SIGNALL: A EUROPEAN PARTNERSHIP APPROACH TO DEAF STUDIES VIA NEW TECHNOLOGIES

Lorraine Leeson and Haaris Sheikh

Trinity College Dublin (IRELAND)
Interesource Group (Ireland) Limited (IRELAND)
leesonl@tcd.ie, haaris@interesourcegroup.com

Abstract

This paper presents preliminary outcomes of a European Commission funded project which brings together industry, academics and practitioners in an innovative project to create an international forum of learning. SIGNALL II builds on the successes of SIGNALL I (a Leonardo da Vinci project). It is promoted by Interesource Group (Ireland) Limited partnered with the Centre for Deaf Studies, Trinity College Dublin (Ireland), Irish Deaf Society (Ireland), Finnish Association of the Deaf (Finland), University of Sussex (UK), the Foundation for the Promotion of Entrepreneurship, Lodz,(Poland) and Grant Advisor, Brno (Czech Republic).

SIGNALL 2 aims to utilise the experience, results, partnership alliances and the relationships built up with supporters and user groups from SIGNALL I and to develop an accredited digital course on Perspectives on Deafness (POD). Accreditation leads to the transfer of credit points (under the European Credit Transfer System) amongst participating third level educational establishments promoting international mobility in education and the transparency of qualifications. Experiential and evidenced-based material will illustrate experiences of deafness by using digitized case studies and video materials.

The course will be offered as a distance-learning programme with fully accessible (signed, subtitled) course content in each partner country on-line. This is essential given that Deaf people are the most under-represented group accessing third level education, for example, [17], [5], and is challenging given the linguistic diversity of the European Union. For example, signed languages differ from territory to territory, even where spoken languages are the same (i.e. Britain and Ireland have very different natural signed languages – British Sign Language and Irish Sign Language).

The core content for the 'Perspectives on Deafness' course has been created by the Centre for Deaf Studies (CDS) at Trinity College Dublin. CDS has actively engaged in the development of digital learning assets to support traditional delivery of programmes, and are actively engaged in the development of blended learning diplomas and degrees. European perspectives are added, allowing for the exploration of shared – and differing- experiences of Deafhood [14] across Europe as well as notions of d/Deafness as a medical, social, cultural, and historical construct. Human rights perspectives are also explored in this wide reaching course.

This paper outlines the background to the development of this course, outlining rationale, content, creation of digital materials, the nature of international involvement and the challenges to creating a repository of digital courseware that will be accessible and relevant to Deaf and hearing students and employers across the European Union, and beyond.

Keywords: E-learning, Deaf Studies, Signed Languages, Accessibility, European collaboration.

1. BACKGROUND: EUROPEAN DEAF COMMUNITIES OF SIGN LANGUAGE USERS

Deaf people who are sign language users form Deaf communities that have identifiable cultural and behavioral norms that include use of a shared (signed) language (though signed languages differ from territory to territory), similar educational experiences (which we describe further below), endogamous marriage patterns, close community ties, and a strong sense of communion with other Deaf people in other countries (see [14], [24], [15]). This differentiates them from non-sign language users, including those who are hard of hearing or who become deafened post-lingually, but who use spoken language as their preferred means of interaction. These people do not typically enter the Deaf community and instead, typically function within the majority culture of their territories, e.g. [14], [26]. Approximately 1 person in a 1000 is a signed language user [11], [3], which suggests that there are some 490,426 Deaf signed language users in the EU[1].

Only 5-10% of deaf children are born to Deaf parents, which means that for the majority, the acquisition of a signed language does not follow a normative path. That is, deaf children with Deaf parents, acquire signed language in a natural way, following the same general milestones, that hold for hearing children acquiring a spoken language. For the majority of deaf children, the acquisition of a signed language is bootstrapped on "home sign" use – a highly idiosyncratic and systematized use of gesture developed in individual hearing families to bridge the language gap - with fully grammatical signed language use developing only when a deaf child comes in contact with other deaf children and adults (see [10] for detailed description of this process).

