As many researchers have indicated; it takes a few years for children with second language to perform academically at the same level with students who have English as their first language. Many of our deaf children are semilingual and need more time to perform academically at the age appropriate level.

2.7. Deaf bilinguals learn when ASL and English are given equal status and teachers and administrators are fluent in both languages.

In this seminar, teachers filled out a survey on "Ingredients for a Model ASL-English Bilingual Program" (see Appendix E). This survey was adapted from the work of Miranda Pickersgill in Gregory, Knight, McCracken, Powers, and Watson (1998). The purpose of the survey was to have the teachers reflect on what constituted a good

ASL/English Bilingual Program at school. Teachers were asked to evaluate their school's policy and practices.

Teachers were asked to reflect on 18 statements within the following four categories: Language and Communication, Curriculum and Assessment, Staffing, and Linking with the Community (see Appendix E). The teachers' responses are summarized below.

On the whole, teachers in all five schools responded to the survey by indicating that most of the schools were recognizing ASL as the language of instruction (see Appendix E, Item 1a). On average, they recognized that exposure to ASL should begin as early as possible (see Appendix E, Item 1b). Teachers from three of the schools responded that they did not think teachers at their schools separated the two languages (ASL and English) for teaching purposes (see Appendix E, Item 1e). Teachers in three of the schools did not believe that language mixing was clearly defined at their school (see Appendix E, Item 1f). Teachers from all five schools strongly agreed that the child should have access to a community of Deaf ASL users (peers and adults) (see Appendix E, Item 4b).

Teachers discussed important features of a quality ASL-English Bilingual Program and the effectiveness of their school with regard to this.

> One important feature of a bilingual program is ongoing inservice training should be provided for staff to further develop their ASL skills, and bilingual methodology using both ASL and English in the classrooms.
>
> X school could benefit from having an ASL specialist on premises, as well as an English specialist. Students need to be able to see someone for services in the languages outside of the classroom. In order to have a successful bilingual program, staff need to have proper training and experience would be beneficial.

In the area of language and communication, I really do believe that ASL and English have gained an equal status in the eyes of most of the staff. However, it is difficult for hearing parents who have never been around deafness to be able to afford English (the parents' own language) and ASL equal status. We all need to continue to educate parents in this area . . . do we assess children in ASL or English? . . . As far as staffing, we are fortunate to attract highly skilled deaf staff. This provides role modeling for our students as well as a link to the Deaf community.

The area that probably concerns me the most is the exposure to ASL as a full and natural language as early as possible. This I do not see happening. Few teachers in the early grades use ASL as a separate language. Sign Language and English are used simultaneously. Our students from hearing families are not introduced to ASL until a much later time. Some were not exposed until they reach a STAR classroom in our upper elementary department. It is sad that students are missing the language and instruction they need. When our children are finally instructed in ASL they become excited. By using ASL and English separately, the students are grasping English much quicker and their written work is exciting to me. It is much richer, more thoughtful, and they are willing to take risks.

I agree that auditory-oral support should be given at an early age but I also think this support should be given along with sign language. The first years for language development are very important and focusing on only one method is a mistake.

I do see more ASL used by teachers in the upper grades where the students are more insistent on using their language.

Our school would like to hire more deaf staff. We are able to recruit dorm parents, but we struggle to get deaf educators. Part of this comes from salary and part from our state certification process. This is an area of desperate need for us, more qualified deaf teachers.

The philosophy underpinning sign bilingualism . . . deaf people are respected as members of a minority group defined on the basis of language (sign language) and culture (Deaf culture). The goals of sign bilingualism are to enable deaf children to become bilingual and bicultural and participate in both the hearing society and the Deaf world. Deafness is not regarded as a barrier to linguistic development, educational achievement or social integration.

2.8. Deaf bilinguals have diverse language needs.

In this seminar, teachers read chapters about language choices at home and at school for the deaf child. They read Knight and Swanwick's (1999) work on language choices at home and Finton's (1998) chapter on living in a bilingual and bicultural family. Teachers wrote case studies of their deaf students who were learning two or three languages and then described how they attempted to meet those students' language needs. Below are some examples of case studies of students with diverse hearing losses, ages of onset, and diverse language/culture backgrounds.

One teacher wrote a case study about a boy in a Hispanic hearing family learning three languages—ASL, English, and Spanish.

> He came to school a few years ago from South America. He grew up in a Spanish speaking environment, and his primary language was spoken Spanish. There was no (or virtually non-existent) sign language used in his schooling (but I am certain there were some home signs used at home; this I am not certain about). When he arrived here, he began to learn English and ASL at the same time. Now, three years later, he is comfortable in ASL and uses it as his primary method of communication. He has not yet acquired English at the same rate as ASL, but he does have a base command of it—enough to survive in our English speaking culture. He has told me that his family primarily speaks Spanish, but they are learning English, and so he is experiencing yet another language—spoken English. I admire this boy, making do despite being exposed and confused by two languages. In the classroom, I use ASL (because it is my primary language of communication) to communicate with him, but at his request, I have tried to incorporate more English in our classes. I do this by requesting some form of writing along with the computer assignments I give—for example, the Easy Book Program. He is able to create pictures and then he adds text (stories, facts, whatever) to the pictures in order to create a story. I also ask him to write something to go with the digital pictures he creates on the computer, among other things.

Another teacher described one of her students whose parents are deaf.

> This boy was born to deaf parents, and ASL is the language of choice at home and at school. As is usually the norm with deaf children of deaf parents, the boy has acquired a good mastery of English—at least, better

> than most peers. His conceptual knowledge rivals most of his peers, also, and we can relate well because we communicate in the primary language, ASL. However, there is still a necessity for language choices in the classroom—in order to enhance his vocabulary development, I have taken to fingerspelling more and asking him to write some terms instead of signing them. He is sufficiently fluent in both languages for me to focus more on his understanding of transitions and codeswitching. This can be a challenge when I take into consideration the other students in the same class as him—they are all at varying degrees of bilingualism, and I don't want to neglect them when I make my language choices. However, I feel that what this boy experiences benefits the others, even if they have to work harder to understand what is happening.

Another teacher described a student who is a postlingually hard of hearing boy with one hard of hearing sibling and hearing parents.

> This boy is a 13-year-old with a moderate to severe hearing loss. He began losing his hearing at a young age and the hearing loss became significant at the age of seven. He moved from his former public school to X school for the deaf two years ago. He still has significant auditory and speaking abilities, and is able to comprehend most speech when directed at him. His speech is fully intelligible. He has difficulty understanding speech when not directed at him. He did not know sign language until he was enrolled at X School for the Deaf. He has picked up the language with relative ease although he still needs to separate English and ASL syntax. He has professed that he prefers ASL in the classroom because he understands the information better. He interacts with friends through both spoken English and ASL. His family is hearing, although one brother also lost his hearing. Everyone, including his deafened brother speaks to each other at home. My academic choices for him: because his hearing is getting progressively worse, it is necessary for him to continue improving his ASL skills. An ASL class would be ideal for him, discussing the difference between ASL and English. That is also something he has shown interest in. Clearly, he should maintain his speech skills and he has been doing this though his spoken English classes. In my classroom, I try to use a lot of fingerspelling with him and I use ASL when conveying information through the air and written English whenever applicable. His receptive and expressive English skills are quite high and I have begun using more complex English lexicon/concepts with him including idioms. Incorporate ASL skills such as storytelling in the classroom.

A deaf boy from a Navajo speaking family was described by another teacher.

> One of my students is a semilingual in both ASL and English. In his home environment, spoken English is used but no ASL. Emotional issues related to poverty have complicated his language learning. He is 13 years old and a Navaho. He was in public school before coming to the deaf school and experienced failure to learn to read and write English through using only his auditory skills. In school, he uses his hearing to locate the source of sound and uses ASL to communicate with his peers and teachers. In the dorm, he uses both spoken English and ASL depending on whom he converses with. In the public, he apparently prefers to talk. In social settings—his inappropriate behaviors might be associated with misunderstanding. I often asked him if he would rather have me sign with my voice "turned on" or not. He always opted for me to fully use ASL. I would encourage him to sign for himself in ASL, but he rarely participates. I feel he is in this phase where he is absorbing information through his eyes now (silent period). I use visual aids, ASL discussions, and continue using textbook and teacher made questions that we had previously discussed. He does the writing part when it is a high interest subject and I support him by encouraging him to continue.

2.9. Deaf bilinguals have different routes to bilingualism.

In this seminar, teachers read chapters on bilingualism by Colin Baker (1996) and by Knight and Swanwick (1999). They compiled case studies of students' routes to bilingualism taking into consideration the students' exposures to formal and informal languages (ASL and English) in their homes, community, and school environments. Teachers also noted if their students' learning of ASL and English was simultaneous (at the same time) or sequential (one language after another). Teachers' responses revealed that most deaf students of hearing parents followed the sequential route of bilingualism while deaf students with deaf parents usually followed the simultaneous route.

Teachers described several students who experienced various routes to bilingualism. The first two examples are of simultaneous bilingualism, and the last two examples are of sequential bilingualism.

> She was born deaf to parents who are hearing. Upon learning that their daughter was deaf at the age of six months, her parents began ASL classes. As she continued to grow, her parents began signing to her. Her

parents were actively involved in the local Deaf community and made sure that she interacted with deaf adults on a regular basis. At the same time, they began reading with her at every opportunity. As she got older, she began developing her ASL. Her parents continued to use ASL as their primary means of communication with her. By the age of three, she had extensive ASL vocabulary, as well as a growing English vocabulary. Her parents had emphasized reading, as well as writing at an early age by writing notes back and forth and by reading books on a regular basis. By the time she was ready for kindergarten, she was beginning reader books, and was above her peers. She entered kindergarten at the state school for the deaf, where she continued to build ASL and English skills. At home, her parents continued to do both well. Since her parents emphasized both ASL and English from infancy, she experienced simultaneous exposure. When she reaches middle school, she will already have a solid language base in ASL, and be ready to focus more on the specifics of English through her reading and writing.

A female student is five years old and is the youngest of four children. Her sisters are hearing, her parents are deaf. She has acquired ASL at home in a natural or informal manner. It is the language of everyday communication. Her family is active in the Deaf community, so her social experiences have also been in ASL. Her preschool experiences have been bilingual in an informal, natural preschool setting. Her route to bilingualism has been mixed, I think. Her family uses ASL, but in interactions with the hearing world, they use a variety of English skills and she has been exposed to these interactions in a very natural way. To enhance her continued bilingual experiences, I provide authentic experiences to communicate in both languages—writing notes, writing to who is absent, fingerspelling names, speechreading social phrases when hands are full, using ASL to learn and communicate with adults and peers. There are many opportunities to practice skills of both languages. I continue to provide activities that are motivating and interesting for preschoolers.

