

ISHARA RESEARCH SERIES

**Sign bilingualism in education:
challenges and perspectives along the
research, policy, practice axis**

Carolina Plaza-Pust



Ishara Research Series

The Ishara Research Series is dedicated to current research in sign language linguistics and Deaf Studies. The series is designed for publications that are of current relevance to the field, but are not easily accommodated within the scope of conventional outlets.

In addition, this innovative format is ideal for young researchers and first-time authors publishing work of high academic quality. The series is intended to be a tool for stimulating research in emerging areas, with particular emphasis on promoting Deaf authors and authors in countries where sign language studies and Deaf Studies are not established disciplines yet.

Editorial board

Anastasia Bradford
Thierry Haesenne
David McKee
Connie De Vos

**Sign bilingualism in education:
challenges and perspectives along the
research, policy, practice axis**

Carolina Plaza-Pust

Ishara Research Series 3 /
Sign bilingualism in education: challenges and perspectives
along the research, policy, practice axis
Carolina Plaza-Pust / Lancaster: Ishara Press 2016.
ISBN 978-0-9929221-3-9

Ishara Press
International Deaf Empowerment Foundation
18 Sibsey Street
Lancaster LA1 5DF
United Kingdom
projectmanager.isharapress@gmail.com

Cover illustration: Dan Zeshan

Published 2016.

For my family and friends

Acknowledgements

When I set out to work on bilingualism and deafness, I was not only intrigued by a type of bilingualism that involves two different modalities of expression. I was also impressed by the complexity of internal and external factors that shaped its development and maintenance. It became clear very soon that a comprehensive understanding of sign bilingualism required a cross-disciplinary approach that would allow for the consideration of the socio-linguistic, psycholinguistic and educational factors that determine deaf learners' bilingual development of a sign language and an oral language. In practice, this meant not only going beyond a developmental linguistics approach and adopting an integrated perspective on bilingualism and deafness, but also engaging in a dialogue with diverse experts, exchanging with professionals on the spot, sitting in on classes and exchanging with the bilingual deaf students themselves.

The results of the research undertaken are presented and discussed in two volumes that appear in parallel. The present work complements the volume on bilingualism and deafness in which I explore language contact in the bilingual language acquisition of sign language and written language. In that volume, education is taken into consideration in the discussion of the internal and external factors that determine the development and maintenance of sign bilingualism. In the present work, we narrow the focus on sign bilingualism in deaf education and the challenges and perspectives of a bilingual promotion of deaf learners in the educational domain.

I want to extend my gratitude to all those colleagues and professionals who have contributed in one way or another to the progression of the present work. First and foremost, I wish to thank Klaus-B. Günther. Thank you for making it possible for me to join the research team concomitant to the bilingual education programme established in Berlin, and to conduct a longitudinal study with the deaf students participating in this programme. Thank you also for the thoughtful and thorough feedback to an earlier version of the present work. Very special thanks to Helen Leuninger, for your encouragement to conduct a study on sign bilingualism, and for your thoughtful feedback to previous versions of the present work. Your profound knowledge of sign language linguistics (and many other intricate areas of psycholinguistics) as well as your commitment to the recognition of sign language and their users in Germany have been a constant source of inspiration.

Exchanges with many different people have helped to sharpen my views on challenges and perspectives in deaf education. For stimulating discussions about sign bilingualism, deaf education and related issues at different points in time throughout the last years I wish to thank Anne Baker, Anne-Marie Parisot, Astrid Vercaingne-Ménard, Beate Krausmann, Beppie van de Bogaerde, Bob Hoffmeister, Claudia Becker, Claudia Wilsdorf, Esperanza Morales-López, Gary Morgan, Johannes Hennies, Knut Weinmeister, María Luz Esteban Saiz, Marie-Anne Sallandre, Marie-Thérèse L'Huillier, Mieke van Herreweghe, Lourdes Gómez Monterde, and Victòria Gras.

I am also grateful to the participants in the interviews I have conducted over the last years at various educational institutions in several countries, and to headmasters and teachers who have facilitated my sitting in several bilingual classes so that I could get a glimpse of actual teaching practices.

Special thanks to the editors of Ishara Press, and, in particular to Annika Herrmann, for guiding me with patience and support through the publication process.

I am indebted to my friends and to my family for their continued support and motivation to bring this work to a good close. To you I dedicate this work.

Table of contents

Acknowledgements — v

Table of contents — vii

List of figures — ix

List of tables — ix

List of acronyms for sign languages — ix

1. Bilingualism and education — 1

1.1. Introduction — 1

1.1.1. Outline of the book — 2

1.2. Bilingual education — 3

1.2.1. Aims and types of bilingual education — 3

1.2.1.1. Submersion education — 4

1.2.1.2. Transitional bilingual education — 4

1.2.1.3. Maintenance bilingual education — 5

1.2.2. Bilingual education programmes: Variables — 6

1.2.2.1. Status of the languages — 6

1.2.2.2. Language competence(s) envisaged — 6

1.2.2.3. Placement — 8

1.2.2.4. Students' profiles — 9

1.2.2.5. Curriculum languages — 9

1.2.3. Bilingual education in Germany — 10

1.2.3.1. The monolingual habitus vis-à-vis linguistic diversity — 11

1.2.3.2. Types of bilingual education programmes — 13

1.2.4. Bilingual education: Challenges along the research, policy, practice axis — 13

1.2.4.1. Educational objectives and evaluation of outcomes — 14

1.2.4.2. Bilingual education and academic achievements — 15

1.2.4.3. The “bilingual” label revisited — 16

2. Changing perspectives in deaf education — 17

2.1. Early records of deaf education — 17

2.1.1. Teachers of deaf students — 18

2.1.2. The establishment of deaf schools — 23

2.1.3. Competing educational philosophies: Manualism vs. oralism — 24

2.2. From vision to audition: Changing perspectives in deaf education — 27

2.3. Oralism — 29

2.3.1. Components of oral education — 30

2.3.2. Outcomes and critique — 34

2.4. Total Communication — 37

2.4.1. Components of TC approaches to deaf education — 39

2.4.2. Challenges to the inclusion of signs in deaf education: The Hamburg experience — 41

2.4.3. Outcomes and critique — 45

2.4.4. The controversial status of signed systems — 48

3. Sign bilingual education — 51

- 3.1. Sign bilingual education on the agenda — 51
 - 3.1.1. First steps: Developments leading to the inclusion of sign language — 52
 - 3.1.2. First bilingual education programmes: Challenges at the level of practice — 54
 - 3.1.3. Diversification of methods used in deaf education — 54
- 3.2. Variation in sign bilingual education: a critical appraisal — 55
 - 3.2.1. Status of the languages — 56
 - 3.2.1.1. Sign language: Variation in age of exposure — 56
 - 3.2.1.2. Spoken language and written language — 60
 - 3.2.2. Curriculum languages: Language choice and language planning in the classroom — 63
 - 3.2.2.1. Team teaching (one person–one language) — 64
 - 3.2.2.2. Simultaneous communication — 66
 - 3.2.2.3. Sign language as a separate subject — 67
 - 3.2.2.4. Language contacts in the classroom and the promotion of metalinguistic skills — 67
 - 3.2.3. Educational placements and the concept of inclusion — 69
 - 3.2.3.1. Special schools — 69
 - 3.2.3.2. Bilingual education in the mainstream — 70
 - 3.2.3.3. Variation in educational placements: Special needs vis-à-vis equity of access — 72
 - 3.2.3.4. Sign bilingualism in the mainstream: Tasks to be tackled — 73
 - 3.2.3.5. A note on the bicultural component of sign bilingual education — 76
 - 3.2.4. Students' profiles — 77

4. Sign bilingualism in deaf education: Challenges along the research, policy, practice axis — 79

- 4.1. Language planning and deaf education: On the relevance of coordinated action — 79
 - 4.1.1. Bottom-up processes — 80
 - 4.1.2. Top-down processes — 82
 - 4.1.3. Holistic model envisaged — 84
- 4.2. Modelling bilingualism as an option: Challenges at the level of practice — 85
 - 4.2.1. Lack of institutionalisation — 85
 - 4.2.1.1. Teaching conceptions, materials and assessment tools — 85
 - 4.2.1.2. Teacher qualifications — 85
 - 4.2.2. Heterogeneity of the student population — 87
 - 4.2.3. Service provision and language choice for the deaf child — 88
- 4.3. Sign bilingualism in deaf education: Navigating expectations — 92
 - 4.3.1. Variation in sign bilingual education: Unravelling the objectives — 92
 - 4.3.2. Bilingualism as a chance: Deaf learners' pooling of linguistic resources — 95
 - 4.3.2.1. Insights into the organisation of multilingual knowledge in deaf learners — 95
 - 4.3.2.2. Sign language, academic language and literacy skills — 96
- 4.4. Concluding remarks: Sign bilingualism as a challenge and as a resource — 98

5. References — 100

Index — 113

List of figures

- 1.1: Bilingual education continuum — 4
4.1: Sign language input continuum in deaf education — 79

List of tables

- 1.1: Bilingual education variables — 6
2.1: The influential work of teachers of the deaf in the 17-19th centuries — 18
2.2: Oral methods and their different orientations — 31
3.1: Sign bilingual education variables — 56
3.2: Distribution of languages on the curriculum at the Berlin bilingual programme — 65
4.1: Language planning scenarios — 80
4.2: Linguistic profiles — 87

List of acronyms for sign languages

ASL	American Sign Language
Auslan	Australian Sign Language
BSL	British Sign Language
DGS	<i>Deutsche Gebärdensprache</i> , German Sign Language
DTS	<i>Dansk tegnsprog</i> , Danish Sign Language
LSE	<i>Lengua de Signos Española</i> , Spanish Sign Language
LSF	<i>Langue des Signes Française</i> , French Sign Language
LSQ	<i>Langue des Signes Québécoise</i> , Quebec Sign Language
NGT	<i>Nederlandse Gebarentaal</i> , Sign Language of the Netherlands
SSL	Swedish Sign Language

1 Bilingualism and education

1.1 Introduction

While “using a second language is a commonplace activity” (Cook 2002: 2) for the majority of the world's population, language policies and attitudes towards multilingualism differ markedly. This variation, in turn, is ultimately reflected in the advantages or disadvantages attributed to the development and use of two languages at the individual and societal levels. For the “elite nomad” (Garcia et al. 2006: 35) multilingualism is the key for her socioeconomical mobility; however, the situation is entirely different for multilingual people with little formal education and mobility, for whom the language issue can easily turn into a barrier. Hence, whether bilingualism is regarded as a resource or as problem depends on diverse circumstances, including the status of the languages and their speakers.

Because the educational area is the domain of language policy *par excellence* the question of whether and how bilingualism is promoted in education is intimately tied to the values agreed upon in a given society, underpinning national curricula. Education can be understood as a route to the wellbeing of the individual, “to equality of opportunity for all” (UK National Curriculum 2010). If one of the main aims of school curricula is to provide opportunities for all pupils to learn and to achieve, the question that arises with respect to the education of bilingual learners is whether and how educational institutions respond to their strengths and needs, including those that pertain to their linguistic skills.

The identification of language, culture and nationality in the tradition of the one nation-one language ideal that originated in the 19th century (Siguán 2001: 16) is commonly translated in the greater part of the Western world into predominantly monolingual language planning and language policies. In this tradition, schools represent “ideal” sites for the perpetuation of a monolingual state ideology that regards monolingualism as a key guarantor of social cohesion. As discourse on multilingualism in educational contexts continues to be “confronted by a monolingual and monocultural ideological heritage” (Lengyel 2012: 170) and by the myth of linguistic homogeneity, we advance the tension that arises between the values of equality of opportunity and the advantages attributed to the enculturation of linguistic minorities into the majority language society. The apparent tension raises the question about the role of research and the evaluation of the benefits attributed to bilingual education, which requires a clear definition of the goals pursued and the criteria used to determine whether and to what extent these are fulfilled. Ultimately, there is the issue of how to reconcile conflicting objectives at the level of practice.

As for bilingual signers, whose bilingualism has been largely ignored, if not suppressed, policies recognising deaf individuals' human and linguistic capital reflect a change not only in the perception of deafness but also of sign language. The legal recognition of sign languages is one of the major topics on the agenda of deaf associations (and related interest groups) together with the demand for their inclusion in deaf education in those social contexts in which this has not already occurred, or not yet materialised.

The path toward sign bilingualism in deaf individuals is determined by a complex interaction of internal and external factors (Plaza-Pust 2016). Among the external factors determining the development and maintenance of sign bilingualism, education plays a key role. Indeed, because of the specific sign language transmission patterns and the unequal accessibility of sign language and oral language in the deaf child supportive measures are necessary for the promotion of both languages. Studies conducted from a developmental linguistics perspective have provided important insights into language acquisition in deaf learners. The developmental milestones in the acquisition of sign languages have been found

to be similar to those observed in the acquisition of spoken languages. Written language development, too, albeit at a much slower pace than in hearing learners, has been found to be characterised by structure-building processes. There is no evidence of language confusion in the organisation of multilingual knowledge in bilingual deaf learners. Quite to the contrary, cross-modal language contact phenomena reveal a sophisticated pooling of resources indicating that bilingual deaf learners, like their hearing peers, know that irrespective of the modality of expression natural languages share a common basis. Studies on narrative development also document the development of deaf bilingual learners as bilingual communicators. Despite these findings, however, the promotion of sign bilingualism in deaf learners continues to represent the exception rather than the norm in most countries throughout the world.

At a time when the debate about the most adequate educational philosophy is reviving, following changes in deaf students' potential to attain spoken language skills associated with cochlear implantation, earlier diagnosis and intervention measures, it seems appropriate to have a closer look at sign bilingual education, its major components and objectives. Our purpose here is twofold. Not only are we interested in discerning the factors affecting the changing status of sign language in deaf education. Our aim is also to clarify the question of whether and how deaf students' bilingualism is being promoted in the educational domain.

Commonly, the primary promotion of sign language is a characteristic of sign bilingual education conceptions at the programmatic level. Yet, how is this demand put into practice? Are sign bilingual education programmes established in the last decades based on a common didactic conception? And if they are not, what are the main dimensions of variation and what does the variation observed reveal about the objectives pursued? Furthermore, and given that sign bilingual education still constitutes the exception in many countries worldwide, we are interested to learn more about the major challenges in the implementation of sign bilingual education programmes.

As we will explain later in this work, we have used several sources as a basis for our analysis. Suffice it to mention here that we have paid particular attention to obtaining further insights into the circumstances that have shaped the status of sign bilingual education in diverse social contexts. The testimonials of scholars and professionals that participated actively in the development and implementation of bilingual education programmes in diverse countries contribute an important piece to the puzzle of understanding the challenges faced at the level of practice. Because the information they provide commonly appears in reports or publications addressed to the local audience in the local language, much of the information has not been easily available to the general international public.

The present work extends and deepens some of the issues raised in our publication on bilingualism and deafness appearing in parallel with this volume (Plaza-Pust 2016). In that publication, we explore the intricate interplay of internal and external variables determining the development and maintenance of sign bilingualism from a cross-disciplinary perspective. In this volume, we zoom in on sign bilingualism in education. Based on a critical appraisal of the developments leading to the implementation of sign bilingual education programmes, and a systematic comparison of the different types of bilingual education programmes implemented in various countries, we discuss some of the main challenges and perspectives of sign bilingual education in the domains of research, policy and practice.

1.1.1 Outline of the book

We begin this work (section 1.2) with an introduction to bilingual education in general and the spectrum of educational options subsumed under the label of “bilingual”. This will provide us with the necessary framework to assess sign bilingual education, its main

components and the spectrum of its variation. Subsequently, we turn our attention to the education of deaf students. In chapter 2 we sketch the status of sign language in deaf education from a historical perspective with a view to tracing the current diversity of approaches to the education of deaf students. We will see that the use of signs or sign language in the teaching of deaf students is not a completely new phenomenon although it was not conceived of in terms of *bilingual* education at the time. The historical perspective also reveals how deaf education has been determined, from its beginnings, by changing perspectives on deafness and the specific needs and abilities of deaf children. The objective of remedying hearing loss lies at the heart of the monolingual orientation that continues to prevail in deaf education in the form of the so-called oralist approach, presented after the section dedicated to the early records of deaf education. Subsequently, we will turn our attention to the development of alternative educational approaches including the use of signs and signed systems. Chapter 3 is dedicated to sign bilingual education. We begin this chapter with a sketch of the developments leading to the implementation of the first sign bilingual education programmes in the late 20th century. We then explore the main components and the spectrum of variation of how sign bilingual education has been put into practice. We close this work with a discussion of the challenges and perspectives of sign bilingual education along the research, policy, practice axis in chapter 4.

1.2 Bilingual education

Over the last decades, educational institutions have been confronted with the challenge of providing equal opportunities to learn and to achieve for an increasingly heterogeneous student population, overcoming potential barriers to learning and assessment of pupils for whom the national language is an additional language. At the same time, the promotion of bilingualism emerges as a task to be tackled in response to the opportunities and challenges of a rapidly changing world, including continued globalisation of economy and society.

Despite the dynamics and the diversity of people's language practices, measures adopted at the political level seldom promote bilingualism as a *resource*. Indeed, language policies in the greater part of the Western world continue to be predominantly monolingual, based on the tradition of the one nation-one language ideal. The ideal that originated in the 19th century identifies language, culture and nationality (Siguán 2001: 16). Commonly, this ideal of linguistic homogeneity is associated with the view of bilingualism as a *problem*. Linguistic diversity is associated with a potential for socio-political conflict at the societal level. And it is also related to problems at the individual level reflected in a diversity of linguistic profiles of bilingual individuals that goes well beyond the idealised notion of a uniform competence in monolingual individuals. The apparent dichotomy in the appreciation of bilingualism as a problem or a resource is also reflected in education, the key domain of language policy.

In the following sections we examine the main aims of bilingual education and the spectrum of its variation. This will provide us with the necessary framework to explore bilingual conceptions and practices in deaf education, and to identify the remaining hindrances that work against a wider distribution of this education option worldwide.

1.2.1 Aims and types of bilingual education

The ... advantages [that] make 'strong' forms of bilingual education ... value-added over mainstream education, and worthy of expansion ... also leave the uncomfortable question of whether any child who is denied the chance to become bilingual through the family or the school is being linguistically, culturally, cognitively deprived. (Baker 2007: 149)

On a general level, research into bilingual education reveals that the notion of *bilingual* is used as a cover term for various types of education (Romaine 1995). One fundamental issue that allows for a broad categorisation of bilingual education options is whether full bilingualism is pursued as a goal. Two types of bilingual education are commonly distinguished in this respect, namely *transitional* vs. *maintenance* bilingual education (Baker 2001: 192). While transitional bilingual education aims at the social and cultural assimilation of the minority child into the language majority, maintenance bilingual education aims at fostering full bilingualism. Within each of these two broad categories there are numerous variants (Baker 2001: 195f.). Here we will summarise the main types of bilingual education that are relevant for the present study, after a short description of *submersion education*, a type of education allocated at the monolingual end of what might be conceived of as a bilingual education continuum, with maintenance bilingual education at the other extreme of the spectrum, and multiple variants between these two extremes (cf. Figure 1.1).

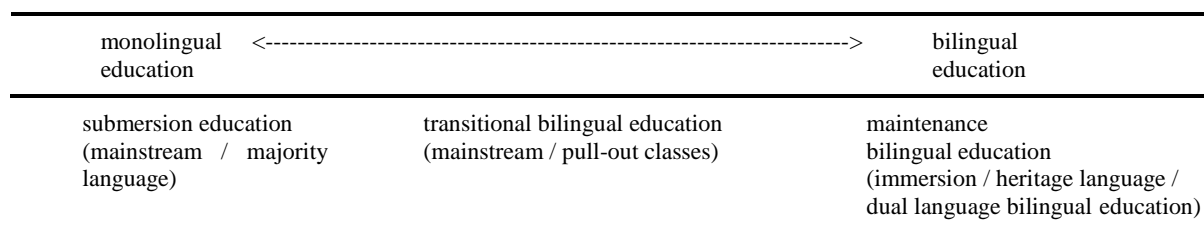


Figure 1.1: Bilingual education continuum.

1.2.1.1 *Submersion education*

In this type of education, language minority students are placed in mainstream education. They are not instructed in their language, but in the majority language, placed in a classroom with majority language speakers (in contrast to students in *structured immersion* self-contained classes, where teachers might adapt their language to the level of their students and accept students' responses in their home language). Hence this type of education is not bilingual, although bilingual students are present in the classroom.

Critiques of submersion education and its variants commonly remark on (a) language and communication problems in the classroom, in particular at the beginning (students do not understand the teacher; teachers seldom have a training in second language methodology), (b) low academic achievement levels relating to the learning through an undeveloped language, (c) teacher's teaching and class management problems in dealing with the broad range of language abilities encountered in the classrooms, (d) language minority children's problems in their emotional and social adjustment and related drop-out rates. Against the backdrop of these shortcomings the question arises of why this type of mainstreaming continues to be widespread, particularly in the Western world (according to Romaine 1995: 245, this is "the most common experience for immigrant children" throughout the world, cf. also section 1.2.3 in which we discuss the situation in Germany). The observation that where this education is favoured "ideology (e.g. assimilation of immigrants) is dominant over educational effectiveness" (Baker 2001: 197) might serve as a clue to answer this question.

1.2.1.2 *Transitional bilingual education*

In transitional bilingual education programmes language minority students are taught through their home language until they attain sufficient proficiency in the majority language to cope in mainstream education (Baker 2001: 198). In the USA, temporary mother tongue use might extend over two years (*early exit transitional bilingual education*) or six years (*late exit transitional bilingual education*). As Baker (2007: 133) pithily remarks, this type of bilingual

education, criticised by many academics for its shortcomings (basically the ones listed previously in relation to submersion education), is commonly the educational option favoured by politicians, who's motto could be summarised as “maximal majority language experience”. Typically, the political line of argumentation is based on the claim that “only by education through the majority language will a child be given the greatest economic, social and cultural opportunities” (Baker 2007: 134). Such beliefs make apparent that transitional bilingual education is typically based on what could be dubbed as a *language-as-a-problem* orientation (Baker 2001; Hornberger 2006). In the USA, this type of education was emphasised by the Bilingual Education Act, originally passed by the Congress in 1968. The categorisation of minority students as “limited English speaking” reflects a compensatory model that aims at remedying a language deficit. It should be noted that the 1994 reauthorization of the law involved an ideological shift toward a *language-as-a-resource* view, reflected also in the change of the terminology as students were categorised as “English language learners” (Hornberger 2006: 229).

1.2.1.3 Maintenance bilingual education

In maintenance types of bilingual education competence in the two languages involved is the intended outcome. Depending on the languages involved, different types are distinguished.

Immersion bilingual education. Conceptions of immersion bilingual education were developed in the 1960s in Canada, where educational experiments were set up upon (English speaking) parents' initiatives, with the aim that their children become bilingual and biliterate in French and English (the two official languages of Canada) (Baker 2001: 204). Immersion bilingual education spread rapidly in that country (catering about 288,000 students in 1990, Siebert-Ott 2001: 153, *pace* Wode 1995), and later in parts of Europe (implemented with the aim to foster the bilingualism of autochthonous language minorities, as was the case in Wales, or in the form of the so-called “European schools”, see section 1.2.3.2) and in many other countries worldwide (Baker 2001: 357). It usually represents an optional, not a compulsory type of education. The aim is that children reach normal achievement levels and become bilingual and bicultural in two languages (usually two prestigious languages). Conceptions vary regarding the children's age at which they begin the educational experience (kindergarten, 9-10 yrs, secondary level) and the amount of time spent in immersion, total immersion in the second language commonly beginning with 100% immersion per week, partial immersion with 50%. As Romaine (1995: 246) remarks, most of the positive results of bilingual education have been obtained from this type of acquisition context, which is commonly related to the prestige of the languages involved, the qualifications and commitment of the teachers, parents' involvement in this type of education, the appreciation of the children's home language at school, and the relative homogeneity of the students' experience in the languages (see Baker 2001: 204f. and 358f. for detailed discussions).

Heritage language education. This type of strong bilingual education aims at promoting full bilingualism in the native, ethnic or heritage language (e.g. Navajo or Spanish in the USA, the Aboriginal languages in Australia). Language minority children are educated through the minority and the majority language, whereby the minority language is used for 50% or more of the curriculum time.

Dual language bilingual education. In dual language bilingual education (also *two way immersion*) minority and majority language students, ideally in an equal number, are taught in the same classroom with both languages being used as a medium of instruction (though not during lessons, to keep boundaries between the languages). Apart from fostering full bilingualism, this type of education also aims at enhancing communication between the groups and cultural awareness.

1.2.2 Bilingual education programmes: Variables

The preceding typology reveals that bilingual education varies along different components (cf. Table 1.1), namely, (a) status of the languages (minority vs. majority language), (b) language competence(s) envisaged (full bilingualism or proficiency in the majority language), (c) placement (segregation vs. mainstreaming), (d) students enrolled (with a minority or a majority language background or both), and (e) allocation of the languages in the curriculum (cf. Baker 2007). As we will see next, a critical appraisal of this variation adds a piece to the puzzle of understanding variation in expectations and outcomes of bilingual education.

Table 1.1: Bilingual education variables.

<i>Status of the languages</i>	<i>Language competences envisaged</i>	<i>Placement</i>	<i>Students' language background</i>	<i>Curriculum</i>
Minority / majority language	<ul style="list-style-type: none"> • full bilingualism • majority language proficiency • metalinguistic skills • academic language • conceptual literacy 	<ul style="list-style-type: none"> • segregation • mainstreaming (regular / sheltered content instruction / pull-out classes) • bilingual facilities • professionals' qualifications / training 	<ul style="list-style-type: none"> • minority language • majority language • bilingual • relation of home languages and instruction 	<ul style="list-style-type: none"> • equal distribution and status of the languages • selection of subjects taught in majority language

1.2.2.1 Status of the languages

One crucial component that distinguishes bilingual education programmes is the status of the languages involved. The choice of the languages used in the teaching of the curriculum reflects the policies adopted toward the respective languages and their speakers. Strong forms of bilingualism are most commonly promoted where the languages involved are recognised as co-official languages or are attributed prestige value (recall that, in general, national ethnic minorities commonly have more rights than immigrant groups, Romaine 1995: 246). Specific school types have been established to promote this type of bilingualism (such as the European schools in some European cities or the International schools, cf. Baker 2001: 223f. for a description, section 1.2.3.2). García et al. (2006: 15) remark on the terminological shift depending on the status of the languages involved (in their terms, the power relationships between the languages of instruction in relation to the student). For example, education in a language other than the mother tongue is attributed the status of *immersion* education if it involves language majority children, while it is categorised as *submersion* education if it involves language minority children. Notice, though, that the terminological shift goes along with a change in contextual variables, such as the availability of immersion facilities or the use of and value attributed to the mother tongue language in the society at large.

1.2.2.2 Language competence(s) envisaged

From the perspective of the language competences envisaged, the spectrum of bilingual education options includes those that pursue a *weak* and those that promote a *strong* form of bilingualism. In this respect, submersion and transitional bilingual education are commonly regarded as weak forms of bilingual education because the aim is not to foster bilingualism in school (Baker 2001: 204). In contrast, immersion bilingual education is considered a strong form of bilingual education because bilingualism is the intended outcome.

As for the promotion of the mother tongue it is important to distinguish between the teaching of the language and the use of the language for the teaching of content matter, which involves the learning through the language. This latter dimension leads us to the issue of which language varieties or registers are used in the classroom, and what competence levels the children are expected to attain in these. Situations that bear risks related to a mismatch between the skills in the two languages include (a) cases in which the L1 has no written form as opposed to the L2, (b) students with a literacy-distant social background, and (c) transitions in the educational system that involve a change of the language of instruction, as is the case in transitional forms of bilingual education.

Academic language and conceptual literacy. Baker (2007: 133) addresses the risk of a language barrier that would result from the lack of alignment of the child's level in the L2 (majority language) and the level required in that language for a successful classroom communication, once it is used as the only medium of instruction. The importance of the development of *academic language* for academic success cannot be overemphasised for it is through this specific type of communication that the students learn to plan and realise investigations, identify categories, express their assumptions and conclusions, etc. (Siebert-Ott 2001: 171). Some authors have remarked on the need to look more closely at the choice of linguistic means in particular communicative situations to better capture bilingual students' development in the respective content areas (Siebert-Ott 2001: 173).

