Using a Sign Language in the Teaching of English to Deaf Pupils

Patricia Pritchard

Introduction

This article is based on a presentation given at the DFGS conference at Bad Segeberg, 19th November, 2010. It will describe the policy changes that have taken place in Norway since 1997 in relation to the teaching of English to deaf and severely hard-of-hearing pupils. It will give a description of the teaching methods prescribed by the National Curriculum for the teaching of English for deaf pupils that introduced British Sign Language (BSL) into the classroom. How pupils learn a second language based on Krashen's theory, will be described briefly. The results of a study, carried out to investigate what was happening in the classroom after the introduction of BSL, are presented and discussed.

Attitudes to teaching English to Deaf pupils

It is common to meet some of the following statements in discussions about teaching English to deaf pupils, which illustrate an underestimation of deaf pupils' potential:

- Do they really need English? There are problems enough with Norwegian/German!
- If we must – then reading and writing English are the most important skills
- Oral skills = spoken English

Without respect for and acceptance of Sign Language by teachers and school administrators, it is difficult or nigh on impossible to include a foreign Sign Language as part of the curriculum for Deaf pupils. Teaching needs to be tailored to suit the individual pupil's needs, based on assessment, and not based on what is available or what the teacher thinks or feels he needs based on his own pedagogical ideology. For some Deaf pupils, using a foreign sign language can provide the key to foreign language learning, for some a passing acquaintance may be all that is necessary.

Changes in educational policy in Norway

Prior to 1997, most deaf pupils attended schools for the deaf or special units for the hearing-impaired.[1] In 1997 a new National Curriculum (L97) was introduced. The curriculum described teaching methods, lesson content and classroom activities. It included, for the first time, the following obligatory subjects for deaf children: Norwegian Sign Language as a First Language, Norwegian for Deaf Pupils, English for Deaf Pupils and Drama & Rhythms (which replaced the subject of music).

Deaf pupils as defined by The Norwegian Ministry of Education (KUF) in 1997 are: "... pupils who use Sign Language in communi-

1 Before and after the 1997 reform, there are five state-run boarding schools for the deaf in Norway, each serving a region of the country. Some larger municipalities fund units or classes for the hearing-impaired attached to one of their schools. The unit then serves the whole municipality. Inclusion of pupils in their nearest local school was one of the 1997 reform's basic principles, so that parents could now choose to send their deaf children to either of the above or to their nearest local school. The latter choice usually results in the child being the only deaf child present at their school.

cation with their social environment and to gather information. Functionally bilingual pupils can belong to this group." (KUF, 1997. p.2). Earlier medical definitions of deafness looked upon hearing loss as a pathological impairment and disability, which should be remedied. KUF however, did not use a medical definition, but a socio-linguistic one: focusing on how individuals interact and function linguistically. By using Norwegian Sign Language (NSL) socially and in learning situations, one is defined as deaf. This was in keeping with the change in perception of how language is acquired; that again changed the general view on deaf children and their needs. KUF's definition was a break with traditional views and in-line with the child-centred pedagogical ideas presented in the L97 curriculum. The definition can also be said to reflect the perception of the deaf as a linguistic minority. The educational goal of L97 for deaf pupils is Sign Bilingualism. Sign Bilingualism is the use of two languages in different modalities: one signed and one spoken.[2]

Although all other types of Special Schools were abolished at this time and replaced by consultative resource centres, Schools for the Deaf remain. Deaf pupils can choose to attend these schools either full-time or "mainstream". Mainstreamers can however visit a school for the deaf for short-term stays of up to 12 weeks spread throughout the year. This gives them access to a Sign Language environment.

In 1998 The Law for Primary and Secondary Education §2-6 established deaf children's legal right to education in and about Norwegian Sign Language (NSL), regardless of where they receive their education. Coupled with the widespread use of cochlear implants, this appears to have led to a decline in the number of full-time pupils in schools for the deaf. There has been an increase in the number of pupils receiving their education partially at their local school and partially at a deaf school or attending their local school full-time.