A male student is from a hearing family with hearing siblings. He spent the early years communicating in speech and gestures with a strong English base. Early school experiences were mainstreamed including classes where he had a sign language interpreter, signing SEE. Since the student had a reasonable access to spoken English (he was hard of hearing), he developed a base language of English and this was his preferred language. His social English is good, but he struggles with academic English. His bilingual development is sequential and did not really begin until the 6th grade when he enrolled in our residential school. Here, he has been placed in an ASL environment with English support. He lives in the dorm where ASL is used primarily. I am exposing him to as much ASL as he can absorb without becoming frustrated, then I switch

> back to spoken English for support. I have seen real growth in his ASL over the 8 months he has been there. He is acquiring ASL both from classroom exposure (more structured) and his peers (more natural acquisition).
>
> A boy is a deaf child of hearing parents. He has gone to our residential school since he was a little boy. His informal language is ASL. He understands clearly through ASL; however, his family doesn't use ASL to communicate with him. . . . Sadly, his family uses spoken English, and he knows very little English. He possibly learned ASL naturally. I have to teach him English formally. Everyday, I use ASL in the classroom to explain our lesson plan, then I will move into using academic ASL to encourage them to think. Once they get the experience, we move into social English. My goal is for them to move to academic English before they move to middle school.

As part of this seminar, teachers also gained a better understanding of the functions and results of codeswitching (Baker, 1996; Baker & Jones, 1998). Codeswitching is a normal and often deliberate function in a bilingual individual in which the two languages might be switched for various purposes. Baker has identified 13 overlapping purposes of codeswitching. We developed a survey incorporating and adapting Baker's explanations to allow teachers to reflect on the appropriate uses of codeswitching. As a result, teachers increased their awareness of how they are using the two languages (ASL and English) in their classroom (see Appendix F: Codeswitching Frequency Survey, which lists the 13 purposes of codeswitching). However, there is a great need for more research of how codeswitching is used in the classrooms to better understand its role and the benefits of codeswitching for deaf students. This information will help teachers of deaf learners to use ASL and English more effectively for language instruction.

Teachers commented on their use of codeswitching in their reflective logs.

> According to Baker, there are 13 purposes of codeswitching. I have used or observed others using most of these purposes for codeswitching at some

point in time. A specific activity in my classroom in which I utilized the third purpose for codeswitching was when I was teaching a lesson on idioms. English idioms obviously do not correspond exactly with ASL. . . . I would initially sign an idiom like "it's raining cats and dogs," in English, then I would sign the meaning of the idiom in English. . . . Codeswitching was a valuable tool during this lesson.

I use codeswitching in my classroom to help teach the English language. When there are words that are for emphasis or a vocabulary word I will sign it and fingerspell it. I will also write it on the board or have the word somewhere in print around the room if it is relevant to what we are studying. This will help the student have access to both languages. Many times students understand different concepts or ideas but they are not able to communicate or recognize it in English. This provides exposure to important words and will help the students to later recognize the word in other situations.

I have observed several students using fingerspelling Y-E-S to emphasize a point. Although that might be considered a fingerspelled loan sign, the students clearly fingerpell each letter and use it for emphasis instead of signing YES or simply nodding.

My student is hard-of-hearing and from a hearing family whose preferred form of communication is spoken English. . . . He provides a wonderful example of codeswitching. When he is communicating in ASL with hearing staff he will use Sim-Com. However, when communicating with deaf staff, he will turn off his voice and is able to express himself very clearly in ASL. I witnessed this one time and asked him why he turned his voice off for the deaf staff but he always voiced to me. His response was "she is deaf." I told him that I could understand him if he did not use his voice, but he still told me I was hearing. . . . From what I can see, no one ever explained to him how to transition to this different form of language.

I routinely code switch when a student may not understand a word, or a phrase in English, then I will switch to ASL in hopes that the student will understand the question, word, or phrase. Once they have understood the intended phrase, I will switch back to English for instruction. I have observed children, while playing in drama center, will act like teachers to other kids, modeling the code switching that takes place in the classroom.

I use English fingerspelling for first and last names, for months of the year and to switch from ASL to fingerspelling during our calendar discussion. With one child who is hard-of-hearing, I switch from speech to ASL to speech and sometimes back to ASL. I can say, "J. wash your hands," wait for a response—movement toward the sink—if nothing happens, I get his attention visually, then sign—WASH HANDS—then repeat in English

> speech as he moves toward the sink. Today, a student was using fingerspelling to show me what she knew. She spelled, 'cat," 'cow,' and 'bee.' She knows the signs and was showing off her new spelling skills.

2.10. Language attitude, aptitude, motivation, and self-concept affect deaf bilinguals' acquisition of first and second languages.

In this seminar, teachers reflected on Lambert's model of second language learning (as cited in Baker, 1996). Lambert emphasized that both the individual and sociocultural factors are important in the development of bilingualism. The model starts with the person's attitudes and aptitude toward a language. Both attitude and aptitude are important factors in second language learning. If society or the individual has a negative attitude toward ASL, then the child's acquisition of ASL may suffer. Deaf children may have negative attitudes toward English because of their difficulties learning and understanding English or their negative experiences in the classroom. Therefore, their acquisition and development of English may be delayed. The next part of Lambert's model is motivation or the readiness to participate in learning activities. The third part of the model is bilingual proficiency, and the final category is self-concept. Lambert (1974) believed that becoming bilingual has effects on the child's self-esteem and ego. Bilingualism expands the child's conversational partners, world views, values, beliefs, and even career aspirations (Baker, 1996).

Here is what one teacher said about her students' motivation to write English.

> After discussing with my students about my disappointment in their behaviors during a field trip the other day, . . . they agreed that they could do better. They also agreed that they would not go on the next field trip . . . [and] that they would write up rules and expectations for the next field trip. They did this and asked us for clarification on spelling and phrasing. On Lambert's model, they showed motivation. They saw others writing on paper. They wanted to be like them and be a part of the group decision. This was a good example of learning a language for useful purpose.

And here a teacher discussed students overcoming negative attitudes toward English.

> One of the biggest changes that I have seen over the last ten years is the attitude toward English. Five to ten years ago, many students felt there was no need to learn English, the prevailing attitude was that by learning English you are becoming Hearing. During that period; teachers also picked up on that and less and less English was presented. The entire focus was ASL. The attitude toward English made acquiring it difficult. Fortunately, that attitude has changed and now many students value English as an important tool to have.

And here a teacher discussed language aptitude and language learning.

> Aptitude is also key for deaf children, especially profoundly deaf children. To acquire English, deaf children must memorize and internalize syntax, vocabulary, and conventions. Some students have a difficult time with memory, making English acquisition slow and tedious. For deaf children, additive bilingualism is necessary. They cannot drop their ASL but rather be able to use both depending on the situation. I feel one of the real gains we have made over the past ten years has been in self-concept. With respect for both languages, with Deaf studies programs, with more and more deaf role models, students can and should be proud of their Deaf culture.

> As for my students, I have several with strong English skills. They all have positive attitudes about learning English, and are aware that they will make mistakes. We have a great understanding. They are patient and guide me with my ASL skills, and I guide them in English. This creates a great respect for each other. Rather than being critical of one another, we are supportive of the other's second language. I also have some students who are still acquiring their first language.

Teachers also responded to Andersson's (1994) article about second language literacy and gave examples of their students' study of English literacy. One teacher linked Anderrson's ideas to motivation.

> Several things in the Andersson article surprised me. First, I had never thought about how my students think of punctuation. The example of the exclamation point made me think about it more. Are students taught corresponding facial expressions for punctuation and intonation in English?

> In response to the Andersson article, the part that made the strongest impact on me was the suggestion that creating in deaf students a lasting interest in their second language should be one of our most important goals. . . . I think the best way to develop our students' English skills is to show them that reading and writing can be enjoyable tasks.

2.11. Deaf bilinguals learn from cognitively demanding language lessons in ASL and English.

In this seminar, teachers described a variety of teaching activities they used for lessons and placed these activities on Jim Cummin's (1984) two-dimensional scale describing the range of contextual support and degree of cognitive involvement in communicative activities. The first dimension, range of contextual support, related to the use of context-embedded versus context-reduced communication. The second dimension, degree of cognitive involvement, relates to the use of cognitively demanding versus cognitively undemanding communication (Baker, 1996). In designing their lessons, teachers can manipulate these variables to provide students with learning opportunities of varying degrees of complexity. Teachers described some of their teaching activities and how these related the dimensions of contextual support and degree of cognitive involvement. Teachers also read Hammer's (1998) article on cognition and language development and discussed how this article impacted their thinking and teaching.

> Here are language learning lessons created by teachers.
>
> One activity we are working on in our classroom is writing our own versions of fairy tales. First, we read a variety of different fairy tales. Most of the fairy tales were presented to students in ASL with book illustrations providing additional context (cognitively undemanding/context embedded). Students also read some fairy tales themselves, using their knowledge of fairy tales and the book illustrations to assist them with reading the English text (cognitively demanding/context embedded). We also acted out the various fairy tales as a group (cognitively demanding/context embedded) and discussed how

fairy tales are the same and different from other stories (cognitively demanding/context reduced). Then, students chose one fairy tale as a model and planned their own fairy tale by drawing the basic events in sequence (cognitively demanding/context reduced). Students signed their story again, incorporating the ideas suggested, then watched the videotape and wrote English translation of their story (cognitively demanding/context embedded). Next, I worked with each student to edit their English draft of their story for English grammar, punctuation, or whatever was appropriate for that particular student (cognitively demanding/context reduced). Finally, students read their finished text, and drew illustrations, for it (cognitively demanding/context embedded).

Most of my students are semilingual; therefore, it is critical to increase the context of communication as much as possible by using experiences as concrete examples. Their schemas are important too. I often use Preview, View and Review. This format greatly helps me and my class to see how much we know. I am really sensitive to their learning and want them to be able to grow academically as well as socially.

Students started a research project. They were asked to bring in an artifact from home that is at least 30 years old. They also had a list of questions that they had to ask whomever they got the object from. . . . This portion...is in the context embedded/cognitively undemanding quadrant. Although, writing English may be the demanding side. Next, they had to research the decade that their artifact is from. This required them to use the Internet and search through information. This is context reduced/cognitively demanding. Next, the students put all their information together and creatively displayed it on a board (which is cognitively undemanding/context embedded) . . . . This will be displayed during parents' night and they will be asked to talk about their artifact . . . cognitively undemanding/context embedded but a bit reduced as well because they are sharing information about their decade, which is new to them.

We were studying genre autobiographies, and decided to give school presentations as if we were visiting authors. The students were excited about this project and soon came back to school with props and costumes ready to begin. . . . We discussed autobiographies asking for prior knowledge, and familiar lists of books and authors (context embedded/cognitive undemanding). Teachers read several selections from autobiographies (context embedded/cognitive undemanding). Our librarian modeled an autobiography presentation on Patricia Polacco (content embedded/cognitively undemanding). Students selected an autobiography to read (context reduced/cognitively undemanding). Students read their autobiography and took notes for their presentation (context reduced/cognitively demanding). Discussion with the teacher on

ways to present their autobiography (context embedded/cognitively demanding). Students developed an oral presentation becoming authors themselves using props, posters, costumes (context embedded/cognitively demanding). Presented autobiographies as if they were authors themselves (context reduced/cognitively demanding). Wrote a final evaluation sharing their feelings related to the activities (context reduced/cognitively demanding).

Teachers described their insights from reading Hamer's (1998) article on bilingualism and cognitive development.

> What impacted me about Hamer's article was the absolute necessity to develop a strong base language as early as possible. Bilingualism can lead to cognitive advantages if a strong L1 is developed early. Studies show that bilingualism itself can lead to delayed cognitive growth if the conditions are not right. These conditions seem to be a development of an early L1.