Essential to our discussion is the fact that Deaf people in Europe share a history of linguistic suppression, 'normalization', and oppression by (often well-meaning) hearing people: since the 1880s, signed languages have been suppressed in education, with significant negative educational outcomes for Deaf people, including functional illiteracy levels for averagely intelligent Deaf people in the majority language of their country (see [4], [8], [13], [14], [17], [18]). Part of the reason for this is the fact that in many states, teachers of the deaf are not required to know or use a signed language in their work and are often still actively discouraged from signing [18]. Deaf children too have been actively discouraged from signing, or even punished for using signed languages: in Ireland, for example, children were forced to sit on their hands to prevent signing and encouraged to give up the use of signed language for Lent, the Catholic period of preparation for Easter, while parents were advised (incorrectly) that use of a signed language would impede acquisition of oral language skills, for example [9], [16], [17], [18], [20], [25].

In some countries, eugenics movements targeted Deaf people, leading to forced sterilization [2], while the implementation of widespread cochlear implantation programmes coupled with genetic selection technologies [11], the closure of many schools for the deaf and the trend towards mainstream education (which impacts on use and trans-generational transfer of signed language and cultural norms) has been tagged "linguistic genocide" [29]. Additionally, the fact that in many territories, signed languages are still not considered official languages, with Deaf people considered as disabled rather than as members of a linguistic minority community, conspires to mark Deaf people as a disadvantaged minority in Europe [12], [31]. However, the international community clearly recognises signed languages as "real" natural languages worthy of protection: the European Parliament has passed 2 resolutions on signed languages (1988, 1998) [6], [7], while in 2003 the Council of Europe's parliamentary assembly passed a resolution calling for the protection of signed languages [17], [31]. UN documents also recognize the value of signed languages: both UNESCO's Salamanca Statement (1994) and the UN Convention on the Rights of Persons with a Disability (2006) call for the use of signed languages in education.

[1] This figure is based on an EU population of 490,426,060 (July 2007 est.) www.cia.gov/library/publications/the-world-factbook/print/ee.html

We note here that signed languages are naturally occurring languages that have evolved over time in Deaf communities. They are independent of the spoken languages that surround them (i.e. they have independent syntax, semantics, lexicon, etc.) and they differ from territory to territory. The significance of signed languages for Deaf people is summed up by Helga Stevens, former President of the European Union of the Deaf, a Deaf lawyer and a current member of parliament and senate in Flanders, Belgium:

> "Without sign languages Deaf people cannot function and participate fully in society. Because it is through sign languages that Deaf people communicate with the outside world. Take sign language away from a Deaf person and s/he is 'disabled' because s/he doesn't have a language to communicate. Without sign language/s Deaf people cannot 'survive' in society, cannot get an education, cannot communicate, etc." [30].

2. EDUCATIONAL DISADVANTAGE IN EUROPEAN DEAF COMMUNITIES

The fact that signed languages are not formally recognized, and in many EU countries, not actively used or encouraged in education limits educational attainment for Deaf children. In countries where signed languages are not included in national curricula, and where children are still expected to learn via lip-reading ("oral education"), the average reading age for Deaf school leavers is comparable to that of an 8-9 year old hearing child [4], [17], [18]. While figures for participation at tertiary level are not available on a European level, we know that Deaf students are severely under-represented [8],[13]. In Ireland, we know that Deaf students are the most under-represented of all disadvantaged students at tertiary level [16], [17]. In an increasingly globalised world, where literacy is key to full participation, educational progression and employment success, the barriers to participation across all levels of education for Deaf sign language users represent a challenge to our assumption that a meaningful education is available as a right to all EU citizens in the 21st century.