Another critical issue that has been discussed in the literature pertains to children's coping with *conceptual literacy*. For example, some scholars in Germany have drawn attention to language problems of students with a migration background during primary school, commonly underestimated by teachers particularly during the initial two years. These problems become pronounced at 3rd grade, that is, the time when the transition from *conceptual oracy* to *conceptual literacy* takes place in primary education provided in this country. This transition towards conceptual literacy, requiring an increased use of productive and receptive language skills on the side of the learner, is also reflected in a change toward the use of the written language register by the teacher and in the respective school materials. It is interesting to note in this context that this change does not only pose a challenge to immigrant children but also to German students, who reach primary education with quite different language skills. For all those students who have not been raised in literacy oriented families the lack of alignment of their spoken everyday language skills and the academic language used at school might negatively affect their academic achievements (Gogolin 2007: 29). As Siebert-Ott (2001: 192) succinctly remarks, one of the central aims of language teaching in primary education should lie in the promotion of conceptual literacy in addition to the traditional focus on literacy *as a medium*.

Metalinguistic skills. Another dimension of variation with respect to the competences promoted concerns the extent to which the bilingual learners' metalinguistic awareness about their own bilinguality, in general, and about the specific linguistic, pragmatic and sociolinguistic characteristics of their languages, in particular, is fostered. Further, as García et al. (2006: 37) point out, good multilingual schools always need to include *critical (language) awareness* as an important component of the curriculum, whereby the attribute of *critical* is used to address the component of reflection on potential undemocratic or discriminatory uses of the languages. Gogolin (2007: 18), in turn, introduces the notion of *bilingual habitus* to capture the skills that should be fostered in bilingual children¹, that is

¹ Gogolin elaborates the notions of a monolingual (1994) and bilingual (2007) *habitus* on the basis of the notion of linguistic habitus which she defines -*sensu* Bordieu- as "the set of dispositions in the field of language: to a person's notion of linguistic 'normality' and of 'good' language, to a society's notion of 'proper' ways of language behaviour, of 'legitimate' language variations and practice. The term ... refers primarily to the symbolic relations and signs by which language becomes a medium of power" (Gogolin 2006: 195).

(...) *eines Habitus des selbstbewusst in zwei oder mehr Sprachen lebenden Menschen, eines Menschen, für den es selbstverständlich ist, dass Verständigung nicht immer gelingt, man sich über Mittel zur Verständigung oft erst verständigen muss und aufmerksam sein muss auf sprachliche Nuancen und Differenzen, dass man sich also in sprachlich komplexen, heterogenen Situationen differenziert zu verständigen weiß.* [(...) as a set of dispositions in an individual living confidently with two or three languages; someone for whom it is self-evident that communication may not always be successful, and that it is often necessary to agree on communication means and that one has to be sensitive to linguistic nuances and differences, and, hence, that one is able to communicate in a qualified manner in linguistically complex and heterogeneous situations.]

1.2.2.3 Placement

Choice of educational placement or institutional framework is another dimension of variation that has been widely debated. Separation of students in residential schools or in separate day schools has occurred for diverse objectives, so has been the mainstreaming of children with different linguistic backgrounds in regular schools. Between these two options, there are variants of bilingual education, such as the provision of mother tongue language classes (outside ordinary school hours) (not a type of bilingual education in a strict sense), the provision of majority language teaching in withdrawal or pull-out classes (pull-out programmes in the USA and England, Baker 2001: 197), the teaching of content through the majority language in separate Sheltered Content Instruction classes (Sheltered English or Sheltered Content English).

In the past, the assimilation goal was often pursued through the removal of minority children from their parents and (physical) punishment for speaking their language (see Romaine 1995 for a discussion of such practices with Scottish children, and Baker 2001: 211 for Native American children). The opposite case is given where minority language students are denied access to education in the majority language and educated in a separate placement (Baker 2001: 200 refers to this type as “separatist education”), as is the case of colonial people or in apartheid regimes. Separate education might also aim at fostering monolingualism in the minority language to protect the linguistic minority (as is the case of some isolationist religious schools in the USA) (Baker 2001: 201).

It should be noted, though, that separation cannot always be equalled with segregation in the negative sense of the term. Indeed, strong forms of bilingual education are fostered in separate schools, as is the case of the European schools established in several European countries (Baker 2001: 223), or the schools that foster the mother tongue of ethnic community members, maintained by these communities or foreign governments in many countries worldwide (often these schools are private, fee-paying, schools). As García et al. (2006: 21) succinctly remark, the interest in *physically* integrating minority students as early as possible often overlooks linguistic and educational concerns, including potential gaps in the qualifications of the teaching staff to deal with a multilingual student population.

Submersion or transitional bilingual programmes offered at mainstream schools may involve *pull-out* classes (Baker 2001: 197) for the teaching of the majority language. As pointed out by Baker (2001: 197) the withdrawal of the children may go along with a stigmatisation of the children for their absence: “A withdrawal child may be seen by peers as ‘remedial’, ‘disabled’ or ‘limited in English.’” This holds equally of so-called *Sheltered Content Instruction* offered in the USA, where children are taught the curriculum in simplified English (with specific materials and methods), although the children may profit from a greater opportunity of participation (being less inhibited) and the teachers might be more sensitive to the cultural and linguistic needs of the children.

In the USA, the overrepresentation of bilingual children in Special Education (Baker 2001: 304), allocated in such programmes because of alleged learning difficulties, suggests

that special education might have been used as a kind of hidden form of segregationist education of language minority children (see Baker 2001: 309 and McSwan & Rolstad for detailed discussions of the assessments used).

A sub-component of bilingual education that is related to the institutional context pertains to the bilingual or immersion facilities available, including the qualification of the school personnel, empirically tested teaching material, and a supportive school philosophy. The success of bilingual immersion programmes rests largely on the qualifications of the school personnel (including teachers, support staff, administrative staff and the school management), their language profiles and commitment to bilingualism. Indeed, the relevance of the latter should not be underestimated for it has been found that successful bilingual education is achieved in institutions with a firm commitment to bilingualism, in addition to a strong leadership and positive achievement expectations (Gogolin 2007: 31).

On a critical note, there is a continuing lack of appropriate teacher training for bilingual education (Baker 2007: 140), informing teachers about how to work in a bilingual environment, appropriately using and allocating both languages in the classroom.

1.2.2.4 Students' profiles

Variation in bilingual education programmes also pertains to the language background of the children that are taught together in one classroom, and to the relation of the home languages and the languages of instruction used in the school. Students may have a monolingual or bilingual home, and the home language(s) may or may not be used as languages of instruction in the schools. In the USA, an equal number of English L1 and Spanish L1 children is taught in so-called Dual Language Schools (adopting a model that is referred to as two-way immersion programme in other countries).² In immersion bilingual education, all or the majority of the children have a majority language background.

It is interesting to note that while there is an awareness of the increasing heterogeneity of the student population with an immigrant background (or language background other than the official national language), the question of how to cater for this heterogeneity within a bilingual model of education is seldom addressed in a way that would deliver a solution to this challenge. Instead, the answer to this diversity is generally to ignore it, while praising the integration into the majority society through mainstreaming (we will come back to this view in our discussion of the situation in Germany, section 1.2.3). The only programmes that have been put into practice to cater for diverse languages are the European Schools, originally implemented to promote the bilingualism of students with a mother tongue belonging to the group of languages of the European Union. Hence, inspired by the Berlin experience with European Schools, one possible conception of bilingual education catering for a heterogeneous population is the association of schools in a city (*Schulverbund*) providing bilingual education in different language combinations (Siebert-Ott 2001: 175). International schools typically have a heterogeneous student population but only seldom offer teaching in the home languages of the children (rarely “immigrant” languages).

1.2.2.5 Curriculum languages

Types of bilingual education are commonly distinguished in relation to (a) how much content matter is taught through the respective languages, and which subject areas are taught through which language (notice that this excludes the teaching of one of the two languages as a foreign language as a form of *bilingual* education, cf. also Baker 2007: 131), and (b) whether

² Roughly, in these schools the subject curriculum is taught in one language or the other during alternating periods (these can be a day or a week long) (Baker 2007: 135).

and how heritage or mother tongue development is promoted across the curriculum. Transitional bilingual education uses the children's home language only temporarily (commonly during a limited time in primary education), with no content teaching in that language after that time. In heritage language bilingual education, the curriculum is taught through the heritage language, particularly during the early school years, whereas an increasingly equal distribution of the two languages might occur in secondary schooling. Programmes also vary with respect to whether or not they include a *first language programme* that would specify aims and goals of the promotion of that language (through language lessons dedicated to the teaching of the language but also through the fostering of the language during lessons dedicated to the teaching of content matter).

Language distribution. The choice of the subjects taught in either language might affect the status attributed to the languages used. For example, the majority language is often used in the teaching of science and mathematics, which reinforces the status of the majority language, its “prestigious value” (Baker 2007: 139). Siebert-Ott (2001: 167) remarks on the lack of a consensus regarding the choice of subjects that could be taught in a second language (other than social sciences) in the context of the bilingual secondary education programmes in Germany. As this author points out, the teaching of natural sciences in the foreign language, particularly in English, would be in line with the role this language assumes in the international communication in this area. At the same time, however, the development of this language as a kind of *lingua franca* would further weaken the role of the other languages, relegating them to the status of everyday language.

The question of which languages are used to teach which subjects also leads us to the crucial question of the role of language in the teaching and learning of content matter, and, ultimately, to the role language assumes when it comes to the academic achievements of the students. The choice of the subjects subsumed under social sciences within the CLIL model (*Content and Language Integrated Learning*, see section 1.2.3.2 below) not only have the advantage that initially the content can be introduced through direct demonstration (consider the use of maps, pictures etc). Notice that the teaching and learning of content in subjects such as geography or history involves knowledge at the level of content, method and language. Irrespective of language choice, students need to learn the respective specialised vocabulary, special language register and concepts.

1.2.3 Bilingual education in Germany

Throughout the preceding sections, we have elaborated on bilingual education, its main objectives and the spectrum of variation regarding the way it is put into practice from a rather general perspective. In this section, we will briefly elaborate on the status of bilingual education in Germany. This will allow us to put the status of sign bilingual education in this country -a topic we will take up later in this work (chapter 3)- into perspective.

In recent years, bilingualism and the questions of whether and how it should be promoted in the educational domain are receiving an increased attention in Germany (cf. Gogolin 2007, Gogolin & Neumann 2009, Siebert-Ott 2001). At the level of educational conceptions two different scenarios need to be distinguished. On the one hand, demographic changes owing to migration raise the question of how to cater for the linguistic needs and abilities of an increasingly heterogeneous student population with diverse linguistic backgrounds. On the other hand, the extent to which additional linguistic competences should be promoted is an issue that needs to be addressed in the face of an increasing internationalisation of the society.

1.2.3.1 The monolingual habitus vis-à-vis linguistic diversity

In Germany, mainstreaming in terms of submersion into the majority language (German) constitutes the main type of education provided to students with a non-German background (Neumann 2009: 320; Siebert-Ott 2001: 200). The only measure acknowledging the non-German background of these students consists of additional home language lessons provided outside regular school hours. Immersion programmes, mostly without consideration of the mother tongue are provided to children who recently immigrated to the country (Neumann 2009: 320).

Over the last decades the proportion of students with a non-German background has been increasing. At the beginning of the 1990s about 20% of the student population grew up with two or more languages, acquiring German as a second or foreign language. Twenty years on, about 30% of the students in Germany have a parent who immigrated to Germany and whose mother tongue is not German (Krifka 2014: 1). Commonly, the percentage is reported to be higher in urban areas. In the educational domain, however, the linguistic situation of the children with a non-German background as they enter the school system is hardly taken into consideration (Neumann 2009: 319).

From a language planning perspective, there is a lack of a policy that would attempt to resolve the discrepancy between the monolingual ideal of linguistic homogeneity and the actual linguistic heterogeneity of the society. Teachers continue to regard monolingualism as the norm and to act as if they were dealing with a homogeneous student population that would have to be prepared to live in a homogeneous, monolingual society (Siebert-Ott 2001: 181). Clearly, the *monolingual habitus* (Gogolin 1994) of teachers and institutions that continue to cling to a static and monolithic one language-one nation ideology clashes with the dynamics of a changing demography.

Interestingly, in educational research, the positive results of immersion programmes documented in Canada have been translated into the assumption that the choice of *one* language of instruction throughout the whole curriculum is to be favoured over the use of *two* teaching languages (cf. Siebert-Ott 2001: 155 for a discussion). Although this interpretation differs radically from the actual reality in Canadian programmes (depending on the type of immersion programme, the L1 is used as a language of instruction from the beginning or after the two initial immersion years), the claim has served as a justification for the mainstreaming of students with a migration background (Siebert-Ott 2001: 156).

As the monolingual myth continues to persist in the educational area, it is hardly surprising that lower academic achievements and higher drop-out rates in further education of students with a migration background are readily interpreted as an effect of their “language problem” (Siebert-Ott 2001: 199), that is, family language background (Gogolin 2007: 28). While the linguistic background is a factor to be considered, the evidence obtained in nationwide OECD studies (e.g. PISA 2000, 2003) whereby students enrolled at schools in Germany from the beginning have been found to reach lower achievement levels than those who started education in their country of origin, raises the question about potential deficits in the educational system. Certainly, lack of language competences necessary for school achievement in students who have spent their entire school life at German schools calls into question the effectiveness of instruction (Gogolin 2007: 19). It is important to note that this conclusion is not exclusive to the German context, but is a common observation in the evaluation of submersion education. As we remarked upon in our brief sketch of this type of education (section 1.2.1.1), educational effectiveness as a goal is superseded by socio-political (ideological) considerations in the adoption of submersion education.

The role of language background in majority language teaching. One of the major controversial issues at the level of educational conceptions pertains to the teaching of the majority language (German) and whether and to what extent the home languages of the children should have a place in language classes.

In a detailed study on the available types of bilingual education in Germany, Siebert-Ott (2001: 200) remarks that there is no consensus about how German should be taught as a subject to an increasingly heterogeneous student population, nor is there a consensus about the status that should be attributed to the minority languages of children that are often third-generation immigrant children. Notice that the debate concerns the extent to which the languages of origin should be considered in the teaching of the majority language, the teaching of content matter through the students' home languages being only a marginal issue in such debates.

Some scholars have argued in favour of the benefit of contrastive teaching for all children, for their language development, identity building and communication in the classroom. Others maintain that for immigrant children this type of awareness raising is of little benefit if not counterproductive, particularly for students with a literacy-distant background and low competence levels in the majority language. Some scholars would even go so far as to claim that those who migrated also decided to give up their language and culture of origin (cf. Siebert-Ott 2001: 182f. for a discussion).

Lack of a holistic conception. In recent years, supportive measures targeting the early stages of language acquisition in children with a migration background have been developed. These initiatives can be understood as a reaction to the documented lower academic achievement levels of students with a non-German language background. However, they are available only occasionally and are often provided without any additional institutional support. Further, there is a general lack of coordination of these activities and primary education, with the effect that nursery and preschool initiatives are not taken up in primary education. The lack of coordinated action is particularly striking because it affects children's development at a time that is critical for their language development (Gogolin 2007: 62). In sum, despite the relevance attributed to a systematic, continuous and coherent language promotion for a successful development of bilingual children at the level of research, educational practices in Germany are such that the students are confronted with discontinuous language experiences.

The remaining shortcomings in the education of students with a non-German background makes apparent that there is a lack of a holistic conception that would integrate language and content learning, as it is done in models of bilingual education targeting other language groups (Siebert-Ott 2001: 200). However, unlike in traditional models of bilingual education focusing on the promotion of two languages, the conception envisaged would have to be conceived of to promote language and content learning in a linguistically heterogeneous student population (Siebert-Ott 2001: 200). Further, scholars have remarked on continuity as a criterion for success of what should be a *systematic* language promotion over a prolonged period of time (Gogolin 2007: 20). It should be noted that the implementation of a coherent policy along these lines represents a challenge in the German context given that (a) education is a devolved matter (owing to the country's federal organisation), with each of the Federal States having separate systems, (b) the foundation phase is shorter than in the majority of countries with a developed education system, and (c) preschool, primary and secondary education are strictly separated (Gogolin 2007: 20).

Education in Germany is characterised not only by variation among the multiple separate systems implemented in the different Federal States; it is also organised in such a way that the foundation and preschool stage are under the charge of a variety of institutions (including non-governmental ones), which is also a factor why a comprehensive documentation of distribution and characteristics of education programmes, including those with a bilingual orientation, is unavailable thus far (Gogolin 2007: 40). In their 2013 report, the Federal Ministries of education, too, remark that bilingual modules are increasingly included in the curriculum but are seldom captured in the statistics (KMK 2013: 10).

Originally provided mainly in secondary education, bilingual education is increasingly offered also in primary education (KMK 2013: 10).

1.2.3.2 Types of bilingual education programmes

Bilingualism in majority language children has been promoted in individual programmes through the teaching of content matter in a foreign language as of the late 1960s; yet the limited scope of these measures, too, reflects a guarded enthusiasm towards bilingualism. Basically, bilingual education is offered either in the form of dual-immersion programmes (mostly in primary education) or in the form Content and Language Integrated Learning (CLIL) in a foreign language (mostly in secondary education) (Neumann 2009: 320).

Content and language integrated learning. In Germany, bilingual programmes in German and French (and later English and a few other languages) have been implemented at several secondary schools as of 1969 (KMK 2013: 3). What is currently dubbed as *bilingualer Sachfachunterricht* in German corresponds with the notion of CLIL used at a European level (KMK 2013: 3, Neumann 2009: 320). In this model, the foreign language is regarded as a “partner language” (Siebert-Ott 2001: 154). Originally developed with the language pair German-French, other languages involved include Dutch, Italian, Spanish, Russian or Greek (Siebert-Ott 2001: 165). Prior to the teaching of content matter in one to three subjects in the partner language (as of grade 7), students learn the language in foreign language classes (Siebert-Ott 2001: 167). According to the Ministries of Culture of the Federal States, this type of bilingual education is the favoured option.

The main objective of these programmes is that the students, who typically have a monolingual German language background, reach a high level of language competence in the foreign language and, hence, a high degree of bilinguality. Also, language awareness and metalinguistic competences are expected to be promoted (Neumann 2009: 320). Empirical studies suggest that these expectations are met (KMK 2013: 19). Also, it is expected that the students develop a bicultural competence in the course of the bilingual education. The awareness about the relevance of this aspect becomes apparent in the statements expressed in the 1960s regarding German-French bilingual education, with a political dimension that is best understood against the backdrop of the general political aim of promoting the partnership between France and Germany (in fact, for decades, this type of bilingual education involved German and French and was only later extended to other languages, KMK 2013: 3).

Two way-immersion programmes. As of the early 1990s several two-way immersion programmes have been established in Germany in early primary education (Siebert-Ott 2001: 199). The Berlin European School model caters for the linguistic and cultural heterogeneity of a capital city by offering bilingual education in different language pairs at different school sites. This type of bilingual education, in which students are grouped according to the language pairs they acquire, and in which care is taken about a balanced number of students with respect to their language background, is generally favoured over a random grouping of students with diverse language backgrounds (Siebert-Ott 2001: 198). The objectives of this type of bilingual education include the acquisition of the second language in its spoken and written modality, as well as an age-adequate promotion of the children's home language (Neumann 2009: 322). Because of the diversity of family language backgrounds, this model also promotes intercultural learning (Neumann 2009: 323).

1.2.4 Bilingual education: Challenges along the research, policy, practice axis

Throughout the preceding sections we have sketched the major variables that determine how bilingual education is put into practice. The spectrum of bilingual options portrayed reveals

that different, often conflicting, objectives are pursued in bilingual education, whereby the linguistic aim (promotion of bilingualism) is often superseded by educational objectives (academic achievements) and socio-political expectations (full competence in the majority language, linguistic homogeneity). This is reflected in the typology of bilingual education conceptions sketched at the beginning of this section. As List (2009: 257) remarks, attributive opposites such as transitory vs. maintenance types of bilingualism show how descriptive linguistic models have developed into controversial positions at the programmatic level in the domain of educational policy. Certainly, a discourse that is marked by an advantage-disadvantage dichotomy “subjects bilingualism as such to fundamentally opposite evaluations” (List 2009: 257, our transl.). In this context, it is important to emphasise, once again, the relevance of taking the historical tradition into consideration because it “sets the framework for the controversies which play out around bilingual education in the present day” (Gogolin 2011: 232). As it turns out, the lack of a consensus in the evaluation of bilingual education originates in different views about the value of bilingualism and the linguistic resources of bilingual individuals. Ultimately, attributions of success or failure of bilingual education programmes, as it is outlined by Gogolin (2011: 237), are

- explicitly or implicitly- related to a normative basis. If, in principle, the value of bilingual education is determined by the point of view that proficiency in *both* languages counts, the evaluation and judgement of the 'success' or 'effectiveness' of bilingual education models will turn out differently from approaches in which only the results in *one* language, namely the majority language, count as a yardstick.

1.2.4.1 Educational objectives and evaluation of outcomes

Crucially, the tension that arises between educational and linguistic objectives pursued through language policies of modern nation states that continue to be monolingual in orientation is also reflected in evaluations of the outcomes of bilingual education. The ongoing debate about the benefits or the effectiveness of bilingual education, often dubbed as the *bilingualism controversy* (cf. the contributions in Gogolin & Neumann 2009, for a recent discussion), reveals that there is no agreement about “what .. the valuable outcomes of schooling” should be (Baker 2001: 231).

Scholars dedicated to the investigation of the outcomes of bilingual education vary in their general evaluation of the benefits of a bilingual promotion (see Baker 2001: 229 f. for a detailed discussion; Siebert-Ott 2001 for a summary of the debate in Germany). Hence, it comes as no surprise that the question about what linguistic and non-linguistic skills should be assessed to judge bilingual education successful or not has not been established yet (Baker 2001: 231). It must be noted that the lack of a consensus about the benefits of bilingual education at the level of research represents one of the major impediments to articulate a proposal for change at the political level (see Esser 2006 for a critical evaluation). Indeed, while the power of bilingualism research could lie in holding up a mirror to socio-political imbalances, research continues to be fragmented, contributing this way to the perpetuation of myths that reinforce inequality. Consequently, we are left full circle in a situation that is determined by the inter-dependence of research, policy and practice.

The picture that emerges upon a critical appraisal of the contradicting evaluations is that the status of a language, which reflects the status of its speakers, is a decisive factor when it comes to the extent to which it is promoted in education. Notice that the economic value attributed to bilingual education is commonly acknowledged only in the case of the multilingual promotion of prestige languages, despite cost-benefit analyses indicating the benefits of bilingual education, in terms of lower student drop-out rates, higher achievement levels, skilled work force and reduced unemployment rates that would make it an attractive

option also for other student groups. Indeed, bilingual education has been estimated to have comparable expenditure costs to mainstream (monolingual) programmes (Baker 2007: 143).

As for the overall socio-political climate in Germany we conclude that it is such that it is not overly favourable to bilingualism, either in majority language or in minority language children. We may advance, therefore, the challenges encountered by those who advocate for the bilingual option in deaf education (see section 2.4.2 below) in a socio-political context in which linguistic diversity continues to be widely regarded as a problem, rather than as a resource. Where the *monolingual habitus* is identified as one of the elements contributing to the structural inertia of the educational system (Gogolin 1994: 30), we might ponder about how it might be overcome.

1.2.4.2 Bilingual education and academic achievements

Because language is so intimately intertwined with knowledge attainment and general development, expectations on language skills attained and educational outcomes are often confounded in evaluations of bilingual education. As Baker (2001: 231) succinctly remarks “bilingual education, whatever type or model, is no guarantee of effective schooling.” Put differently, there is more to education than the choice of language only. Today, there is a consensus that bilingualism *per se* is not a problem. Quite to the contrary, the available research indicates that early bilingual education “... does not impose excessive demands, neither on children with, nor on children without a migratory background. This holds true regardless of whether the two languages are being acquired simultaneously or successively” (Siebert-Ott 2001: 201, our transl.) This observation is in line with the findings obtained in the area of developmental linguistics about bilingual language acquisition (Plaza-Pust 2016).

Variables affecting outcomes. Variation in the results obtained in the area of bilingual education must be regarded in relation to contextual variables (type of bilingual education, sociolinguistic and socio-political characteristics of the environment) and individual variables (students investigated, parental involvement and teacher motivation) that ultimately determine how bilingual education is actually put into practice. More differentiated accounts would address achievement levels for different curricular areas, identifying those areas that would need to be subjected to closer inspection of the influencing factors.

Status of the languages. The status of languages in a given social context, as remarked upon previously, determines the extent to which they are promoted in education. It is interesting to note in this context that not all non-territorial linguistic minorities function alike at the socio-political and socio-linguistic levels. Romaine (2004: 392) highlights the differences between linguistic minorities in the USA that are commonly assumed to be reflected in educational outcomes. For example, concerning their sociolinguistic characteristics, this author distinguishes between “caste-like” immigrant communities (e.g. Mexican or Native Americans in the US) and autonomous minorities (the Ultra-Orthodox Jewish community). According to this author, education failure is common in the former whilst it is not in the latter, which she takes as an indication that the latter type is not subordinate either politically or economically.

Parental involvement. Another factor that has been found to affect achievement levels of both monolingual and bilingual students concerns language practices in the family. In a review of the available research, Gogolin (2007: 29) remarks how mother-child interactions in families with a literary orientation already prepare the children toward a written language oriented language use. Further, better results have been found for those students with a literacy distant background that were explicitly and systematically introduced to the difference between everyday and academic language.

Conception of bilingual education. In our discussion of the variables that distinguish bilingual education programmes it became apparent that the linking of content and language

learning, as it occurs in immersion bilingual education, is considered to be one of the best predictors in the evaluation of bilingual education programmes (Siebert-Ott 2001: 197, *pace* Thomas & Collier 1997). Two-way bilingual immersion education has been found to deliver better results for immigrant children, which, by assumption, is related to the comprehensive conception of linguistic, content and inter-cultural learning underlying this type of education. In general, the success of bilingual programmes, as pointed out by Siebert-Ott (2001: 194), rests largely on the availability of an overall conception, including such fundamental components as the availability of a well-defined curriculum, teaching materials, specific training measures, and a school philosophy supporting the programme. The irony of such a conclusion is that one would take such a conception to be a requisite for any type of education.

1.2.4.3 The “bilingual” label revisited

We conclude this chapter by taking up the issue of the rather generic use of the term bilingual to designate educational programmes. In view of the variety of models described, including those pursuing a subtractive type of bilingual education, we believe that it is useful to narrow the scope of the term and reserve it to education where some, most or all subject content is taught through two or more languages (cf. Baker 2007: 131, García et al. 2006: 13, among others). Further, we believe that a distinction needs to be made between those schools that “tolerate” bilingualism and those that “exert educational effort” (García et al. 2006: 14). The latter, as García et al. (2006: 14) explain cultivate the children's languages, by taking into account and building further on “the diversity of the languages and literacy practices that children and youth bring to school.” Finally, we would like to argue in favour of the *ecological* approach to multilingualism in education “centred on the dynamic and changing conditions of the complex historical, ideological, structural, and practical contexts in which people use different languages and different varieties of languages in society and schools” (García et al. 2006: 20).

2 Changing perspectives in deaf education

In this chapter we turn our attention to the education of deaf students and the changing status of sign language from a historical perspective. We will see that the use of signs or sign language in the teaching of deaf students is not a completely new phenomenon although it was not conceived of in terms of *bilingual* education at the time. The historical sketch also reveals changing perspectives in the understanding of (a) deafness (as more knowledge was gathered about the effects of hearing loss), and (b) language (as more knowledge was gathered about the linguistic system, in particular, at the level of phonology, and articulation). As views about deafness and language have evolved over the centuries, so have the main objectives pursued in the education of deaf children, which is, in turn, reflected in a changing emphasis on the aim of catering for the specific needs and abilities of deaf children, on the one hand, and the objective of remedying hearing loss, on the other hand.

2.1 Early records of deaf education

Little is known about sign languages, the language behaviour of their users and the status of these languages in education and the society at large until fairly recently. What can be gleaned from studies on the early records of deaf individuals' use of signs to communicate and the first attempts to educate deaf children is that manual means of communication – where they were used – were not being referred to as a *language* on a par with spoken languages or deaf individuals as *bilinguals*. However, questions concerning the *universal* nature of gesture/signing (Woll 2003: 9), or the use of manual means of communication (in particular, the use of manual alphabets) have been addressed since the beginnings of deaf education.