To encourage early language development, the Norwegian State offers parents of deaf children 40 weeks NSL education with full economical compensation, from the time the child is diagnosed until his/her sixteenth birthday.

A later curriculum – L06 - was introduced and implemented in 2006. L06 contains the same subjects as L97, but the target group now includes also the severely hard-of-hearing. The focus of L06 is no longer teaching methods, content and common classroom activities, but learning goals. The individual school and

2 The balance of languages will be unique for each pupil according to individual preference, stage of development and demands from the environment (Pickersgill, 1998). The main underpinning of Sign Bilingualism is distinct language separation, high levels of signing skills and the development of metalinguistic skills through discussion in sign language (Swanwick, 1998; Mahshie, 1995). Through Sign Bilingualism pupils should gain access to the curriculum, and the socio-cultural values and beliefs of the Deaf and hearing communities. (Deaf with a capital D denotes a cultural definition. By means of sign language the Deaf have created linguistic and cultural milieus where they feel at home and that they are proud of (Ladd, 2003))

its teachers now choose methods and lesson-content to facilitate the individual reaching the prescribed learning goals.

The L06 English curriculum for deaf pupils still has the same main aims as L97 (See below). However, the form of "oral English" communication can now be chosen to suit the individual i.e. sign language (BSL or American Sign Language (ASL)), sign supported English, spoken English or even IT chatting. As with L97, pupils are expected to sit national examinations at the end of secondary and upper-secondary school.

What the National Curriculum (1997) said about teaching English to deaf pupils.

Prior to L97, English was seldom found on the timetable and, if present, would consist of English written language, giving deaf pupils no means of direct face-to-face communication. Previously, the teaching of English started in year 4 (11 year olds), but after 1997, pupils start to learn English in year 1.

L97's main objectives were for pupils to be able to express themselves in English and to be able to interact with English-speaking hearing and deaf people. Pupils were to have some knowledge of BSL. In addition, pupils were required to have knowledge of English literature and culture, of both the hearing and Deaf communities. The curriculum described active pupils acquiring[3] language through interaction and exploration (KUF, 1997) **and the role of BSL**. In year 1, BSL was introduced. It was expected to make pupils aware of foreign languages by giving them experience of an easily accessible language (KUF, 1999). Acquiring BSL should offer opportunities to develop language-learning strategies. BSL's easy accessibility should also give pupils opportunities to succeed, and thereby increase their motivation and self-confidence. Acquiring a foreign language is much more susceptible to individual differences than the development of the mother tongue (Berggreen & Tenfjord, 1999), and motivation plays an important role if the pupil is to be successful. BSL is the language of people that pupils can identify with, while making them more conscious of their own identity, language and culture. (KUF, 1999). The introduction of BSL was also meant to provide pupils with an opportunity to compare two sign languages, and thereby develop metalinguistic skills, useful in the construction of language. Making use of BSL's oral components and signs based on finger spelling, can also provide some kind of bridge to English.

The curriculum described **the teacher's new role** as that of a guide and organizer, not necessarily a language model with regard to BSL. Teaching materials[4] were available with BSL language models on video. Together, the

3 See Krashen's definition of "acquisition"

pupils and teacher were to explore the texts. The intention was for pupils to actively participate in unravelling the texts' meaning (KUF, 1999). The teacher was expected to act as "a gatekeeper": creating situations where pupils could experience and use BSL and provide strategy support (scaffolding). Pupils were to be encouraged to work both top-down and bottom-up i.e. look for the language's meaning as well as its form. Games and role-play were important classroom activities meant to stimulate interaction in BSL. Experiences with BSL were followed up by exercises in written English, in both reading and writing. Spoken English was to be offered to pupils who showed interest and aptitude. (KUF, 1999). In year 4, the emphasis gradually shifts to English.

Why was BSL chosen in L97 and not American Sign Language (ASL)?