In this context, elearning is a tool for greater equalization of opportunity for Deaf people insofar as we can harness the potential for streaming video content in signed languages, with associated text-based content in an accessible manner. Providing training in an appropriate language (i.e. a signed language), with associated on-line supports (e.g. online tutorials) and assessment is a significant step in the direction of facilitating access to third level programmes for Deaf people.

2.1 Links between low educational attainment, under-employment and relative poverty

The issue of access to education does not exist in a vacuum. Educational attainment (even to minimum state-defined levels of achievement) is associated with success in employment. Given the context that signed language users find themselves in, the majority of Deaf people do not meet the minimum qualification standards achieved by their hearing peers. Kyle and Allsop (1997) conducted a snap-shot review of the status of signed language users in the European Union and found that Deaf people were under-employed, often as a result of poor literacy attainment [13]. By 2001, the European Union of the Deaf found no significant changes to this pattern. In an Irish context, only 7% of students presenting for disability support at third level are deaf or hard of hearing. This represents only 2% of the total undergraduate student population [1], [17], [23].

In an empirical analysis of the situation of 354 Irish Deaf people, Conroy (2006) found that 38% of Irish Deaf people reported that they are not confident reading a newspaper and more than half were not fully confident writing a letter or filling a form [5]. Focusing specifically on education, Conroy notes that the educational experience of adults

> "reveal a series of grave flaws in Deaf education. The first deficiency is in communication. Deaf children who were able to communicate with each other, reported being unable to communicate clearly with their teachers who did not use Irish Sign Language." (2006: 45) [5]

Leeson (in press) notes that today, there are few Deaf teachers - most Deaf people are employed within the educational system as Special Needs Assistants (SNAs) who tend to work beyond their intended function by acting as interpreters in the classroom and by teaching their deaf and hard of hearing students, as the teacher frequently cannot communicate directly with their pupils [16].

Other flaws include the fact that many Irish Deaf children leave school with no formal qualifications (Junior Certificate, Leaving Certificate) or any other formal proof of their educational attainment; the lack of transfer to continuing education at third or vocational level; the high drop out rate of Deaf students who do continue to third level; and the fact that this perpetuates the lack of opportunity for the natural evolution of Deaf role models and critical analysis by Deaf people of the educational system [16]. Conroy [5] notes that the absence of educational qualifications places Deaf people at a serious disadvantage in later life, with Deaf adults often obliged to accept entry-level jobs where they remain for long periods. Even those lucky enough to access third level education face additional challenges: Conroy notes that her sample report

> " … being isolated from student life and many found no supports or reasonable accommodations or adjustments to enable them to compete on an equal footing with other students. … In the absence of a 'critical mass' of Deaf students, they were out on their own." (Conroy 2006: 45) [5]

Perhaps the most significant aspect of the Conroy report is the fact that clear links are drawn between educational disadvantage and negative employment outcomes for Deaf people in Ireland (though we note that this trend holds across Europe (see [8], [13] [27]). While employment rates for Deaf people in Ireland are only marginally below those of hearing people, (64% as the national average, 60% for Deaf people), unemployment is much more significant for Deaf people: Deaf respondents experienced four times the national rate (3% national average, 12% for Deaf people), dispelling the myth that *" 'people with an impairment' are economically inactive'* (Conroy 2006: 46 [5]), although their income levels are very low.

Conroy found that Deaf adults were concentrated in lower level clerical and manual posts with very low levels of pay. Thus, she suggests that many Deaf people can be considered to be 'working poor'. Further, Deaf people do not readily move jobs, do not seek or receive promotion and experience vertical and horizontal blockages to movement in the jobs market. Leeson and Matthews (2001) report that even where Deaf people wish to consider re-training or further education, they tend not to take up full-time study, opting to stay in low-level posts instead, as they are fearful of losing steady employment [22]. Also, they are mindful of negative experiences of education at primary and post-primary level, and often have low levels of confidence in their own abilities. Thus, it is very difficult to attract Deaf students to third level education, even where increased incentives are in place to support mature students, students with disabilities and those from disadvantaged communities.