Beginning in the mid 16th century, the history of the education of deaf children is not only marked by developments specific to the teaching/learning situation of deaf children, such as the use of manual means (manual alphabets) to support the teaching of the written language, but also by changes in the society at large, for example, concerning the increasing urbanisation in Western countries and the provision of universal primary education in the second half of the 19th century (Winzer 1993: 7). Information on individual cases of literate deaf individuals already circulated in Europe as of the 14th century suggesting that the teaching of deaf children was not only an issue at the theoretical level but was already tackled in practice by anonymous people (Gascón-Ricao & Storch de Gracia y Asensio 2004: 82). The first attempts to educate deaf children contradicted the longstanding belief that deaf individuals were debilitated intellectually (it was assumed that hearing loss implied the loss of the faculty of reason), a view that had been influenced for nearly two thousand years by the views expressed by Aristotle in the 4th century B.C. (Winzer 1990: 18). The first records of the education of deaf students date from the 16th century, a time that was characterised by the liberal atmosphere of the Renaissance which had brought about a new interest in humanistic principles, individuality and learning (Winzer 1990: 26; Gras 2006: 247; Günther 1996: 107); attempts were made to demonstrate that disabled persons could learn and achieve, whereby deaf individuals were considered first, followed by blind and only much later mentally retarded people (Winzer 1990: 31).

The next sections are dedicated to a discussion of some of the main milestones in the early history of deaf education until the end of the 19th century, namely, (a) the private teaching of deaf students through the use of various methods, (b) the establishment of deaf schools, and (c) the rise of the education methods controversy.

2.1.1 Teachers of deaf students

The early history of the education of deaf students is marked by the influential work of several teachers of the deaf. Historical documents reveal that individual deaf children from the aristocracy were taught by private tutors (often brothers from religious congregations) in the 16th century. The teaching of the spoken language to these children occurred with two main objectives: a legal one (that they could be heirs to property) and a religious one (that they learn about the Lord's word).

From a historical perspective it is interesting to remark on the spread of information about the methods developed as of the 16th century from one country to another, through reports of chroniclers, publications, or correspondence between advocates of distinct approaches. Professionals were eager to keep up with the latest developments. However, although the invention of printing in the 1450s provided a major impetus to the dissemination of knowledge, individual professionals often refrained from disseminating their knowledge because they were much more concerned about the economical benefit from keeping their successful method secret. In addition, some of the first documents were written with the aim to report on the teachers' success rather than to provide a faithful documentation of the methods used (Gascón-Ricao & Storch de Gracia y Asensio 2004; Monaghan 2003), which imposes caution on some of the interpretations available in the literature about the achievements described by the teachers themselves or their chroniclers.

Table 2.1 provides an overview of the main tenets and activities of some of the most influential figures in the history of deaf education. What can be gleaned from this overview is that beginning with a focus on the teaching of the written language and the use of manual communication means (manual alphabets and signs), the development of deaf education is characterised by diverging views on the language skills to be promoted and the means used to achieve these aims. While it is beyond the scope of this work to discuss these developments in detail, we will elaborate on some of the main changes introduced by some of the key figures listed in Table 2.1.

Table 2.1: The influential work of teachers of the deaf in the 17-19th centuries.³

<i>Publication⁴ / school founded</i>	<i>Main tenets / method</i>
Pedro Ponce de León (1506?-1584)	<ul style="list-style-type: none"> • Focuses on teaching/learning of the written language • Promotes use of fingerspelling and signs in the teaching/learning of the written language and in communicative interactions • Teaches word spelling, fingerspelling, and articulation of sounds
Manuel Ramírez de Carrión (1579- 1652)	<ul style="list-style-type: none"> • Focuses on teaching/learning of the written language and the spoken language • Uses fingerspelling
Juan Pablo Bonet (1573-1633)	<ul style="list-style-type: none"> • <i>Reduccion de las letras y arte para enseñar a ablar a los mudos.</i> (First • Teaches the written language and the spoken language

³ The information provided is based on Tellings 1995, Gascón-Ricao & Storch de Gracia y Asensio 2004, Sutton-Spence 2003, Winzer 1990.

⁴ Publications listed (appearing in italics) are not exhaustive.

	<i>Publication⁴ / school founded</i>	<i>Main tenets / method</i>
	practical treatise in the art of teaching the deaf; publication includes manual alphabet.)	<ul style="list-style-type: none"> • Uses fingerspelling • Focuses on the articulation of sounds
John Wallis (1616-1703)	<ul style="list-style-type: none"> • <i>Grammatica linguae anglicanae. Cui praefigur, De loquela sive sonorum formastione, tractatus grammaticophysikus.</i> (Grammar of English for non-English speakers; contains description of vocal organs, nature of voice and analysis of phonetics of English.) 	<ul style="list-style-type: none"> • Teaches through written language • Uses manual alphabet for the teaching of speech (fingerspelling, like writing, was assumed to represent speech) • Emphasises learning the words' meaning before their articulation
John Bulwer (1614-1684)	<ul style="list-style-type: none"> • <i>Chirologia or the Naturall Language of the Hand</i> • <i>Philocophus, or the Deafe and Dumb Man's Friende</i> 	<ul style="list-style-type: none"> • Uses signs as a complement to speech • Uses bimanual alphabet • Emphasises value of lipreading
William Holder (1616-1698)	<ul style="list-style-type: none"> • <i>Elements of Speech: an essay of inquiry into the natural production of letters: with an appendix concerning persons deaf and dumb.</i> (Treatise on the nature of language, and the teaching of deaf people to illustrate new theories) 	<ul style="list-style-type: none"> • Uses manual alphabet and signs • Emphasises speech and articulation before writing
Johan Conrad Amman (1669-1724)	<ul style="list-style-type: none"> • <i>Surdus loquens</i> • <i>Dissertatio de loquela</i> 	<ul style="list-style-type: none"> • Advocates primacy of spoken language for the development of thought • Believes that the feeling of vocal organs in sound articulation replaces inner speech, and speechreading acoustic perception in deaf individuals • Teaches sound articulation /sound inventory • Regards speech image, written image and sound as a unit
Jacob Rodrigue Péreire (1715-1780)	<ul style="list-style-type: none"> • First professional teacher of the deaf in France 	<ul style="list-style-type: none"> • Stimulates residual hearing to improve speech production • Regards speech as the goal in deaf education
Thomas Braidwood (1715-1806)	<ul style="list-style-type: none"> • Braidwood academy, Edinburgh (first private academy catering for deaf students) 	<ul style="list-style-type: none"> • Advocates oral techniques • Uses speech, written language, lipreading, fingerspelling, signed-spoken communication
Charles Michel de l'Épée (1712-1789)	<ul style="list-style-type: none"> • <i>L'instruction des sourds et muets par la voie des signes méthodiques</i> • <i>La véritable manière d'instruire les sourds et muets</i> • French National Institute for Deaf-Mutes, Paris (first government sponsored school for deaf children in Paris) 	<ul style="list-style-type: none"> • Asserts that sign language is the natural language of deaf people • Develops system of methodical signs • Emphasises intellectual approach to deaf education, stimulating students' thought
Samuel Heinicke (1727-1790)	<ul style="list-style-type: none"> • School for the deaf in Leipzig 	<ul style="list-style-type: none"> • Advocates the primacy of speech for mental development (human thought being possible only by the spoken word)

<i>Publication⁴ / school founded</i>	<i>Main tenets / method</i>
Johannes Vatter (1842-1916)	<ul style="list-style-type: none"> • Emphasises articulation • Believes inner sensation of articulation to be the basis for development of inner thought • Acknowledges use of written language and signs as a supportive means in class • Rejects fingerspelling in class

Early records of deaf education in Spain. The origins of deaf education in the 16th and 17th centuries in Spain are commonly associated with the influential work of three individuals, namely, Pedro Ponce de León, Manuel Ramírez de Carrión and Juan Pablo Bonet (Gascón-Ricao & Storch de Gracia y Asensio 2004; Günther 1996; Plann 2004; Werner 1932). From a historical perspective, it is interesting to note that the beginnings of deaf education associated with the work of these individuals were triggered by the high incidence of deafness in the Spanish aristocracy.

Indeed, a coincidence of developments tied to the history of the Velasco family in Spain paves the way for the development of deaf education as of the 16th century. Beginning with two deaf boys sent to a monastery around 1550 where they were to be brought up by a monk, Pedro Ponce de León, the developments continued about seventy years later as the Velasco family was to choose Manuel Ramírez de Carrión as the teacher of a three year old child that suffered hearing loss. Juan Pablo Bonet, appointed later as a secretary of the family was to write down the methods adopted in teaching deaf children, possibly upon his observations of Ramírez's work. Each one of the three key figures contributed his way to the development of deaf education. As Werner (1932: 132, our transl.) puts it, “a lucky inventor had invented half unconsciously the method of teaching the spoken language and thereby demonstrated that it was possible, a conscientious teacher had perfected it and trained it practically, and a clever man and good writer had eventually given the idea continuance.” Hence, though developed in the teaching of individual aristocratic children, the methods elaborated by their tutors may be considered to have been of benefit of deaf education in general (cf. Werner 1932: 12).

Information on the teaching of deaf students in Spain was to spread to other countries in the first half of the 17th century, mainly through Franciscus Vallesius' book “De sacra philosophia” (published first in Turin 1587) (Werner 1932: 118) and through the work of Kenelm Digby who visited Spain in 1623 and met the deaf individuals taught by Carrión, and who also learned about Bonet's publication. Little is documented about the methods used around 1545 by Fray Ponce de León, a Spanish Benedictine monk, commonly mentioned as the first known teacher of deaf students (Winzer 1990: 32), although he was not a teacher by profession. Despite the paucity of historical documents there is agreement that Ponce focused on the teaching/learning of the written language. He is reported to have used signs and a manual alphabet with his students (Gascón-Ricao & Storch de Gracia y Asensio 2004). Neither did Ramírez de Carrión, the first teacher of the deaf by profession (a teacher who had also taught reading and writing to hearing individuals), document the method he elaborated for the teaching of reading and writing, and ultimately also of the spoken language to deaf children. As remarked upon by Werner (1932: 12, 201) it is understandable that he would not have been interested in disseminating his method given that intellectual property was not protected at the time and professionals like Ramírez de Carrión were making their living on

their expertise. Unfortunately, however, the secrecy about the methods used also prevented them from being used for the benefit of other deaf children Gascón-Ricao & Storch de Gracia y Asensio 2004: 86).

Pablo Bonet's publication in 1620 (*Reduccion de las letras y arte para enseñar a ablar a los mudos*) the first publication dedicated to the education of deaf children, breaks with the tradition of secrecy (Gascón-Ricao & Storch de Gracia y Asensio 2004: 143). However, there is some debate about the originality of his work. In his concise study of historical records of the beginnings of deaf education Spain, Werner (1932) points out that the method elaborated in Bonet's publication was not originally his own but rather the method devised and used by Ramírez de Carrión (cf. also Plann 2004: 59, but see Gascón-Ricao & Storch de Gracia y Asensio 2004: 163 who take note of the accusations but dismiss them as false). We will not delve into the controversy over the alleged plagiarism any further because it is beyond the scope of this work to settle this issue. Suffice it to mention here that despite the allegations there is a consensus on the relevance of Bonet's contribution to deaf education by publishing the first volume on the matter (Werner 1932: 13).

In a nutshell, the relevance of the work of Ponce, Ramírez and Bonet can be seen in their focus on the teaching/learning of the written language, the use of manual alphabets in the teaching of the spelling of words and in the communication between deaf and hearing individuals. Neither Ponce, nor Ramírez or Bonet did engage in the teaching of lipreading, although some of their pupils are reported to have done remarkably well in lipreading. The deaf learners instructed by these figures also developed spoken language skills.

Dissociation of dumbness and deafness. The dissociation of dumbness and deafness, reflected in the methods used by the Spanish teachers and later in the methods developed by teachers in England, The Netherlands and Germany, represents a crucial step in the history of deaf education. The relevance of the teaching of articulation needs to be understood against the backdrop of the longstanding belief that dumbness resulted from articulatory deficits (believed to be the consequence of an impairment of the tongue) that were related to deafness. Not originally at the focus in Ponce's work, but in Ramírez's and Bonet's, the “de-muting” of deaf individuals breaks with this myth. However, the general attribution of a miraculous achievement by contemporaries reflects the continuing belief in the associated deficit (see Werner 1932 for an extended elaboration on the medical beliefs at the time). While Ponce, not focusing originally on the development of speech, might not have been aware of this dissociation, Ramírez de Carrión probably was (Jann 1991: 89).

Focus on the written language. The beginnings of deaf education are also marked by the central role attributed to the written language in deaf children's language development. Against the backdrop of the predominant view of the primacy of the spoken language, the promotion of the acquisition of the written language prior to the attainment of the spoken language deserves to be emphasised. The reversed order of acquisition clearly contrasts with the view of spoken language acquisition representing a requisite for the attainment of the written language, a view predominant at the time and today⁵.

In his concise analysis of the few texts documenting Ponce's work (among them a document written by a chronicler related to the family), Werner (1932) portrays the work of Ponce as the result more of coincidence than of purpose. Ponce's efforts in teaching writing to the boys seem to have been guided by the theory that another sense organ compensated the lack of one sense, so that in the case of deafness the eye substitutes the ear. Ponce's teaching of the written language comprised exercising the writing of whole words first, then the alphabet, and subsequently the promotion of extended reading (Werner 1932: 168). In their

⁵ Cf. Plaza-Pust 2016, chapter 2.4.2.1, for a discussion of the different hypotheses elaborated about the relation between the written language and the spoken language.

interaction with Ponce and other interlocutors, Ponce's pupils used the signs of a manual alphabet (Werner 1932: 50). Ponce delved into the teaching of the spoken language only at a later point, probably prompted by the boys' own attempts at pronouncing sounds (Werner 1932; Gascón-Ricao & Storch de Gracia y Asensio 2004: 84). It is reported, however, that their spoken language skills remained poor when compared with their writing skills. It is not documented that other teachers would have taken up his method or that Ponce himself would have trained other individuals to become teachers of the deaf.

Use of the manual alphabet. In one of the few notes available, Ponce writes that the deaf learner is prompted to learn the letters of the alphabet on the hand, using them then to designate basic objects such as foodstuff. Further, he notes that care should be taken that the learner writes the words properly and separately. He recommends labelling objects with names designating them and associating them also with their respective signs (see Gascón-Ricao & Storch de Gracia y Asensio 2004: 101 for a reproduction of the original note). Jann (1991: 88) points out that Ponce did not regard the different semiotic systems in isolation but established interconnections between them.

According to Gascón-Ricao and Storch de Gracia y Asensio (2004: 100) Ponce used a symbolic alphabet signified on the left hand. Ponce's brief notes on the method used indicate that the letters were represented at the finger joints (Plann 2004: 60). The alphabet used by Carrión and reproduced in Bonet, by contrast, used manual signs to represent the letters of the alphabet (Plann 2004: 60). Ponce's manual alphabet is therefore similar to the one used in Gregorian chant, a system whose use was particularly widespread among Benedictine monks.

Worthy of mention is the role attributed to the use of the manual alphabet for successful communication (Günther 1996: 110) so that people close to deaf individuals were encouraged to learn the alphabet (an issue that would also be taken up later by Bonet). The use of the manual alphabet in the teaching of learning to read and write is regarded as the major achievement of both Ponce and Ramírez de Carrión (Günther 1996: 110; Werner 1932: 235-6). As remarked upon by Günther (1996: 115) "they showed that there is a way for deaf to learn a "spoken" language without first learning to articulate". With the time, the use of the manual alphabet would become a teaching tool used in schools for the deaf as well as in the communication between deaf and hearing individuals (Gascón-Ricao & Storch de Gracia y Asensio 2004: 68).

Use of signs. Apart from the manual alphabet, as we learn from the Ponce's note mentioned previously, Ponce recommends the use of signs in the teaching/learning of deaf students. It is likely that especially Pedro Ponce de León used the signs he knew from the system of signs used among Benedictine monks when they were obliged to keep silent (Plann 1997: 24). That successful communication was possible through the use of these signs might have influenced the reasoning that these manual means could be used in the education of deaf students (Plann 1997: 24) (in her review of historical records Susan Plann remarks on publications including compilations of the signs used, amounting to about 300 around 1500 AD, Plann 1997: 220).

Spoken language. Unlike Ponce, whose teaching reflected the fundamental role attributed to the learning of the written language, Bonet focused on the articulation of sounds. After the pronunciation of individual letters, students learned to pronounce syllables, then words, focusing then on the reading of texts (Plann 2004: 60). Because of his focus on speech production, Bonet is considered to represent "the oralist by excellence" (Plann 2004: 61, our transl.). Günther (1996: 107), however, remarks on the "misunderstanding throughout oralist historiography, about the role of speech and of the manual alphabet" and points out that "a look at the available historical sources shows a very different picture". Pablo Bonet's main aim was indeed the teaching of the spoken language. For this purpose, he considered the use of written language and the manual alphabet as supportive means (Jann 1991: 90). Signs were

considered to be helpful in class, but they were not perceived as a supportive means in the teaching of the spoken language.

2.1.2 *The establishment of deaf schools*

The beginnings of deaf education, as we learned previously, are tied to the teaching of individual aristocratic children in the 16th and 17th centuries. Larger groups of deaf children were only taught more than a century later (in the 1760s), for example, at Thomas Braidwood's private academy in Edinburgh, or at the French National Institute for Deaf-Mutes opened in Paris by the abbé de l'Épée. It should be remembered in this context that the provision of universal education to all children was not an ethical issue until the second half of the 19th century, where a (new) concern for children as a part of the society, and childhood as a discrete stage of development emerged (Winzer 1993: 7-8). It is not possible to detail all the factors that influenced special education and institutional development in the late 18th and throughout the 19th century. However, it should be noted that the developments did not occur in isolation, but are rather related to society's structures and values (Winzer 1993: 84):

Many of the issues in the nineteenth-century special education transcended strictly educational considerations – the definition of handicaps, the criteria for institutionalisation, the administrative structure governing schools, the financial responsibility for exceptional persons, and the differential treatment of various socioeconomic groups, ... These issues and their solutions link the structure and functions of the institutions with a variety of external economic, political, social, and intellectual forces.

Urbanisation and industrialisation beginning in the late 18th century made poverty and dependence more visible; new large-scale social problems emerged, and traditional social institutions adopted new roles (Winzer 1993: 89). New conceptions of children's needs emerged. Schooling was interpreted as a means to deal with social problems and as a way to socialise children into a common cultural world (Winzer 1993: 89). Public school promoters also considered special children as they believed their education depended more on schooling than that of the other children. According to Winzer (1993: 93-94) the establishment of isolated institutions for students with special needs probably is the result of the circumstance that a stable framework of an existing school system was not as yet available, and trained personnel that would deal with what was increasingly regarded as a medical problem was not available in regular institutions. Therefore, "... the system that emerged reflected not an alignment with the common schools, but the traditional perceptions of disabled people as charity recipients" (Winzer 1993: 94).

The Institute in Paris mentioned previously was the first *public* (that is, not private) school for deaf students, catering not only for children of wealthy families but also for those coming from more modest backgrounds. Soon after, schools with deaf pupils were opened in other larger towns across Europe (for example in Leipzig/Germany in 1778, in Vienna/Austria in 1779, and in Madrid/Spain in 1795) (Monaghan 2003). At that time, the State and religious groups (often the Catholic Church) were the major stakeholders in the education of deaf children. Priests, nuns and brothers from diverse congregations founded schools also in other countries throughout the world. In some cases, deaf teachers who had worked in schools for the deaf in Europe went to establish educational institutions abroad. The first school for the deaf in Brazil (Rio de Janeiro), founded in 1857 by Huet, a deaf teacher from Paris, is a case in point (Berenz 2003: 176).

2.1.3 Competing educational philosophies: Manualism vs. oralism

While the goal of teaching deaf children the spoken language was common to the different approaches that were developed, the means to achieve this goal would soon become a matter of a heated debate that has continued to divide the field today (Gascón-Ricao & Storch de Gracia y Asensio 2004, Lane et al. 1996, Tellings 1995).

Manualism. According to de l'Épée, the founder of the Paris school, sign language is the natural language of deaf individuals (Winzer 1990: 49). In his school, deaf pupils were taught written language on the basis of a signed system (“methodical signs”) consisting of the signs used by deaf individuals in Paris and additional invented signs to convey the grammatical aspects of French. The impact of his teaching method went well beyond Paris, as several other schools that adopted this method were established in France and a teacher trained in this tradition, Laurent Clerc, established the American Asylum for the Deaf in Hartford (Connecticut) in 1817 together with Thomas Gallaudet. Teachers trained in this institution later established other sign-oriented schools throughout the USA (Lane et al. 1996).

Several historical records document the value attributed to sign language for deaf individuals' communication and self-esteem by advocates of the use of sign language in deaf education. Succinct statements of deaf teachers, as the one provided in (1) dating from the mid 19th century, strike us today, more than 150 years on, because of the awareness they reflect about the relevance of sign language for the lives of deaf individuals and the learning opportunities of deaf children (the passage by Otto Friedrich Kruse published in 1853 is quoted in Wisch 1990: 250).⁶ Particularly remarkable in this quotation is the role attributed to sign language for the development of thought, traditionally associated with the spoken language *qua* language of thought (Große 2001: 65).

- (1) *Die Geberdensprache ist das wahre Rüstzeug des geistigen Lebens des Taubstummen; er denkt und theilt sich nur in einer solchen Form mit, und nimmt die ihm mitzutheilenden Begriffe und Ideen auf eben demselben Wege in sich auf. Sie ist die erste geistige Aeußerung, welche auch darum jeder anderen Sprache vorgeht, ja in ihr kann er, **inwieferne sie ihm das Denken anbahnt, das Wort auffassen lernen, kann sich die Idee der Sprache, als Form des Gedankens vergeistigen.** Sie ist ein unentbehrliches Verständigungsmittel zwischen Lehrer und Schüler und leistet dem Unterricht zum Behuf der Erklärung der Begriffe und Wörter wesentlichen Dienst. Sie bricht nicht nur dem Unterricht zuerst die Bahn, sondern muß auch demselben fortwährend vermittelnd und erläuternd zur Seite gehen.* [Sign language is the real tool for the deaf-mute's intellectual life; he thinks and communicates only in this form, and imbibes the concepts and ideas conveyed to him in this way. It is the first manifestation of the mind thus also preceding any other language; **indeed, it is in that language that – inasmuch as it initiates his thinking – he may learn to comprehend the word and embrace the idea of language as the form of thought.** Between teacher and pupil sign language affords an indispensable means of understanding which during the lesson provides an essential service of explaining concepts and words. Not only does sign language actually open up the possibility of education and instruction in the first place, it must also continually go side by side with the teaching, mediating and explicating.]

⁶ Following the tradition of discourse analysis citations analysed from a discourse analytic perspective are formatted like other examples and not as regular quotations.

Oralism. The spread of the method that promoted the use of signs, even if part of them were artificial, and recognised the value of sign language for the communication with deaf students and the teaching of written language through it, was brought to a halt as a consequence of the increasing influence of those who argued in favour of the oralist approach. Exclusively oriented towards the acquisition of the spoken language, regarded as a requisite for an appropriate cognitive development and full integration into society, the oral method restricted communication means to speech and lipreading. Its advocates assumed that the development of abstract thought was dependent on speech. As written language was deemed inappropriate for deaf learners to develop thought (Jann 1991: 75), its learning was regarded as secondary to the mastery of the spoken language.

One of the most influential advocates of the oral method in deaf education that spread in Germany and among its allied countries was Samuel Heinicke. Originally, a private tutor of hearing and deaf students, Heinicke founded the first school for the deaf in Germany in 1778. In line with the ideas developed by Johann Conrad Amman in the late 17th century, Heinicke emphasised the relevance of the spoken language for the development of thought in deaf individuals. Spoken language was ranked first in priority over written language, before sign language and the manual alphabet (Jann 1991: 96). Heinicke contradicted de l'Épées view of vision representing a sufficient substitute for the lack of the hearing sense. Written language was disregarded as a basis for the teaching of spoken language, but was recognised as a supportive means (Jann 1991: 99). By the same token, signs were regarded as useful in the explanation of word meanings. However, they were rejected as communication means. Fingerspelling was banned from class. Heinicke paved the way for what is known as the “German method” in deaf education (Jann 1991: 99).

Johann Conrad Amman, a Swiss-German physician settled in the Netherlands, had based his approach on his own teaching experiences with deaf children. According to Jann (1991: 95), the relevance of Amman's approach lies in the focus on speechreading, articulation, and the conception of speech image, written image and sound constituting a unit. Amman realised that the articulation of sounds corresponded with different speech images, and categorised sounds into vowels, consonants and semi-vowels (Jann 1991: 93). He classified sounds according to their place of articulation (Jann 1991: 93). Amman's method consisted in the teaching of the feeling of sounds in their production through their vibration in the larynx. The approach was based on the assumption that movements of the vocal organs felt during speaking constituted appropriate signs for thought, representing an equivalent to acoustic perception in hearing individuals, believed to be the basis for the development of a symbolic system. Jann (1991: 97) remarks on the shift from the focus on the external control of speech through the feeling of sounds produced and speechreading towards the inner sensation of the speech motor activity, regarded as the basis for the development of inner thought. Beyond articulation and the sound inventory of the language, writing and reading, Amman's method focused on the teaching of language as a means of expression (Jann 1991: 94). Amman believed in the primacy of the spoken language as the means of communication for the deaf (Noordegraf 2006: 197).

In England, William Holder applied the phonetic theory he developed (classification of sounds according to their place of articulation) in his teaching of deaf students, which, similar to the method elaborated by Amman, relied on the visual perception and feeling of sound articulation (Neis 2006: 373).

The Milan congress. About a century after de l'Épée's and Heinicke's debate on what should be considered the most appropriate educational method, a congress attended by educational professionals would pave the way for the predominance of oralism which prevails until this day. Indeed, 1880 is commonly identified as a turning point in the history of deaf education. During the International Congress on the Education of the Deaf held in Milan in

that year, following a resolution adopted during this congress, the use of signs in the education of deaf students was rejected, and delegates voted in favour of the superiority of the oral method (Gascón-Ricao & Storch de Gracia y Asensio 2004; Lane et al. 1996). The impact of this congress, attended by hearing professionals from only a few countries, also needs to be understood in relation to the social and political developments toward the end of the 19th century: “Milan makes an interesting case study for examining the interrelationships among nationalism, signing, and oralism as well as the complex relations among France, Austria, and Germany” (Monaghan 2003: 6; cf. also Ladd 2003).

It is important to mention that the Milan resolutions did not materialise immediately in all countries (Monaghan & Schmaling 2003). In some, the shift towards oralism only occurred decades later, as was the case in Ireland where signing continued to be used in schools until well into the 1940s (LeMaster 2003). In others, for example, in the USA, sign language was never banned completely from deaf education, although some schools already abandoned the use of the language toward the end of the century (Lou 1988: 86)⁷. Bagga-Gupta and Domfors (2003: 70-71) describe the paradoxical situation that obtained in Sweden where, on the one hand, a transition towards the oral approach occurred at the Deaf schools in the spirit of the Milan congress, while, on the other hand, manual communication or signing continued to be a subject in the education of teachers of the deaf. Worthy of mention is also China, where oralism was introduced only in the 1950s based on reports about the use of this method in Russia (Yang 2008).

In addition, some scholars have remarked on additional factors that worked in favour of the turn toward oralism in the second half of the 19th century. Lou's (1988: 85) detailed historical analysis of the language(s) used in deaf education in the USA reveals that several factors converged at the time, namely, (a) the rapid increase of the number of teachers employed in deaf education (from over 100 in 1857 to more than 1,000 in 1894), (b) the poorer qualification of the teachers employed, and the emphasis in their training on lipreading and speech training, (c) the establishment of day programmes (outside residential schools), and (d) the expansion of education to younger children (the Clarke School in Massachusetts, one of the first oral-only schools established in the USA, extended the age of admission to 5 years in 1867). Furthermore, the development of hearing aid technology toward the end of the 19th century needs to be considered as another influential factor (wearable hearing aids would become commercially available in the 1940s).

While the event in Milan was a major setback regarding the attitudes towards sign languages, and its aftermath was felt until well into the 20th century, sign languages continued to be used in the deaf communities. Indeed, although oralist in orientation for their greater part, residential schools for the deaf established at the time and throughout the following decades would still contribute to the development and maintenance of many modern sign languages as they were passed on from one generation to another through the communication among the children outside the classroom. So these institutions can also be regarded as important sites of language contact (Lucas & Valli 1992), and by extension of sign bilingualism, even though there was no awareness of their bilinguality among deaf individuals at the time.