Because of the small numbers of deaf children in Norway, KUF decided that it would be most practical and economical to use only one foreign sign language: BSL or ASL. A working party was set up to look into the question of choosing between ASL and BSL. It was noted that some attempts had been made in other Scandinavian countries to introduce ASL into English lessons, but there was no documented evidence of continuity or success. It was also noted that many deaf adults were of the opinion that ASL was preferable. However, research carried out by Allsop, Woll and Brauti (1994) into International Sign Language was sited by the working party. It indicated that ASL was not the only sign language used when Deaf foreigners meet. It is said that BSL-related sign languages are used in parts of Africa, Asia and all of Australasia.

The working party chose BSL based on the educational and pragmatic needs of deaf pupils. They emphasised the underpinning of L97's methodology: pupils' active use of their language skills in real-life situations (KUF, 1999). Contact with native English and Sign Language-speakers, was desirable. Obviously the UK is more accessible than USA. At the same time, EU-funding could provide continuity and make exchange visits for schools possible. EU-funding could also provide for BSL-training for Norwegian teachers in the UK, resulting in a nationally recognised diploma (CACDP). Teaching materials in BSL could be produced by established and experienced bodies. In addition BSL and NSL do not have any common, historical root which means that the contrasts between the two languages was more marked that between ASL and NSL. This strong contrast could be valuable in the classroom. Hence, the introduction of BSL was seen as a viable and practical proposition.

4 Teaching materials used were Wow! (Læringssenteret, 2001) which includes BSL stories, workbook and BSL games, and the Oxford Reading Tree books (Oxford University Press, 2000), supplemented with BSL-videos (Chase Video, 1999) and other BSL-story videos produced by Chase Video.

What is necessary for deaf pupils to learn a foreign language?

There has been much research into this question in hearing populations, but little is known about how the deaf learn foreign languages: signed, written or spoken.

Krashen's theories and hypotheses have been the basis for much research into second language acquisition (SLA)[5] and much of the teaching methodology in L97. Krashen takes a psycholinguistic approach (Gass & Selinker, 2001). Some of Krashen's terms are used in this article and his main hypotheses are as follows:

The acquisition-learning hypothesis: Krashen divides SLA into two different processes: learning and acquisition. (Krashen, 1983). He defines learning as a conscious process of developing metalinquistic knowledge through formal study (Ellis, 1996). Acquisition is a process that resembles that of a child learning its mother tongue or L1.

The monitor hypothesis: This hypothesis is connected to the learning process as defined by Krashen. Krashen states that conscious learning of the rules of grammar can only be of use as a monitor for checking production of the foreign language (L2) in situations where the pupil has time to focus on formal L2 structure. During spontaneous L2 production formal knowledge is of little use (Krashen, 1983). Krashen predicts that pupils who over use the monitor may be hindered in their L2 production for fear of making mistakes. This he calls "increased affective filter."

The input hypothesis: This hypothesis is connected to Krashen's acquisition process. The hypothesis describes how, given the correct kind and quantity of L2 input, which contains elements marginally above the pupil's present competence level (i + 1), acquisition happens intuitively (Gass & Selinker, 1994). The input hypothesis stipulates that the pupil must understand the general content of the L2 input, but not every word (roughly-tuned input). The L2 learner will understand by using not only his L2 competence but also knowledge of context, genre, world knowledge, earlier experiences etc. Krashen maintains that L2 learners must experience large amounts of varied, authentic L2 texts. Texts are chosen for their content rather than their form, and should be interesting and relevant to the pupil (Krashen, 1983).

Summary:

- Motivation and self confidence
- To be able to try and fail without shame or ridicule
- Enough roughly-tuned, understandable, input (L+1) to assist the acquisition process
- Someone to communicate with and negotiate meaning
- Encouragement and the feeling that they

5 Second Language Acquisition (SLA) relates to how a second language is learnt, and why L2 pupils rarely achieve the same competence in L2 as in L1 (Gass & Selinker, 2001). SLA begins after the first language (L1) has been established.

are progressing
- Pupils can identify with the language group (L2)

The study

It was only during the period 1997 – 2006 that it was possible to study the whole population of deaf pupils' skills in BSL. There is reason to believe that today, with most pupils using CI and mainstreaming, the number given access to BSL has been greatly reduced.