> One aspect . . . about semilingualism made a strong impact on me . . . . Hamer helped me realize that there are many deaf students who come from hearing families who have extreme fear about communicating with their deaf child. The parent's experience of grief may interfere with the choice of linguistic development for the child. Often the process of linguistic development is delayed while they work through the issues of the child's deafness. . . . Parents will decide to begin with oral language . . . because they can't accept the fact of their child's deafness. . . . The grieving process may take longer and further interfere with the language development. Thus, the child has "unfinished progress" in his language development. I believe that this is the reason students are semilinguistic.

2.12. Deaf bilinguals benefit from language programs that provide an accessible first language, access to the curriculum, and an emphasis on developing a positive self-image and a bicultural identity.

In the last seminar, teachers read Knight & Swanwick's (1999) chapter on using sign language in bilingual programs in England. They discussed the goals of the bilingual approach. They related these goals to their own ideas about deaf education.

> Deaf children and sign language, the author emphasizes the importance of using a sign system with deaf children as a goal of bilingual education. I agree completely with the author. It is imperative that students have access to a language which they completely understand and can have full access to communication in an education setting.

> I agree with the author that all deaf children have different abilities for learning language and that we have to create an educational setting that is appropriate to their needs and their abilities. This is greatly dependent on the students' home environment and the access to language at a young age. I think the authors make a great point when they state that being bilingual is not an option for deaf children. For many children, it is the essential way to a real education. A system focusing on spoken and written English is not enough. Children must have appropriate access to language.
>
> The first goal of acquisition of an age appropriate preferred language is important. . . . The last goal of developing a positive self-image and cultural identity through participation in both the deaf and hearing society is so important to the student's future success in the hearing world, we do not give him a chance to learn about the Deaf culture and to feel proud of himself.

Finally, teachers reflected on their overall growth and learning during the year of Star Schools Training (Levels 1 and 2).

> Star schools has taught me a lot. I think the biggest thing it has taught me is how to think about language. . . . I feel that I have a stronger grasp on what ESL is and how to use it.
>
> For me, the greatest impact this project has had is on the continued development of metacognitively using ASL in the classroom. I have always used ASL as a tool, but not as something to teach. I have begun to promote ASL storytelling as well as viewing stories on videotape.
>
> I have also started using the SMARTBoard ™ more in the classroom along with several other technological tools. This helps keep the students involved in their learning and motivated.
>
> The biggest way that this project has impacted me and my teaching is my understanding of how a person goes about learning language in general and a second language in particular. As I have gained understanding in this area, I have become more aware of how I am using the two languages in a variety of contexts and with individual students. I am more conscious of using both languages in a variety of contexts, both social and academic. I am more aware of the fact that some students need a stronger base with ASL before they are ready for a lot of written English and I attempt to structure activities to provide for that.
>
> The readings, seminars, and discussions . . . have helped to make me think through many of my ideas for lessons and strive to find even better ways

to communicate my ideas. I was resistant to using ASL only with oral, hard of hearing students. With encouragement I used more and more ASL adding in the verbal English when necessary for clarification. This has become necessary less and less and the students' comprehension and academic growth has grown and grown. This is very exciting to me. It has helped take away some of my frustration.

The project has given me greater confidence in discussing the language development of deaf children with the parents that I see.

At the beginning of the year I had a difficult time saying that my students had any language. However, I have learned that their sign language is in fact emerging ASL. Even though it does not have all the necessary characteristics it is in fact a sign system so therefore it is closer to ASL than English. Also, I have watched one student in particular go from having to use two and three separate signs to explain a concept to being able to use direction and speed to make the one sign a three-morpheme statement. These are things, I had knowledge of, but would not have been able to recognize.

I have also seen a great correlation in my students' ASL abilities and their English abilities. Their ability to use either or both languages greatly effect their academic abilities.

Summary of Teacher Reflections

The teachers' excerpts from their reflective logs presented in this report provide documentation of teachers' learning, insights, and growth in bilingual/ESL theories and methodologies. These data met the first two goals of the project. Teachers developed concepts and terminology for use in discussing how their deaf students could acquire and develop two languages—ASL and English. These reflective log excerpts also provide examples of applying bilingual methodology to deaf students in the classroom, dorm, and at home.

In this next section, we report how technology supported the ASL/Bilingual Staff Development Model in the classroom.

Technology Applications

A major focus of the project was to provide teachers with more technology training to support the presentation of the two languages. Teachers used the web and e-mail extensively during the third year of the project. All reflective logs were transmitted electronically to the New Mexico School for the Deaf. Some deaf students in the project received e-mail accounts and began using e-mail regularly to practice their English skills with teachers, parents, and peers. A Bulletin Board, Chat Room, and ListServe were established through the Star School website, in which mentors' and teachers' reflective logs are now posted to promote interaction among the five school sites.

Visual technologies used by mentors and teachers in the project included the SMARTBoard ™; the In-Focus Projector; digital cameras; software programs such as PowerPoint, Photo Studio, and ASPECTS. Teachers and mentors were also provided information on how to integrate the use of technology into their Language Arts classes. For example, Jill Naumann, the project's educational technology specialist,[9] provided training to teachers in showing students how to use software for research projects (CD-ROM encyclopedias, libraries on the web, Internet search engines) and present their research using authoring software such as PowerPoint, HyperStudio and mPower. Teachers were also trained in using the digital camera and in how to make captions for their digital pictures for use in language experience stories and other writing work in the classroom (Naumann & Propp, 2000).

Instruction was also provided on the use of the SMARTBoard ™, which can be used to project text and pictures directly though a computer on a large screen. On the

SMARTBoard, English print is easy to read, and the text can be moved and changed rapidly by touching the board itself. Teachers also received training in making PowerPoint presentations and using the digital camera to enhance the quality of visual presentations. Teachers, in turn, trained many of their students in these technologies. Students presented information in ASL, using English text and pictures presented visually to clarify and enhance their presentation. Teachers also trained students to use the software ASPECTS which links up computers in the classroom and allows students to share written conversations. Naumann and Propp (2000) recommended the use of the following software for deaf students: Easy Book Deluxe, Imagination Express, KidPix Deluxe, TimeLiner, Microsoft Office, Microsoft Publisher, and iMovie. See copies of the school newsletters on the Star Schools website for more classroom activities using technology (www.starschools.org/nmsd).

Other Products of Year 3

Videotape

During the third year, teachers were videotaped working with students as teachers modeled Freeman and Freeman's (1998) seven principles for effective language learning. These principles are considered essential for successfully developing a second language (see Appendix A for these seven principles). Contact the Project Director to obtain copies of the videotape of Star Schools teachers demonstrating the application of seven principles.

[9] Jill Naumann is also the Educational Technology Specialist for teachers at NMSD who are not involved in the STAR Schools project. She can be contacted at jdn@nmsd.k12.nm.us (505-827-6739) for schools interested in expanding their technology resources.

For Parents

We also provided products for the parents about the bilingual approach. Project staff created two newsletters to distribute to all parents whose children were in the project. In the newsletters, we featured pictures of teachers, students, and student projects. The Project Director and staff also developed a series of five articles on "Questions Parents Ask about the Bilingual Approach." Two articles have been published in the *Silent News* on questions asked by families about deaf childrens' language acquisition (Nover & Andrews, March 2000a; 2000b). Three more articles related to speech, hearing and assistive devices, placement issues, and reading and writing issues will be published in the *Silent News*. We are making plans to collate our parent articles into a booklet for parents interested in the bilingual approach for their deaf children and to post this booklet on our website, as well as publish it in hard copy. Interested readers can view these newsletters and parent articles on our website.

Family Lap-top Program

During the second year of the grant, laptops were distributed to families of deaf children in the project. Families communicated with their children via Internet email. [10] In the third year, we adapted the family laptop program into a Summer Reading Program to become effective in the summer of 2000. Mindy Bradford was the coordinator of this project, and Jennifer Herbold, an NMSD teacher, designed the online summer correspondence course in which six middle school students borrowed the laptops. They agreed to read an assigned book and maintain correspondence with the teacher by answering e-mailed questions and participating in a live chat room. The students and

[10] See Critical Pedagogy: Year 2 (pp. 103-109) for data collected during the first and second year of the project with the family laptop program at www.starschools.org/nmsd.

parents were trained on the laptops, received a list of expectations and signed a contract. The instructor kept records of all e-mail and real-time chat correspondence and wrote anecdotal comments on each student's performance.

The Summer Reading Program was well received by the students. They enjoyed the reading, discussions, and especially the ability to send and receive email from their friends. Some students preferred direct discussions with Ms. Herbold on personal e-mail, and others preferred the online chat sessions. Ms. Herbold felt that the online discussions were especially helpful for the students for clarifying difficult and abstract concepts presented in the book. Although the online discussions were scheduled to last one-half hour, they always ran over an hour. From excerpts of the online discussions, it was interesting to note some benefits to students: peer teaching, quality social interaction (using English), and an excellent model of English in the instructor's questions and comments to the students. In the following excerpts, students and Ms. Herbold are discussing the novel, "A Wrinkle in Time."

June 11, 2000 excerpt:

(teacher):	Why were the twins happy he was staying for dinner?
Student 1:	because twin know lot about his record for basketball
Student 2:	because they liked him
Student 1:	am i right
(teacher):	Yes, both of you are right. Calvin is a very good basketball player and that's what they liked.
(teacher):	Ok, can anyone tell me who is "Mrs. Which"?
Student 2:	I didnt understand when meg was talking with her mom o about charles and how diffrent he was
(teacher):	Ok, Charles is a little kid.
(teacher):	But he seems to understand people a lot.
Student 2:	heee iisss thhee onnee whhooo hasss troubblleee talkkkinggg
(teacher):	She seems as if he has the wisdom of a 100 year old man.
Student 1:	mrs which is not talk smooth what (Student 2) said that
(teacher):	hheeee issss aaa ssshhheee
Student 2:	sheee
(teacher):	Yes, Mrs. Which does not talk smoothly.

(teacher): Why do you think she does not talk smoothly?
Student 1: i think her tongues is cut
(teacher): Hahahahaha, I like your thinking.

June 18, 2000 excerpt:
(teacher): When they went into town, they encountered a person that was upset
(teacher): that they were outside.
(teacher): Why was the person upset they were outside?
Student 3: becasue they saw new people?
Student 3: am i right?
(teacher): Sort of, but not quite.
Student 3: dang!
(teacher): They didn't know that Calvin, Meg and Charles are new.
Student 3: oh
Student 4: hmm because they were not suppoed to be outside need to be inside??
Student 1: becasue all follow the rule by time and it never happen for three years that boy drop ball
(teacher): They were upset because... (Student 1?) answer is on page 107, the bottom. Yes, they were upset that the boy dropped the ball.
Student 1: i am right?
Student 4: dang it i was wrong
(teacher): But when they went into town (yes you were half-right)
(teacher): why were they upset?
(teacher): (enough with the "dangs")

June 22, 2000 excerpt:
(teacher): Guess what transparent means.
Student 3: i dunno
Student 1: mean like trip
(teacher): The first person to tell me what transparent means gets a pat on the back from me.
(teacher): Nope, transparent does not mean trip.
(teacher): Student 5, Student 3, Student 1, ask your parents fast.
(teacher): Or ask someone.
Student 1: like bring some thing to there then there then there
(teacher): I would like to see who gets it first.
Student 3: my mom is not here she is at mall wiht her sister
Student 5: see truugh
(teacher): No, transparent does not mean transportation.
Student 5: see trough
(teacher): Yes! Student 5 won!
(teacher): See through.
(teacher): Transparent means something you can see through.
Student 3: oh
Student 1: mean can see through glasss
(teacher): Yes!