As we will see in what follows, the educational philosophies that emerged as of the late 18th and were discussed throughout the 19th century continue to determine deaf education today, and, by extension, the path toward bilingualism in the deaf communities.

⁷ Lou (1988: 86) remarks on the apparent contradictions in the historical records and concludes that these might be an effect of the circumstance that the practice of a continued use of sign language varied at the level of individual schools.

2.2 *From vision to audition: Changing perspectives in deaf education*

Throughout the preceding sections, we have sketched some of the main developments in the early history of deaf education. What can be gleaned from this sketch is that the early history of deaf education is marked by changes pertaining to (a) the people or institutions in charge, (b) the number of children served, (c) the language(s) of instruction, (d) the educational setting, and (e) the methods used. Crucially, we have seen that by the end of the 19th century education reached many more deaf children than had been the case ever before; it must be noted, however, that it became compulsory only much later (in many countries during the second half of the 20th century, see the contributions in Monaghan et al. 2003). Further, it becomes apparent that manual means of communication, in particular, manual alphabets were used early in the teaching of deaf students.

The historical sketch also reveals that views on deafness and education have changed over time. From the early records of deaf education to the 20th century, deaf education has been marked by two major shifts of perspective resulting from (a) efforts made in the teaching of the spoken language, after an initial focus on written language, and later (b) the orientation toward the primary promotion of listening skills that contrasted with approaches that considered the use of all means available.

A second strand in the history of deaf education pertains to signs and sign language, used initially as a component in the communication with deaf children, whereby sign language was attributed the status of a language of instruction in the school founded by de l'Épée, whereas advocates of pure oralist approaches to deaf education rejected it. We will learn later about the reintroduction of signs in the context of total communication approaches in the second half of the 20th century, and the use of sign language as a language of instruction in bilingual conceptions of deaf education developed toward the end of the 20th century.

The dissociation of deafness and dumbness, and the focus on speech. The first shift of perspective in the history of deaf education is marked by a dissociation of deafness and dumbness. Beginning with the teaching of the written language and the use of manual alphabets and signs, the evolution of deaf education is marked by a shift toward an emphasis on speech and spoken language development that would derive into what has been dubbed as *Pädagogik des Entstummens* ('pedagogy of de-muting') (Prillwitz 1991: 20). Initially, written language continued to be used as a basis in the teaching of the spoken language. As Jann (1991: 75-76, his emphasis) remarks, “[e]in wesentliches Argument für den Einstieg über die Schriftsprache war der Sachverhalt, daß die Schriftsprache im Gegensatz zu den Mundbildern beim Absehen der Sprache vom Mund sicher und eindeutig wahrgenommen werden kann. [a fundamental argument in favour of an access via the written language was the circumstance that written language can be perceived in a reliable and unambiguous manner, in contrast to mouthings in the reading of speech from the mouth].” This view contrasts with the approach introduced by Heinicke and later elaborated by Vatter whereby spoken language was developed via the kinaesthetic sensation of the sounds articulated (Jann 1991: 76). Insights obtained into the sound inventory of languages and sound articulation were used in the teaching of articulation and lipreading to deaf students. Advocates of the principle of direct association according to which learners should associate concepts and spoken words directly rejected sign language (written language was attributed the status of a secondary system, cf. Jann 1991: 86). For Vatter, considered as the founder of the *pure* oral method, signs should be rapidly dispensed with and supplied by mime or action (Jann 1991: 82; cf. also Tellings 1995: 43-46 for an extended discussion of the changes in the use of the notion of pure oralism over the last century). The focus on speech was also defended by Alexander Graham Bell. Bell argued that no word should be presented in its written form to the deaf child before it could be lipread, an idea that had also been put forward in a similar way by Johannes Vatter who

argued that the child had to learn to speak the word before she learned to read or write it (Tellings 1995: 54). Vatter focused on the ‘direct association with the spoken language’ (*unmittelbare Lautsprachassoziation*), concept formation in deaf children being directly linked to spoken language development (Jann 1991: 113). Vatter rejected the use of signs in the education of deaf children based on the argument that signs would not only interfere and negatively affect the association of concepts and spoken language words but also the attainment of spoken language morphosyntax (Jann 1991: 113). Neither should signs be used in the teaching of concepts as they would impede conceptual development. Because deaf children's concepts should be linked to spoken words, he also rejected the use of the written language as a basis (Jann 1991: 114). His teaching method focused on the combination of content and language, whereby content was adapted or limited for the purpose of the teaching/learning of the language.

From vision to audition. The second major shift pertains to a change of focus from vision to audition whereby the attention hitherto paid to the oral (spoken) component was superseded by a focus on the auditory (listening) component. The change can be traced back to developments in the late 19th and early 20th centuries regarding advances in hearing aid technology and methods developed to use children's residual hearing (Beattie 2006; Tellings 1995). The recognition (in the late 19th century) that only few deaf people had a complete hearing loss is reflected in the differentiation of degrees of hearing loss, and the distinction between hard-of-hearing and deaf people. The development of wearable hearing aids and their commercial availability in the 1940s represents another fundamental step.

Aural-oral and auditory-verbal approaches share similar attitudes towards deafness and normalisation, but they differ in that the auditory-verbal approach seeks to restrict deaf children's visual input as much as possible so that they rely mainly on auditory cues. It is argued that this will enable the children to develop as “normally” as possible (Power & Hyde 1997). Such a “unisensory” approach contrasts markedly with the main tenet of a multisensory approach whereby deaf learners “get more of the message” from communication via audition, vision and sometimes touch (Power & Hyde 1997: 449). Two developments in the late 20th century furthered the shift toward the focus on audition and the spread of the auditory-verbal approach to deaf education, namely, neo-natal hearing screening and cochlear implantation.

Universal hearing screening. The increasing screening of newborn babies for significant hearing loss (NHS or new-born hearing screening), has affected the timing of diagnosis and early intervention measures (in Germany, screening is regulated by legislation since 2009, Diller 2009: 168). Not only has the number of implantations increased over the last years. The age of implantation has decreased and early intervention programmes are scheduled earlier (Hermans et al. 2014: 397). Advocates of the auditory-verbal therapy emphasise the relevance of detecting hearing loss as early as possible and argue that intervention should start at 6 months of age “for optimal speech and language development” (Lim & Simser 2005: 308). With effective auditory-verbal intervention (combined with early detection and early amplification) it is believed that deaf children develop “age-appropriate language and attend regular schools with their hearing peers” (Lim & Simser 2005: 308).

Cochlear implants. As for cochlear implants (CIs), the increasing number of deaf children provided with these devices has resulted in a revival of the purest oralist goals and the oralist ideal of a “listening deaf child” (compare the discussion in Beattie 2006: 106). Indeed, while oral methods came under critique as of the early 1970s, because of the low academic achievement of orally educated deaf students (see section 2.3.2 below), their advocates gained momentum in the 1980s with the advances in hearing aid technology (Beattie 2006: 106). Beattie's (2006: 106) statement in (2) is an example of how excited advocates of the oral method were about those technological developments. On a critical note, we may wonder about what is actually meant by the notion of “effectiveness”, repeated twice

in this statement, and assume that if it were related to academic results (and not simply hearing skills) the challenge to meet such expectations is certainly more complex than many of the “new” oralist advocates would like to believe.

- (2) Equally exciting is the challenge for teachers and therapists to deliver effective programs to maximise the effectiveness of the equipment and the children's innate potential. It seems unlikely that this will “slow down” any time soon.

Auditory-verbal method. The auditory-verbal approach emerges in the early 20th century (developed by Urbantschitch in Vienna, it was dubbed “acoustic method” the USA by Goldstein, later referred to as “auditory approach” in the UK, and “auditory-verbal” in the USA, based on Pollack's book published in 1985) (cf. Power & Hyde 1997: 450). The main requisites of the auditory-verbal approach as outlined by its advocates comprise (Beebe 1989/2014: 344) (a) early detection of hearing loss, (b) immediate fitting of appropriate hearing aids, (c) development of language and speech through listening with effective use of hearing aids, (d) a partnership of parent, child, and professionals working together, and (e) expecting the child to grow up and live in the most normal learning and living environments possible. The priority of intensive auditory training to achieve the processing of language through the auditory channel is reflected in a therapy “eliminating visual cues to force *maximal* use of even minimal residual hearing” (Beebe 1989/2014: 342, his emphasis); this includes the rejection of lip-reading before it is ensured that the children are “hearing oriented”. Rather than allowing the child to rely on the modality that is accessible to her (the visual), the child “must be *forced* to hear enough to stimulate the motor speech center of the brain and to appreciate what hearing and discrimination can do for him.” (Beebe 1989/2014: 343, his emphasis).

However, in some countries, as is the case of Germany, these developments had an impact on educational practices only many decades later. According to Große (2001: 194) the so-called *German method* (that is, the visuo-vibro-tactile/kinaesthetic approach) was used until well into the 1950s, because professionals believed that the use of residual hearing would have a negative impact on the spoken language. The turn toward the auditory-verbal method in that country occurred only in the 1980s, a change that was to be reflected also in the reorganisation of schools catering for deaf students, with former hearing impaired or deaf schools being renamed as *Förderschulen für den Förderschwerpunkt Hören (und Kommunikation)* ('special schools with a focus on hearing (and communication)') (Kaul 2009: 185).

Worthy of mention in this context is that emphasis on audition combined with technological advances implied a greater involvement of (a) medical professionals in charge of the audiological management and the fitting of assistive listening technology and (b) speech therapists, specifically during the period of early intervention (Beattie 2006; Diller 2009); in addition, the auditory-verbal approach implied a greater engagement of (c) the parents, their time, attention and effort (Power & Hyde 1997: 452).

It is important to note that advances in hearing aid technology, such as wearable hearing aids available as of the 1940s are not only seen in relation to their function as hearing aids, but also as a means to remedy deafness. According to Beebe (1989/2014: 341 his emphasis), for example, “a child in a true auditory program is deaf *only when he takes off his aids*”.

2.3 Oralism

Two hundred years after Heinicke's advocacy of the oral method, the main tenets of the philosophy of education termed oralism continue to be valid. Indeed, the remedy of deafness

and the exclusive promotion of the oral language continue to lie at the heart of this educational philosophy. Today, beyond the traditional view of *rehabilitation* oralism is guided by what is commonly dubbed as the *philosophy of normalisation*. From this perspective, which implies a deficit model of deafness, rehabilitation and intervention measures are necessary to remedy the effects of hearing loss, particularly in the areas disturbed, namely, audition/speech, communication and socialisation (Große 2001: 71).

Große's definition of remedying deafness as a major goal of education targeting hearing impaired students in (3) (Große 2001: 131) and his definition of rehabilitation as a goal in (4) (Große 2001: 133) are representative in this respect. Worthy of mention is the explicit reference to the abilities of hearing individuals serving as a goal and as a yardstick in the elaboration of rehabilitation measures. Implicit to this perspective is the notion of deafness as a childhood problem that needs to be remedied or eliminated. Rehabilitation, as Große defines it in (3) thus comprises all measures that are necessary to remedy deafness "from the perspective of hearing individuals". A typical characteristic of this line of argumentation is to include references to what is perceived as the alternative view, namely that of the deaf community (cf. the comment in (5), from Große 2001: 134). Compare with the testimony of a deaf adult (Frame 1979, quoted in Tellings 1995: 85) in (6) which reflects the increasing awareness and empowerment of deaf individuals in the 1970s, an issue we elaborate in Plaza-Pust (2016, chapter 1) and which is discussed as a component in relation to the factors that initiated a change in deaf education in section 2.4.

- (3) ... *das Entstehen und die Expansion funktioneller Einschränkungen, wie sie aus der Perspektive Hörender als Folge eines Hörschadens beurteilt werden, möglichst optimal aufzuheben suchen.* [... seek to optimally do away with the development and expansion of functional limitations, according to how hearing people judge them as a consequence of hearing loss.]
- (4) *Tatsächlich erhebt Rehabilitation als Ziel die Leistungsfähigkeit Nichtbehinderter, also in unserem Falle Hörender, zum Maßstab, denn der Betroffene soll möglichst optimal in den Zustand des Nichtbehindertseins (wieder-)versetzt werden. Pädagogische Rehabilitation Hörbehinderter vereint folglich alle Ziele und Aufgaben, die der spezifischen Förderung durch Überwindung/Beseitigung und Minderung der psychosozialen Auswirkungen eines Hörschadens aus Sicht der Hörenden dienen.* [Indeed, rehabilitation aims, as a target, at the abilities of the non-disabled (in our case a hearing person) as a yardstick, since the person concerned is to be put (restored) into the condition of not being disabled. Thus, pedagogical rehabilitation of the hearing-impaired comprises all the objectives and targets, which serve specific support by overcoming/eliminating or reducing the psycho-social repercussions resulting from hearing loss according to the point of view of a hearing person.]
- (5) *Daraus resultieren Vorbehalte seitens der Gehörlosengemeinschaft, da sie bekanntlich den Hörschaden und seine Folgen nicht als Defizit akzeptiert.* [Hence, the reservations of the deaf community that does not accept, as is well known, the hearing impairment and its consequences as a deficit.]
- (6) Why do you, as hearing persons who do not know what it means to live in total silence, insist that you know what is good for the deaf when they tell you, with all the sincerity they can muster, that you are wrong?

2.3.1 Components of oral education

While the main objectives of oralism as an educational philosophy targeting deaf students are easy to discern, a general definition of what is commonly referred as the "oral method" turns

out to be elusive because of the diversity of tools and methods developed and used for the purpose of the teaching/learning of the spoken language. Hence, today, oralism is rather used as a cover term to refer to educational conceptions that regard the attainment of the spoken language and full integration into the hearing society as the main goals. Table 2.2 provides an overview of the different orientations in oralist education (cf. Beattie 2006; Tellings 1995). We can see that these differ with respect to the language skills promoted, namely, (a) the spoken (= oral) vs. the written language, (b) the visual perception of the spoken language through lipreading vs. the auditory perception through residual hearing (= aural) (c) metalinguistic awareness, and (d) communication and interaction.

Table 2.2: Oral methods and their different orientations.*

<i>Type of oral method</i>	<i>Area of focus</i>	<i>Language skills</i>
Visual-vibro-tactile/kinaesthetic (also: <i>German method</i>)	<ul style="list-style-type: none"> • focus on speech 	<ul style="list-style-type: none"> • spoken language • visual-vibro-tactile perception of speech signals • kinaesthetic control of articulation
Auditory-oral	<ul style="list-style-type: none"> • audition • vision (lipreading) 	<ul style="list-style-type: none"> • spoken language skills (with the aid of combined auditory and visual cues) • lipreading (exploit phonological/linguistic information)
Auditory-verbal	<ul style="list-style-type: none"> • primacy of auditory input • exclusive focus on listening (unisensory method) 	<ul style="list-style-type: none"> • speech perception • spoken language
Natural oralism > later: natural auralism	<ul style="list-style-type: none"> • maximal use of residual hearing • meaningful input 	<ul style="list-style-type: none"> • metalinguistic awareness (requisite for reading development) • communication (child receives/expresses meaning) • literacy (experience with controversial and creative elements of spoken language)
Maternal reflective method	<ul style="list-style-type: none"> • visual input (early use of texts) • conversational approach (deaf child - mature language user interaction) • residual hearing 	<ul style="list-style-type: none"> • spoken language skills • written language is used as a support for the development of the spoken language • reflection about language based on written transcriptions

* The information provided is based on Tellings 1995, Beattie 2006, and Große 2001.

Variation in the skills promoted, as also became apparent in our historical review, is reflected in the means used to compensate limited or no access to acoustic information perception (Jann 1991: 40), that is, (a) use of other senses (movement, taste, vision, touch), (b) use of additional information systems, and (c) specific activation of the organ impaired.

Traditionally, as we learned previously, oral education is defined by the use of speech, residual hearing, speechreading, and/or vibro-tactile stimulation in the communication with the deaf child (Tellings 1995: 43). As we have noted before, however, unisensory approaches contrast with other oral approaches in their primary focus on audition. We will consider this difference in the following summary of the main components of oralist methods.

Speech. The main aim of oral education is that deaf children communicate solely through speech. The priority attributed to the spoken language is related not only to the circumstance that it is the language of the children's environment, but also to the idea that the spoken language is the language of thought. Hence, beyond the social (communicative) aspect, oralists implicitly or explicitly (Tellings 1995: 55) regard spoken language proficiency as a requisite for an appropriate cognitive development, based on the ideal of a deaf child *thinking* in spoken language.

Written language. Oralist methods traditionally emphasise the superiority of spoken language over written language. However, some variants of the oralist approach developed in the course of the last decades recognise the relevance of literacy attainment and promote the acquisition of the written language. Until recently, this occurred within the framework of structured approaches through which deaf students learned to read and write on the basis of texts adapted to their alleged abilities. Today, the relevance of communicative interaction is recognised.

Integration into the hearing society. Integration into the hearing society is a goal that is central to oralist education conceptions. The notion is commonly conceived of in contrast to what is defined as “segregation” (Große 2001: 134). This major objective is commonly described in terms of socialisation with hearing individuals (involving hearing friends, hearing partners, hearing job environment). However, little is known about the actual measures that are devised for this purpose beyond the status attributed to the oral language as the language of choice. Although many oralists clearly favour the regular school as the most appropriate educational placement to achieve the aim of integration, there is no consensus on this issue because, as yet, the question of whether the regular school can provide for the specific needs of deaf children has not been conclusively established (see section 3.2.3 for a more in-depth discussion of this issue).

Audition. Audition is at the centre of attention of oral methods as they are oriented towards deaf students' hearing, its stimulation and training. Learning to hear is understood as a developmental process that needs to be stimulated as early as possible (Diller 2012: 234). Typically, advocates of the auditory-verbal approach emphasise the relevance of an early auditory stimulation based on the evidence of brain reorganisation after the critical period of language acquisition. As Lim and Simser (2005: 307) put it, “the longer the brain is deprived from auditory input, the greater the resulting sensory deprivation, causing a lack of sensory stimulation to the brain”.

Today, audiological management and the fitting of assistive listening technology is a central component of oral methods. The auditory-verbal method (Lim & Simser 2005: 309) “utilises listening as a primary modality for the development of spoken language, where therapy sessions are individualised and diagnostic”. Listening is not only crucial for the development of spoken language skills but also for literacy skills as reading is assumed to primarily involve processing centres in the auditory cortex (Lim & Simser 2005: 308). To keep the use of vision as an aid to a minimum, oralist teachers of deaf students have even gone so far as to hide their lips with one hand while speaking (Tellings 1995: 60). The so-called hand cue continues to be used today in auditory-verbal approaches as a means to signal to the child that she should pay attention to listening.

Speechreading. Through speechreading (also lipreading) deaf individuals guess what the speaker says. Because many visual “images” of words articulated are ambiguous, comprehension requires, apart from the knowledge of the language, additional clues that might be obtained through the context, and the topic of the conversation (Tellings 1995: 60). The ability to speechread represents a major component of traditional oralist education (see Power & Hyde 1997: 452f. for a discussion of the relation of vision and audition in speech processing based on the findings obtained in studies with deaf and hearing children). However, depending on how much emphasis is put on the use of residual hearing oralist

methods differ in whether or not and to what extent speechreading is promoted. As we will see next, the auditory-verbal approach rejects the use of any kind of visual stimuli.

Rejection of sign language. The recognition of sign languages on a par with spoken languages continues to be (widely) rejected in the educational and medical areas, despite the available linguistic research, which is much in the vein of the founders of oralism who maintained that spoken language was superior to all other forms of communication. Nevertheless, it must be noted that signs are used in some classrooms for oralist purposes, i.e. as a means to enhance spoken language attainment. “Pure” oralists, however, radically oppose the use of signs by the deaf child in any context. So, sign language communication on the playground would be a feature that excludes the school from being “truly oral” (Tellings 1995: 43).

From a sociolinguistic perspective, the use of sign language is argued to alienate deaf children from the surrounding (hearing) society. From a developmental perspective, strict oralists argue that the use of sign language in deaf education has negative effects on the deaf child’s spoken language development. Despite the continuing lack of evidence that would support this claim (cf. Fischer 1998; Fischer et al. 1991), advocates of pure oralism continue to use this myth in their line of argumentation, which usually goes as follows: the use of fully accessible sign language will not only reduce the motivation in the child to learn spoken language but also the time that can be spent for its teaching (see Tellings 1995: 62 and Große 2001: 203 for a discussion and further references).

The rejection of the use of sign language in the course of spoken language development is explicitly listed in the catalogue of principles of auditory-verbal therapy discussed by Lyn Robertson (2014: 94) based on the reasoning that “when vision is unimpaired, a visual language can become dominant and prevent attention to the spoken language”.

It should be mentioned in this context that those oralists, who do not reject the use of sign language as a communication means among deaf adults, usually maintain that the language can be easily learned at a later age by those interested in doing so (Tellings 1995: 56). Differences in the window of opportunity to learn one or the other language are usually defended by pointing to the critical period of language acquisition that would make it necessary to focus on the spoken language in the education of deaf children because of their reduced input in that language. That time of exposure also affects the sign language competence acquired is not taken into consideration, despite the evidence available (compare, for example the work of Mayberry and colleagues, Mayberry 2007), because the attainment of this language is not a goal of this educational approach.

Multisensory vs. unisensory models. It must be noted in this context that rather than focusing solely on the rejection of sign language, advocates of auditory-verbal approaches go a step further when they dismiss the use of the visual modality of processing. Hence, lipreading is not used so as “to make sure that listening is being established” (Robertson 2014: 94). The controversy thus boils down to diverging views on the benefits of a multisensory vis-à-vis unisensory stimulation. Arguments against the former pertain not only to time or to motivation in language learning, they also pertain to effects on hearing potential and spoken language development upon cochlear implantation.

Parental and specialists’ involvement. In general, oralist methods emphasise the relevance of the dedication of all those involved in the education of the deaf child, in particular concerning the maximal use of residual hearing and spoken language use. Apart from the parents, a team of specialists, doctors, speech-hearing therapists and educational professionals are engaged in the endeavour of remedying hearing loss. Parental involvement in auditory-verbal intervention programmes comprises the reception of “weekly targets in audition, speech, language, cognition and communication to integrate into daily routines and interactions with their child” (Lim & Simser 2005: 311). To raise the efficacy of the programme and the belief of the parents in their abilities, sessions between therapists and

parents are also conducted at home. As Lim and Simser (2005: 311) put it, “[p]arents are the main clients in an A-V programme (...) The goals are to develop their confidence and skills in implementing techniques and strategies, and to play an integral role in habilitating their child to develop listening, spoken language and communication competence.”

2.3.2 *Outcomes and critique*

While a comprehensive discussion of the research dedicated to the outcomes of oral education is beyond the scope of this work dedicated to *sign bilingualism in education*, it is useful to recapitulate briefly on some of the main conclusions that can be drawn based on the available literature. Our aim here is twofold, as we are interested, on the one hand, in contrasting the monolingual rhetoric of oralism with the picture that emerges about monolingual education at the empirical level, and, on the other hand, closer to the overarching topic of this book, we are interested in putting the development of sign bilingual education into perspective.

Paucity of research. In general, the greater part of the literature on oral education has been dedicated to a description of the methods applied (Beattie 2006: 118). Scholars dedicated to the study of the outcomes of oral education themselves acknowledge a “paucity of rigorous research” (Beattie 2006: 117) which they commonly relate to the difficulties faced by teachers to get involved in research (lack of time) and the complexity of assessing educational achievements appropriately on the side of researchers (sic!) (Beattie 2006: 119)⁸. Certainly, observations like these reflect a paradox that is not specific to deaf education but can be encountered in educational research in general. However, given the rhetoric of the oralist approach about the superiority of an oral promotion for deaf students’ academic success, the lack of an empirical basis to support the claims about the superiority of this approach is all the more surprising. Given the continuing predominance of oralism, we are led to conclude that the oralist monopoly on deaf education is based more on ideological power than on the power of results.

Ladd's (2003: 109) image of a “wall of silence” succinctly describes the mechanisms on which this ideology is based: “Oralism then proceeded to hold sway across the entire planet... Oralism's practices were then discretely ignored. In the ensuing century and across the entire world, they were never subjected to professional research on a national scale by anybody, whether inside or outside the profession - an extraordinary wall of silence.”

As for the studies undertaken, they typically concern the investigation of individual programmes, with a focus on issues such as educational placement, auditory perception, speech skills or literacy. Achievement levels in content areas other than language are seldom investigated, a gap that reflects the neglect of content teaching in deaf education and the training of teachers of deaf students (Moore & Martin 2006: ix; 9).

Impact of multisensory input on brain organisation. Opponents of a multisensory approach have emphasised the negative effects resulting from an influence of visual input on the organisation of the brain. Diller (2012: 240) remarks on differences in the reorganisation potential of the brain resulting from a deprivation of auditory input. His line of argumentation relates to the phenomenon of cross-modal plasticity whereby some sensory systems might be strengthened to compensate a lack of one system, upon sensory deprivation. Basically, the argument is that visual stimuli engage brain areas in deaf infants that would be involved in the processing of auditory input if hearing was not impaired and that are expected to be engaged in the development of hearing upon cochlear implantation. Negative effects on hearing development after cochlear implantation are expected because of a competition of resources

⁸ According to Günther (1999: 101), the lack of rigorous research also reflects the circumstance that written language assessment has been largely neglected by oralists. The author argues further that written language assessment is more prone to an objective and measurable assessment than spoken language assessment.

in the processing of visual and auditory input. Because similar effects from the use of a spoken language on the processing of visual stimuli in hearing individuals is not reported, it is argued that sign language might be successfully acquired at a later stage. By the same token, the primary promotion of sign language is rejected because of its impact on brain organisation. What is overlooked in this line of argumentation is that cross-modal plasticity is not an effect of sign language exposure *per se*, but is rather the result of prolonged sensory deprivation. As Günther (2012: 209) remarks, it is not the early use of signs but the lack of an early auditory-verbal promotion that leads to the reorganisation of the sensory systems. As pointed out by Günther (2013: 209), the provision of young infants with a CI constitutes no contradiction with an early bimodal-bilingual promotion.

Integration into hearing society as a goal. General success of the method is often associated with mainstreaming of the students, their coping with the general curriculum and socialisation with hearing peers. Though the issue at the programmatic level is a central one, “full integration” into the hearing society as a goal is seldom specified in detail; commonly, indicators of successful integration listed include socialising with hearing people, having a job in a hearing environment, having hearing friends (Tellings 1995: 55), which generally goes along with the rejection of identification with the deaf community. However, there is a general lack of research that would provide insights into the success of the oralist method concerning this goal. As Prillwitz and Wudtke (1988: 21) put it, “*die Fixierung auf innerpädagogische Normen trübt den Blick für die Realität im Erwachsenenleben Gehörloser.* [the fixation on intra-pedagogical norms dulls the perception of the reality of deaf individuals’ lives in adulthood].” Indeed, the exclusion of contact with and advice of deaf adults reflects the limited view of deafness as a child phenomenon we already mentioned previously. As Brennan and Brien (1995: 257) remark, “[i]t is as if such educators were operating on the assumption that deaf children will somehow not grow up to become Deaf adults”.

Another dimension of integration that has been hardly documented in the literature pertains to the family. Unfortunately little is known about the success of oral education at this level, although it is perhaps taken for granted, given that the choice of the spoken language is among the main arguments that are put forward by advocates of oral education.

Oral language levels attained. Compared with the expectations oralist education raises combined with a strong belief that sign language represents a threat to the proclaimed success, the picture that has emerged from research on linguistic and academic achievements of orally educated deaf students is a rather modest one. It is interesting to note in this context that special tests for students with hearing impairment were only developed in the 1970s (Paul 1998: 263) (today, the Stanford Achievement Test – Hearing Impaired Version is the most commonly used standardised test in the USA). In addition, the developments in the area of linguistics, in particular following the new generative paradigm, raised the interest in deaf children's competence at the level of syntax (Marschark & Spencer 2006: 10).

Research documenting low linguistic levels and academic achievements of exclusively orally educated deaf children began to be available in the late 1960s and early 1970s (Wudtke 1993; Günther 1999b). These studies showed that about 50% of orally educated deaf school leavers were illiterate. In particular, Conrad's (1979) study revealing a reading ability at the level of 9-year olds in 16-years old school leavers in England had a great impact, providing much impetus for the search of alternative education methods, as is discussed in section 2.4.