It is against this backdrop that the SIGNALL projects were conceived as starting points on the road to tackling such deep-seated barriers to access, education and employment.

3. SIGNALL I AND SIGNALL II

SIGNALL I (2006-8) was designed to create awareness amongst employers regarding the specific barriers facing Deaf people. Predicated on the idea that a paradigm shift in how employers view Deaf people as potential employees was needed, SIGNALL created a set of digital materials aimed at employers. These include a documentary outlining the experiences of

Deaf people, service providers and employers ("The Significance of Silence"), several adverts that aim to challenge thinking about the potential of Deaf people as employees, and a report that features case studies of best practice in the partner states (Ireland, UK, Spain, Finland, Czech Republic). Additionally, guidelines for employers regarding their interaction with potential and existing Deaf employees were developed. See www.signallproject.com for all content. SIGNALL's success was recognized by the Irish agency, Leargas, and was awarded the European Award for Languages 2008.

Following from the success of SIGNALL I, Interesource Group (Ireland) Limited, SIGNALL II is promoted by Interesource Group (Ireland) Limited partnered with the Centre for Deaf Studies, Trinity College Dublin (Ireland), Irish Deaf Society (Ireland), Finnish Association of the Deaf (Finland), University of Sussex (UK), the Foundation for the Promotion of Entrepreneurship, Lodz, (Poland) and Grant Advisor, Brno (Czech Republic). The project, which runs from 2008-10, aims to maximize the experience, results, partnership alliances and the relationships built up with supporters and user groups from SIGNALL I in the development of a digital course, called Perspectives on Deafness (POD), which builds on an existing, accredited course offered by the Centre for Deaf Studies at Trinity College Dublin.

Accreditation leads to the transfer of credit points (under the European Credit Transfer System (ECTS)) amongst participating third level educational establishments promoting international mobility in education and the transparency of qualifications. Experiential and evidenced-based material will illustrate experiences of deafness by using digitized case studies and video materials. The course will be offered as a distance-learning programme with fully accessible (signed, subtitled) course content in each partner country on-line. This is essential given that Deaf people are the most under-represented group accessing third level education as noted earlier, and is challenging given the linguistic diversity of the European Union in terms of both spoken and signed languages. Effectively, we are seeking to provide aspects of course content in Irish Sign Language, British Sign Language, Czech Sign Language, Polish Sign Language, Finnish Sign Language, Finnish, Czech, Polish and English, with subtitling of signed content.

Further, we are preparing a report that will also function as an elearning tool in its own right: Sheikh and Leeson (in prep.) report on the historical, socio-cultural, medical and human-rights perspectives on deafness, and further, add some original empirical data which will inform our understanding of the situation of signed language users and the status of signed languages in partner countries [28]. This document will subsequently form part of the course reading and will, by integration of new technologies allow for the integration of movie content within a broader text-based content. This will facilitate the integration of signed data at all levels of content presentation. In addition, this volume replicates the Kyle and Allsop (1997) 'Sign On Europe' snapshot on attitudes to signed languages in the partner countries [13], offering, for the first time, a view on Polish and Czech attitudes, which feeds into consideration of the social and legal status of signed languages and the situation of sign language users in our five nations.

4. THE PERSPECTIVES ON DEAFNESS (POD) COURSE

The POD course introduces students to the range of ways in which deafness and Deaf people are categorized – by medical personnel, by hearing people, and by the Deaf community. Three major strands are covered:

- Perspectives on Deafness: The Deaf Community, Culture and Historical Context
- Medical, Social and Personal
- International Perspectives on Deafness