(teacher): Glass is transparent.
(teacher): What else is transparent?
Student 1: so i got a pat ?
(teacher): Nope, Student 5 gets the pat on the back.*

*The students remembered Student 5 earned a pat on her back during the first day of school and insisted that Ms. Herbold give her one.

Ms. Herbold also concluded that because the students had additional access to English language over the summer break, they came back to school with their minds prepared, while their peers who did not read during the summer found it more difficult to begin the year. The Summer Reading Program was an excellent opportunity to maximize effective use of laptops for students who can benefit from guided reading and writing experiences.

Teacher Evaluation Data

An important part of this project was to develop new assessment tools for teachers to assist them in setting up bilingual programs and tracking their students' progress. We have previously mentioned two assessment surveys: the "Ingredients for an ASL/English Bilingual program" and the "Codeswitching survey," (see Appendices E and G for the data on these surveys). In still another survey, we asked teachers to rate their students bilingual proficiency.

Teacher Judgments of Deaf Students' Bilingual Proficiency. In this survey, teachers were asked to rate their deaf students' bilingual proficiency across a continuum of six categories. Categories and category definitions of these bilingual language proficiencies are contained in Table 5.

Teachers were asked to rate their students twice a year, once in the Fall of 1999 and a second time in the Spring of 2000. Table 6 shows the teachers' ratings for Fall

1999 and Table 7 shows the teacher ratings' for Spring 2000. Table 8 then shows the changes in teachers' ratings by percentage over the 1999-2000 school year.

Although the changes may not be statistically significant, it is interesting to note that there was a slight (2%) increase in balanced bilinguals and a slight (2%) decrease in ASL dominant bilinguals.

Table 5: Categories and Definitions of Bilingual Levels (Kannapell, 1989).

Categories	Definitions
Balanced Bilingual	Competent in both ASL and English and comfortable in both cultures
ASL Dominant Bilingual	Competent in both ASL and English but preferring to use ASL most often
ASL Monolingual	Competent in ASL only
Double Semilingual	Not proficient in either English or ASL
English Dominant Bilingual	Competent in both ASL and English but preferring to use English
English Monolingual	Competent in English only

Table 6: Summary of Star Schools Teacher Judgments on Bilingual Language Learning Proficiencies of Students (n = 265) (Fall 1999).

Schools (# students)	Balanced Bilinguals	ASL Dominant Bilingual	ASL Monolingual	Double Semilingual	English Dominant Bilingual	English Monolingual
ENCSD (n=71)	0	27	3	36	5	0
KSD (n=51)	0	25	9	6	10	1
TSD (n=61)	6	21	23	8	3	0
NMSD (n=52)	4	30	5	11	0	2
ISD (n=30)	2	11	1	6	8	2
Total (n=265 students)	12	114	41	67	26	5
Percentages within categories	5%	43%	15%	25%	10%	2%

Table 7: Summary of Star Schools Teacher Judgments on Bilingual Language Learning Proficiencies of Students (n=285) (Spring 2000).

Schools (# students)	Balanced Bilinguals	ASL Dominant Bilingual	ASL Monolingual	Double Semilingual	English Dominant Bilingual	English Monolingual
ENCSD (n=73)	0	26	6	32	9	0
KSD (n=49)	5	22	4	11	7	1
TSD (n=61)	6	31	11	10	3	0
NMSD (n=79)	10	29	18	20	2	2
ISD (n=23)	1	8	7	2	4	1
Total (n=285 students)	22	116	46	75	25	5
Percentages within categories	7%	41%	16%	26%	9%	1%

Table 8: Changes in Teachers' Ratings of Students' Bilingual Proficiencies over one school year (Fall 1999 to Spring 2000)

Categories	**Fall 1999 (n=265 students)**	**Spring 2000 (n=285 students)**	**Percentage changed Over one year**
Balanced Bilinguals	5 %	7%	+ 2 %
ASL Dominant Bilingual	43%	41%	- 2%
ASL Monolingual	15%	16%	+ 1%
Double Semilingual	25%	26%	- 1%
English Dominant Bilingual	10%	9%	- 1%
English Monolingual	2%	1%	- 1%

Student Background Variables and Achievement Data

Another goal of the project was to collect background variables, including Stanford Achievement Test (SAT) scores, of the students taught by teachers in the ASL/English bilingual training. During Year 3, project staff began work on setting up a database of students taught by project teachers from 1997 to the present. These background variables were collected on each student: school, teacher, gender, date of birth, non-verbal IQ score, etiology of deafness, ethnicity, age of onset of deafness, home

language, hearing status of parents and siblings, presence of additional disabilities, and the degree of hearing loss. Plans have been made to examine the students' SAT scores from 1995 to 2002. The project plans to publish these data in the final (fifth) year of the project (2002).

In any discussion of the effects of an educational method, it is critical that student background variables be fully examined because many of those background characteristics can affect language and literacy development.[11] The project has hired an outside consultant who is neither familiar nor involved with the training (and is therefore unbiased). She has a Ph.D. in educational psychology and is an expert in the statistical package, SPSS. She will conduct analyses relating the student achievement scores to teacher training. To control for student background variables, multiple regression analyses will be carried out to determine the effects of the teachers' Star Schools training on their students' SAT scores.

Summary and Implications

Forty-five teachers and mentors in five schools for deaf students read, reflected on, and wrote about applied bilingual theories, methodologies, and strategies in the teaching of language to deaf students. The training supports a dual language developmental bilingual approach that provides access for deaf students in two languages—ASL and English. ESL or English-only monolingual approaches are suggested, but only as a subcomponent within the overall bilingual framework. In other words, after the student has developed a strong first language in ASL, teachers can then

[11] See for example, Critical Background Variables Omitted in Comparison Study: An Appeal to the State Auditor to Reanalyze the Deaf (Andrews & Nover, 2000). www.deafcarolina.com and also on www.starschools.org/nmsd.

provide opportunities for English-only classroom activities that allow the student to acquire, learn, and use English for both social and academic purposes.

This project views bilingualism as an asset for both deaf and hard of hearing students. We do not support the mixing of languages as in a sign-supported speech environment. Although children may naturally mix the two languages (ASL and English) as part of their developmental process, we recommend that schools provide students with fluent models in both ASL and English. Neither do we support an oral/aural approach to be used exclusively but that oral/aural skills be presented to deaf students as a subcomponent of a bilingual approach.

The findings of Year 3 of this study have implications for reforming language teaching in schools for deaf children throughout the U.S. by advocating the use of bilingual and ESL methodologies in inservice teacher training. This project also recommends a closer scrutiny and analyses of the background variables of deaf students because many of these variables affect language learning. In any examination of deaf students' language and literacy achievement, clear and specific descriptions of the students' background variables, such as extent and type of hearing loss, age of onset, etiology of deafness, educational background, etc. should be taken into account. Much damage has been done by well-meaning professionals who have compared test scores of heterogeneous groups of deaf students and falsely attributed low achievement to factors such as use of sign language or residential school education, when in fact many of these children were failing because their exposure to sign language was delayed at home and in public day schools.

Our preliminary database of deaf students involved in the project for the past three years revealed that many older students at the upper elementary and junior high level are entering the residential schools after spending their early years in the public school. Many of these "late arrivers" come to the deaf schools with low literacy and language scores. Simply put, the public school programs are failing many deaf students and are exacerbating their language delays. Many of these children become public school failures, who are later placed in residential schools. Many of these deaf youths come from ineffective oral/aural programs, sign-supported speech programs, or are from immigrant families and have learned English and ASL late in childhood or in adolescence. Therefore, there is a critical need to provide intensive bilingual and ESL training for these older deaf youths who are lagging behind in reading and language. There is also a critical need to provide early intervention using bilingual approaches so that deaf children do not lag behind in their psycholinguistic development of phonological, lexical, and syntactic access to ASL, accessible English, and knowledge of the world (Morford & Mayberry, 2000).

Our three years of study in this five-year project have led us to believe that schools for the deaf are in dire need of reform in setting up language teaching and language learning environments. There is a need for residential schools to restructure and develop innovative ways of providing ASL and English exposure with improved bilingual and ESL methodologies. As it is now, residential schools can be isolating in the sense that deaf youths do not receive an optimal amount of exposure to accessible English. However, we do not advocate closing residential schools. Residential schools have the potential of being linguistic laboratories where deaf students can be exposed to

adult, cross-age, and peer signing language models. Nor do we advocate the general overall mainstreaming of young deaf children without ASL and Deaf culture support. Such mass maintreaming, as what occurred in the 1980s and 1990s, has miserably failed many deaf students socially, emotionally, and intellectually and has probably created a generation of double semilingual students who are neither proficient in ASL nor in English. We advocate for the reforming, restructuring, improving, and upgrading of English and ASL language teaching methods used with deaf students. Such a restructuring should include more bilingual/ESL training for in-service and pre-service teachers. Also beneficial would be bringing in more adult, deaf, ASL signing role models, as well as hearing, English language peer models for deaf students in an overall supportive bicultural (deaf and hearing) environment. This will be the challenge for the next generation of teachers and administrators if residential schools wish to be considered as leading and pioneering institutions in the education of deaf students.

Appendix A

Seven Principles for Effective Language Learning

Following are the seven principles that are essential for success of English language learners (Freeman & Freeman, 1998).

1. **Learning Proceeds from Whole to Part**: Students need the big picture first which helps them move from whole to part.

2. **Lessons Should Be Learner-Centered**: Lessons should begin with what students know, and class activities should be built on students' interests.

3. **Lessons Should Have Meaning and Purpose for Students Now**: Students should be given choices about what they study, and lessons should relate to their real lives.

4. **Lessons Should Engage Students in Social Interaction**: Students learn more when they work in groups and interact socially.

5. **Lessons Should Develop Both Oral and Written Language**: In our case, this means that students can be learning and using ASL as well as reading and writing English to develop language skills.

6. **Lessons Should Support Students First Languages and Cultures**: Recognizing a student's first language and culture builds self-esteem. Students who continue to build on their first language (often ASL for deaf students) use it to facilitate learning English.

7. **Lessons Should Show Faith in the Learner to Expand Students' Potential**: Teachers' activities should show faith in the learner and that they believe in their students' ability to succeed.

Appendix B

Star Schools Project
A Conceptual Framework for Deaf Education:
Bilingual/ESL Approaches to English Literacy

Syllabus
Fall 1999 - Level 1

Teacher Development: An Overview:

The Star Schools two-year teacher development plan provides an opportunity for teachers to use critical pedagogy as defined by Wink (2000). Critical pedagogy is a process whereby teachers "name" their beliefs, "reflect" critically on them, and then take "action." Teachers in the Star Schools training will "name" traditional beliefs, critically and collaboratively "reflect" on them, and then "act" to implement effective practices of bilingual/ESL instruction that will enhance the achievement of deaf students in all academic classes. The overall focus will be on two components of bilingual instruction: (1) a bilingual approach that involves the use of ASL and English and (2) an ESL approach that involves the exclusive use of English as a second language. ASL consists of two language skills: attending and signing. English consists of eight language skills: reading, writing, speaking, listening, fingerreading, fingerspelling, lipreading, and typing).