From a linguistic perspective, the question arises whether deaf learners' errors reflect a rule based development, however delayed or truncated. In the place of theoretically based accounts of deaf learner languages, however, the greater part of the literature contains descriptive accounts of several grammatical deficits. Commonly, the identification of “typical errors” in deaf students' written productions is discussed in the light of the effects of deafness. Große (2001), for example, refers to a “principle of economy” that would guide deaf children in their productions to explain the deficits in the students' productions.

More recent research indicates some improvement but continues to show that deaf children still fail to achieve age-adequate literacy levels (see Beattie 2006 for a review), which underlies the continued need, to this day, of alternative approaches to deaf education.

Technological devices and advances in the medical area (CIs, newborn hearing screening) have not brought about the improvement expected for all deaf children. The developmental delay observed for about 50% of the orally educated cochlear-implanted student population investigated in Szagun's (2001, 2003) study, and other investigations conducted in the last years (cf. Günther 2008: 17) raises serious doubts about the assumption maintained by advocates of the oralist approach that lack of achievement would relate only to remaining deficits in environmental conditions (for example, insufficient teacher qualifications) (Günther & Hennies 2011: 138). Quite to the contrary, the picture that emerges from a critical review of oralist literature is that the oralist approach is not delivering what is promised for a good part of the student population.

The available literature reveals a discrepancy between the skills attained at the level of speech perception and production, which appear to be enhanced through the use of hearing aids and CIs and supportive measures aimed at enhancing listening and speech skills, and skills involved in the creative aspect of language, including the grammatical and pragmatic dimensions that are needed for literary proficiency, which continue to be highly vulnerable (Günther 2008: 17). From a linguistic perspective, the development of the latter is bound to both inborn and environmental factors (language faculty, linguistic input, interaction, cf. Plaza-Pust 2016, section 2.2). In line with the insights obtained in research on language acquisition in hearing children, lexical and syntactic development in children with a CI, too, appear to be related. Children with a fast vocabulary growth have been found to make a fast progress in the development of grammar (Szagun 2003: 75). Although the impact of environmental factors and the nature of the input provided to CI children remain largely unexplored, there is evidence that children benefit from a rich input and parents' care in securing their children's attention in conversation (Szagun 2003).

Speech production and perception. One area in which orally educated deaf students have been found to outperform students enrolled at other programmes is the area of speech perception and production, although it is also conceded that success in speech performance is subject to individual variation, an observation that holds equally of children with CI implants (Beattie 2006: 123; Günther & Hennies 2011: 138). Speech intelligibility, as Marschark and Spencer (2006: 12) put it, remains “both a challenge and the touchstone of most approaches to spoken language training”, including children with cochlear implants. Indeed, given that speech intelligibility in orally educated deaf children has been found to remain below 20% in studies conducted as of the 1940s (Spencer & Tomblin 2006: 176), the success at this level certainly needs to be put into perspective.

Factors preventing success. In general, persistent deficits in the achievements of deaf students, where they are acknowledged, are associated, on the one hand, with deafness (that is, with the limitations resulting from hearing loss), and, on the other hand, with deficits in how the oral method is put into practice. Researchers documenting the outcomes of oral education agree on the relevance of “optimal conditions” (in their terms, parental involvement, early intervention, intensive rehabilitation programmes and quality educational programmes) for higher achievement levels in spoken language communication proficiency.

The pressure imposed by auditory-verbal approaches on parents and children is particularly critical, as “such programs to a greater or lesser degree impose a strict regime on child and parents, often converting mothers (especially) to teachers and giving them the impression that any falling away from the regime will result in the failure of the child to reach the goals of the model and that the fault will be the mother for not working herself and the child hard enough” (Power & Hyde 1997: 455). At the same time, however, it is conceded that many other factors play a part when it comes to success at the level of individual learners.

In this respect, Beattie's (2006: 127) line of argumentation is illustrative as to the discrepancy pointed out at the beginning of this section. Beattie calls for caution when it comes to raising parents' expectations based on good results reflected in-group means because these may not hold for every child. Further, the author also draws attention to the circumstance that the apparent success of an individual child at a specific point in time might be temporary. Admittedly, Beattie is at least addressing issues that are commonly not discussed when it comes to defending oralist education.

Ideological issues. As oralist approaches have not managed to solve the discrepancy between the expectations raised at the programmatic level and the results obtained, it seems rather that we are dealing with a rhetoric that is perpetuating the myth of a deaf child that can be turned into a hearing child through oralist education and medical intervention. We are confronted then with the ideological dimension of oralist deaf education discourse that has been predominant in the field until today (cf. Massone 2008).

It is interesting to note in this context that oralists in their discourse have also incorporated the language rights rhetoric that is typically used by language minority groups to claim their rights. Indeed, oralists' advocacy of spoken language, based on the argument that its competence is a key to social integration and educational opportunities reflects the “philosophy of normalisation” according to which the development of the ability to listen is granted the status of a human right (Beattie 2006: 108), and so is the ability to speak reflected in the claim of “the right to learn to speak” (Tellings 1995: 64). Expressed from a position of power, granting these rights, the rhetoric of change that is commonly associated with demands for language rights is turned into a discourse against change, to secure power.

The question arises whether it is really the case that the “longevity and vitality” of oral education remarked upon by its advocates is bound to the circumstance that the majority of deaf children are born to hearing parents who would “desire their child to use the oral language” (Beattie 2006: 129). Since this wish is not denied in alternative approaches including those that advocate the use of signs, we may wonder whether it is rather the oralists rationale and infrastructure (covering the medical and educational areas) that has managed to influence and scare parents through a rhetoric that equals sign language with a lack of motivation to engage in all the activities that would be necessary to successfully learn the oral language and integrate into the hearing society. Moreover, those who deny deaf individuals the opportunity of (developing) dynamic and diverse affiliations in distinct “communities” may be confronted with the question whether it is really necessary that individuals limit their lives and linguistic resources, finding themselves often in a situation of communicative stress or pressure (Günther & Hennies 2011: 144), rather than drawing on their linguistic and social potential. Proponents of alternative approaches to deaf education think that it is not.

2.4 Total Communication

The first alternative approaches to the strictly oralist method were adopted in the USA in the 1970s as a response to the low linguistic and academic achievements of many exclusively orally educated deaf children that had been documented in research (Chamberlain & Mayberry 2000). The new educational philosophy that emerged at that time is commonly associated with the notion of “total communication” or TC (used first in 1968 by a deaf teacher, Ray Holcomb, cf. Tellings 1995: 80); the core tenet of the new approach, as the notion suggests, is that all means of communication should be used in the interaction with the deaf child; in other words, aural, oral and manual modes of communication are combined in the teaching of and in the communication with deaf children. In general, advocates of the TC approach argue that an appropriate social, cultural and emotional development in deaf children is promoted by the use of signs as an additional means of communication. Further, it

is assumed that the simultaneous use of signs and speech will make it easier for the child to learn the oral language, and by extension to attain better literacy skills.

From a historical perspective, it is worthy of mention that the idea of a combination of methods in the education of deaf children was already put forward in the 19th century by Edward Miner Gallaudet (the son of Thomas Hopkins Gallaudet, founder of the American School for the Deaf in Hartford, Connecticut) in 1871 (Lou 1988: 82; Marschark & Spencer 2006: 8). Notice, however, that at the time, the combined method that resulted from the plea for the additional promotion of the spoken language, which was argued to have been neglected, did not involve the *simultaneous* use of signs and speech (Lou 1988: 83).⁹

It is important to note in this context that, although it represents a multisensory approach to deaf education, the total communication framework is still determined by the primacy of the oral language. Prillwitz and Wudtke's (1988: 23, their emphasis) statement in (7) illustrates how the inclusion of signs in a pilot early intervention programme targeting deaf infants in Hamburg aimed at satisfying a dual objective, namely, the promotion of an age-adequate communicative capacity, and the attainment of advanced spoken language and written language levels, the latter being defined as a requirement imposed by “our society” (sic!). Hence, in essence, the idea was to promote oral language acquisition, yet on the basis of a secured communication (Prillwitz & Wudtke 1988: 15).

- (7) *Es ist eine große Chance, über den Einsatz der Gebärde eine leistungsfähigere Alltagskommunikation aufzubauen, um sich dann auch metasprachlich auf Sprache und ihre verschiedenen Kodes beziehen zu können. (...) Unsere Konzeption zielt auf eine Einbettung der oralen Erziehung und auf eine **Neudefinition der Zentralperspektive**: Ziel allen Handelns muss die Gewinnung einer **möglichst altersangemessenen Kommunikationsfähigkeit** sein. Diese Formulierung schliesst in unserer Gesellschaft ein, dass die Gewinnung eines hohen Laut- und Schriftsprachniveaus unaufgebbar ist (...). Eine um die Gebärdensprache erweiterte Konzeption muß die Möglichkeiten zur Gewinnung einer oralen und schriftsprachlichen Kommunikationsfähigkeit offenhalten oder noch besser: neu definieren. [The use of signs provides a major chance to build up a more efficient everyday communication that will also allow referring to language and its different codes on a metalinguistic level. (...) Our conception aims to embed oral education and **to newly define the central perspective**: the goal of all activities must be to achieve **an age-adequate communication ability**. In our society, this formulation implies that the attainment of a high level of oral and written language may not be compromised (...). An extended conception that also incorporates sign language must keep open the opportunities to attain oral as well as written communication abilities, or even better, define them anew.]*

Indeed, many advocates of TC would claim that it combines the best of two worlds, namely, that of the hearing and that of the deaf, or put differently, and more in accord with the educational dimension, “[t]he goal of Total Communication is to take the best of both oral and manual approaches and tailor them, as far as possible, to the communication needs of individual students” (Lou 1988: 94).

Against the backdrop of strict oralism, the development of this approach, although still encroached in the oral tradition because of the primacy it attributes to the oral language, marked an important step forward in deaf education, because (a) it acknowledged the relevance of communication for the deaf child's emotional, cognitive, linguistic and social

⁹ In her discussion of the origins of the combined method (Tellings 1995: 79) points out that Edward Miner Gallaudet, the son of Thomas Hopkins Gallaudet, recommended to introduce the teaching of speech, using reading and writing as a means to teach the spoken language upon his return from Europe where oralism was gaining ground (cf. also Marschark & Spencer 2006: 8).

development (hence it was *child-centred*, and not exclusively oriented toward remedying hearing loss) and (b) it recognised signing as an additional means of improving communication situation in the classroom.

Advocates of the TC philosophy argued against (pure) oralism, in particular, against the aim that deaf children exclusively communicate through speech, which they claimed to be an aim that could not be fulfilled. They also regarded the objective as immoral, given the discrepancy between effort and time spent on *normalising* deaf children's speech and the skills they eventually attained. Other critical moral aspects were seen in the child's right to use the more accessible communication via signs, to develop an identity (that does not deny deafness), and to attain knowledge about the world.

Diverse factors are reported in the literature (Strong 1988; Prillwitz & Wudtke 1988; Tellings 1995) to have led to the (re-)introduction of signs, including (a) research documenting the low academic achievements of orally educated deaf students, (b) studies revealing the better results of deaf children of deaf parents (DCDP) indicating the relevance of natural language input early on (c) linguistic research recognising sign languages as full languages, (d) nativist hypotheses put forward in the domain of developmental linguistics about the inborn human language faculty and the relevance of natural language input for a successful language development, (e) deaf adults' testimonies and advocacy of the use of manual communication in deaf education, and (f) the incipient political activism of deaf leaders.

From a historical perspective it is clear that not all of the factors mentioned previously played a part at the same time because the developments do not chronologically concur (either in the USA or in other countries); their convergence should rather be regarded within a larger period of time, spanning the 1960s to the 1980s. As for the situation in Germany, Günther and Hennies (2011: 135) remark on the relatively late onset of the debate about what they dub as the “oral crisis”. As Prillwitz and Wudtke (1988: 20) report, the academic response to the general picture that emerged from the available research, documenting the lack of success of a method that rejected the use of sign language upfront, was to demonstrate that the oralist prejudices against sign language were unfounded. In particular, it was argued that

... aus psycholinguistischer Sicht stellt sich die Gebärdensprache nicht nur nicht als Hindernis für die Entwicklung gehörloser Kinder dar, sondern als die nahezu einzige Chance auf eine hörenden Kindern vergleichbare 'normale' geistige, soziale und emotionale Persönlichkeitsentwicklung. [... from of a psycholinguistic perspective sign language does not only constitute no handicap for the development of deaf children, but rather nearly the only chance of a relatively 'normal' cognitive, social and emotional personality development, comparable with that of hearing children.]

2.4.1 Components of TC approaches to deaf education

As with other notions in education, the term of Total Communication (TC) is used widely for different educational practices, the actual definition of TC as a method remaining rather vague for many educators (Tellings 1995: 47). Spencer and Tomblin (2006: 169) in turn, emphasise that total communication refers to a philosophy of communication and not to a specific method. The major components of education in TC settings include the following.

Simultaneous communication. Through the simultaneous use of signs and speech (a method that is also termed “simultaneous communication” or “SimCom”, particularly in the USA), TC advocates aim at enhancing spoken language acquisition which is assumed to serve as a basis for an improved literacy acquisition, the general idea being that manual elements (signed systems, fingerspelling) serve to “visualise” the spoken language (Spencer & Tomblin 2006: 171).

Manual codes of the spoken language (signed systems). The use of simultaneous (bimodal, that is visual and oral) communication involves the use of speech and elements of a manual code developed for the representation of the oral language. These codes typically include elements of the surrounding sign language and additional signs, created for the representation of grammatical elements of the spoken language, in particular, function words and bound morphology (Supalla 1991: 87). For example, inflected spoken language verb forms are expressed manually through a sequential combination of signs representing the verb root and the affix respectively (spatial components in the signing do not play any grammatical role, unlike in sign languages). The creation of artificial systems consisting of sign language elements and artificial signs began in the USA in the 1960s. As the TC philosophy later spread to several countries worldwide, signed systems were also created to represent the national oral language of the respective country.¹⁰ In Germany, first educational experiences including the use of signed German (LBG, *Lautsprachbegleitendes Gebärden*, 'signs accompanying speech') were run in Hamburg and Berlin during the 1980s (see section 2.4.2). In Zurich, the LBG pilot programme starting in 1984, included the elaboration of a collection of 3,000 signs and the *Anleitung für die Praxis des LBG* ('guideline for the practice with LBG') (cf. Kaufmann 1995: 14).

Sign systems vary as to the degree to which they aim at indicating "faithfully" the respective spoken language information. Hence the variety of systems in use in one country, such as Seeing Essential English (SEE I), Signing Exact English (SEE II) and Signed English used in the USA. Today Manually Coded English (MCE) is used as a collective name to refer to these systems (Spencer & Tomblin 2006: 171, Supalla & Cripps 2008: 179).

Orientation towards the spoken/written language in manual codes is reflected at different levels of linguistic analysis, including the lexical, morphological and syntactic levels. At the lexical level, for example, some systems involve the use of the same sign for homonyms in the oral language, although different signs would be available to express the different meanings in the surrounding sign language. In a similar vein, compounds are split into meaning units despite the existence of separate signs. In SEE I, for example, 'butterfly' is expressed through the use of the signs for 'butter' and 'fly'. Other versions of signed systems include more sign language elements (SEE II would contain 61% of ASL signs, cf. Lou 1988: 92). However, they still use artificial signs to reflect the spoken language inflectional system, and the sequential order of the elements in a clause follows the word order of the respective spoken language.

Sign language. Natural sign languages are recognised as the natural languages of the members of the deaf community. However, they are not included on the curriculum because they are not regarded as an appropriate educational tool to enhance deaf children's spoken language acquisition.

Audition. Early diagnosis and assessment/fitting of hearing aids is an important component of TC programmes. Methods used for the promotion of visual-auditive speech perception and audition are the same as in oral education, although, in addition, signs are believed to reinforce visual-speech perception (through simultaneous use of sign and speech).

Socialisation. Parents are expected to attend courses in signing and fingerspelling. They are encouraged to use all means of communication with their child (signs, mime, speech), whereby they should progressively strive towards the use of simultaneous communication in speech and sign. Further, deaf children's identification with other deaf people as role models is regarded as a crucial factor for their appropriate social and emotional development. Therefore, the inclusion of deaf teachers or support personnel in the classroom is a central

¹⁰ For a historical review, see Lou (1988). The first system (*Signing Essential English*, SEE or SEE I) was created by a deaf teacher, David Anthony, in Michigan in the early 1960s. The idea was that every word would be signed morphemically. The system was later elaborated further and referred to as *Seeing Essential English*, which reflected the purpose to create a system that would appeal to hearing parents and teachers (Lou 1988: 91).

component of this type of education, which marks an important difference to oral education programmes.

Communication in the classroom. As for the actual communication in the classroom, advocates of total communication approaches emphasise their flexibility regarding the communication means that can be used for different purposes in deaf children's education, arguing that “[f]lexibility and adaptability in the modality of communication method used yield a larger number of potential audiences and an increased access to communication patterns” (Spencer & Tomblin 2006: 170).

It should be noted, however, that the flexibility envisaged does not involve the use of sign language as a language of instruction. This holds equally of the approach envisaged by Prillwitz and Wudtke (1988: 23) for the early intervention programme in Hamburg as is reflected in the following statement:

Wir versuchen - angesichts der immer noch enttäuschenden Erziehungsergebnisse – herauszufinden, ob sich nicht die Freiheitsgrade im pädagogischen Programm erhöhen lassen, um flexibler in der langen Zeit, bezogen auf das je einzelne Kind und die Fülle der Bildungsziele, den Sprach- und Kommunikationsaufbau fördern zu können. [In the face of the still prevailing disappointing educational results, we are trying to establish whether it is possible to increase the degree of freedom within the didactic programme, in order to support language building and the development of communication over the long term and with respect to the individual child as well as the multitude of educational goals.]

From a historical perspective, this line of argumentation shows not only how carefully arguments in favour of the inclusion of signs were put forward at the time, but also that there was little room for manoeuvre at the level of educational conceptions.

Metalinguistic awareness. Among the linguistic skills that are assumed to be enhanced through TC is metalinguistic awareness. Consider Prillwitz and Wudtke's (1988: 23) statement in example (7) above. The goal of promoting metalinguistic skills certainly deserves to be emphasised. At the same time, the statement is revealing in that the metalinguistic knowledge Prillwitz and Wudtke (1988: 23) refer to is still monolingual, as it is not (yet) the use of sign language they have in mind. Notice, in addition, that the authors refer to metalinguistic awareness of “language” (*Sprache*) not ‘the languages’ (*die Sprachen*).

Since total communication approaches are typically monolingual in orientation, the diversification of educational options at this stage spans a *nonvisual/visual* continuum (Grimes et al. 2007: 530) at the level of the modality of expression, consequently not a bilingual continuum, involving different languages.

2.4.2 Challenges to the inclusion of signs in deaf education: The Hamburg experience

From a historical perspective, it is worth recapitulating the circumstances under which the first educational programmes including the use of signs were developed. Although not all of these educational experiences would use the label of total communication, using instead attributes such as “educational programme with signs”, goals, components and practice of the new approaches conceived of correspond with the characteristics outlined previously for deaf education in TC settings.

This is the case also of the early intervention and preschool pilot programme run in Hamburg from 1979 to 1987. The insights provided by those who actively participated in the first educational experience including the use of signs (LBG) are not only illustrative of the main ideas of those who favoured a change of orientation in deaf education, they also reveal some of the challenges that were faced at the time, at the levels of policy, research and practice (that is, the three main areas involved in language planning activities). It is interesting

to note, from a historical perspective, that, on the one hand, the “LBG-experience” represented a precursor phase that was succeeded by the implementation of the first sign bilingual education programme with deaf students in Hamburg, whereas, on the other hand, it probably triggered the spread of a vaguely defined practice to use LBG in the classroom in other parts of the country.

In Germany, one of the countries with the strongest oralist tradition since Heinicke's advocacy of the oral method in the late 18th century (section 2.1.3), the controversy over the decision to make the step to include signs (not sign language, but elements of the German signed system LBG) in the education of deaf students is reported to have been virulent. From a historical perspective and in the face of the continuing predominance of oralism in this country, the discrepancy between the (ongoing) heated debate on the inclusion of signs and the rather limited extent to which signs or sign language are actually used in the educational practice is striking (cf. Günther & Hennies 2011: 135). Fortunately, however, although advocates of oralist approaches have impeded a wider spread of the inclusion of signs and sign language in deaf education, their campaigning against sign language did not fully prevent the conception and implementation of sign bilingual approaches in Germany (see section 3.1.1).

The development of an early intervention programme including the use of signs, as well as its implementation and concurrent research (beginning in 1979) were conducted by a team of academics from the University of Hamburg and professionals working at the Hamburg School for the Deaf (Wisch 1990: 219). According to Wisch (1990: 219) the impetus for the development of the programme was provided, on the one hand, by the empirical evidence documenting the low achievement levels of orally educated deaf children, and, on the other hand, by the good results reported for deaf children of deaf parents growing up in a bilingual environment with sign language. In addition, the empirical evidence gathered in a study of everyday communication practices in 20 families (hearing parents, deaf children aged 2-6 years) carried out by Prillwitz and colleagues in the 1970s (Prillwitz & Wudtke 1988; Wisch 1990) showed that the temporal delay in spoken language development, reflected in a reduced quantity and quality of interactional turns at conversation, imposed severe restrictions not only on communication, but also on identity development in the children (Prillwitz & Wudtke 1988: 25; cf. also Wisch 1990).

The notion of language barrier (obstructing, for example, access to print) is used by Prillwitz and Wudtke's (1988: 27) to describe what they assume to be the cause for deaf children's difficulties in attaining good academic achievement levels (in this context, they cite Van Uden's figure of 3,800 words passive vocabulary in 14-years old deaf children). Wisch (1990: 241) succinctly makes the point by describing the scarce language foundations upon which communication and the teaching/learning of content is supposed to function in the (oral language only) classroom, both on the side of the learners regarding their limited spoken language skills (cf. (8)) and on the side of the teachers with respect to their lack of sign language knowledge (cf. (9)) (Wisch 1990: 241):

- (8) *Wie will ich einen dem Wissenstand von Grundschulkindern angemessenen Sachunterricht durchführen, wenn dazu auf der Seite der Schüler bestenfalls ein aktiver Wortschatz von 200 bis 400 Wörtern zur Verfügung steht, die nur mühsam artikuliert werden können und von denen sich vielleicht 5% auf das gerade anstehende Sachthema beziehen?* [How can I adequately teach a non-language focused subject on the level of primary school students' factual knowledge, if the students' active vocabulary at best comprises 200 to 400 words that can only be articulated with difficulty and when of these words approximately only some 5% might refer to the current topic?]
- (9) *... wenn ich als Lehrer gerade über ein paar hundert Gebärdenzeichen verfüge, aber nicht über die vollständige Gebärdensprache: Praktisch bedeutet dies eine doppelte*

Sprachbehinderung in der Gehörlosenschule, für Schüler und Lehrer. [... when, as a teacher, I only master a few hundred signs instead of the complete sign language: this, in effect, constitutes a twofold language impairment at a deaf school, for both students and teachers.]

Main tenets and goals. Much in line with the emphasis on communication which characterises the rationale of TC, the arguments that were put forward in support of the inclusion of signs concern advantages attributed to their use for the cognitive, communicative and social development of deaf children. As for the main tenets and goals of the educational experience, Wisch (1990: 221) mentions the following:

- acceptance of the child's deafness (as opposed to the traditional oralist fixation on exceptional deaf individuals with excellent speech skills)
- trouble-free communication between parents and children, age adequate at the level of content
- recognition of deaf individuals as members of a linguistic minority group
- inclusion of sign language not only with the aim of promoting a relation with the deaf community but also to ensure a relatively normal language development
- promotion of speech and hearing skills from the beginning (including first steps into written language at preschool)
- preparation for a double integration, as a successful socialisation is understood to be related to the integration into the hearing and the deaf worlds.

Challenges. In their report of this educational experience, Prillwitz and Wudtke (1988: 21) summarise some of the challenges and tasks that needed to be tackled, in particular, concerning (a) the collaboration with deaf adults, (b) the identification of the main properties of sign language, (c) the relation of sign language and written language, and (d) the effects of the combined method on parent-child communication. A review of the literature reveals that these issues also represented a challenge for professionals and scholars in other countries (cf. for the USA, Strong 1988; Kuntze 1998; for Switzerland Kaufmann 1995).

Deaf collaborators and teachers. One important aspect that distinguishes TC from oral education pertains to the choice of role models, among whom deaf adults play a key role. Notice that deaf professionals were banned from deaf schools upon the turn towards oralism, but had been teachers at if not the founders of many educational institutions catering deaf children during the 19th century (see section 2.1.2). Statements like the one provided in (10) (from Prillwitz & Wudtke 1988: 21, their emphasis) make it clear that the recognition of deaf individuals as equal collaborators was not obvious at the time (cf. also Kaufmann 1995). The use of the adverb *nun* ('now') indicates that the new education conception was a first step toward this goal.

- (10) *Wer die Gebärden in der Alltagskommunikation und in Bildungsprozessen einsetzen möchte, muß mit Gehörlosen zusammenarbeiten. Uns scheint es ein Zeichen demokratischer Erziehungskultur, dass die Pädagogen sich den Erzogenen jenseits von Familie und Schule nun auf der Basis von Gleichheit stellen. Wir sind der Überzeugung, daß nur in Zusammenarbeit mit gehörlosen Erwachsenen die Kommunikationsprobleme angemessen verstanden werden können, ohne daß es hier privilegierte Einsichten gibt.* [Anyone who wants to use signs in everyday communication and in education must **collaborate with deaf individuals**. We deem it as a sign of democratic education that teachers have now put themselves on an equal footing with the educated – beyond family and school. We are convinced that only in cooperation with deaf adults can the problems of communication be adequately understood, without privileged insights.]

Signs vs. sign language. The need of (further) sign language research was acknowledged, in particular, as a requisite for the development of educational conceptions that envisaged to include sign language in the curriculum (that sign language research was in its early stages is also acknowledged for the situation in the USA at the time when signed systems were developed, cf. Kuntze 1998: 5). While the difference between the use of signs and the use of sign language was acknowledged, several advantages were attributed at the time to the use of signed systems (Prillwitz & Wudtke 1988: 126). For one, the use of LBG was thought to be psychologically helpful in particular for the hearing parents who would be able to continue to use the spoken language with their deaf child after the diagnosis shock. In addition, LBG was assumed to be of use in the promotion of the spoken language development. Another influencing factor pertained to the circumstance that neither hearing nor deaf professionals were available that would have been in the position to teach the language and use it in classroom communication. It is interesting to note in this context that the same shortcomings were addressed in other countries (cf. Strong 1988: 117).

The statement in (11) (from Prillwitz & Wudtke 1988: 21) shows that there was an awareness of the dual role sign language might fulfil in the educational area, namely, that of an educational tool, and that of a language in its own right. The latter function was understood as a “future phenomenon” because of the limitation that oralism had imposed on its development as a language (sic!). Against this backdrop, it is certainly remarkable that only two years later, in March 1990, the line of argumentation changed to the reverse, emphasising the advantage of the natural sign language as opposed to the use of signs as a pedagogical tool (Prillwitz 1991). The key to resolve the apparent “contradiction” can be found in the statement we provide in (12), which is part of the final conclusion of Prillwitz' contribution to the International Congress on Sign Language Research in 1990. The change toward a bilingual model, as Prillwitz (1991: 31) puts it, did not happen overnight and it was designed in such a way that it would “für die (vormals) orale Praxis verkraftbar vonstattengehen. [occur in a bearable manner for the (previously) oral practice].”