POD outlines a continuum of perspectives of Deafness, and examines the range of practical and political implications of these views. For example, we examine the variety of societal responses to Deafness over time. We begin with references to deafness and Deaf people in ancient times and

trace changing attitudes to Deafness, signed languages and Deafhood up to and including contemporaneous views. We also explore the notion of Deaf culture/s and community/communities and consider the objective symbols and behavioural norms of these cultures. We look at the range of implications that this can have on a Deaf person's self-image. A range of views from Deaf, deafened and hard of hearing people from the five partner nations are shared over the course of this module and important 'tipping points' for Deaf people and their languages are referenced (e.g. the European Parliament's first resolution on signed languages in 1988, the recognition of the Polish Deaf battalion who fought during the Warsaw Rising in 1944, national recognition of Finnish Sign Language, the establishment of national associations of the Deaf, etc.).

This module also considers different ways of being Deaf in the modern world. Major organizations from the Deaf communities in the five partner nations are given attention, and we also consider the relationship between the developed and the developing worlds, with special emphasis on the European experience of Deafness.

4.1 Learning outcomes:

A number of learning outcomes are associated with completion of this module which forms part of the core required teaching for any of the undergraduate diploma programmes offered by the Centre for Deaf Studies at TCD and carries 10 ECTS[2]. As we develop the course, we are re-visiting the detail of our intended learning outcomes. As a guide, the generalized learning outcomes for students completing this course are as follows:

On completion of the POD course, you will be able to:

- Describe the historical context that notions of Deafness are grounded within
- Describe the major milestones in Deaf history (e.g. establishment of deaf education, formation of communities, the 'Golden era' of manualism, the rise of oralism, the Congress of Milan 1880, the introduction of oral education in Ireland and consequences thereof).
- Describe the major philosophical influences on responses to deafness (e.g. legal, religious, educational, rehabilitation, normalization, eugenics, human rights, socio-cultural views, medical responses to deafness).
- Describe the medical model of deafness
- Describe the social model of deafness
- Describe the human rights agenda as it relates to the Deaf community
- Define Deafhood
- Situate Deaf community experiences in a broader EU and global context
- Outline contemporary responses to deafness and Deafhood
- Have a knowledge of the main organizations of and for Deaf and hard of hearing people in the SIGNALL project partner member state/s
- Describe the situation of some of the minority communities within the Deaf community (e.g. Deaf Travelers, Deaf people with disabilities, Deaf-blind people, Deaf gay/lesbians, Deaf people of race, Deaf people who are members of minority religious communities, etc.)
- Explain how educational context has impacted on policy that impacts on the Deaf community
- Describe the relative differences in attitude to signed languages as illustrated in the SIGNALL project report's replication of Kyle and Allsop's (1997) report on signed languages in Europe.

[2] One ECT equals 20-25 hours of student work.

4. 2 Assessment

Traditionally, POD has been assessed on the basis of coursework and a final assessment, which students can submit in either the written language of their territory (e.g. English) or video-record a formal presentation in the signed language of their territory (e.g. ISL). The accrediting university, TCD, has an exams policy that allows for submission of work in Irish Sign Language, creating the way for productive literacy deficits to be overcome without lowering required academic standards[3]. Assessment content is linked to learning outcomes, which are also mapped onto the session-by-session content.

Additionally, we have identified the learning objectives of each POD lecture and its themes on a session-by-session basis. For example, week 1, lecture 1 has learning objectives LO1, LO2 and LO3, etc. which broadly equates with a lecture plan that is rolled out over a semester. For example, the traditional, class-room based POD course is delivered over two semesters totaling 24 weeks with 24 2-hour lectures over the academic year. We are in the process of explicating the learning objectives for each of these lectures so that each objective may be supported by up to four learning objects. These learning objects are expected to form a composite unit, but will comprise a range of media. A composite unit, will be expected to include the lecture notes (.pdf or .ppt), MOODLE[4] quizzes and exercises, video data of signing interactions (in Macromedia Breeze, Apple QuickTime and/or other formats), and ELAN[5] digital corpora. To make a composite unit, each learning object needs to be wrapped with proper tagging to facilitate searches for these learning objects within a digital repository. We anticipate that given this level of detailed focus, that each online session will comprise short presentations linked to each learning outcome, with associated multimedia content to support same. Potential tags of interest include the following (after Leeson and Nolan 2008 [21]):