A study was carried out in 2004. It was a first step in evaluating the impact of L97 English curriculum. In view of the lack of literature on deaf pupils' foreign language learning in the classroom, it was necessary to investigate whether Norwegian deaf pupils (N=15) had acquired skills in the foreign sign language. The study asked the questions: Can Deaf pupils acquire BSL? What variables play a part in Norwegian Deaf pupils' acquisition of BSL?

A quantitative research method was used. Questionnaires were used to gather background information from teachers (n = 11) about themselves, their deaf pupils and learning environments. 100% of the sample completed the tests and all the questionnaires were returned. The pupils were given three language tests. The same tests were also carried out on two control groups of the same age as the Norwegian deaf pupils: a group of Swedish deaf pupils (n=8), described as Sign Bilingual by their school but with no experience of BSL, and a group of hearing Norwegians (n=6) with no experience of any Sign Language.

Depth of comprehension can vary: from grasping only the general gist of an L2 statement to understanding it at a structural analytical level (Gass & Selinker, 2001). This study could not answer questions about depth of understanding, but pupils were nevertheless tested in three areas of BSL receptive skills: vocabulary, grammar and story comprehension. The first two tests of BSL vocabulary and grammar were from Assessing BSL Development (Herman, Holmes & Woll, 1999). The tests control the input, the response and the scoring in these two areas of BSL receptive skills. The grammar test is a standardised language test of BSL, making it possible to compare the results of Norwegian deaf pupils and the results of British deaf children of the same age. A third test of story comprehension was developed especially for the study. All the tests were presented on video and pupils showed their understanding of BSL signs, phrases or text by choosing pictures from a selection provided.

It should be noted that unrelated sign languages have an average mean of similarity between the lexicons of 35 – 40%. This is a much higher figure than one would expect to find between two unrelated spoken languages (Kyle & Woll, 1985). In the study, signs in BSL and NSL that are similar in appearance and

School placement	Pupils' hearing losses: calculated as an average of 500-1000-2000-4000 Hz		
	56 – 70dB moderate (n = 2)	71 – 90dB severe (n = 7)	>90dB profound (n = 6)
Local School	1	5	3
School for the Deaf	1	2	3

***Table 1**. Degree of hearing loss over four frequencies (500, 1000, 2000 and 4000Hz) in the best ear. Results are divided into groups according to their school placement: Local School or School for the Deaf. (n = 15)*

meaning, are called **chance cognates**. The existence of chance cognates can be due to iconicity[6] , which is used a great deal in all sign languages. The number of chance cognates in the test materials must be taken into account when evaluating pupils' results.

The sample

All deaf pupils with no additional learning disabilities, using the English curriculum in 2003- 2004 took part in the study (N=15). The pupils' hearing losses and placements are presented in **Table 1**. Three of the pupils used Cochlear Implants.

Having no test for measuring pupils' NSL development, teachers were asked their opinion of their pupil's preferred language. In the local schools, five pupils were said to prefer spoken Norwegian with sign support (NSS), three preferred NSL and one preferred spoken Norwegian. In the deaf schools two pupils preferred NSS and three, NSL (n = 14, 1 missing case). 20% of the pupils were reported as being equally fluent in Norwegian and NSL.

Teacher qualifications

All the teachers were qualified teachers and had at least 30 credits in NSL. Eight of the eleven EFL teachers (72,7%) had been on an intensive BSL course, but *none* had formal qualifications in teaching English to deaf pupils (30 credits).

Some of the study's results:
Pupils' reactions to BSL

All the teachers reported on the questionnaire that their pupils were interested in BSL and appeared motivated regardless of their degree of hearing loss, school placement or preferred mode of communication. None of the pupils were passive during lessons or easily forgot BSL signs and all were willing to use BSL when given the opportunity. Motivation has several aspects, but one that is of special interest in connection with deaf pupils is "integrative motivation" (Stevick, 1976). Integrative motivation comes into play when the L2 pupil identifies with the L2 community and wants to contact. The pupil will not feel an-

5 Second Language Acquisition (SLA) relates to how a second language is learnt, and why L2 pupils rarely achieve the same competence in L2 as in L1 (Gass & Selinker, 2001). SLA begins after the first language (L1) has been established.