Seminar Description: Levels 1-2:

During the first year, teachers participate in 24 seminars (2 hours each) totaling 48 hours of training; the initial and final seminar of each semester is used for orientation/review and evaluation. The first year reviews the current research on bilingual/ESL education, culture, the deaf bilingual child, first and second language acquisition and learning, language use, language teaching, and language assessment. Teachers reflect on the concepts of bilingualism presented and observe how they apply to their own classrooms. The result is a collection of teachers' stories that describe teacher development in creating a bilingual classroom for deaf children.

Seminar Requirements

1. **Attendance**: Teachers attend 12 seminars (two hours each) per semester; the first is for orientation and the last for evaluation. Attendance is mandatory because participation in and contributions to the seminars are essential; teachers who miss more than two seminars are subject to losing their stipend ($1,000 each semester).

2. **Communication**: Teachers are expected to use ASL during seminar meetings.

3. **Reflective Logs (RL):** Teachers are expected to complete the reading assignments and type reflective logs before weekly seminars, share individual responses, and participate in weekly reflective activities.

- Reflective log questions are completed for 10 seminars each semester; these logs will be an individual's response to the readings, topics discussed in seminars, and/or experiences that teachers have had in their classrooms. Log entries are used as a basis for group discussion, serve as a written record of individuals' thinking, and provide data for research purposes and dissemination of successful strategies of language teaching.
- Teachers are expected to keep all completed reflective logs in a binder throughout the year for documentation of professional development.
- It is critical that reflective logs be turned in on time for effective participation and for research purposes.

4. **Videotaping:** One 15- to 20-minute videotape is required by each teacher. These videotapes are utilized for a variety of functions to fulfill the requirements of the Star Schools project. For Level

1, teachers can videotape a sample lesson using whole to part, teaching language through content or language use through social interaction. The lesson should include both ASL and English. Teachers can use these videotapes for self assessment, paired viewing for peer coaching, and/or for demonstrations/presentations to professional peers.

Required Texts

1. Fradd, S. (1998). Instructional language assessment. Gainesville, FL: IASCP, University of Florida.
2. Freeman, Y. S., & Freeman, D. E. (1998). ESL/EFL teaching: Principles for success. Portsmouth, NH: Heinemann.
3. Nover, S. & Andrews, J. (1998). Critical pedagogy in deaf education: Bilingual methodology and staff development. Santa Fe: New Mexico School for the Deaf.
4. Parasnis, I. (Ed.). (1996). Cultural and language diversity and the deaf experience. Cambridge: Cambridge University Press (used for Levels 1 & 2).

Required Articles (these will be distributed by your mentors)

1. Barnum, M. (1984). In support of bilingual/bicultural education for deaf children. American Annals of the Deaf, 129 (5), 404-408.
2. Ewoldt, C. (1993-1994). Language and literacy from a deaf perspective. *Teachers Networking:* The Whole Language Newsletter, 13 (1), 3-5.
3. Kannapell, B. (1989). An examination of deaf college students' attitudes toward ASL and English. In C. Lucas (Ed.). *The sociolinguistics of the deaf community* (pp. 191-210). San Diego, CA: Academic Press.
4. Krashen, S. (1995). Bilingual education and second language acquisition theory. In D. Durkin (Ed.), Language Issues: Readings for Teachers (pp. 90-116). White Plains, NY: Longman.
5. McLaughlin, B. (1992). Myths and misconceptions about second language learning: What every teacher needs to unlearn. Washington, DC: National Center for Research on Cultural Diversity and Second Language Learning.
6. McLaughlin, B. (1995). Fostering second language development in young children: Principles and practices. Washington, DC: National Center for Research on Cultural Diversity and Second Language Learning.
7. Nover, S & Moll, L. (1997). Cultural mediation of deaf cognition. In M. P. Moeller & B. Schick (Eds.), Deafness and diversity: Sociolinguistic issues. Omaha, NE: Boys Town National Research Hospital.
8. Skutnabb-Kangas, T. (1981). Bilingualism or not: The education of minorities. Avon, England: Multilingual Matters..

Level 1 of the Star Schools Training, Fall 1999

SEMINAR 1

Reading Assignment Due

- Nover and Andrews (1998). Critical pedagogy in deaf education: bilingual methodology and staff development.

Writing Assignment Due

- Contracts

Discussion Topics/Activities

- Orientation and Introduction
- Expectations
- Syllabus

Preview for Seminar 2: RL 1.1

SEMINAR 2

Reading Assignment Due

- Grosjean (1996). Living with two languages and two cultures (pp. 20-37). **(mentors have the Grosjean article; it can also be found in the book by Parasnis)
- Kannapell, B. (1989). An examination of deaf college students' attitudes toward ASL and English. (pp. 191-210).

Writing Assignment Due: RL 1.1

- Self-Assessment
- Question 1: Reflect on the articles you have read, and share your thoughts and feelings on the themes covered. Include observations about yourself, your students and school environment if relevant.

Discussion Topics/Activities

- RL 1.1
- Who is bilingual?
- Bilingualism in hearing and deaf individuals
- Relationship between ASL and English

Preview for Seminar 3: RL 1.2

SEMINAR 3

Reading Assignment Due

- Krashen (1995). Bilingual education and second language acquisition theory (pp. 90-95).
- Fradd (1998). Additive and subtractive bilingualism (Stack 3).
- Skutnabb-Kangas (1981). Bilingualism or not: The education of minorities (pp. 141-144).

Writing Assignment Due: RL #1.2

- Question 1: See Krashen's (1995) *Summary of the Issues* on pages 94-95 of the article, reflect on the five questions, and share your thoughts and feelings on these questions.
- Question 2: Additive bilingual education provides educational settings in which students are able to study subject matter in their first language (ASL) while their weaker language (English) catches up. Is this feasible for your deaf bilingual students? Why or why not? Also, describe two features within your school that indicate an additive or subtractive bilingual language learning environment.

Discussion Topics/Activities

- RL 1.2
- Bilingualism in schools: Varieties of bilingual education
- Additive and subtractive bilingualism

Preview for Seminar 4: RL 1.3

SEMINAR 4

Reading Assignment Due

- Krashen (1995). Bilingual education and second language acquisition theory (pp. 95-102).
- Ewoldt (1993-1994). Language and literacy from a deaf perspective (pp. 3-5).
- Padden (1996). Early bilingual lives of deaf children (pp. 99-116).

Writing Assignment Due: RL #1.3

- Question 1: How do Krashen's (1995) five hypotheses about second language acquisition impact your thinking about language instruction?
- Question 2: C. Ewoldt (1994) described many examples of learning strategies and experiences that deaf students can share. Describe an ASL learning strategy that you have observed in one of your students. Describe an English learning strategy that you have observed in one of your students.

Discussion Topics/Activities

- RL 1.3
  - Second language acquisition theory
  - Language and literacy learning strategies

Preview for Seminar 5: RL 1.4

SEMINAR 5

Reading Assignment Due

- Fradd (1998). Length of time in acquiring a language (Stack 4).
- McLaughlin (1992). Myths and misconceptions about second language learning: What every teacher needs to unlearn.

Writing Assignment Due: RL #1.4

- Question 1: Reflect on the McLaughlin (1992) article and Fradd's (1998) Stack 4, and share your thoughts and feelings on the themes covered. Include observations about yourself, your students, and school environment, if relevant.
- Question 2: Describe activities that you currently do to give students opportunities to use ASL and English in social and academic contexts.

Discussion Topics/Activities

- RL 1.4
- Length of time to acquire a language
- Social language acquisition theory

Preview for Seminar 6: RL 1.5

SEMINAR 6

Reading Assignment Due

- Freeman and Freeman (1998). Introduction (pp. xiii-ix), Chapter 1: Contexts and orientation (pp. 1-29).

Writing Assignment Due: RL #1.5

- Question 1: Discuss the differences in the amounts of exposure to English within ESL and EFL settings, and compare the experiences of deaf and hearing students in these settings.
- Question 2: Based on your own teaching experience and reviewing the five orientations described in this chapter (p. 29), describe which orientations you feel you have used with your deaf students? Why?

Discussion Topics/Activities

- RL 1.5
- Compare the differences in the amounts of exposure to English within ESL and EFL settings for both hearing and deaf students
- Language teaching: Contexts and orientations

Preview for Seminar 7: RL 1.6

SEMINAR 7

Reading Assignment Due

- Freeman and Freeman (1998). Chapter 2: Teaching language through content (pp. 30-61).

Writing Assignment Due: RL #1.6

- Question 1: What are the advantages of teaching English through content to deaf students? What challenges does this present in an ESL/EFL setting for deaf students?
- Question 2: How do the ideas and strategies for ESL/EFL instruction apply to teaching deaf children?

Discussion Topics/Activities

- RL 1.6
- How do we make English comprehensible?
- Teaching English through content

Preview for Seminar 8: RL 1.7

SEMINAR 8

Reading Assignment Due

- Barnum (1984). In support of bilingual/bicultural education for deaf children.
- Freeman and Freeman (1998). Chapter 3: Learning goes from whole to part (pp. 62-87).

Writing Assignment Due: RL #1.7

- Question 1: Cummins (1984) emphasized the importance of learners developing two types of language proficiency: social (BICS) and academic (CALP), and that the contextual support differs for each of these. How does this concept apply to deaf children who are acquiring both ASL and English?
- Question 2: "Preview, View, Review" (pp. 77-78) is an example of whole to part teaching. How could you develop an activity in your classroom using this approach?

Discussion Topics/Activities

- RL 1.7
- Types of language proficiency
- Whole to part language teaching

Preview for Seminar 9: RL 1.8

SEMINAR 9

Reading Assignment Due

- Freeman and Freeman (1998). Chapter 4: Lessons should be learner centered (pp. 88-125).
- McLaughlin (1995). Fostering second language development in young children: Principles and practices.

Writing Assignment Due: RL #1.8

- Question 1; In what ways could you make your lessons more student-centered?
- Question 2: Select several principles McLaughlin (1995) has identified to foster second language acquisition. How can you apply those principles to your classroom practice?

Discussion Topics/Activities

- RL 1.8
- Whole to part and principles that foster both ASL and English acquisition
- Learner-centered lessons

Preview for Seminar 10: RL 1.9

SEMINAR 10

Reading Assignment Due

- Freeman & Freeman (1998). Chapter 5: Lessons should have meaning and purpose for learners (pp. 126-147).
- Nover & Moll (1997). Cultural mediation of deaf cognition.

Writing Assignment Due: RL #1.9

- Question 1: Students learn as they engage in activities in which they find meaning, set purpose, claim ownership and take risks. How can you do the same in your classroom?
- Question 2: How does Nover and Moll's (1997) language learning experience differ from the approaches discussed in the Freeman and Freeman (1998) chapter?

Discussion Topics/Activities

- RL 1.9
- What makes language learning meaningful and purposeful?
- Language teaching methods

Preview for Seminar 11: RL 1.10

SEMINAR 11

Reading Assignment Due

- Freeman and Freeman (1998). Chapter 6: Learning takes place in social interaction (pp. 148-175).

Writing Assignment Due: RL #1.10

- Question 1: Traditionally, deaf children have had to learn English with a focus on form (grammar and vocabulary). How can we increase deaf children's opportunities to use English in an interactive setting (in the dorm, at home, etc.)?
- Question 2: How does Nover and Moll's (1997) language learning experience differ from the approaches discussed in the Freeman and Freeman (1998) chapter?