- (11) *Die Gebärden sind ja deshalb ein so besonderer Gegenstand, weil sie als lautsprachbegleitende Gebärden pädagogisches Zweckmittel sind, aber auch eine Zukunft als eigenständiges Sprachsystem (DGS) haben. Die Gebärdensprache will in ihren kreativen Leistungen aber auch in ihren Begrenzungen analysiert werden, die sich aus der eingeschränkten sozialen Reichweite und dem Ausschluss aus Bildungsprozessen seit dem Mailänder Kongress (1880) ergeben. [Signs are special in so far as they are used in sign supported oral communication as a means to a pedagogical end, but also because they have a future as an independent linguistic system (DGS). Sign language has to be analysed regarding its creative achievements, but also with respect to its limitations in consequence of its socially restricted range and its exclusion from educational processes since the Milan 1880 Congress.]*
- (12) *... befinden wir uns alle immer noch in einer sehr schwierigen Situation; denn die Grundlage einer Neuorientierung in Richtung Zweisprachigkeit, eine umfassende Gebärdensprachforschung und –lehre für die DGS, ist bis heute bestenfalls in Ansätzen gegeben. Für die praxisbezogene Umsetzung im Bereich Dolmetschen, Gebärdensprachkurse, Lehr-/Lernmaterialien, und besonders im Bereich Erziehung und Bildung sind noch wesentliche Grundlagenarbeiten zu machen. Bevor hier nicht die entsprechenden Angebote ausgearbeitet sind, sollte man sich hüten, die Kolleginnen in den Gehörlosenschulen über erhöhte Ansprüche zu überfordern. Als erstes müsste die gehörlosenpädagogische Aus- und Weiterbildung Gebärdensprache als wesentlichen Bestandteil aufnehmen. Dies ist bis heute noch an keiner Ausbildungsstätte für Gehörlosenpädagogik in unserem Land geschehen. Vielleicht ist auch unter diesem Gesichtspunkt der lange Weg zur Gebärdensprache und zur Zweisprachigkeit*

Gehörloser über das lautsprachbegleitende Gebärden eine Hilfe, den Frust über die Diskrepanz zwischen Wollen und Können, zwischen Anspruch und Wirklichkeit über Jahre, ja Jahrzehnte auszuhalten. [... we are still in a very difficult situation since the foundations for reorientation towards bilingualism, comprehensive research on and teaching of DGS, have until now only been carried out rudimentarily at best. For its implementation in practice, in the areas of interpretation, sign language courses, teaching and learning materials, and especially in education, significant groundwork still needs to be done. Until an adequate offer is available in these areas, one may be well advised not to overstrain the colleagues at deaf schools by levying excessive expectations on them. First, sign language has to be adopted as an essential component in further education and training programmes in deaf pedagogy. That, however, has not yet happened in any training institution in this country [i.e. Germany, CPP]. Bearing in mind the actual situation, having to go the long way towards sign language and deaf bilingualism via signed German might be of help to bear the frustration given the discrepancy between intention and capability, expectations and reality over years, even decades.]

Literacy. The relationship of literacy and sign language competence remained largely unexplored at the time. Prillwitz and Wudtke's (1988: 21) questions (13) reveal how little information on deaf individual's own perception of literacy was available. We can see further that didactic conceptions concerning the relationship between sign language and written language still needed to be devised.

- (13) *Völlig ungeklärt sind die Bezüge zwischen Gebärden und der Schriftsprache. Die Gehörlosen besitzen keine spezielle Schrift. Wie verstehen sie Texte? Was könnten wir hier lernen, wenn wir uns kommunikativ zu den Gehörlosen in Beziehung setzen könnten! Wie lassen sich Gebärdenkompetenz und Schriftsprache aufeinander beziehen?* [The relationship between signs and written language remains unclear. Deaf individuals do not possess a special writing system. How do they understand texts? How much could we learn in this respect if we could relate to deaf individuals communicatively! How could competence in sign language and in written language be related to each other?]

Impact on parent-child communication. The need to assess parents' sign language skills was identified as a task in order to ascertain whether the use of signs improved parent-child communication during all important phases in life (Prillwitz & Wudtke 1988: 21). It is interesting to note that the essential component of what Prillwitz and Wudtke (1988) refer to as the “combined method”, namely, the combination of signs and speech in the communication with the deaf children is not addressed as a challenge. Neither do they refer to the creation of artificial signs that were necessary for the “visualisation” of all spoken language properties, to enhance the child's “input” in that language, which was ultimately the aim of the simultaneous use of speech and sign.

2.4.3 Outcomes and critique

More than 30 years after the establishment of the first TC settings it is interesting to remark on the rapid spread of the TC approach throughout the world (e.g. in the Australia, Germany, New Zealand, Switzerland, The Netherlands, Spain, Thailand, Taiwan, USA, to name but a few countries, cf. Monaghan 2003: 15; Tellings 1995: 79-80). The USA, for example, witnessed a changeover to TC from 1968 to 1978, whereby in 1978 a total of 65%

programmes had adopted this approach (35% identifying themselves as pure oral programmes) (cf. Lou 1988: 93; also Kuntze 1998: 5). Factors that contributed to these developments include the functional use of artificial sign systems (as a tool to teach the oral language) and the relative ease in their “mastery” by hearing teachers (that is, it was only signs that had to be learned, not a different (spatial) grammar and language).

Turning to the outcomes of the TC approach, there is no agreement in the literature about its impact on deaf children's oral language development, although an improvement at the level of communication is generally acknowledged. For example, about 10 years after TC programmes were established in the USA, Luetke-Stahlman (1990: 326) concluded that there was no indication of an improvement of academic achievement levels in deaf students educated in TC settings (compared to those in other types of education). Spencer and Tomblin (2006), too, conclude their review of the available studies with the assertion that there is, as yet, no clear picture of the outcomes.

General assessments. Evaluations of programmes including the use of signs coincide in the improvement of deaf children's skills in different areas. For example, the results obtained in the longitudinal research concomitant to the early intervention and preschool programme established in Hamburg document the children's development at the level of the lexicon (cf. Prillwitz & Wudtke 1988: 76-108, cf. also Wisch 1990: 226 for a summary of the results obtained). The children's spoken language was found to reach optimal levels according to Van Uden's definition for orally educated deaf children, that is, a command of more than 200 active words and 500-700 speech read words. Further, the children were found to be able to identify 400-700 written words (some children already started to write, whereby fingerspelling was found to be useful).

As for the signs attained, the children's sign vocabulary was found to comprise 1,400-2,000 signs, which allowed them to engage in sophisticated and spontaneous communication. Interaction sequences in sign supported communication were reported to be much longer than the ones identified in the communication of orally educated deaf children, and the range of topics addressed to go well beyond the here and now, which is also reflected in the diversity of functions language is used for. Wisch (1990: 230) highlights the knowledge function (to request/provide information). He also remarks on the use of egocentric language, with similar forms as the ones observed in hearing children. On a more general level, the overall development of the children at the levels of self-esteem, independence, and social behaviour was found to be positive. The children's parents are reported to have engaged in the learning of signs (generally, the mothers). At the level of speech production the children were found to frequently produce speech with signs. Articulation is described as less clear compared to successful orally educated deaf children. It is also conceded that formal linguistic competence and speech had not progressed as expected (Wisch 1990; Prillwitz & Wudtke 1988).

Speech intelligibility. While “the promise of fully intelligible speech in TC classrooms has not been achieved” (Spencer & Tomblin 2006: 176f.), no negative impact of signed communication on speech intelligibility was found. Evaluations of the intelligibility of their students provided by the teaching staff mirror the proportions obtained for orally educated deaf children (less than 20% are estimated as “fairly easy to understand”).

There has been, however, some concern about the quality of the speech used simultaneously with sign given that speech (and pauses) produced in simultaneous communication tends to have a longer duration (Spencer & Tomblin 2006: 175) resulting in sequences like “okaaaay, noooow weee aaare reaaadyy foor luunch” (Kuntze 1998: 6, *pace* LaBue 1995: 170). However, the impact of these modifications on speech acquisition remains unexplored. Spencer and Tomblin (2006: 179) report on the results obtained in a more recent study (Yoshinaga-Itano & Sedey 2000) where several factors influencing the development of phoneme inventories and speech intelligibility were identified, namely, (a) age (older children produced phonemes more correctly), (b) language skills (higher language skills correlating

According to Hansen (1991: 66, our transl.), the children mixed the languages to “survive communicatively”, but they had no idea about “where one language ended and the other began”. Observations like these hint at the discrepancy between the functional dimension attributed to simultaneous communication and the knowledge of language it is expected to enhance.

2.4.4 *The controversial status of signed systems*

Today, the use of simultaneous communication in the field of deaf education continues to be widespread, although critiques of hybrid communication means have been abundant. Advocates of the TC approach generally point to remaining shortcomings in the way TC is put into practice. From the perspective of developmental linguistics the benefit of this approach is questioned on more fundamental grounds pertaining to the relevance of natural language input for the acquisition of language.

Shortcomings at the level of practice. Advocates of the TC approach acknowledge the lack of a general success of TC, but do not question the use of simultaneous communication *per se*. Rather, remaining shortcomings are discussed in relation to deficits in how TC is put into practice (Akamatsu & Stewart 1998; Spencer & Tomblin 2006; Fischer et al. 1991). Spencer and Tomblin (2006: 173), for example, remark that “[v]ariability in the language models provided should be considered when supposed “results” of exposure to TC are discussed.” Further, they argue (Spencer & Tomblin 2006: 170, their emphasis) that “there appears to be a discrepancy between what people think *should* be used and what *is* in use regarding sign systems.” Indeed, adult “models” (e.g. teachers and parents) have been found to use simultaneous communication in an inconsistent manner. Particularly functional elements appear to be frequently dropped (Schick 2003). Estimates of the proportion of omissions in simultaneous signed/spoken utterances vary. Spencer and Tomblin (2006: 173-4) report on a range from 8 and 26% of omissions found in the input provided by mothers (*pace* Swisher 1985) (particularly English function words were omitted); teachers matching their utterances for as much as 90% (*pace* Luetke-Stahlman 1988). Apart from missing elements, simultaneous communication has also been found to contain mismatches between the signed and the spoken component. Johnson et al. (1989: 16), for example, provide an excerpt of the transcription of the productions of a preschool teacher interacting with 4 years old preschool children. Mismatches included lexical errors (signs: EASTER DEVIL, speech: *Easter Bunny*; signs: FREEZE, speech: *want*), and morphological errors (signs: CAN'T, speech: *can*). On a critical note, it seems that the apparent “flexibility” of simultaneous communication might also turn into one of its major drawbacks.

Critique from the perspective of (developmental) linguistics. From the perspective of developmental linguistics the question arises as to whether deaf children exposed to a mixed code acquire that code. Not surprisingly, the impact of simultaneous communication is seldom addressed this way, but is rather assessed in relation to the function it is supposed to fulfil, namely, the acquisition of the oral language. As Schick (2003: 225) remarks, “for children acquiring MCE, the goal is to acquire English as a first and native language, and researchers typically focus on the extent to which children adhere to or deviate from the rules of English, rather than a description of the children's overall communication skills.” We are confronted then with an incongruity between the input provided (a mixture of codes) and the output expected (knowledge of the oral language). This discrepancy reflects not only a lack of differentiation between communication and language, it also reveals a general misunderstanding of the impact of modality on the organisation of language, a point that has been taken up by linguistic critiques of signed systems, but has been largely ignored in the educational area.

The main concerns expressed pertain to (a) the status of signed systems vis-à-vis independent linguistic systems, and (b) the impact of signed systems on deaf learners' language acquisition. There is a consensus that signed systems do not constitute a proper basis for the development of the deaf child's language faculty (Bavelier et al. 2003; Drasgow 1993; Fischer 1998; Johnson et al. 1989; Lane et al. 1996; Singleton et al. 1998; Strong 1988; Supalla 1991).

A widespread misconception, particularly at the level of practice (that is, in the education of deaf children) is that signed systems would represent the language they *duplicate* in another modality of expression. Linguistic analysis clearly shows that they do not. As Supalla and Cripps (2008: 184) put it, “MCE is not comparable to the language (i.e., English) that it intends to duplicate for the benefit of deaf children. The structural violations leading to the production of distorted sentences is thus real and undermine their capacity for language acquisition”.

From a linguistic perspective, research has shown that signed systems are inconsistent with how spatial languages work (Schick 2003; Supalla & Cripps 2008). Supalla and Cripps (2008: 184) illustrate how the use of sequential morphemes in signed English systems (MCE) to represent inflected spoken language verbs violates the morphological and phonological constraints that hold of sign languages (for example, to express “watching” two separate signs are sequentially combined, namely, the sign WATCH and the sign –ING). Children confronted with these forms failed to correctly identify the signed “affixes” as part of the verb roots, interpreting them rather as unbound morphemes. A similar effect of confusion is given at the lexical level with the artificial creation of compounds. For instance, the “butterfly” example mentioned previously rather than helping children to decipher the intended meaning would provoke confusion, letting them wonder “how in the world a stick of butter was able to fly” (Kuntze 1998: 5). Observations like these make apparent that an appropriate understanding of bimodal productions requires not only knowledge of the signs used, but also knowledge of the grammar simultaneous productions are meant to reflect (Johnson et al. 1989: 19). Consequently, the use of signed systems leads to a paradoxical situation, as it requires knowledge of the language whose acquisition it is supposed to enhance.

Furthermore, it must be noted that the creation of signed systems represents an intervention into the *architectural* principles of sign languages that underlie their efficacy as language systems, not only in language use, but also in the development of language. As Supalla and Cripps (2008: 185) put it, “an adoption of the spoken language structure (for the signed medium) will only lead to the linguistic system losing its learnability variable”.

Against this backdrop, it is certainly not without irony that students educated in TC settings have been found to adapt their signing to better conform to the constraints of natural sign languages (e.g. with respect to the use of spatial grammar). Such adaptations are generally interpreted as providing additional evidence for the artificial character of signed systems (Kuntze 2008; Singleton et al. 1998; Strong 1988) and the role of modality in sign language development (Supalla 1991: 109). As Schick (2003: 228) remarks, “there maybe something about making a spoken language into a visual one that is inconsistent with how languages work (...)”. Put differently, it seems “the linguistic system must be free in adopting a structure best suited to its modality” (Supalla & Cripps 2008: 185).

Simultaneous communication and sign bilingual education. We would like to end this critical appraisal by drawing attention to two aspects we consider important for an appropriate evaluation of the role of signed systems in the education of deaf students. The first observation concerns the impact of the use of simultaneous communication on the evolution of deaf education. From a historical perspective, it can be argued that the TC approach paved the way for further developments, including the demand for and the establishment of sign bilingual education programmes. As pointed out by Kuntze (1998: 5), the spread of signed systems in its various forms “helped legitimize the use of signed communication in the

classroom” (for a similar conclusion along these lines see Prillwitz 1991, whose statements in this respect were discussed in section 2.4.2). Johnson et al. (1989: 13), too, remark on the circumstance that because TC “obliged” teachers to use signs it became a symbol of resistance to oralism, strongly supported by the adult deaf community in the USA at the time.

The second observation concerns the continued use of simultaneous communication in TC and in bilingual settings, despite the caveats outlined previously. We shall expand on this in section 3.2.2. Nevertheless, we advance here that this practice reflects unresolved issues pertaining to communication between hearing adults and deaf children and the means that should be used in the teaching of the grammatical properties of the oral language.

3 Sign bilingual education

Following our critical appraisal of education philosophies with a monolingual orientation, we turn now to the question of how sign bilingualism is promoted in the context of sign bilingual education settings. We are interested to trace the developments leading to the establishment of sign bilingual education programmes, and to identify the key components of this type of education as well as the range of variation. Because the bilingual education option continues to represent the exception rather than the norm today, we will seek to discern those circumstances that work against a more widespread promotion of deaf children's bilingualism.

In the following sections, we will look first at the main developments leading to the inclusion of sign language in deaf education (section 3.1). We will then critically appraise the main components of bilingual education and explore the dimensions of variation in how bilingual education is put into practice (section 3.2).

3.1 Sign bilingual education on the agenda

Sign bilingual education emerges in socio-political, educational and linguistic discourses as of the 1980s as a notion to refer to an educational philosophy that differs radically from oralist and TC approaches in that it includes the use of sign language as the or one of the language(s) of instruction in a bilingual model of deaf education (cf. Johnson et al. 1989; Knight & Swanwick 2002; Singleton et al. 1998). In recognising the relevance of *sign language* for the linguistic and cognitive development of deaf children, the bilingual/bicultural approach to deaf education marked a turn in the history of deaf pedagogy (Johnson et al. 1989; Prillwitz 1991). In the bilingual model envisaged, sign language is attributed the status of the primary language for deaf students, in terms of accessibility and language development. The oral language, in turn, is attributed the status of a *second language* (L2). The bilingual model also acknowledges the bicultural dimension of a bilingual promotion through the inclusion of deaf teachers as role models and Deaf culture as a subject on the curriculum.

The inclusion of *sign language* in a bilingual approach to deaf education is commonly regarded as the result of a convergence of developments in the socio-political, educational and academic areas. From a historical perspective, however, it is important to note that discourses in these areas have only progressively converged.

Educational discourse. In educational discourse, sign bilingual education emerged as an alternative to the TC approach in the 1980s. Although the Total Communication philosophy had represented a step forward in the recognition of the relevance of communication through the visual modality, it came under an increasing critique because simultaneous communication was deemed inappropriate as a basis for *natural* language development. Johnson et al.'s (1989) publication "*Unlocking the Curriculum:...*" had a major impact on the debate about deaf education not only in the USA but also in many countries throughout the world. In their publication, the authors questioned the use of signed systems in view of the continuing failure of deaf education and argued in favour of the inclusion of sign language. The publication reflects major changes not only regarding the recognition of sign languages as full languages, but also with respect to a socio-cultural view of deafness.

Deaf movement. Changes concerning communication and travel during the latter half of the 20th century increased opportunities to exchange and disseminate knowledge, contributing also to a rapid spread of the ideas associated with the Deaf movement and the demand of bilingual education (Bagga-Gupta 2004: 48). The Deaf movement in the USA in the late 1980s opened new perspectives on the role of deaf individuals as agents of change and their role in deaf education. As Bagga-Gupta (2004: 276) puts it, "[i]t can be surmised that Deaf

education, probably for the first time ever (anywhere in the modern world), became a serious and realistic agenda *for* Deaf children and by the Deaf in the United States (as opposed to Deaf education being an agenda for Deaf children by hearing professionals”).

Speech therapists involved in the bilingual programme established in Italy, at the Cossato school, also remark on how visits abroad, notably to Gallaudet University, affected the views and knowledge of deaf individuals who later engaged in research activities (see Plaza-Pust 2016 for a discussion). According to Lerda and Minola (2003: 39) the participation of deaf individuals helped to break with the traditional way educational intervention had been conceived of and organised (a task exclusively tackled by speech therapists until then):

Ciò ebbe un effetto dirompente ed innovativo sul modo in cui veniva considerato l'intervento educativo e rieducativo nei confronti dei bambini sordi: portava in primo piano l'esperienza ed i vissuti comunicativi e linguistici degli stessi protagonisti della presa in carico logopedica ed arricchiva di informazioni e conoscenze il terreno d'intervento fino ad allora dominato esclusivamente dai “rieducatori” e dalle loro esclusive conoscenze. [This had an explosive and innovative effect on the manner in which the educative and re-educative intervention has been considered in the way to deal with deaf children: in the first place it brought in the linguistic and communicative experience of the very protagonists of speech therapeutical care and enriched with information and knowledge the intervention area, up until now dominated exclusively by “re-educators” and their exclusive knowledge.]

Social model of disability. The developments depicted also run on a par with a change of perspective on disability that derived in a social model of disability, whereby disability is understood in relation to the social context and the environment developed by non-disabled people (Knight & Swanwick 2002: 29; cf. also Domínguez-Gutiérrez & Alonso-Baxeiras 2004: 16). Humanitarian principles leading to the development of this model began circulating in the 1960s, at the time of the civil rights movement, when many of society’s stereotypes were questioned (Winzer 1993: 376). As Knight and Swanwick (2002: 29) remark, “from this perspective, people are not disabled by their particular disability, but by the extent to which the social environment in which they live places constraint upon their opportunity to function fully within it”.

Parental engagement. Finally, one crucial factor in the implementation of bilingual education programmes pertains to support and engagement of deaf children's parents. Indeed, parents' initiatives have played a key role at the socio-political level. Their dissatisfaction with the available educational options and informed decision to demand the implementation of the alternative sign bilingual option provided the impetus for the set up of the first experimental classes in Sweden and Denmark (Mahshie 1995: xxxiii). The engagement of the parents (often in the form of parents’ associations) is also acknowledged as a driving force for the implementation and the continuity of bilingual programmes in other countries, such as Germany (Günther 1999b), France (Leroy 2005), Italy (Volterra 2003), Australia (Komesaroff 2001), and Spain (Gras 2006; Pérez Martín et al. 2014).

3.1.1 First steps: Developments leading to the inclusion of sign language

The comparison of the developments leading to the implementation sign bilingual education programmes in several countries toward the end of the 20th century makes apparent how local circumstances interact with global issues. For further illustration, we will briefly sketch the developments in the USA, Scandinavia and Germany.

USA. In the USA, the inclusion of sign language in deaf education in terms of a bilingual model of deaf education was already discussed in several publications appearing in the 1970s (Bagga-Gupta 2004: 132). In the academic area, the demand for bilingual education

of deaf students was also included in the resolutions adopted, for example, at the Second National US Symposium on Sign Language Research and Teaching in 1978 (Bagga-Gupta 2004: 132). However, at the time, there was yet no convergence between research and practice with respect to a new orientation in deaf education. As pointed out by Strong (1988: 117) “this change in thinking is not yet reflected in school programs for a number of reasons”. Among the factors that worked against putting the bilingual idea into practice were the teachers' scepticism against sign language, their lack of qualification in that language, the lack of a written form of sign language and the lack of sign language curricula (cf. Singleton et al. 1998 who also remark on the administration's reluctance to support a bilingual programme without empirical research supporting the need of such a shift in programme design). Against this backdrop, we can understand why some researchers called for caution, expressing concern about the danger of setting-up poorly designed bilingual programmes that would be likely to fail (Mahshie 1995: 206 cites Woodward 1978). Further, several activities preceded the implementation of a bilingual programme. At the California School for the Deaf, for example, a committee was set up in 1990 that would coordinate the activities aiming at a better understanding of the bilingual/bicultural approach among the different stakeholders, and the administrative effort its implementation would take. As of the late 1980s and early 1990s, several bilingual programmes were established at public and at residential schools (Mason 1994; Singleton et al. 1998: 18).

Sweden. In Sweden, where the provision of home-language teaching to minority and immigrant students was stipulated by the 1977 “home language reform” (Bagga-Gupta & Domfors 2003), sign language was recognised in 1981 as the first and natural language of deaf individuals. Because Swedish Sign Language (SSL) was recognised as the first language of deaf children, the 1981 ruling decreed that they would receive all their schooling in this language (Bagga-Gupta & Domfors 2003: 68). As remarked upon by Svartholm (2010: 161), while the Special School curriculum implemented in 1983 required that deaf children should strive *toward* bilingualism, the 1994 national curriculum required schools to ensure bilingualism in all deaf pupils upon the completion of their education. The work of Swedish Sign Language researchers (inspired by Stokoe's research into American Sign Language, ASL), deaf community members, and parental NGOs brought about the change at the level of language policy that would soon be reflected in the compulsory use of sign language as the language of instruction at schools with deaf students. The policy resulted in the implementation of a uniform bilingual education option (Bagga-Gupta & Domfors 2003: 67), which contrasts markedly with the continuum of options offered in other countries as of the 1990s. Indeed, the institutionalisation of the bilingual option in this country has not been replicated in any other country. Yet, word of the changes in Sweden circulated quite early in the USA and in other countries, although detailed information on how bilingual education was put into practice only became available in English only later (Mahshie 1995: xxi).

Denmark. As for the developments in Denmark, Hansen (1991: 66) also notes that the acknowledgement of shortcomings of TC combined with an increasing knowledge about Danish Sign Language (DT) and the parents' initiatives furthered the idea of bilingualism in deaf education. The Centre for Total Communication in Copenhagen contributed to the implementation of bilingual education programmes with the set up of language courses for parents and teachers, and the making of teaching videos in DT.

Germany. At the Hamburg school for the deaf, the first bilingual classes were implemented in the 1993/4 school year (Günther 1999a: 11). Several factors contributed to this development, including (a) the results of the early intervention experimentation and related demand for the continuity of the experience (upon the parents' initiative), (b) progress in sign language research (the ‘Institute for German Sign Language’, *Institut für Deutsche Gebärdensprache*, at the University of Hamburg was the first to undertake linguistic research on sign language in Germany), (c) parents' engagement, (d) professionals' engagement, and

(e) the appointment of a new chair of deaf pedagogy (Klaus-B. Günther) who would contribute to the theoretical foundations of the bilingual programme and conduct the concomitant research group. According to Günther (1999a: 11), the parents of the children attending the LBG-early-intervention-and-preschool-experience described previously (cf. section 2.4.2) demanded the continuity of the bilingual approach as of 1991, seeking advice also in the academic area. Their engagement was found to be decisive for the conception and implementation, and ultimately the success of the programme. The potential influence of other factors, such as the Scandinavian experiences, is qualified by Günther (1999a: 11) who argues that the results of the Scandinavian experiences were not available at the time when a team of teachers of the Hamburg school for the deaf and academics of the Hamburg University presented their conception for the bilingual programme in 1992 (they would become available only in the course of the bilingual experience). As the sign bilingual education conception elaborated was rather theoretical, with little information on how the bilingual teaching was to be put into practice, the didactic conception and the scientific elaboration of the “bilingual idea” (Günther 1999a: 11) had to be developed further based on the actual practice in the bilingual pilot programme.

3.1.2 First bilingual education programmes: Challenges at the level of practice

The preceding sketch of the developments leading to the implementation of bilingual education programmes in diverse social contexts hints at some of the challenges faced and efforts made by the professionals involved. These professionals were confronted with the circumstance that information (and research) on how the sign bilingual education philosophy was put into practice was scarce. Scholars emphasising the right of the deaf child to grow up bilingually, notably François Grosjean (1992: 314), outlined the main components of sign bilingual education, remarking, at the same time, that “how this is done is clearly a challenge for parents, educators and members of the linguistic communities involved”. In a similar vein, Drasgow (1993: 247) acknowledges that the implementation of a bilingual programme is “no simple matter” and that “there is much to consider”. Further, he argues that the use of sign language in the education of deaf students raises “complex issues” (Drasgow 1993: 245), such as “How and when should English be taught? Who should be the teachers and role models? Because language and cultural identity are so closely intertwined, what about the possibility of cultural conflict between deaf children and their hearing parents?”

More than ten years after the implementation of the first experimental classes in Sweden, Mahshie's (1995: xxxiv, our emphasis) observations on the status of bilingual education in that country succinctly summarise the types of challenges faced at the practical level: “Those involved agree that the implementation of this model –which involves putting in place personnel, practices, expertise, and other *attributes that have not been typically been present in either the educational or the healthcare system* – requires both time and broad-based support.” (cf. also Hansen, 1990, for a critical appraisal of the developments in Denmark). What these reports make clear is that the provision of sign bilingual education requires a range of human and didactic resources, including qualified teachers, appropriate teaching materials, and a bilingual curriculum, and that it takes some time before these resources are developed.

3.1.3 Diversification of methods used in deaf education

Throughout the preceding sections, we have sketched the developments leading to a diversification of options in deaf education in the late 20th century, including the sign

bilingual approach. By the turn of century, oralism had definitely lost its exclusive status in many European countries. In a survey on status, distribution and characteristics of sign bilingual education programmes in Europe¹¹ (Plaza-Pust 2004), many of the participants asked about the *general* status of sign language in schools with deaf students in their country or region hinted at the availability of education methods including sign language to a greater or lesser extent. In general, the increasing diversity of methods at the time was emphasised in additional comments such as “enormous variation across schools, units, regions” or “it is a mixture – different methods in different schools” (Plaza-Pust 2004: 144¹²). Interestingly, the survey revealed variation not only in the distribution of the bilingual programmes implemented, but also in educational conceptions. This variation, as becomes apparent in recent publications on deaf education in other parts of the world, is not exclusive to the European context. The next sections are dedicated to a critical appraisal of the dimensions of variation in sign bilingual education.

3.2 Variation in sign bilingual education: A critical appraisal

As outlined previously, sign bilingual/bicultural education is used as a notion to refer to a philosophy of education defined primarily by the use of sign language as the or one of the language(s) of instruction in the education of deaf students (Knight & Swanwick 2002). Because the language of the surrounding community is the spoken language and it is the language of literacy, access and provision of sign language to deaf children is bound to a bilingual concept of education. Unlike bilingual education catering for hearing students, which, as we learned previously, is characterised by variation regarding its objectives, the bilingual approach to deaf education is often associated with the idea of a uniform conception that would account for the specific needs and abilities of deaf learners. While this idea continues to be widespread at the programmatic level, we are interested in how bilingual education is put into practice, and to discern the key variables that determine the development and maintenance of sign bilingualism in education.