1	**Topic**		
2	**Description**		
3	**Sections**		
4	**Media**	*a. Source*	
		b. Options for reuse	
		c. Context - 'where used now'	
		d. Proof of availability	
		e. Ownership	i. Licensing
			ii. Cost
			iii. Payment Method
		f. Optimum speed of access and use	
		g. Ability to apply style guide	
		h. Types supported	

[3] We note here that this doesn't abdicate responsibility for supporting majority language skill development for Deaf students. Ideally, a bilingual approach allows for attention to be given to both signed and spoken languages in the curriculum, fostering mother tongue (signed language) competence, and second language learning.

[4] MOODLE is the platform we are using to deliver POD. Working in partnership with the Institute of Technology, Blanchardstown, the Centre for Deaf Studies has piloted on-line content using MOODLE since the academic year 2005-6. In 2009, we aim to use MOODLE to deliver blended learning versions of our undergraduate diplomas and introduce a 4 year honours degree in Deaf Studies, funded by the Higher Education Authority's Stratigic Innovation Funds (Cycle II).

[5] ELAN is a software programme developed by the Max Planx Institute, Nijmegan. It was developed with the aim of providing a sound technological basis for the annotation and exploitation of multi-media recordings. *(Source: ECHO Project* - http://www.let.ru.nl/sign-lang/echo/index.html?http&&&www.let.ru.nl/sign-lang/echo/data.html CDS has used ELAN to annotate the Signs of Ireland corpus, one of the largest and most highly annotated digital corpora of a signed language worldwide.

5	**Handle Tags**	*a. Specific topics covered*	
6	**Context**	*a. Modality for delivery*	
		b. Format	
7	**Conversion speed**		
8	**Assessment of topics**	*a. Assessment of specific areas*	
		b. Depth of adaptability	
		c. Level of adaptability	
		d. Feedback	
9	**Author**		
10	**Version number**		
11	**Date created**		

Figure 1. Potential tags of interest

One of the boons to SIGNALL II is the availability of some digital content from the SIGNALL I project in relevant languages, coupled with the existence of .pdf and .ppt files for much of the POD content, allowing for maximization of transfer of learning from partner knowledge to this new project.

4.3 Overcoming measurable barriers: why elearning works

Motivations for SIGNALL II and the digital POD course include, as we have seen, recognition of the situation of Deaf people as struggling to access mainstream education in a language other than their own, leading to under-representation at third level, with consequences for employment. Facilitating access to third level in a traditional manner is not enough: we have seen that many Deaf people are unlikely to attain educational grades required to gain direct entry to third level or to return to education as mature students due to negative experience at post-primary level and low levels of self-confidence linked to literacy attainment [5], [16], [17], [18]. Further, the fear of unemployment keeps Deaf people in jobs that are low-paid and do not allow for progression. Fear of failure, coupled with the severe shortage of appropriately qualified signed language interpreters in most of the European Union conspires to minimize academic progression for Deaf students.

Given that elearning allows for asynchronous learning, Deaf employees can access content while continuing to work, using education as a stepping-stone to change. Within the proposed POD framework, all content will be presented in a signed language, or, where content is delivered in a spoken language, interpretation into a signed language will be available on-screen. Further, subtitled content will be provided to support non-sign language users to access the materials. Tutorial support (via iChat / ooVoo or Skype) will be available in a signed language too. These approaches will set the standard for universal access for courses that include Deaf and non-Deaf students.