Discussion Topics/Activities

- RL 1.10
- How can we increase opportunities to use ASL and English in social and academic settings?

Preview for Seminar 12: Reflection and Evaluation

SEMINAR 12

Reading Assignment Due

NONE!!

Writing Assignment Due

- Reflection and evaluation

Discussion Topics/Activities

- Discuss/summarize issues of bilingual education for deaf students.

Appendix C

Star Schools Project
A Conceptual Framework for Deaf Education: Bilingual/ESL Approaches to English Literacy
Syllabus

Spring 2000 - Level 2

Teacher Development: An Overview:

The Star Schools two-year teacher development plan provides an opportunity for teachers to use critical pedagogy as defined by Wink (2000). Critical pedagogy is a process whereby teachers "name" their beliefs, "reflect" critically on them, and then take "action." Teachers in the Star Schools training will "name" traditional beliefs, critically and collaboratively "reflect" on them, and then "act" to implement effective practices of bilingual/ESL instruction that will enhance the achievement of deaf students in all academic classes. The overall focus will be on two components of bilingual instruction: (1) a bilingual approach that involves the use of ASL and English and (2) an ESL approach that involves the exclusive use of English as a second language. ASL consists of two language skills: attending and signing. English consists of eight language skills: reading, writing, speaking, listening, fingerreading, fingerspelling, lipreading, and typing.

Seminar Description: Levels 1-2:

During the first year, teachers participate in 24 seminars (2 hours each) totaling 48 hours of training; the initial and final seminar of each semester is used for orientation/review and evaluation. The first year reviews the current research on bilingual/ESL education, culture, the deaf bilingual child, first and second language acquisition and learning, language use, language teaching, and language assessment. Teachersl reflect on the concepts of bilingualism presented and observe how they apply to their own classrooms. The result is a collection of teachers' stories that describe teacher development in creating a bilingual classroom for deaf children.

Seminar Requirements

1. **Attendance**: Teachers attend 12 seminars (two hours each) per semester; the first is for orientation and the last for evaluation. Attendance is mandatory because participation in and contributions to the seminars are essential; teachers who miss more than two seminars are subject to losing their stipend ($1,000 each semester).
2. **Communication**: Teachers are expected to use ASL during seminar meetings.
3. **Reflective Logs (RL):** Teachers are expected to complete the reading assignments and type reflective logs before weekly seminars, share individual responses, and participate in weekly reflective activities.

- Reflective log questions are completed for 12 seminars each semester; these logs represent an individual's response to the readings, topics discussed in seminars, and/or experiences that teachers have had in their classrooms. Log entries are used as a basis for group discussion, serve as a written record of an individual's thinking, and provide data for research purposes and dissemination of successful strategies of language teaching.
- Teachers are expected to keep all completed reflective logs in a binder throughout the year for documentation of professional development.
- It is critical that reflective logs be turned in on time for effective participation and for research purposes.

4. **Videotaping:** One 15- to 20-minute videotape is required by each teacher. These videotapes are utilized for a variety of functions to fulfill the requirements of the Star Schools project. For Level 2, teachers can videotape a sample lesson using ASL and English to teach ASL, reading, writing, or content. Any of the methods suggested by Livingston (1997) or Jacobson (1990) would be appropriate. Teachers can use these videotapes for self assessment, paired viewing for peer coaching, and/or for demonstrations/presentations to professional peers.

Required Texts

1. Baker, C. (1995). A parents' and teachers' guide to bilingualism. Clevedon: Multilingual Matters. (All levels).
2. Baker, C. (1996). Foundations of bilingual education and bilingualism. 2nd Ed. Clevedon: Multilingual Matters. (Levels 2 and 3).
3. Freeman, Y. S., & Freeman, D. E. (1998). ESL/EFL Teaching: Principles for success. Portsmouth, NH: Heinemann. (Levels 1 and 2).
4. Knight, P., & Swanwick, R. (1999). The care and education of a deaf child. Clevedon: Multilingual Matters. (Levels 2 and 3).
5. Parasnis, I. (Ed.). (1996). Cultural and language diversity and the deaf experience. Cambridge: Cambridge University Press (Levels 1 and 2).

Required Articles (these will be distributed by your mentors)

1. Andersson, R. (1994). Second language literacy in deaf students. In I. Ahlgren & K. Hyltenstam (Eds.), Bilingualism in Deaf Education (pp. 91-101). Hamburg: Signum.
2. Baker, C., & Jones, S. P. (1998). Encyclopedia of bilingualism and bilingual education. Clevedon: Multilingual Matters.
3. Graney, S. (1997). Where does speech fit in? Spoken English in a bilingual context. Working Paper. Washington, DC: Gallaudet University Pre-College Mission Programs.
4. Hansen, B. (1994). Trends in the progress toward bilingual education for deaf children in Denmark. In C. Erting, R. Johnson, D. Smith, & B. Snider (Eds.), The Deaf Way: Perspectives from the international conference on Deaf culture (pp. 606-614). Washington, DC: Gallaudet University Press.
5. Hoffmeister, R. (1996). Cross-cultural misinformation: What does special education say about deaf people (pp. 172-189). Disability and Society, 11(2), 171-189.
6. Jacobson, R. (1990). Allocating two languages as a key feature of a bilingual methodology. In R. Jacobson & C. Faltis (Eds.), Language distribution issues in bilingual schooling (pp. 3-17). Clevedon: Multilingual Matters.
7. Nover, S. (1995). Politics and language: American Sign Language and English in deaf education. In C. Lucas, (Ed.), Sociolinguistics in Deaf communities (pp. 109-163). Washington, DC: Gallaudet University.
8. Nover, S., Christensen, K., & Cheng, L. (1998). Development of ASL and English competence for learners who are deaf. Topics in language disorders, 18(4), 61-72.
9. Skutnabb-Kangas, T. (1994). Linguistic human rights: A prerequisite for bilingualism. In I. Ahlgren & K. Hyltenstam (Eds.), Bilingualism in deaf education. Hamburg: Signum.
10. Svartholm, K. (1994). Second language learning in the deaf. In I. Ahlgren & K. Hyltenstam (Eds.), Bilingualism in deaf education. Hamburg: Signum.
11. Wink, J. (2000). Critical Pedagogy: Notes from the real world. New York: Longman.

Level 2 of the Star Schools Training, Spring 2000

SEMINAR 1

Reading Assignment Due

- Freeman & Freeman (1998). Chapter 7: Lessons should include all four modes (pp. 176 -191).
- Nover, Christensen, & Cheng (1998). Development of ASL and English competence for learners who are deaf (pp. 61-71).

Writing Assignment Due: RL 2.1

- Question 1: Using Table 3 as a guide (Nover et al., 1998, p. 68), what types of activities could you develop that enhance language abilities using: (a) a bilingual approach (10 language skills) and (b) an ESL approach (8 language skills)?
- Question 2: Using the attached form, analyze language use in five of your classroom activities. In other words, briefly describe what children are doing with each modality: signacy, literacy, and oracy for each given activity.

Discussion Topics/Activities

- RL 2.1
- Research on using four modes for hearing learners
- Research on using eight modes for deaf learners
- The importance of reading for acquiring English as a second language

Preview for Seminar #2: RL 2.2

SEMINAR 2

Reading Assignment Due

- Freeman and Freeman (1998). Chapter 8: Lessons should support students' first languages and cultures, Part one (pp. 192-218).
- Emerton (in Parasnis, 1996). Chapter 8: Marginality, bilingualism, and social identity of deaf people (pp. 136-145).

Writing Assignment Due: RL 2.2

- Question 1: How would you explain to a parent, fellow teacher, or administrator the importance of bilingual education for deaf children?
- Question 2: In what ways can you, as a teacher, promote cultural/linguistic self-awareness, self-esteem, and empowerment for deaf students within a bilingual classroom?

Discussion Topics/Activities

- RL 2.2
- Several misconceptions about bilingual education
- Rationale for bilingual education
- Marginality and bilingualism

Preview for Seminar #3: RL 2.3

SEMINAR 3

Reading Assignment Due

- Wink (1997). An excerpt, "Hidden Curriculum" (p. 43).
- Baker (1996). Chapter 19: The politics of bilingualism (pp. 352-372).
- Nover (1995). Politics and language: American Sign Language and English in deaf education (pp. 109-163).

Writing Assignment Due: RL 2.3

- Question 1: Audism and hearization are manifestations of a hidden curriculum based on ethnocentrism and assimilation. If audism and hearization exist within your school system, could you provide examples of each?
- Question 2: After reading about the concepts of a hidden curriculum, audism, and hearization, how can you address and/or resolve these issues within your school community (staff, faculty, administration, parents)?

Discussion Topics/Activities

- Hidden curriculum
- Audism and hearization
- Language orientations

Preview for Seminar #4: RL 2.4

SEMINAR 4

Reading Assignment Due

- Freeman and Freeman (1998). Chapter 9: Lessons should support students' first languages and cultures, Part two (pp. 219-240).
- Hansen (1994). Trends in the progress toward bilingual education for deaf children in Denmark (pp. 605-614).

Writing Assignment Due: RL 2.4

- Question 1: What features will promote successful deaf learners in a bilingual setting?
- Question 2: What aspects of the Hansen (1994) article made a strong impact on you and why?

Discussion Topics/Activities

- RL 2.4
- Bilingual education programs and models
- Features of effective programs for English language learners
- An overview of the linguistic situation in the Danish deaf community

Preview for Seminar #5: RL 2.5

SEMINAR 5

Reading Assignment Due

- Freeman and Freeman (1998). Chapter 10: Faith in the learner expands student potential (pp. 241-266).
- Freeman and Freeman (1998). Epilogue (pp. 267-275).

Writing Assignment Due: RL 2.5

- Question 1: Read the following quote: "Stories of students have convinced us that of all the seven principles for success, the 'faith in the learner' principle is the most critical. When teachers show they believe in their students, the other principles follow naturally. When teachers show they have faith in the learner, they show students the big picture, not just bits and pieces of information" (Freeman & Freeman, 1998, p. 246). Describe some teaching experiences in which your attitudes toward students have influenced their performance positively or negatively.
- Question 2: After reading several examples of applying the seven principles, how have you or could you apply them in a unit you have taught?

Discussion Topics/Activities

- Attitudes toward English language learners
- Assessment for English language learners
- Putting all seven principles into action

Preview for Seminar #6: RL 2.6.

SEMINAR 6

Reading Assignment Due

- Hakuta & Mostafapour (in Parasnis, 1996). Chapter 3: Perspectives from the history and politics of bilingualism and bilingual education in the United States (pp. 38-50).
- Hoffmeister (1996). Cross-cultural misinformation: What does special education say about deaf people (pp. 172-189).

Writing Assignment Due: RL 2.6

- Question 1: How has the "deficit model" permeated educational policy and practice in deaf education?
- Question 2: How has your deaf education teacher-training program affected your teaching experience?

Discussion Topics/Activities

- The status of bilingual education and deaf education from a research perspective
- Cross-cultural misinformation about deaf people

Preview for Seminar #7: RL 2.7

SEMINAR 7

Reading Assignment Due

- Pickersgill (1998). Chapter 2.5: Bilingualism: Current policy and practice

Writing Assignment Due: RL 2.7

- Question 1: Using the attached form, compare your school's "ingredients for a model sign bilingual program" to those described in Pickersgill's (1998) chapter. While discussing your findings, what ingredients could be added or revised at your school?