6 Many signs have a visually motivated link with their referents. These signs are termed "iconic". (Sutton-Spence & Woll, 1998)

xious or threatened and this will increase the likelihood of L2 acquisition.

Teachers said one thing and did another

The questionnaire used in the study revealed various aspects of the teachers' methods, attitudes and the learning environments they provided. They were asked to give their opinion of the suitability of certain activities and thereby teaching methods. The attitudes of the teachers towards socio-cultural/linguistic methods were positive and in keeping with L97's intentions. Paradoxically however, the questionnaire showed that the pupils were seldom given tasks that corresponded with the methods prescribed by L97 and that teachers reportedly preferred i.e. methods that are child-centred and where language acquisition can take place through interaction in L2 and exploring L2 texts. Instead, teacher-dominated activities were most abundant involving "learning" rather than "acquisition": for example, "pupils answer teacher's question with a drilled answer."

This miss-match can indicate two things: teachers needed a greater understanding of the curriculum and also theoretical knowledge and understanding of the teaching of a foreign language to young children. This could perhaps have helped them take on the desired teacher role and use methods other than those derived from the traditional foreign language classroom they themselves had experienced as pupils. These results raise questions about the need for in-service training and further education of teachers of deaf pupils.

Teachers reported using a variety of languages and mixed codes with comparatively little active use of the target language: BSL. This is corroborated by Ohna et al's (2003) qualitative observations. Scored on a scale of 1 to 6 (6 = always, 3 = seldom, 1 = never), the languages and codes were: NSL (4,7), written English (4,4), English speech with BSL-like signed support (4,3), BSL (3,5), NSL with English mouthings (3.0) (occurred only in local schools) spoken English (2,8) Norwegian speech with NSL support (2,8) written Norwegian (2,8), Norwegian speech (2,2). It seems that teachers did a lot of talking about English and/or BSL, but did not use BSL to any great extent in their interaction with pupils. Fortunately, 72% of teachers regularly used the teaching materials especially designed for the subject, although pupils were rarely given the opportunity to freely explore the texts (Score = 2, 0 (on a scale of 1 to 6: 6 = always, 1= never.)

Did the pupils understand BSL?

Yes. The three tests of BSL receptive skills revealed that the Norwegian pupils performed best on the vocabulary test. It contained 54% chance cognates. On the grammar test, 46,6% of the pupils performed over the standardised score for English deaf children of the same

age. One can speculate whether this is a result of the systematic NSL tuition offered to parents and teachers providing the Norwegians with good NSL skills or properties of the test itself. The BSL story comprehension test contained extremely few chance cognates; nevertheless, more than half (53%) of the pupils scored over 60%. 13% of pupils scored the maximum score, 100%. **See Table 2**.

The results of the Swedish pupils indicated that with the knowledge of a sign language from early childhood, and without formal teaching or experience of BSL texts, deaf pupils are capable of understanding some BSL (Total mean scores 65,99%). However, the difference in scores between the Swedes and the Norwegians shown using Cohen's d[7] , seem to imply that exposure to and experience of BSL, aids understanding. There was a large difference in scores in favour of the Norwegians (Difference in total mean scores d = 0,91). **See Table 3**.

Table 4 presents the results of the Norwegian deaf pupils and the two control groups on the BSL Story Comprehension Test. The Norwegian pupils out-performed both control groups.

It was interesting to note that deaf pupils from foreign language backgrounds (non-European), scored very well on the BSL receptive tests. Also deaf Norwegian pupils with CI performed above average. For more details see Pritchard (2004).

What variables seem to be important in aiding pupils' BSL receptive skills?