All aspects of SIGNALL II builds on past successes: we draw on SIGNALL I for some course content, while course delivery mechanisms have been piloted by CDS in partnership with the Institute of Technology, Blanchardstown. Indeed, digitized POD content will form a core component in a blended learning honors degree in Deaf Studies, and a proposed Masters programme in Irish Sign Language from 2009. A key element in all of these successes is the partnership with Deaf people and their representative organizations. Crucially, the POD course has been created by Deaf academics and is informed by “grass-roots” Deaf people from across partner countries in shaping how we talk about Deaf communities and Deaf experience. It is a course about Deaf people, taught by Deaf people, delivered in signed languages, and informed by Deaf-led research.

5. CONCLUSIONS

We have outlined the educational and linguistic barriers that result in significant under-representation of Deaf students at third level in Europe and described the processes and systems that we are drawing on in developing the ground-breaking POD digital course. We noted that the key for success is partnership with Deaf academics and organisations of Deaf people in identifying both barriers to participation and possible means of redressing educational defecits and and subsequently, challenging the pattern of underemployment that dominates for Deaf people in the EU. We summarised work in progress regarding the development of the digital POD course and accompanying volume. We look forward to reporting further on the SIGNALL Project outcomes as we move forward.

Acknowledgements

Thanks to Leárgas, to the SIGNALL partners and, most importantly, the Deaf people in the Member States who have participated in our project.

References

[1] AHEAD (2001): *Initial Findings of HEA Survey on Participation Rates of and Provision for Students with Disabilities in Higher Education for the Academic Year 1998/99*. Dublin: AHEAD Education Press.

[2] Biesold, H. (1999) *Crying Hands: eugenics and deaf people in Nazi Germany*. Washington DC: Gallaudet University Press.

[3] Conama, John Bosco (2008): *Review of the Signing Information Project, Mid-West Region*. Limerick: Paul Partnership.

[4] Conrad, Reuben (1979): *The Deaf School Child. Language and Cognitive Function*. London: Harper and Row.

[5] Conroy, Pauline (2006): *Signing In and Signing Out. The Education and Employment Experiences of Deaf Adults in Ireland*. Dublin, Irish Deaf Society.

[6] European Parliament (1988): Resolution on Sign Languages as Adopted by the European Parliament in Plenary Session on 17 June 1988. (Doc. A2-302/87).

[7] European Parliament (1998): Resolution on Sign Languages as Adopted by the European Parliament in Plenary Session on 18 November 1998. (B4-0985/98).

[8] European Union of the Deaf (2001): *EUD Update. Special Edition: Update on the Status of Sign Languages in the European Union.* Volume 4, Number 10, March 2001.

[9] Grehan, Carmel (2008): *The Impact of Oral Education on Irish Sign Language in St. Mary's School for Deaf Girls*, Dublin. M. Phil dissertation. School of Linguistic, Speech and Communication Sciences, Trinity College Dublin.

[10] Goldin-Meadow, Susan (2003) *The Resilience of Language: What gesture creation in deaf children can tell us about how all children learn language.* Hove: Psychology Press

[11] Johnston, Trevor (2004) *W(h)ither the deaf community? population, genetics, and the future of Australian Sign Language,* American Annals of the Deaf 148:5.

[12] Krausneker, Verena (2001): Sign Languages of Europe-Future Chances. In Leeson, L. (ed.). *Looking Forward- EUD in the 3rd Millennium- The Deaf Citizen in the 21st Century*. Gloustershire, UK: Douglas McLean Publishers. 64-73.

[13] Kyle, Jim G. and Lorna Allsop (1997): *Sign On Europe: A Study of Deaf People and Sign Language in the European Union*. Bristol: Centre for Deaf Studies, University of Bristol.

[14] Ladd, Paddy (2003): *In Search of Deafhood*. Multilingual Matters: Clevedon.

[15] Lane, H.; R.J. Hoffmeister, and B. Bahan, (1996): *A Journey into the Deaf World*. San Diego, California. Dawn Sign Press.