The empirical basis of our critical appraisal comprises personal interviews conducted over the last decade with professionals in educational institutions offering sign bilingual education in several countries, including Germany, Spain, Quebec, France and Switzerland. We obtained further insights into educational philosophy and bilingual teaching practices through our participation in bilingual classes. We also subjected the available literature on bilingual education programmes to a critical review. In the last years, several thematic volumes, dissertations and journal articles have been published (see, for example, the report on the Québec bilingual programme in Vercaingne-Ménard et al. 2005, the bilingual programme established in Hamburg in Günther et al. 2004, the bilingual programme established in Berlin in Hennies & Günther 2011, the bilingual experience established in Cossato, Italy, in Teruggi 2003, the research on sign bilingually educated deaf children at the Geneva school in Niederberger 2004, the research on bilingual education offered in France by the association *Deux langues pour une éducation 2LPE* in Leroy 2005 and 2010, and the contributions in Plaza-Pust & Morales-López 2008 providing insights into developments in diverse social contexts, such as Argentina, Austria, China, Italy and Spain.). Pilot bilingual

¹¹ The countries covered by the survey were Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Norway, Spain, Sweden, Switzerland, The Netherlands and the United Kingdom.

¹² Apart from the feedback obtained through a questionnaire, additional information was gathered in the context of personal interviews with professionals involved in deaf education in France, Germany, Spain and Switzerland. Participants included headmasters, teachers and sign language interpreters. As most of the participants had filled out the questionnaire previously, the semi-structured interviews centred on the issues raised in the survey as well as on the particular problems encountered in the respective institution.

programmes established with the political mandate of concomitant research, documenting not only conception and establishment of the programme but also the students' performance, turned out to be particularly valuable as a source (this is the case, for example, of the programmes established in Quebec and Germany).

What can be gleaned from the information gathered is that sign bilingual education programmes vary along the components identified previously for bilingual education in general (section 1.2.2), namely, (a) status of the languages (minority vs. majority language), (b) language competence(s) envisaged (full bilingualism or proficiency in the majority language), (c) placement (segregation vs. mainstreaming), (d) students enrolled (with a minority or a majority language background or both), and (e) allocation of the languages in the curriculum. In the course of the following sections, we will look at these dimensions of variation in more detail, paying particular attention to some of the dimensions we consider particularly critical for the promotion of sign bilingualism (cf. Table 3.1 for an overview).

Table 3.1: Sign bilingual education variables.

<i>Status of the languages</i>	<i>Language competences envisaged</i>	<i>Placement</i>	<i>Students' language background and hearing status</i>	<i>Curriculum languages</i>
<ul style="list-style-type: none"> • Status and timing of exposure to sign language • Status and timing of exposure to spoken language and written language 	<ul style="list-style-type: none"> • sign language • spoken and written language proficiency • metalinguistic skills • academic language • literacy 	<ul style="list-style-type: none"> • special school • regular school (interpreted education, co-enrolment, units) 	<ul style="list-style-type: none"> • hearing status • linguistic background 	<ul style="list-style-type: none"> • sign language • spoken language • signed systems

3.2.1 Status of the languages

3.2.1.1 Sign language: Variation in age of exposure

Status. One of the main tenets of sign bilingual education as an educational philosophy concerns the promotion of sign language as the *first* language of deaf children. The status attributed to sign language as an L1, irrespective of the language used at home, marks an important difference to other types of bilingual education.¹³ That sign language be promoted as early as possible as the primary language is a requirement that is based on insights obtained in the area of developmental linguistics concerning the relevance of natural language input during the sensitive period for language acquisition (cf. Bavelier et al. 2003; Fischer 1998; Grosjean 2008; Leuninger 2000). Because deaf learners have limited or no access to the spoken language, sign language is regarded as the *natural* language of deaf children on accessibility grounds. As Vercaingne-Ménard et al. (2005: 10) remark

...pour l'enfant sourd chez qui la surdité et telle qu'il est incapable de discriminer les sons, l'acquisition d'une langue orale comme langue première est impossible. Dans son cas, seule un langue signée correspond aux conditions d'acquisition d'une langue première. [... for a child whose degree of deafness is such that he is not able to discriminate sounds, the acquisition of an

¹³ Kuntze (1998: 3) remarks that this is a “radical departure from the basic assumptions of bilingual education in general”. The observation takes mainstream bilingual education in the USA as a reference, whereby children are taught in their home language, which is assumed to help them in their acquisition of the (majority) L2 (cf. section 1.2).

oral language as a first language is impossible. In this case, only a signed language meets the criteria of the acquisition of a first language.]

Further, the social and communicative (interactive) aspect is also taken into account by some scholars highlighting the status of sign language as the social/peer language of deaf students. Mason (1994: 12), for example, argues that “[i]nteractive, spontaneous and meaningful communication with students is more likely when the teachers and students can understand and be understood in their interactions”.

The status attributed to sign language is a matter of choice in more flexible conceptions of sign bilingualism, in which the definition of the “preferred language” is related to the individual needs and abilities of the children (Knight & Swanwick 2002: 30):

Although the model is largely developed around the linguistic needs of those deaf children for whom sign language will be a first or preferred language, it also addresses the needs of those deaf children for whom spoken language is the preferred language and sign language may be their second language. This ensures that they equally have the opportunity to enhance their cognitive, academic and social opportunities.

Knight and Swanwick (2002: 30) also note that the bilingual policy may change over time depending on the development of the child and the demands of the curriculum. Further, owing to the circumstance that the “preferred language” cannot (always) be determined at the early years stage, a policy is required that would ensure “...access to a broad band of linguistic experiences [that] should continue to be available to all children within the nursery whatever their degree of deafness” (Knight & Swanwick 2002: 55). This holds equally of children provided with a CI, as is elaborated further below.

The status attributed to sign language in practice depends on several variables, such as the choice of the languages of instruction, the type of educational setting and the availability of early intervention measures that would focus on the development of a firm competence in sign language early on.

Variation in age of exposure. Because the majority of deaf children are born to non-signing hearing parents, the early exposure to sign language is a critical issue when it comes to how bilingual education is put into practice, whereby information and involvement of the parents is an important factor. However, the details of how and when sign language is acquired by the majority of deaf children with hearing parents remain largely unexplored (see Bagga-Gupta 2004: 137; Singleton et al. 1998: 19).

Well-defined intervention measures are necessary to promote deaf children's acquisition of sign language. Unfortunately, the social (peer-group) transmission pattern of sign language is often confused with the assumption that deaf children would naturally acquire the language at any age, provided they encounter other deaf peers. Not only do we know today that late sign language learners do exhibit deficits particularly at the morphosyntactic level (Singleton et al. 2004; Mayberry 2007); what is more important is that many of these children never had the chance to develop a true mother tongue in the first place, which has severe consequences for their acquisition of a second language (including sign language) at a later age because their language faculty did not develop appropriately during the sensitive period for language acquisition.

Measures to ensure an early exposure are taken where bilingual education is institutionalised (the case of Sweden) or organised by a comprehensive bilingual service (the case of the IRIS association in France, including a service for the families). Particularly in those programmes offering bilingual education as of preschool (or earlier, at the foundation stage, in nursery schools), deaf students' learning of sign language is modelled in such a way that it is acquired in a natural way, or as naturally as possible. That is, emphasis is put on the communicative and interactive dimensions of the language (Rodríguez 2003: 3). In Sweden,

parents are offered courses in sign language upon the diagnosis of hearing loss in their child (Ahlgren 1991: 107; Svartholm 2010). Sign language courses were also established in Denmark and Norway upon the implementation of sign bilingual education (Swanwick et al. 2014: 294-5).

The SBE (*Service d'Éducation Bilingue*, 'Bilingual education service') offered in the area of Poitiers, too, comprises a set of measures carried out by different professionals, so as to ensure the appropriate development of the children catered for (Leroy 2005: 58):

L'éducation dans le Service d'Education Bilingue est le fruit d'un choix opéré par les parents: le choix d'une scolarité normale, à l'école publique et en langue des signes. Les objectifs de cette scolarité sont les mêmes que pour tous les enfants, objectifs fixés par l'Education Nationale. Il s'agit, dans une situation aisée de communication, de favoriser les apprentissages et d'ouvrir les enfants sur le monde. Chaque enfant sourd est accueilli dans la classe correspondant à son niveau, avec les enfants entendants, à la différence de IRIS et Laurent Clerc, où les enfants sont regroupés dans des classes LSF. L'élève sourd suit les mêmes enseignements que ces homologues entendants, auxquels s'ajoute un enseignement spécifique de langue des signes (renforcement, consolidation de la langue, celle-ci étant apprise la plupart du temps, en dehors de l'école, de façon naturelle, en communication avec des personnes signantes). Les 2 langues de la scolarité sont la langue des signes et le français écrit. La langue des signes reste la langue de communication et d'enseignement. Quant au français, langue de la société, accessible par les sourds dans sa modalité écrite, il est proposé très tôt pour devenir outil de communication et d'acquisition des connaissances. [Education in the Service d'Education Bilingue (Bilingual Service of Education) is the result of a choice made by the parents: they opt for a normal schooling in a state school and schooling in sign language. The objectives of this education are the same for all children, they are set by the National Curriculum. It is about furthering learning and making the children aware of the world around them in a normal communication situation. Each deaf child is integrated in a class corresponding to his/her level, together with hearing children, in contrast to IRIS and Laurent Clerc, where the children are put into LSF classes. The deaf child follows the same curriculum as his hearing counterparts, with additional teaching of sign language (reinforcement or consolidation of the language that is, most of the time, being learned outside school in a natural fashion, in communication with signing people). The 2 languages used in school are sign language and written French. Sign language remains the language of communication and of instruction. As to French, the language of society that is accessible to deaf people in its written form, it is offered very early so that it becomes a tool of communication and acquisition of knowledge.]

In most other programmes, however, for multiple reasons (among them the predominantly oralist orientation of medical advice upon diagnosis, and of early intervention programmes, the later enrolment of deaf students coming from oralist programmes and the unequal regional distribution of bilingual programmes), the requirement of an early exposure to sign language is often not met and deaf children reach the bilingual programme with little or no sign language competence at all.

Bilingual programmes are often established first as pilot programmes with a limited scope (in terms of the time available and the number of students catered for). Vercaingne-Ménard et al. (2005: 4) address the discrepancy between theory and practice regarding an early promotion of sign language in their report of the bilingual education programme established in Quebec, when they remark that the initial idea of beginning the programme at preschool was later rejected. Instead, the programme began with a first year primary education class, made up of students with quite different language backgrounds. As they put it (Vercaingne-Ménard et al. 2005: 4), “*le projet ne tablait pas sur une classe exceptionnelle et les élèves représentaient bien la réalité de la clientèle de l'école Gadbois.* [the project was not targeting an exceptional class, and its students' range of abilities was representative of the student population at the Gadbois school.]”

A similar situation obtained in the case of the first bilingual pilot programme at the Hamburg school for the deaf in Germany (Tollgrief 1999: 23). The second grade class, for example, included some of the students that had participated in the LBG-project (see section 2.4.2), and also a newcomer with no language skills at all. Another student with rudimentary skills joined the group at third grade primary education.

With regard to the bilingual programme established in Cossato (Italy), too, Volterra (2003: 12) notes that “... *molti di questi bambini entrano nella scuola con una competenza limitatissima sia nella lingua dei segni che nell'italiano rispetto alla loro età cronologica.* [... many of these children enter school with a very limited competence in sign language as well as in Italian with respect to their chronological age.]”

In some cases, deaf children reach the programmes at a later age with no language competence at all. Compare Leroy's (2005: 88) observation concerning one of the participants in a primary education class, where the IRIS service was providing a bilingual service: “*En effet lorsqu'elle est arrivée à IRIS, sa langue des signes était très pauvre, et à 10 ans, elle ne savait pas lire, comme le dit la responsable pédagogique il s'agit là d'un "travail de réparation"*”. [As a matter of fact, as she joined the IRIS program, her level of sign language was very low and, at the age of ten, she could not read; as pointed out by the teacher in charge, what needs to be done is ‘repair work’.]”

Cases like these continue to occur, because bilingual programmes cater also for deaf students that fail in oral programmes. It is clear that this practice, combined with the “repairing” myth of deaf education, is the product of a system that continues to regard the use of sign language as a last resort option, disregarding not only the knowledge that has been accumulated about sign language but also about first language acquisition and the sensitive period the successful unfolding of the language faculty is bound to.

A specific situation arises in interpreted education, where students attend regular classes in a mainstream school, supported by sign language interpreting. In this type of education, it is common to take the students' sign language competence for granted, with little effort put into the teaching of this language (the French bilingual service programme mentioned previously representing a remarkable exception). In practice, this means that many students are required to learn the language whilst using the language to learn, receiving language input from adult models who are mostly not native users of the language (Cokely 2005).

A different situation obtains in the case of deaf children native in sign language attending co-enrolment classes. In Vienna, for example, such a bilingual pilot class with deaf and hearing children taught by a deaf and a hearing teacher was established at a regular school. As remarked upon by Krausneker (2008: 216), a project of this type “would probably not have worked so smoothly with children whose linguistic development was delayed or whose language skills were insecure or weak”. A different approach is adopted in co-enrolment settings catering for deaf children without a sign language background, in which linguistic diversity of the students is taken into account. This is the case of co-enrolment in the four schools providing bilingual education in Madrid (Pérez Martín et al. 2014), the bilingual programmes established in Hong Kong (Tang 2014: 318), the Netherlands (Hermans et al. 2014) and Italy (Ardito et al. 2008).

Domains of language use. To attribute sign language the status of a primary or preferred language also raises the question about the domains of deaf children's sign language use. Although parents are encouraged to learn the language, and some programmes include the provision of sign language courses, the focus of research is generally limited to the institutional framework. Hence, the knowledge that can be gleaned from the available research offers only a limited insight into the multilingual lives of deaf students, their language acquisition and communication practices at home and in their leisure time.

As for the use of the language in the academic context, it is important to ensure that sign language is used as a language of instruction, as an academic language; this status needs to be

distinguished from the use of the language as a communication language on the school premises. The distinction is remarked upon in the interim report of the Hamburg bilingual programme by one of the (hearing) teachers involved (Wudtke 1999: 88). Wudtke's observations in (15) are interesting because they show that development and knowledge about the language was regarded as a dynamic process influenced by the functional dimensions of its use in the academic context.

- (15) *Die Zukunft der Gebärdensprache liegt nicht allein im Alltagsgespräch, der Einsatz in schulische Bildungsprozesse wird sie selbst dynamisieren, ihre Potentialität bei der Wort-, Idiom- und Begriffsbildung steigern, die Gebärdensprache muss gerade auch als sprachliches Medium anspruchsvoller Diskurse gesehen werden. Sie ist nicht nur Notbehelf wie etwa bei mehrfachbehinderten Heranwachsenden, sie kann gerade auch Medium der Höherbildung und selbstreflexiven Vergewisserung in der Gehörlosenkultur sein.* [The future of sign language will not just lie in everyday communication; its application in educational processes is going to revitalise it and boost its own potential of creating words, idioms and concepts. Sign language has to be especially considered as a communication means in sophisticated discourses. Sign language does not only constitute a makeshift, as in the case of adolescents with multiple disabilities, but is particularly a means for higher education and self-reflexive awareness in deaf culture.]

As for the use of the language in regular classrooms with deaf and hearing children, including the presence of an interpreter and a deaf educator (as is the case in the bilingual programme offered in Cossato, Italy) Celso (2003: 34) distinguishes the use of sign language in direct communication and a “filtered” use of the language, whereby the latter would be characteristic of the language produced in interpreted situations. Further, he notes that in class the academic register is typically used when the topics centre on academic contents such as mathematics, grammar, or geography (Celso 2003: 35).

In this context, it is interesting to note that the 1994 Swedish national curriculum specifically addresses the relevance of the skills needed in communication situations involving sign language interpreters, both in terms of the development of linguistic repertoires and metalinguistic awareness about the impact of interpretation on social interaction (Hult & Compton 2012).

3.2.1.2 Spoken language and written language

Status and timing of promotion. The oral language has commonly been attributed the status of a *second language* (L2) in sign bilingual education programmes (Bagga-Gupta 2004; Günther 1999b; Günther et al. 2004; Krausneker 2008; Vercaingne-Ménard et al. 2005; Yang 2008). Upon closer scrutiny, it becomes apparent that variables concerning oral language promotion, such as the time of exposure (simultaneous to sign language exposure or at a later age) or the emphasis on written language vs. the spoken language reflect (a) different conceptions of the relationship between the languages, (b) different theories about the acquisition of literacy, and (c) different views about the promotion of the spoken language as an educational goal.

With respect to the promotion of the oral language, two approaches can be distinguished, namely, (a) the promotion of sign language skills before oral language skills vs. (b) the parallel promotion of the languages early on. Arguments in favour of one or the other model are, in part, similar to the ones put forward with respect to bilingual education of hearing students. In the realm of sign bilingualism, however, additional factors come into play related to the circumstance that deaf children have no or only a limited access to the spoken

language, on the one hand, and seldom reach educational institutions with sign language skills, on the other hand.

It is important in this context to acknowledge that the issue of the timing of exposure to the spoken language at the level of educational intervention pertains to the timing of a *structured* introduction to the spoken language. This needs to be distinguished from a general introduction to spoken language “dictated more by the individual child's experiences than by a specific decision by a teacher” as that the majority of children grow up in a hearing environment (Knight & Swanwick 2002: 37).

The primary promotion of sign language occurs, at times, to the exclusion of exposure to the oral language during the early years. Until recently, the promotion of the written language in the bilingual model adopted in Sweden began at age seven (with the beginning of primary education). Notice that the successive model implemented in Sweden most closely adheres to Cummins' idea (1991) of a strong L1 being the best foundation for the learning of the L2 (commonly referred to as the Interdependence Hypothesis, see section 4.3.2.2). Indeed, according to Svartholm (1993: 324), whose line of argumentation is based on this theory, the L2 written language deaf children learn is a context-reduced language, which, according to this author, has no meaning for the child before she “has attained the cognitive maturity the task demands”. Recently, however, the model adopted in the country has changed (Swanwick et al. 2014: 298) from a focus on the written language to a broader concept including spoken language.

The simultaneous model, adopted in the bilingual programmes established in Hamburg, Berlin, Madrid and Montréal, is based on the idea that children should profit from their residual hearing from the beginning. Commonly, the promotion of the spoken language is broader in scope than in aural approaches in that it is not only limited to the fostering of speech/audition, but conceives of spoken language attainment as a process embedded in the students' bilingual development (Günther et al. 1999: 86). One of the main tenets of the educational philosophy adopted in the bilingual programmes in Hamburg and Berlin is that because the two languages do not develop at parity, sign language assumes the role of a base language. Indeed, Günther (1999b: 24) assumes that “... *sich die Gebärdensprache schneller und differenzierter entwickelt und dadurch die schwächere Verbalsprache quasi mitzieht, ohne daß sich kontraproduktive Interferenzen zeigen.* [...] sign language develops faster and in a more differentiated manner, pulling along the weaker oral language without counterproductive interferences.” The bilingual approach thus accounts for the asynchrony in the development of the two languages, the developmental delay of the oral language being compensated by the more advanced sign language as a base system (Günther 1999c: 101).

In addition to this developmental argument, the equal status of the two languages is regarded as a requisite to comply with the goal of providing educational excellence, compare Krausmann's (2004b: 13) statements in this respect:

Das Konzept zur bilingualen Erziehung gehörloser Schüler formuliert als Konsequenz aus den Einschränkungen, die eine hochgradige Hörschädigung für die Betroffenen mit sich bringt, dass beide Sprachen in den Bildungs- und Erziehungsprozess gehörloser Kinder gleichberechtigt einbezogen werden müssen, um eine kognitiv anspruchsvolle Bildung zu ermöglichen. [In consequence of the limitations imposed by a severe hearing impairment in the individuals affected the concept of bilingual education in deaf children claims that the two languages be integrated in the educational process on an equal footing in order to make a cognitively sophisticated education possible.]

Promotion of spoken language and written language. Sign bilingual education conceptions, as opposed to traditional oralist approaches, have commonly emphasised the promotion of the written language because of its full visual accessibility. From a developmental perspective, many programmes concur in that written language is given prominence over spoken language

(the case of the Quebec bilingual programme, cf. Vercaingne-Ménard et al. 2005, bilingual deaf education in Sweden, cf. Svartholm 1993, Bagga-Gupta 2004: 135-6, the bilingual education service in France, cf. Leroy 2005, 2010, and the programmes in Hamburg and Berlin, cf. Günther & Hennies 2011, Günther 2004: 86). In a more individually oriented model, the status attributed to the oral language depends on the individual characteristics and needs of the students. Speech/hearing therapy and promotion of spoken language development would be provided on an individual basis, outside regular classroom teaching, in accordance with the students' abilities. This practice was adopted in Sweden, where the training of speech skills “is kept apart from other parts of teaching, such as reading texts in the classroom for the purpose of mastering their contents” (Svartholm 1993: 299, Bagga-Gupta 2004: 136). As Svartholm (2002: 1) explains, in the Swedish model the promotion of the L2 oral language is conceived of as a “‘silent’ second language, i.e. without taking speech into account for developing reading skills but using their first language, Swedish Sign Language”.

Variation concerning the weighting of the written and the spoken language is intimately bound to conceptions of written language acquisition, on the one hand, and socio-political expectations, on the other hand. Many educational professionals in bilingual education programmes have been confronted with the ethical dilemma of how to deal with the political pressure to deliver good results in the mastery of the spoken language, on the one hand, and their knowledge about deaf students' sensory limitations and related efforts in learning the spoken language, on the other hand (Tellings 1995: 121). Current developments regarding deaf children's improved opportunities to attain the spoken language have reduced the pressure on professionals related to this dilemma.

Mugnier (2006: 147) summarises the relevant views, highlighting the ambivalent position of deaf individuals with respect to this issue:

Ainsi, la question de savoir si l'enseignement de la langue nationale inclut – en plus de la lecture et de la production écrite – un entraînement de l'utilisation du reste de l'audition, un enseignement de la lecture labiale et de l'articulation reste une source de débats dans lesquelles la question de l'identité sourde résonne fortement. De ces débats en découle un autre, celui de la problématique de l'acquisition de la lecture où s'opposent deux positions, l'une privilégiant la voie phonologique, la seconde s'appuyant sur la voie idéographique. [So, the question as to whether the teaching of the national language includes – in addition to reading and written production – training in the use of residual hearing, a teaching in lipreading and articulation remains a source of discussions in which the question of the deaf identity weighs heavily. From these discussions follows another about the issue of reading acquisition where two approaches confront each other, the one favouring the phonological route, the other one being based on the ideographic route.]

Scholars in Germany have favoured another, more holistic view of language development. Promotion of written *and* spoken language skills is assumed to constitute a requisite to fulfil the core education goal of preparing students for their adult life in the hearing and the deaf worlds (Krausmann 2004b: 17); good speech-reading skills and vocabulary are regarded as an asset for the students' later professional lives. According to Günther (1999b: 23), the aim of uniting the oral/aural and sign language opportunities in one concept are in line with a holistic view of the development of deaf individuals' personality over the whole lifespan.

Activities aimed at enhancing the children's awareness of the meaning of the written language are a fundamental component of some preschool programmes offered in special schools (Rodríguez 2003: 3) or in bilingual classes at regular educational settings (Ardito et al. 2008). The bilingual conception of the Berlin programme, for example, emphasises the primary promotion of the written language based on (a) the full accessibility of print and (b) the relative autonomy of the written language, which implies that the acoustic perception of the language is not regarded as a requirement for its acquisition (Krausmann 2004b: 14-15).

In other words, the assumption is that written language can be acquired independently from the spoken language (Krausmann 2004b: 15; for a discussion of the different hypotheses see Plaza-Pust 2016, section 2.4.2). The relevance of the written language is not only emphasised with respect to deaf children's literary and academic development, but also as a medium of communication with the hearing society, and hence, as an important requisite for integration and participation in society (Krausmann 2004b: 17).

Teacher qualifications and materials. As for the teaching of the oral language as a second language, conceptions are commonly based on those available for the teaching of the oral language as an L2 to hearing students. This practice implies that the cross-modal component of sign bilingualism is not taken into consideration in the materials available. For the contrastive teaching of the two language teachers are usually confronted with the task of devising their own teaching materials.

The promotion of speech and hearing skills usually involves the engagement of specialists other than the regular teachers, as for example, speech therapists and educational audiologists. Programmes vary as to not only whether this work is carried out by these specialists or is rather done by the hearing teacher, but also as to whether these specialists are present in the classroom during regular classes, or work with the children separately outside the regular classroom. An interesting situation obtains in secondary education provided in Madrid (Spain) as speech therapists assuming the role of support teachers are often competent in sign language and regarded by their students as a preferable figure in the classroom than that of the interpreter (Morales-López 2008).

The impact of changes in hearing aid technology. The status attributed to the spoken language in sign bilingual education has been affected by the increasing sophistication of technology, in particular, in the form of cochlear implants (CIs) (Knoors 2006). As more and more cochlear-implanted children attend bilingual programmes, a trend that reflects the overall increasing provision of deaf children with these devices, bilingual conceptions of the promotion and use of the spoken language need to be redefined to do justice to the linguistic abilities and needs of these children. A possible response to the increasing heterogeneity of the students population regarding their accessibility and use of the spoken language is the conception of more flexible, that is individually oriented, conceptions that would define the L1 and L2 labels (or what is considered to be the preferred language) in accord with the individual student's abilities and needs (Knight & Swanwick 2002: 115).

3.2.2 Curriculum languages: Language choice and language planning in the classroom

One crucial variable in bilingual education pertains to the choice of the main language(s) of instruction. Variation in this respect reflects not only the status attributed to the languages, but also different conceptions about the specific circumstances that determine bilingual language acquisition in deaf children, favouring a parallel or a successive promotion of the languages. Variation is also tied to the respective set-up of the teaching/learning situation of the educational placement chosen (cf. section 3.2.3). Consider the elaborate type of “linguistic planning” required for team-teaching in a co-enrolment setting (Pérez Martín et al. 2014: 376) vis-à-vis the choice of sign language as a medium of instruction in interpreted education.

Only in few bilingual education programmes all curriculum subjects are taught in sign language. This was the case of the bilingual education model adopted until recently in Sweden and one of the bilingual programmes established in France, namely, the one in Toulouse (IRIS) (Leroy 2005: 73). In Sweden, there is one national curriculum with a supplementary curriculum for special schools (Svartholm 1993: 299, Hult & Compton 2012). Swedish and Swedish Sign language are recognised as languages of instruction. The training of speech skills is required to take place separately; it is promoted on an individual basis.

3.2.2.1 Team teaching (one person–one language)

In some other programmes, the languages are not strictly allocated by subject but are used alternatively in classes taught by deaf and hearing teachers in collaboration. This method was applied in the Quebec programme, particularly in the language lessons (Quebec Sign Language, LSQ, and French) as the political mandate for the project was oriented towards a bilingual concept for the teaching of French and LSQ (Vercaingne-Ménard et al. 2005: 4, fn 1).¹⁴ The Hamburg and Berlin programmes were footed on a conception characterised by a *continuous bilinguality* in the classroom (cf. Günther 1999a). One central component of this conception is the bilingual team-teaching of a hearing and a deaf teacher based on the one-person-one language principle assumed to contribute to a separate development of two languages in a bilingual acquisition situation. Particularly during the initial phases of the bilingual development, the person-related use of the languages may serve as an additional cue to differentiate the two codes (Vercaingne-Ménard et al. 2005). In addition, the functional distribution of the languages is meant to enhance the students' awareness about an appropriate language choice (cf. Krausmann 2004b: 13, cf. also Pérez Martín et al. 2014):

Durch die Zuordnung der beiden Sprachen zu verschiedenen Personen wird ihnen deutlich, dass es sich um zwei verschiedene Sprachsysteme handelt. Sie lernen dabei, in der Interaktion je nach Adressat die eine oder andere Sprache zu benutzen und entwickeln so ihre Fähigkeit zu einem situations- oder personenbezogenen Code-switching: Sie wählen in der Regel DGS, wenn sie mit Gehörlosen kommunizieren und Deutsch mit Unterstützung von LBG oder bei entsprechenden individuellen Voraussetzungen nur gesprochene Lautsprache, wenn sie mit Hörenden kommunizieren. Daneben besteht selbstverständlich die Möglichkeit, mit entsprechend kompetenten Hörenden auch in DGS zu kommunizieren. [By assigning the two languages to two different persons, they understand that these are two different linguistic systems. This helps them in their interaction to learn how to use one or the other language according to the addressee and develop the skill of situation and person-related code-switching. They usually choose DGS when communicating with deaf people, and German, supported by LBG or, depending on the individual circumstances, just spoken communication when communicating with hearing people. Alternatively, there is, of course, also the possibility to communicate in DGS with sufficiently competent hearing people.]