Discussion Topics/Activities

- Definition of sign bilingualism
- Implications for classroom practice

Preview for Seminar #8: RL 2.8

SEMINAR 8

Reading Assignment Due

- Knight, P. & Swanwick, R. (1999). Chapter 4: Home and the wider world (pp. 52-62).
- Knight, P. & Swanwick, R. (1999). Chapter 5: Language choices at home (pp. 63-74).
- Finton (in Parasnis, 1996). Chapter 17: Living in a bilingual-bicultural family (pp. 258-271).

Writing Assignment Due: RL 2.8

- Question 1: Present two case studies of your students with diverse language needs. Describe how they use languages at home, school, or in social settings. How do you make language choices in the classroom to match their language needs?

Discussion Topics/Activities

- The deaf child's language and communication development
- Language choices
- Identifying deaf children's communication needs
- Language use in the home
- Person-language bond

Preview for Seminar #9: RL 2.9

SEMINAR 9

Reading Assignment Due

- Baker (1996). Chapter 5: The development of bilingualism (pp. 76-93).
- Knight & Swanwick (1999). Chapter 6: Becoming bilingual (pp. 77-93).
- Baker & Jones (1998). Chapter 3. Codeswitching (p. 58-61.)

Writing Assignment Due: RL 2.9

- Question 1: Create a case study of a student's route to bilingualism considering the following factors: a) what was his/her exposure to formal and informal languages (ASL and English) in their home, community, and school environment?; b) have they experienced simultaneous or sequential exposure to ASL and English? How can your instruction and classroom environment enhance his/her individual language experience?
- Question 2: Part 1: Fill-out the Codeswitching Frequency Survey (see attached page); Part 2: describe the following uses of codeswitching (refer to Baker's [1996] "13 purposes of codeswitching," (pp. 87-89.), (a) a specific time or activity in which you used codeswitching in your classroom; (b) a specific time or activity in which you observed a student codeswitching.

Discussion Topics/Activities

- Various routes to becoming bilingual
- Routes to bilingualism for deaf children
- Types of childhood bilingualism
- A variety of informal and formal educational means of acquiring competency in a second language
- Issues of language mixing
- Purposes of codeswitching

Preview for Seminar #10: RL 2.10

SEMINAR 10

Reading Assignment Due

- Baker (1996). Chapter 6: Second language acquisition (pp. 95-115).

- Andersson (1994). Second language literacy in deaf students (pp. 92-101).

Writing Assignment Due: RL 2.10

- Question 1: How does Lambert's model (as cited in Baker, 1996, p. 101) relate to (a) your experiences of learning a second language?; (b) one of your student's experiences of learning a second language?
- Question 2: What aspects of the Andersson (1994) article made a strong impact on you and why? Please explain in detail.

Discussion Topics/Activities

- An overview of theories of second language acquisition and learning
- Krashen's (1995) theory applied to the classroom
- The learning situation and language exposure for deaf students
- Attitudes and motivation: Integrative motivation and instrumental motivation
- The importance of being aware of why, when, and where deaf people use the national language

Preview for Seminar #11: RL 2.11

SEMINAR 11

Reading Assignment Due

- Baker (1996). Chapter 9: Cognitive theories of bilingualism and the curriculum (pp. 145-161).
- Hamers (in Parasnis, 1996). Chapter 4: Cognitive and language development of bilingual children (pp. 51-75).

Writing Assignment Due: RL 2.11

- Question 1: Describe a variety of teaching strategies you have used for a lesson and where they are placed on Cummins' quadrant (as cited in Baker, 1996, pp. 156-157). How effectively have you covered the range from cognitively undemanding/context embedded to cognitively demanding/context reduced?
- Question 2: What aspects of the Hamers' (1998) article made a strong impact on you and why? Please explain in detail.

Discussion Topics/Activities

- Cognitive theories of bilingualism and the curriculum
- Cognitive and language development of bilingual children

Preview for Seminar #12: RL 2.12

SEMINAR 12

Reading Assignment Due

- Knight and Swanwick (1999). Chapter 7: Deaf children and sign language (pp. 94-112).

Writing Assignment Due: RL 2.12

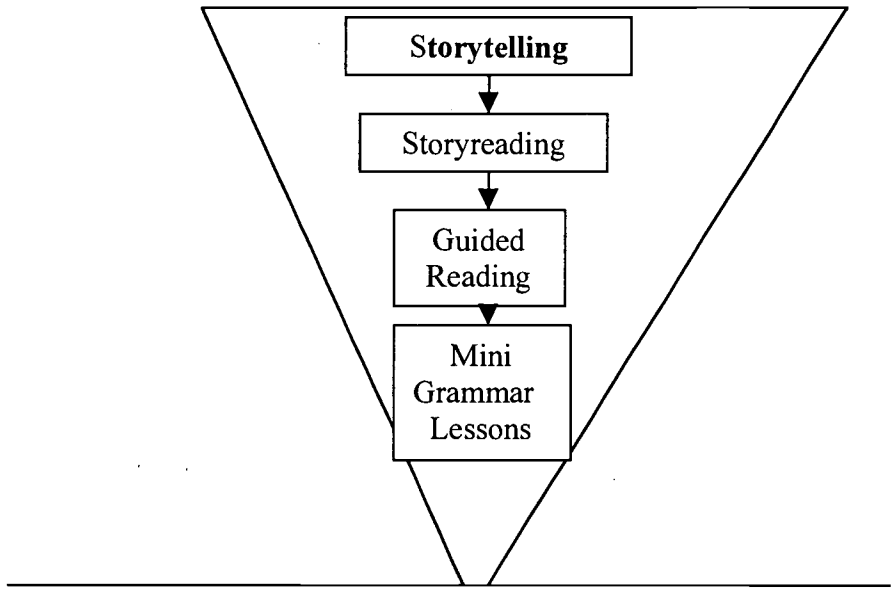
- Question 1: How do the goals of a bilingual approach to deaf education, as described in Chapter 7, meet the needs of all deaf children?
- Reflection and evaluation
- Based on your readings, participation in the seminars, and attempts to apply these principles in your classroom, describe some personal insights you have had related to your teaching. Explain how this project has had an impact on your teaching practice.
- What were some strengths of this project? What were some weakness that you feel need to be addressed?

Discussion Topics/Activities

- An overview of the aims and goals of a sign bilingual approach
- Share insights
- Identify new learning
- Identify goals for Level 3

Appendix D

Dr. Laurene Gallimore's (2000) Guided Reading Lesson Progressing from Whole to Part



Storytelling: The teacher signs the whole storybook (text) to the students to give the "big" picture conceptually of the text's meaning.

Storyreading: The teacher signs a whole page of the text, or a whole paragraph, sentence by sentence. Teacher translates the text into smaller segments. Teacher may use some fingerscanning while she or he points to chunks of English text and translates the English text into ASL.

Guided Reading: The teacher identifies a short paragraph. She or he plans the reading skills to be taught (e.g., main idea, inference, idioms). Skills can also be grammar-driven such as articles in "The big dog." Teacher may color code elements in the paragraph to be emphasized. For example, code the articles in blue, adjectives in green, yellow for multiple meaning words or idioms. Teacher then fingerscans the text pointing out the elements as she or he explains them while reading the text. As needed, the teacher **fingerspells** the English print and gives the ASL equivalent.

Mini-Grammar Lessons: Teacher presents lessons on grammatical features. For example, she or he may want to emphasize the past tense rule in English and in ASL. The teacher presents the rules of regular (add "ed") and irregular past tense (change spelling) in English. Teacher points to specific examples in the story she or he read to the students. Past tense rules in ASL are also explained (using signs such as BEFORE, FINISH, YESTERDAY, LAST WEEK, etc.). All explanations of grammar rules should be related to the actual text used in guided reading lessons to keep the lesson meaningful for the students.

Contact: Dr. Laurene Gallimore, Director of Deaf Education, Teacher Training Program at Western Oregon University, Salem, Oregon for a videotape of this process and well as for more information. She can be contacted at her email address: GALLIML@wou.edu.

Appendix E

INGREDIENTS FOR A MODEL ASL-ENGLISH BILINGUAL PROGRAM

Directions: Based on your observations and experiences in your department, reflect on these statements. There are no right or wrong answers. Circle one response per statement.

SA=Strongly Agree **A**=Agree **N**=Not Sure **D**=Disagree **SD**=Strongly Disagree

1. Language and Communication.					
1a. ASL is recognized as a language of instruction. ASL and English are accorded equal status.	**SA**	**A**	**N**	**D**	**SD**
1b. Exposure to ASL as a full and natural language begins as early as possible.	**SA**	**A**	**N**	**D**	**SD**
1c. ASL and English are used throughout the child's schooling with high levels of competence and proficiency expected in both.	**SA**	**A**	**N**	**D**	**SD**
1d. The interdependence of ASL and English and the transfer of skills between them are encouraged. Priority is given to the development of ASL proficiency and English literacy skills.	**SA**	**A**	**N**	**D**	**SD**
1e. ASL and English (spoken and written) are kept separate for teaching purposes.	**SA**	**A**	**N**	**D**	**SD**
1f. The place of language mixing (contact signing) or using signs in English grammar order for purposes of English instruction only are clearly defined.	**SA**	**A**	**N**	**D**	**SD**
2. Curriculum and Assessment					
2a. Both ASL and English are languages of instruction and subjects of study.	**SA**	**A**	**N**	**D**	**SD**
2b. The curriculum and instructional materials meet the diverse linguistic and cultural needs of the students including but not limited to Deaf studies and multiculturalism.	**SA**	**A**	**N**	**D**	**SD**
2c. The development of curriculum-based signs are done by, and in consultation with, deaf people.	**SA**	**A**	**N**	**D**	**SD**
2d. Both ASL and English are used according to the child's language preference when conducting curriculum assessments.	**SA**	**A**	**N**	**D**	**SD**
3. Staffing					
3a. Deaf staff who are proficient in both ASL and English are employed.	**SA**	**A**	**N**	**D**	**SD**
3b. Hearing staff who are proficient in both ASL and English are employed.	**SA**	**A**	**N**	**D**	**SD**
3c. Ongoing inservice training is provided for staff to further develop their ASL skills.	**SA**	**A**	**N**	**D**	**SD**
3d. Ongoing inservice training is provided for staff to further develop English skills.	**SA**	**A**	**N**	**D**	**SD**
3e. Ongoing inservice training is provided for staff in bilingual methodology using both ASL and English in the classroom.	**SA**	**A**	**N**	**D**	**SD**
4. Links with the Community					
4a. Links with the Deaf community and ethnic minority communities are promoted.	**SA**	**A**	**N**	**D**	**SD**
4b. The child has access to a community of deaf ASL users (peers and adults).	**SA**	**A**	**N**	**D**	**SD**
4c. The community is considered a resource in promoting cultural and language skills.	**SA**	**A**	**N**	**D**	**SD**

Comments:

Source: This ingredient checklist was adapted from the work of Miranda Pickersgill in Gregory, S., Knight, P., McCracken, Powers, S., & Watson, L. (1998).