[16] Leeson, Lorraine (in press) Supporting Academic Success for the Irish Deaf Community. In Lorna Carson and Breffni O'Rourke (eds.) *Festschrift for Prof. David Little*. Peter Lang.

[17] Leeson, Lorraine (2007): *Seeing is Learning. A Review of education for deaf and hard of*

hearing people in Ireland. Report submitted to the National Council for Special Education.
[18] Leeson, Lorraine (2006): *Signed Languages in Education in Europe – a preliminary exploration. Preliminary Study.* Strasbourg: Language Policy Unit, Council of Europe.
[19] Leeson, Lorraine (2004): Signs of Change in Europe: European Developments on the Status of Signed Languages. In Patrick McDonnell (ed.) *Deaf Studies in Ireland: An Introduction,* Coleford, England, Doug McLean, pp.172-197.
[20] Leeson, Lorraine and Carmel Grehan (2004). *To the Lexicon and Beyond: The Effect of Gender on Variation in Irish Sign Language.* In M. Van Herreweghe and M. Vermeerbergen (eds.): To The Lexicon and Beyond: The Sociolinguistics of European Sign Languages. Gallaudet University Press, pp. 39-73.
[21] Leeson, Lorraine and Brian Nolan (2008) *Digital Deployment of the Signs of Ireland Corpus in Elearning*. Proceedings of the Language Resources in Education Conference (LREC) 2008. Marrakesh, May 28-June 2, 2008.
[22] Leeson, Lorraine and Patrick A. Matthews (2001): *Submission to the Advisory Committee on Deaf Education*. Centre for Deaf Studies, Trinity College Dublin.
[23] Mathews, Elizabeth (2007): Some Statistics Regarding the Education of Deaf and Hard of Hearing Children in Ireland: The Current Situation. In Leeson, L., *Seeing is Learning. A Review of education for deaf and hard of hearing people in Ireland*. Report submitted to the National Council for Special Education, 34-54.
[24] Matthews, Patrick A. (1996): *The Irish Deaf Community Vol. 1 Survey report, history of education, language and culture*, Dublin: Institiuid Teangeolaiochta Eireann.
[25] McDonnell, Patrick and Helena Saunders (1993): *Sit on Your Hands: Strategies to Prevent Signing. In Fischer, R. and Lane, H. (eds.) Looking Back: A Reader on the History of Deaf Communities and their Sign Languages.* Hamburg: Signum. 255-260.
[26] Mindess, Anna (1999): *Reading Between the Signs: Intercultural Communication for Sign Language Interpreters*. Intercultural Press.
[27] Sheikh, Haaris (2008) *The Significance of Silence*. Dublin: Interesource Group (Ireland) Ltd. www.signallproject.com
[28] Sheikh, Haaris and Lorraine Leeson (in prep): *Five Nations: Snapshots of Deafness, Identity and Experience in Ireland, Czech Republic, Finland, Poland and the UK*. SIGNALL II REPORT. Dublin: Interesource Group (Ireland) Ltd.
[29] Skutnabb-Kangas, Tove (2000): *Linguistic genocide in education or worldwide diversity and human rights?* Mahwah, NJ: Erlbaum .
[30] Stevens, Helga (2005): *Equal rights for Deaf People: From Being a Stranger in One's Own Country to Full Citizenship*. Paper presented at the International Conference on Deaf Education, 17-20 July 2005.
[31] Timmerman, N. (2005): *The Status of Sign Languages in Europe*. Strasbourg: Council of Europe. *United Nations Convention on the Rights of Persons with Disabilities (2006):* A/61/611 Distr.: General 6 December 2006. http://www.un.org/esa/socdev/enable/rights/convtexte.htm
[32] UNESCO (1994): *Salamanca Statement and Framework for Action on Special Needs Education World Conference on Special Needs Education: Access And Quality*. Salamanca, Spain, 7-10 June 1994 . http://www.ecdgroup.com/download/gn1ssfai.pdf