The test data collected seemed to indicate that school placement, in a local school or a deaf school, resulted in Norwegian deaf pupils encountering different kinds of learning environments. The learning environment effected access to BSL texts. Schools for the deaf offered classroom-teaching in small groups to all their pupils, regardless of hearing status. Local schools generally offered one-on-one teaching in a separate room for the profoundly deaf, while pupils with severe or moderate hearing losses were taught English in classes together with their hearing peers (Average class size: 21). The test results seem to reflect these differences in learning environments, as follows:

The majority (83%) of the profoundly deaf pupils (n = 6) scored above the average total mean scores for the sample. This group was reported to have access to BSL teaching materials, although the actual amount and quality of BSL input was not measured. However, the pupils with access to BSL teaching materials scored significantly better than pupils who did not (Cohen's d = 1,52. Large difference). The quality and quantity of BSL interaction

7 Cohen's d (d) or Effect Size shows the difference between the means of two groups. Cohen defined effect sizes as small, d = 0,2 medium, d = 0,5 and large, d = < 0,8. Effect sizes can also be interpreted in terms of the percent of non-overlap of the treated group's scores with those of the untreated group.

	Vocabulary Test scores %	Grammar Test scores %	BSL Story Test scores %	Total Mean scores %
N Valid	15	15	15	15
Missing	0	0	0	0
Mean	88,00	73,00	71,00	76,00
Std. Deviation	5,60	7,20	18,00	9,3
Range	18,18	20,00	55,00	31,3
Minimum	77,27	62,50	45,00	59,6
Maximum	95,45	82,50	100,00	90,98

Table 2. *Descriptive Analysis of the BSL Test Results of the Deaf Norwegian pupils (N = 15)*

BSL test	Cohen´s d	Comments
BSL vocabulary test	d = 1,38	Large difference. 65,3% non overlapping
BSL grammar test	d = 0,64	Moderate difference, 38,2% non overlapping
BSL Story test	d = 0,57	Moderate difference. 33% non overlapping
Total mean scores	1d = 0,91	Large difference. 51,6% non overlapping

Table 3. *Differences between the three test results and total mean scores of the Deaf Norwegian and Deaf Swedish pupils.*

	N	Mean score in %	Minimum	Maximum	Range	Std. Deviation
Deaf Norwegians	15	71,00	25	100	75,00	21,55
Deaf Swedish pupils	8	52,19	6,25	85	78,75	24,93
Hearing Norwegians	6	42,17	20	58,75	38,75	13,99

Table 4. *Descriptive Analysis of the BSL Test Results of the Deaf Norwegian pupils (N = 15)*

experienced by the profoundly deaf was unclear. However, experience of authentic BSL texts appears to have played an important role in developing Norwegian deaf pupils' BSL receptive skills.

Of the pupils with severe hearing losses, 72% (n = 7) scored below average. 60% of those were taught EFL in classes with their hearing peers and given little access to BSL texts. It is not likely that the hearing loss in itself has caused lower test results as pupils with greater hearing losses scored better. Rather, one should speculate about the kind of tuition this group of pupils received. Is their education focused mainly on spoken English, despite their having chosen the L97 curriculum for deaf pupils? If so, is the spoken English input accessible? Are the severely hard-of-hearing being included in the English dialogue in the classroom? Are their skills in oral and written English age-appropriate or is this group missing out on both BSL and spoken English?

Conclusion

Although teachers in the study had qualifications in NSL, this did not mean that they also had a clear understanding of teaching English as a foreign language. While the L97 curriculum uses a vocabulary that depicts pupils playing an active role in their own language learning process (KUF, 1997), teachers described their role as a leader and organiser, with a tendency to dominate lessons, talking about BSL and English rather than using it. Although educational policies are in place, it seems that changes in classroom practise cannot come about without profound efforts on the part of educational authorities to further educate teachers.

Overall however, it seems that the acquisition of BSL receptive skills is not an insurmountable task for Norwegian deaf pupils – if they are given access to the language. The tests showed a significant difference in scores in favour of those pupils with access to and experience with BSL texts.

It would be useful to carry out a study to ascertain which strategies pupils use to acquire BSL. Are successful pupils combining their knowledge of NSL, BSL, world knowledge and context to understand BSL texts as Krashen predicts? (Roughly-tuned input). Do these same pupils make use of their experiences with BSL as a bridge to learning English? This knowledge could be useful in the development of methods to enhance the teaching of English for deaf pupils.