Appendix F

Codeswitching Freqency Survey

	ALWAYS (5)	OFTEN (4)	SOME-TIMES (3)	RARELY	NEVER
1. I use codeswitching to emphasize a particular point in conversation.					
2. If I do not know a word, a sign, or a phrase in a language, I substitute a word or sign in another language.					
3. Words/signs or phrases in two languages may not correspond exactly. I switch to one language to express a concept that has no equivalent in the culture of the other language.					
4. I use codeswitching to reinforce a request.					
5. I use repetition to clarify a point.					
6. I use codeswitching to communicate friendship.					
7. In relating a conversation held previously in English, I report the conversation in ASL to an ASL monolingual.					
8. I use codeswitching as a way of interjecting into a converation.					
9. I use codeswitching to ease tension and inject humor into a conversation.					
10. I use codeswitching often to regulate social distance.					
11. I use codeswitching to exclude people from a conversation.					
12. I use codeswitching to indicate a change of attitude during the conversation.					
13. In some bilingual situations, I codeswitch regularly when certain topics are introduced.					

SOURCE: This survey was adapted from the work of Baker (1996, pp. 87-90).

References

Andersson, R. (1994). Second language literacy in deaf students. In I. Ahlgren & K. Hyltenstam (Eds.), Bilingualism in deaf education (pp. 91-101). Hamburg: Signum.

Andrews, J., & Akamatsu, T. (1993). The building blocks of literacy: Getting the signs right. Perspectives, in Education and Deafness, 11(3), 5-9.

Andrews, J., & Nover, S. (2000). Critical background variables omitted in comparison study: An appeal to the state auditor to reanalyze the data. [On-line] Available: www.deafcarolina.com and www.starschools.org/nmsd.

Andrews, J. (1997). Letter to the editor: ASL to English literacy. American Annals of the Deaf, 142(4), 276-277.

Baker, C., & Jones, S. (1998). Encyclopedia of bilingualism and bilingual education. Clevedon: Multilingual Matters.

Baker, C. (1995). A parents' and teachers' guide to bilingualism. Clevedon, England: Multilingual Matters.

Baker, C. (1996). Foundations of bilingual education and bilingualism (2nd ed.). Clevedon, England: Multilingual Matters.

Barnum, M. (1984). In support of bilingual/bicultural education for deaf children. American Annals of the Deaf, 129(5), 404-408.

Bialystok, E., & Hakuta, K. (1998). In other words: The science and psychology of second-language acquisition. New York: Basic Books.

Chamberlain, C., Morford, J., & Mayberry, R. (Eds) (2000). Language acquisition by EYE. Mahwah, NJ: Lawrence Erlbaum.

Collier, V. (1995). Promoting academic success for ESL students: Understanding second language acquisition for school. Elizabeth: New Jersey Teachers of English to Speakers of Other Languages-Bilingual Educators.

Cummins, J. (1984). Bilingualism and special education: Issues in assessment and pedagogy. Clevedon, England: Multilingual Matters.

Emerton, G. (1998). Marginality, biculturalism, and social identity of deaf people. In L. Parasinis (Ed.), Cultural and language diversity and the deaf experience (pp.136-145). Cambridge, MA: Cambridge University Press.

Ewoldt, C. (1993/1994). Language and literacy from a deaf perspective. Teachers Networking: The Whole Language Newsletters, 13(1), 3-5.

Finton, L. (1998). Living in a bilingual-bicultural family. In I. Parasnis (Ed.), Cultural and language diversity and the deaf experience (pp. 258-271). Cambridge, MA: Cambridge University Press.

Fradd, S., & McGee. P. (1994). Instructional assessment: An integrative approach to evaluating student performance. Reading, MA: Addison-Wesley.

Freeman, Y., & Freeman, D. (1998). ESL/EFL teaching: Principles for success. Portsmouth, NH: Heinneman.

Gallimore, L. (2000). Guided reading lessons. Unpublished manuscript, Western Oregon University, Salem.

Graney, S. (1997). Where does speech fit in? Spoken English in a bilingual context. Working Paper. Washington, DC: Gallaudet University Pre-College Mission Programs.

Grosjean, F. (1996). Living with two languages and two cultures. In I. Parasnis (Ed.), Cultural and language diversity and the deaf experience (pp. 3-19). Cambridge, MA: Cambridge University Press.

Grushkin, D. (1998). Why shouldn't Sam read? Toward a new paradigm for literacy and the deaf. Journal of Deaf Studies and Deaf Education, 3(3), 179-198.

Hakuta, K., & Mostafour, E. (1996). Perspectives from the history and the politics of bilingualism and bilingual education in the United States. In L. Parasinis (Ed.), Cultural and language diversity and the deaf experience (pp. 38-50). Cambridge, MA: Cambridge University Press.

Hamers, J. F. (1998). Cognitive and language development of bilingual children. In L. Parasinis (Ed.), Cultural and language diversity and the deaf experience (pp. 51-75). Cambridge, MA: Cambridge University Press.

Hansen, B. (1994). Trends in the progress toward bilingual education for deaf children in Denmark. In C. Erting, R. Johnson, D. Smith, & B. Snider (Eds.), The Deaf way: perspective from the international conference on deaf culture (pp. 606-614). Washington, DC: Gallaudet University.

Hoffmeister, R. (1996). Cross-cultural misinformation: What does special education say about deaf people (pp. 1972-189). Disability and Society, 11(2), 171-189.

Jacobson, R. (1990). Allocating two languages as a key feature of a bilingual methodology. In R. Jacobson & C. Faltis (Eds.), Language distribution issues in bilingual schooling (pp. 3-17). Clevedon: Multilingual Matters.

Jones, B. Valdez, G., Nowakowski, J., & Rasmussen, C. (1996). Plugging in: Choosing and using educational technology. Designing learning and technology for educational reform. [On-line] Council for Educational Development and Research. Available: www.starschools.org.

Kannapell, B. (1989). An examination of deaf college students' attitude toward ASL and English. In C. Lucas (Ed.), The sociolinguistics of the deaf community (pp. 191-210). San Diego: Academic Press.

Knight, P., & Swanwick, R. (1999). The care and education of a deaf child. Clevedon, England: Multilingual Matters.

Krashen, S. (1995). Bilingual education and second language acquisition theory. In D. Durkin (Ed.), Language issues: Reading for teachers (pp. 90-116). White Plains, NY: Longman.

Lambert, W. E. (1974). Culture and language as factors in learning and education. In F. E. Aboud and R. D. Meade (Eds.), Cultural factors in learning and education. Bellingham, WA: Fifth Western Washington Symposium on Learning.

Livington, S. (1997). Rethinking the education of deaf students: Theory and practice from a teacher's perspective. Portsmouth, NH: Heinemann.

McLaughlin, B. (1992). Myths and misconceptions about second language learning: What every teacher needs to unlearn. Washington, DC: The National Center for Research on Cultural Diversity and Second Language Learning.

McLaughlin, B. (1995). Fostering second language development in young children: Principles and practices. (Educational Practice Report No. 14). Santa Cruz, CA: The National Center for Research on Cultural Diversity and Second Language Learning. (ERIC Document Reproduction Service No. ED 386 932)

Morford, J., & Mayberry, R. (2000). A reexamination of "early exposure" and its implications for language acquisition by eye. In C. Chamberlain, J. Moford, & R. Mayberry (Eds.). Language acquisition by eye (pp 111-127). Mahwah, NJ: Lawrence Erlbaum.

Naumann, J., & Propp, M. (2000). The use of technology in the bilingual classroom for deaf students. Hartford, CT: Technology in Deaf Education Conference (TIDE). American School for the Deaf.

Nover, S., & Andrews, J. (1998). Critical pedagogy in deaf education: Bilingual methodology and staff development: Year 1 (1997-98). Santa Fe: New Mexico School for the Deaf.

Nover, S., & Andrews, J. (1999). Critical pedagogy in deaf education: Bilingual methodology and staff development: Year 2 (1998-99). Santa Fe: New Mexico School for the Deaf.

Nover, S., & Andrews, J. (2000a). Bilingual-bicultural education for my deaf child: What about it? Questions parents ask. Silent News, 32(3), 18-19.

Nover, S., & Andrews, J. (2000b). Questions parents ask about the bilingual-bicultural approach: Language issues. Silent News, 32(5), 15-16.

Nover, S. & Moll, L. (1997). Cultural mediation of deaf cognition. In M. P. Moeller & B. Schick (Eds.), Deafness and diversity: Sociolingistic issues (pp. 39-50). Omaha, NE: Boys Town National Research Hospital.

Nover, S. (1995). Politics and language: American Sign Language and English in deaf education. In C. Lucas (Ed.), Sociolinguistics in Deaf communities (pp. 109-163). Washington, DC: Gallaudet University.

Nover, S. (1997). A conceptual framework for deaf education: Two approaches for English literacy. Star Schools Grant #R203A70030-97.

Nover, S., Christensen, K., & Cheng, L. (1998). Development of ASL and English competence for learners who are deaf. In Philip Prinz (Ed.), Topics in Language Disorders. Special Edition. ASL Proficiency and English Literacy Acquisiton: New Perspectives, 18(4), 61-71.

Padden, C. (1996). Early bilingual lives of deaf children. In I. Parasnis (Ed.), Cultural and language diversity and the deaf experience (pp. 99-116). Cambridge, MA: Cambridge University Press.

Pickersgill, M. (1998). Bilingualism – current policy and practice. In S. Gregory, P. Knight, W. McCracken, S. Powers, & L. Watson (Eds.), Issues in deaf education. London: David Fulton.

Prinz, P. (1998) (Ed.). ASL proficiency and English literacy acquisition: New perspectives. Topics in Language Disorders, 18(4).

Rolstad, K. (2000, March 15). Capitalizing on diversity: Lessons from dual language immersion. NABE News, 5-6.

Skutnabb-Kangas, T. (1981). Bilingualism or not: The education of minorities. Clevedon, England: Multilingual Matters.

Wilbur, R. (2000). The Use of ASL to Support the Development of English and Literacy. Journal of Deaf Studies and Deaf Education, 5(1), 81-104.

Wilhite, M. (1997). Letter to the editor: ASL to English literacy. American Annals of the Deaf, 142(1), 5.

Wink, J. (2000). Critical pedagogy: Notes from the real world. (2nd ed.). New York: Longman.

Stephen M. Nover, Language Planner
and Star Schools Project Director
New Mexico School for the Deaf
1060 Cerrillos Road
Santa Fe, New Mexico 87503
V/TDD: (505) 827-6739
FAX: (505) 827-6684
E-Mail: steve.nover@nmsd.k12.nm.us

Cover design: Center for the Application of Information Technologies at Western Illinois University

Star Schools Project Report No. 3

CRITICAL PEDAGOGY IN DEAF EDUCATION:

TEACHER ' REFLECTIONS ON CREATING A BILINGUAL CLASSROOM FOR DEAF LEARNERS

ISBN 0-9668769-2-X

U.S. Department of Education
Office of Educational Research and Improvement (OERI)
National Library of Education (NLE)
Educational Resources Information Center (ERIC)

NOTICE

REPRODUCTION BASIS

☐ This document is covered by a signed "Reproduction Release (Blanket) form (on file within the ERIC system), encompassing all or classes of documents from its source organization and, therefore, does not require a "Specific Document" Release form.

☑ This document is Federally-funded, or carries its own permission to reproduce, or is otherwise in the public domain and, therefore, may be reproduced by ERIC without a signed Reproduction Release form (either "Specific Document" or "Blanket").