Verfasserin:

Patricia Pritchard, cand polit
Audiopädagogin
Statped Vest, Norwegian Support System
for Special Education
Bergen, Norway.

www.statped.no/vest
E-post: pat.pritchard@statped.no

Literatur:

Allsop L, Woll, B. and Brauti, J. M. (1994). International Sign: The Creation of an International Deaf community and Sign Language. Sign language research 1994. Proceedings of the European congress on sign language research Munich. 1994, 1995

Berggreen, H & Tenfjord, K. (1999). Andrespråkslæring. Ad Notam Gyldendal. Oslo.

Det kongelige kirke-, utdannings- og forskningsdepartement. (1997a). Læreplanverket for den 10-årige grunnskolen. Norsk, engelsk og drama og rytmikk for døve. Oslo. Det kongelige kirke-, utdannings- og forskningsdepartement

Det kongelige kirke-, utdannings- og forskningsdepartement. (1999). Veiledning- L 97. Engelsk for døve. Oslo. Det kongelige kirke-, utdannings- og forskningsdepartement

Ellis, R. (First published 1985, eleventh impression 1996). Understanding second language acquisition. Oxford University Press. Oxford.

Gass, S. M., & Selinker, L. (1994). Second Language Acquisition. An introductory Course. Lawrence Erlbaum Ass. Inc.

Gass, S. M., & Selinker, L. (2001). Second Language Acquisition. An introductory Course. Lawrence Erlbaum Ass. Inc.

Herman, R., Holmes, S. & Woll, B. (1999). Assessing British sign language development. Tester's manual for the receptive skills test. Gloucester. Douglas McLean at the Forest Bookshop.

Krashen, S. (1983). The input hypothesis. Issues in language testing research. Oller, J. W. Newbury house publishers, Massachusetts. 357 – 366.

Kyle, J.G. & Woll, B. (1985). Sign Language. The study of deaf people and their language. Cambridge University Press.

Ladd, P. (2003). Understanding Deaf Culture. In Search of Deafhood. Multilingual Matters Ltd. Clevedon.

Mahshie, S.N. (1995). Educating deaf children bilingually. Gallaudet University Press. Washington DC.

Ohna S, E., Hjulstad O., Vonen A. M., Grønlie S. M., Hjelmervik E., Høie G. (2003). På vei mot en ny grunnskoleopplæring for døve elever. Evaluering etter Reform 97. Oslo. Skådalen publications.

Pickersgill, M. (1998). Bilingualism – current policy and practice. Gregory, S., Knight, P., McCracken, W., Powers, S., Watson, L. (Eds). Issues in deaf education. pp. 88 – 99. Fulton Publishers. London

Pritchard, P. (2004). TEFL for Deaf pupils in Norwegian bilingual schools: Can Deaf primary school pupils acquire a foreign sign language? Hovedoppgave ved NTNU, Trondheim. Møller kompetansesenter, Norway

Stevick, E. (1976). Memory, meaning and method. Rowley. Ma. Newbury House.

Sutton-Spence, R & Woll, B. (1998) The linguistics of British Sign Language. Cambridge University Press. Cambridge

Swanwick, R. (1998). The teaching and learning of literacy within a sign bilingual approach. Gregory, S., Knight, P., McCracken, W., Powers, S., Watson, L. (Eds). Issues in deaf education. pp. 111 – 119. Fulton Publishers. London

Internet references

www.web.uccs.edu/lbecker/psy590/es.htm.Becker. L. Effect Size. Downloaded 07.06.04

BSL teaching materials

Wow! (2001). Pritchard P. Lærermiddelsenteret, Utdanningsdirektoratet. Oslo

Oxford Reading Tree. Stages 1-5 (1999) Chase Video, Derby, UK.

www.signedstories.com

www.signstation.org

www.deafbooks.co.uk/

Let's Sign & Write: www.widgit.com/products/signwrite/index.htm