For the professionals involved, team teaching imposes some additional tasks that need to be tackled. Tollgref and Schwarz (1999: 60), for example, remark that

[i]m Team zu unterrichten, bedeutet, gut vorbereitet zu sein, aufeinander zu achten, gleichberechtigt vor die Klasse zu treten und partnerschaftlich miteinander umzugehen, um den SchülerInnen ein positives Vorbild zu geben. Das ist nicht immer leicht, auch deshalb nicht, weil wenig Teamzeit zur Verfügung steht (...). [Team teaching means to be well prepared, to respect each other, to teach the class as equals and to cooperate with one another, so as to give a good example to the students. That is not always easy, the more so because there is little time set aside for team meetings.]

Antia and Metz (2014: 436) coincide with these observations when they remark that teachers are confronted with the challenge of (a) giving up some of their autonomy as they have to work in a team and regard each other as equals, (b) additional time needed to plan classes in collaboration, and (c) learning sign language (by the hearing teachers).

Despite the benefits attributed to team-teaching, this method is seldom used in the teaching of the whole syllabus. In the Hamburg programme, for example, team-teaching covered 8 hours a week, which amounts to one third of the total teaching load (cf. Günther

¹⁴ That deaf teacher would also use LSQ in other classes can be gleaned from the indication (in a footnote) that the deaf teacher was present in the mathematics classes. However, the authors of the final report do not provide any further information because, as they remark, this was not part of the mandate for the bilingual programme.

1999a: 12, 22); in the Berlin programme it covered 15 hours a week (cf. Krausmann 2004b: 25). The distribution of the languages at the Berlin programme, as described in one of the school reports, is summarised in Table 3.2 (Krausmann 2004b: 25).

Table 3.2: Distribution of languages on the curriculum at the Berlin bilingual programme.

<i>Hours</i>	<i>Subjects</i>	<i>Languages</i>	<i>Teachers</i>
15	bilingual language and content teaching	DGS, German with LBG	team teaching hours (class teacher and deaf teacher)
3	sports, swimming	DGS	deaf teacher
9	mathematics, religion, rhythmic/music, arts	German with LBG	hearing teachers

It is interesting to note that the unequal distribution of hours taught in either language is the result of a compensatory factor. Krausmann's (2004b: 25-26) observations reveal that the 40 to 60 percent ratio of DGS vs. German input aims at compensating the limited access to the spoken language:

Die Gewichtung von etwa 40% Basissprache DGS zu etwa 60% Zielsprache Deutsch zeigt, dass ein möglichst gleichwertiges Verhältnis der beiden Sprachen im bilingualen Schulversuch erreicht wird. Das vorhandene Übergewicht von Deutsch rechtfertigt sich aus der Tatsache, dass Deutsch als Zielsprache den Schülern nur mehr oder weniger eingeschränkt zugänglich ist und sie deshalb auch mehr Zeit für den Erwerb der geschriebenen und in verstärktem Maße der gesprochenen Form des Deutschen aufwenden müssen. [The ratio of 40% base language DGS to 60% target language German in the bilingual educational pilot project shows a balanced distribution of both languages. The predominance of German is justified by the fact that German as a target language is more or less of only limited accessibility to the students which means they have to spend more time on mastering written and, even more so, spoken German.]

What is remarkable about the bilingual conception implemented is that the teaching of the language and the teaching of content are explicitly separated (Krausmann 2004b: 15):

Bilingualer Unterricht reduziert diese Doppelfunktion der Lautsprache zunächst auf die Zieldimension - den Erwerb möglichst weitgehender Deutschkompetenz - und entlastet so die inhaltliche Arbeit von kommunikativen Einschränkungen. Die Gebärdensprache wird anfangs vorrangig als Medium zur ökonomischen Vermittlung altersentsprechend komplexer Inhalte genutzt. [Bilingual teaching first brings down this dual function of oral language onto the level of the target dimension – the acquisition of German as best as possible – thus relieving content work of communicative limitations. Sign language is predominantly used at the beginning as a means of teaching complex age-specific content in an economical way.]

Further, students were initially not obliged to use the spoken language, but were allowed to choose their preferred language, to promote its development, following the tenet that (Krausmann 2004b: 28) “[e]ine Sprache kann dann möglichst schnell und vollständig erworben werden, wenn sie ungehindert und selbstverständlich benutzt werden darf. [A language may be acquired rather swiftly and comprehensively on condition that the learners are allowed to use it naturally and without restraint.]” In their description of language learning activities in the context of the co-enrolment model adopted in four schools in Madrid, Pérez Martín et al. (2014: 375) remark how the hearing co-tutors fluent in sign language take responsibility of the use of Spanish Sign Language (LSE). Following the one person-one

language principle, sign language and spoken language are associated with the respective professional.

This interaction stimulates conversations, hypothesis testing, and exchanges of opinions where the students engage in negotiating the content of classroom discussion (...) This means that children are learning the language by practically interacting with each other, which resembles the natural processes of language acquisition. This practice means that teachers must pay attention to what activities they are using to promote language learning.

What is remarkable of the linguistic planning process described is that it is tailored to the individual needs of each child. It is not “the same across all activities and contexts; instead, it needs to be planned depending on the skills of each child in each classroom group” (Pérez Martín et al. 2014: 376).

Some of the strategies used to link language learning activities with the work on content matter, such as the one described by Krausmann (2004b: 29), are reminiscent of those used in the foreign language classroom; for example, not all errors are corrected, but selectively those that are relevant for the overall theme treated during the lesson. Some errors that occur persistently are worked upon separately, during the speech/hearing training hours. It is noted, however, that this procedure needs a careful monitoring on the side of the teachers so as not to disrupt the communicative and content activities of the class (Krausmann 2004b: 29):

Dieses Vorgehen impliziert aber, dass weiterhin strikt darauf geachtet wird, die kommunikative Interaktion an sich und den sachlichen Gehalt der entsprechenden Unterrichtssequenz nicht unnötig durch wiederholtes Üben zu belasten oder gar zu zerstören - ein Muster, was im traditionellen Unterricht an der Gehörlosenschule häufig vorkam und zu Recht kritisiert wurde. [This procedure implies taking care that neither the communicative interaction as such nor the content of the teaching sequence are unnecessarily burdened or even destroyed through repetitive exercising – a pattern that used to be common at the deaf school that has been justly criticised.]

Finally, at times, the original conception concerning the allocation of the languages is changed. This was the case of the bilingual programme established in Madrid at the *Instituto Hispanoamericano de la Palabra*, where the original practice consisted of the teaching of the whole curriculum in both languages, through the team-teaching method. In the course of the first experimental year, however, it was realised that sign language developed much faster and that the aim of providing all content in parallel was difficult. Hence, it was decided to attribute sign language the status of the base language used in communicative interactions and for the learning of content. The teaching of the oral language was conceived of in terms of a second language, with a more systematic approach, and greater focus on vocabulary and form (Rodríguez 2003: 4).

3.2.2.2 Simultaneous communication

Although “puristic” bilingual conceptions would only consider the use of sign language and written language, additional codes are generally used for the teaching of the oral language. Cued Speech, for example, was used in the training of speech skills in the Madrid bilingual school mentioned previously. The use of fingerspelling, signed German and Cued Speech are also listed in the conception of the Hamburg programme (Günther 1999a: 13). In the interim report of the Hamburg experience, Poppendieker (1999: 56-57) explains how terminology and activities in the mathematics classes were mastered using DGS (as a base language) but also with an increasing use of written language exercises. The use of signed German (LBG) is not explicitly mentioned in the definition of what is referred to as continuous bilinguality in the classroom, but it is clearly the communication medium of the hearing teachers, as is

documented in the Hamburg and Berlin reports (Krausmann 2004b: 13; Günther et al. 1999), and I had the chance to observe at the programme in Berlin. In their report of their team teaching at the Hamburg programme, Tollgref and Schwarz (1999: 59) describe the planning of individual classes, whereby “[f]ür die konkrete bilinguale Unterrichtssituation wird jeweils in Vorgesprächen geklärt, welcher Teil der Unterrichtseinheit in DGS, welcher in LBG und an welcher Stelle Laut- und Schriftsprachiübungen vorgesehen sind. [In preliminary talks about the concrete bilingual lesson it is determined which part of the teaching unit is going to be in DGS, which in LBG and at what point there will be spoken or written language exercises.]” The authors describe their work with written language materials used for the teaching of different subjects. They note that work with these texts required careful preparation, including translation into DGS (which often represented a challenge at the level of terminology). Beginning with a “reading in DGS”, the texts are subsequently read aloud with the help of LGB (Tollgref & Schwarz 1999: 59).

3.2.2.3 Sign language as a separate subject

Another issue that varies is the inclusion of sign language as a separate subject in the curriculum, as it was the case in the Hamburg and Berlin bilingual programmes (Günther 1999a: 12; Günther & Hennies 2011). Celo (2003: 35), the LIS specialist engaged at the bilingual programme established in Cossato (Italy), remarks on the relevance of promoting deaf students' knowledge of sign language, its grammar and pragmatic dimensions also to enhance their metalinguistic awareness of the language. Interestingly, Celo, also remarks on the children's exposure to different dialects of sign language (given the different regional background of the specialists using the language in the project). As for the syllabus for the teaching of sign language, it must be noted that it is not always readily available (in Berlin it was developed during the time covered by the pilot bilingual programme, cf. Bauermann et al. 2011).

3.2.2.4 Language contacts in the classroom and the promotion of metalinguistic skills

One salient characteristic of communication in the *sign bilingual classroom* is that it involves several languages and codes. As Knight and Swanwick (2002: 24) put it “[t]he challenge facing all teachers of the deaf working in these situations is how and when to use each language and, more importantly, how to manage this within the wide variety of education settings in which they are working”.

While “language use in classrooms for deaf children is a complex, controversial, and poorly understood phenomenon” (Ramsey & Padden 1998: 7), studies conducted on communication practices in the classroom show that (a) language contact is used as a pedagogical tool, (b) teachers (deaf and hearing) and students creatively use their linguistic resources in dynamic communication situations, and (c) students learn to reflect about language, its structure and use.

Typically, the activities aimed at enhancing the associations between the languages involve their alternative use, often in combination with elements of other supportive codes, as is the case of teaching techniques that are commonly referred to as *chaining* (Humphries & MacDougall 2000), where written, fingerspelled and spoken/mouthed items with the same referent follow each other (hence the notion of chaining), as is illustrated in example (16) (from Humphries & MacDougall 2000: 90).

- (16) (VOLCANO) (V-O-L-C-A-N-O) ('volcano') (point) (V-O-L-C-A-N-O)
 initialized sign + fingerspelling + printed word + pointing to word + fingerspelling

During text comprehension and production activities, teachers and students move between the languages. For example, it has been observed that teachers provide scaffolding through sign language during reading activities, including explanations about the areas of contrast between oral language and sign language (Baldwin 1997: 12, 14). Bagga-Gupta (2004: 184) describes chaining of the two languages in a simultaneous or synchronised manner, for example, by periodically switching between the two languages or “visually reading” (signing) a text. Mugnier (2006) analyses the dynamics of bilingual communication (in LSF and French) during text comprehension activities in classes taught by a hearing or a deaf teacher. LSF and French were used by the children in both situations. However, while the deaf teacher validated the children's responses in either language, the hearing teacher only confirmed the correctness of the spoken ones. Only in the former situation did teacher-student exchanges include metalinguistic reflection about the differences between both languages. This aspect is missing in the communication with the hearing teacher, in which it was occasionally observed how the students, among themselves, engaged in a parallel exchange, with no participation on the side of the teacher. Millet and Mugnier (2004: 14) conclude that students do not profit from their incipient bilingualism by the simple juxtaposed presence of the languages in the classroom, but benefit where language alternation is a component of the didactic approach adopted.

The dynamics of bilingual communication in the classroom also has a cultural component. As pointed out by Ramsey and Padden (1998: 7), “a great deal of information about the cultural task of knowing both ASL and English and using each language in juxtaposition to the other is embedded in classroom discourse, in routine 'teacher talk' and in discussions”. The teachers' behaviour will be determined not only by their linguistic background and their training, but also by the type of setting in which they are working (Humphries & MacDougall 2000: 92).

The situation is different in interpreted education where, as remarked upon by Ramsey (2004: 222) the interpreter serves as a language “medium” not a “model”. Students in interpreted education often lack the opportunity to develop one important component of bilingualism, namely the awareness of their own bilinguality and the knowledge about the contrasting properties between the languages, because sign language is hardly ever included as a subject in the curriculum (Morales-López 2008). However, knowledge about special language registers and academic language would seem to be a requirement where students are expected to cope with a “bilingual” situation in which, on the one hand, sign language is used as a means of communication, but on the other hand, the teaching/learning of academic content is based on materials devised in the written language.

A different situation obtains in the case of co-enrolment classes, in which deaf and hearing children are taught together, as classroom communication is characterised by a continuous bilinguality. Ardito et al. (2008) and Krausneker (2008) describe the language practices in such contexts for preschool programme in Italy and a primary education class in Austria, respectively. A positive effect of this type of education is that deaf and hearing children learn to respect the linguistic needs and abilities of each other. Krausneker (2008: 212), for example, describes a situation in which a hearing child explains to her why the interpreter is in the classroom (“because Melanie and Doris [Deaf pupils] are here and they can't understand Brigitte [hearing teacher] so well and therefore Sabine [the interpreter] is here”). Krausneker (2008: 212) enquired further why the deaf students did not understand the hearing teacher so well, to which the hearing child responded “Brigitte can't sign so well”. Ardito et al.'s (2008) description of the constant code-switching also provides an insight into how deaf and hearing children are immersed in a bilingual situation, in which they learn about the pragmatic dimensions of language choice.

3.2.3 Educational placements and the concept of inclusion

One important variable in deaf education concerns the type of institutional framework in which bilingual education is offered. Several options are available within and without the bounds of special schools, ranging from special schools with a sign bilingual education policy to the provision of interpreted education on an individual basis at a regular school, with intermediate options such as the provision of bilingual classes at schools for the deaf or units for deaf students in the mainstream.

3.2.3.1 Special schools

Special schools defining themselves as clearly bilingual aim at providing a comprehensive framework for the bilingual/bicultural education of deaf students. The bilingual policy of the school is reflected in the commitment of the staff (including deaf and hearing teachers) to the bilingual idea, the promotion of deaf children's deaf identity and socialisation. This goal was pursued at the *Instituto Hispanoamericano de la Palabra*, a bilingual primary school for the deaf located in Madrid (Rodríguez 2003: 1). In 2007, however, the staff decided to pursue a more inclusive model, which resulted in the establishment of an inclusive school in 2009, where deaf and hearing children are taught together (Rodríguez 2009: 2). In the Netherlands, bilingual-bicultural education was established in the 1990s in special schools. Since then, however, the policy adopted has changed, and inclusion is also regarded as favourable to segregation (Hermans et al. 2014: 396).

The type of *segregated* bilingual education was also chosen in Scandinavian countries. In Sweden, Denmark and Norway the implementation of sign bilingual education occurred mainly in the context of special schools, which is interpreted by Swanwick et al. (2014: 298) as “probably the only way to implement the reform at that time”. In Sweden, bilingual education is offered at six regional state schools for the deaf and hard-of-hearing (Bagga-Gupta & Domfors 2003: 75; Swanwick et al. 2014: 298). In addition, eight mainstream schools are equipped to cater also for deaf students, including also the teaching of sign language as a subject for hearing students, a set-up that is reminiscent of other co-enrolment programmes.

Swanwick et al. (2014: 298) describe the model adopted in the Nordic schools as “sign-language islands”. This contrasts with the approach adopted in many special schools for the deaf in other countries where bilingual programmes represent one educational option among others, offered at the premises of one and the same school. This is the case of many pilot bilingual programmes. These programmes, run for a limited period of time only, often constitute individual *classes*. Their “island character” is remarked upon by Möbius (2011: 159), the headmaster of the Berlin school for the deaf, who highlights, on the one hand, how special resources were available for the teaching of this class (at the level of staff, for example, two teachers were engaged in team teaching), and, on the other hand, that teachers and students had to cope with the additional pressure imposed by the public and academic interest in the experimentation. In addition, such educational experimentations are often regarded with suspicion by the surrounding staff.

In some cases, the temporary educational approach is integrated as an option among others. For example, in 2003, the management of the Hamburg school for the deaf agreed, upon the local administration's consent, that the bilingual approach be implemented as one of the two models of education pursued in that institution. The decision was taken after the end of the pilot programme mentioned previously. The Berlin school, in turn, envisages an “open bilingual” concept in its new school programme, with a view to tailoring their offer to the individual needs and abilities of the students (Möbius 2011: 166).

3.2.3.2 *Bilingual education in the mainstream*

Bilingual education in the mainstream also comprises several options, including co-enrolment classes with deaf and hearing students, units of deaf students and interpreted education in regular classrooms. In the first and the third type, deaf and hearing children are taught in the same classroom. The unit model caters for deaf children in separate classes at regular schools, where specialist staff teach them (Knight & Swanwick 1999: 125). For some curricular areas, deaf children might be integrated into mainstream classes.

Particularly in the USA, a widespread alternative to bilingual education in special schools or self-contained classrooms (or units) at regular schools is the provision of sign language interpreters in regular classrooms. Interpreted education is also provided in Spain, particularly in secondary education. In this country, the transition from primary to secondary education involves a change of institution, and often a change of the bilingual method used, as team-teaching, used throughout primary education in some bilingual programmes, is not available in secondary education (Morales-López 2008).

Co-enrolment classes as, for example, the one established at a regular school in Vienna, where hearing and deaf children were taught by a deaf and a hearing teacher, have been found to work well, but often remain temporary education experiences (cf. also de Courcy 2005 for an experimental programme in Australia). The reasons for their temporal limitation are diverse, including the small number of deaf children native in sign language, or the limited time of the political mandate. A different situation obtains in Spain, where bilingual education and co-enrolment have been related since the turn toward integration in the 1980s. As Pérez Martín et al. (2014: 370) explain, special schools opened their doors to hearing students, so that “the same buildings that were used previously by deaf children now housed units for co-enrolment of hearing and deaf pupils together, which generated a more diverse and rich educational context”.

Since the 1970s, integration, in terms of schooling within the bounds of a regular school, has been increasingly regarded as preferable to segregation (cf. Lane et al. 1996) not only in many Western countries (Monaghan 2003) but also in countries such as Japan (Nakamura 2003: 211), with the effect that many special schools have been closed in recent years. In the USA, the trend initiated through Public Law 94-142 (1975) requiring that education should take place in the *least restrictive environment* for all handicapped children has resulted in more than 75% of deaf children being educated in the mainstream (Marschark et al. 2005: 57) (compare with the 80% of deaf children being educated in residential schools before the 1960s in that country, cf. Monaghan 2003: 14). A similar situation can be observed in many other countries, for instance, in the UK, where only a minority of deaf children are educated in special schools (8% according to Swanwick & Gregory 2007: 14; Swanwick et al. 2014 remark on more than 80% of the student population being educated in the mainstream). Moores and Martin (2006: 3) note, though, that in the USA, this type of education was already increasingly offered shortly after World War II as the number of children, including deaf children, increased and the establishment of separate classes in regular schools was favoured to the building of further residential schools. Hence, financial factors also play a part in the decision-making processes concerning the choice of educational placements.

In Spain, too, mainstreaming is the most widespread type of education whereby deaf students attend regular schools supported by teachers for children with special educational needs and speech therapists, in an oral communication environment (Pérez Martín et al. 2014: 370). According to Gras (2006: 236), about 7 % of the educational institutions catering deaf students are special schools. Following the 1982 bill (Ley 13/1982 de 7 de abril de Integración del Minusválido (LISMI)) stipulating the integration of students with disabilities in regular schools, and that they be attended by a multidisciplinary team, special schools for the deaf were closed (with a few exceptions) or recategorised as regular schools (Gras 2006: 237). Gras (2006: 238) highlights the paradoxical situation that arose as speech therapists

assumed a compensatory function owing to a lack of resources necessary for the real integration of deaf students in such settings:

De esta forma, nos hallamos ante la paradoja de un sistema que pretendía ser normalizador, entendiendo esta noción como una forma de que el alumno sordo tuviera la oportunidad de socializarse con el resto de los alumnos oyentes mediante el contacto diario, y termina siendo una barrera para el alumno puesto que no existen los recursos suficientes para que pueda acceder al currículo base con “normalidad”; es decir, a través de un sistema de comunicación accesible para él. [In this manner, we find ourselves in front of the paradox of a system that pretends to be normalising, understanding this notion as a form in which the deaf student would find the opportunity to socialise with the rest of the hearing students during daily contact, and ends up being a barrier for the student since there are no sufficient means that would enable him to have access to the basic curriculum in a “normal” way; that is to say, through a system of communication accessible to him.]

Pérez Martín et al. (2014: 369) also remark on this discrepancy in their description of the efforts made by the administration regarding teacher training measures and the provision of educational placements catering for deaf students. They explain (Pérez Martín et al. 2014: 369) that schools selected as “special mainstream sites” pursued two main objectives, namely, “(1) the focusing of teaching resources (materials and personnel) in these schools and (2) the grouping together of deaf children with hearing children to promote social interaction and to avoid social isolation”. Further, they recount that signed Spanish was to be used as a communication means between teachers, parents and students, and cued speech to enhance the students’ phonological skills (Pérez Martín et al. 2014: 369). However, at the level of practice, language choice was ultimately determined by the aim of catering for the majority of hearing students with the effect that deaf students (a) used visual means of communication only in separate groups within or without the classroom, and (b) attended classrooms in which spoken language was available but not accessible to them.

In Italy, the figure of the support teacher (*assistente alla comunicazione*) was introduced as of the end of the 1990s in classrooms with deaf students in some regions following parents' initiatives. The role of this professional is to improve the communication between the teacher and the deaf student (Volterra 2003: 10). According to Volterra (2003: 10), this type of education often leaves the deaf child alone, except for those individual cases where deaf children are grouped in a classroom, with the effect that they receive more attention by their teachers and hearing peers. An exceptional case to this situation is the experimental programme at the Cossato school, where deaf and hearing children were taught together at an integration school (Volterra 2003: 11).

In the European context, Germany stands out, together with Belgium, The Netherlands and Switzerland by pursuing a two track approach, where segregation of students with special education continues to predominate (cf. also Boban & Hinz 2009: 57). In a comparison of approaches implemented in European countries, the European Agency for Special Needs Education (2003) distinguishes three types, namely,

- one-track approach:
education of all students with special education needs at the regular school
- multi-track approach:
multi-layered system, with different forms of integrative pedagogy
- two-track approach:
two separate education systems, segregated education for students with special education needs being the rule

In Germany, unlike in other countries, mainstreaming as an option was brought to the fore by parents' initiatives (Große 2001: 173-4). This meant a challenge to the traditional approach of

an *indirect* integration (aiming, roughly, at *social* integration via *educational* segregation). Today, mainstreaming (termed *gemeinsamer Unterricht* in German) as an educational option is regulated in the legislations of several Federal States. Although proportions of deaf students attending regular schools have raised, integration continues to be the exception for deaf children in this country (Leonhardt 2009: 182).

3.2.3.3 Variation in educational placements: Special needs vis-à-vis equity of access

Variation concerning the institutional framework of bilingual education is not only tied to the critical question of where deaf children may obtain the highest quality education (cf. Lane et al. 1996). Variation in educational placements catering for deaf students also reflects changes in the conception of disability that are in turn reflected in conceptions of special education. Changes in the conception of diversity, and by extension disability, are reflected in the UN Convention on the Rights of Persons with Disabilities (CRPD) (United Nations 2006: Article 3d) which stipulates “Respect for difference and acceptance of persons with disabilities as part of human diversity and humanity”. Further, the change from a linear, medical, deficit-oriented understanding of disability toward a systemic approach is also reflected in the introductory text to the WHO's *International Classification of Functioning, Disability and Health* (ICF) (2001) endorsed by all Member States of the WHO in 2001, which does not see disability only as a “medical” or “biological” dysfunction (WHO 2001: 20):

A variety of conceptual models has been proposed to understand and explain disability and functioning. These may be expressed in a dialectic of “medical model” versus “social model”. The medical model views disability as a problem of the person, directly caused by disease, trauma or other health condition, which requires medical care provided in the form of individual treatment by professionals. Management of the disability is aimed at cure or the individual's adjustment and behaviour change. (...) The social model of disability, on the other hand, sees the issue mainly as a socially created problem, and basically as a matter of the full integration of individuals into society. Disability is not an attribute of an individual, but rather a complex collection of conditions, many of which are created by the social environment. Hence the management of the problem requires social action, and it is the collective responsibility of society at large to make the environmental modifications necessary for the full participation of people with disabilities in all areas of social life. (...) ICF is based on an integration of these two opposing models.

According to Boban and Hinz (2009: 55), one consequence of this development is that

Personen, denen ein solches Phänomen zugeschrieben wird, nicht mehr pauschal als ein Teil einer definierten Gruppe quasi automatisch einer spezifischen Institution zugewiesen werden, sondern dass anhand ihrer individuell besonderen pädagogischen Bedarfe geschaut wird, wo der Lernort mit einer angemessenen, am wenigsten einschränkenden Umgebung besteht, an dem somit das größte Anregungspotenzial für eine positive weitere Entwicklung besteht. [Individuals afflicted by such a phenomenon are no longer generally perceived as part of a defined group and automatically referred to a specific institution. Instead, by considering their individual educational needs, a placement is sought with an appropriate and least restricted environment, one that, therefore, offers the highest potential of stimuli for a positive further development.]

In the educational area, several terms have been used to describe the main objectives of mainstreaming, namely, the choice of the least restrictive environment, integration or inclusion (Moore & Martin 2006: 3). It is interesting to note, however, that the schooling of deaf children in regular schools addresses only one dimension of the notion of inclusion. As remarked upon by Powers (2002: 230) there is some confusion as to whether refers to

... a goal (e.g., ending “educational segregation” through closing all special schools), a state (e.g., all children educated in mainstream classrooms), a process (e.g., of increasing participation for children with special needs), a means to an end (e.g., mainstream education as a way to better academic outcomes for all), or a value system (e.g., one concerned with rights of all marginalized groups).

The generalised trend toward mainstreaming raises the question of whether the aim to guarantee *equity of access* to all children is superseding requirements concerning educational excellence. As pointed out by Moores and Martin (2006: x), “the goals of equity and access are not always compatible”. Separate education has the potential advantage of providing a framework in which specialised instruction focusing on individual children’s needs can be offered. However, seeking sanctuary in special schools often results in social isolation and reinforced stigmatisation, which goes against the objective of preparing deaf children for their future lives as adult bilinguals. In addition, the simplification of the general curriculum has been a critical drawback of special education (cf. Baker 2001; Lane et al. 1996).

Another important aspect concerns the number of deaf students catered for in a particular institutional context. Unlike mainstreaming in regular schools, co-enrolment programmes and special schools have the advantage of providing deaf students with the opportunity of socialising with other peers. Deaf students’ choice to change to special schools in order to mingle with other deaf peers can be taken as an indication of the relevance of this aspect (Knoors & Marschark 2012: 299).

There is some consensus about the advantages of co-enrolment contexts vs. mainstreaming in regular schools, in particular, regarding (a) the languages of instruction used, (b) the availability of role models (teachers), (c) peer interaction (hearing and deaf students), and (d) access to the regular curriculum.

Antia and Metz (2014: 425) address the important dimension of the status of deaf students in the mainstream when they distinguish between “being a visitor and a member of the classroom”. In traditional models of inclusion, students and their accompanying teachers would be considered as “visitors” to a classroom, which goes along with an emphasis of their differences. In co-enrolment programmes, by contrast, membership is extended to all students (Antia & Metz 2014: 425).

Hermans et al. (2014: 400), too, remark on the advantages of the co-enrolment programmes such as the one established in the Netherlands. Apart from opportunities to interact with hearing peers, students benefit from a faster pace of instruction as teachers cannot attune their pace of instruction as they would in special education where student groups tend to be smaller and teachers tend to elaborate their instruction more with a focus on those children that require more support. At the same time, students become more independent as they cannot expect to get as much attention as they would in the typically smaller groups catered for in special education. On a side note, some authors also remark on hearing students’ benefits from the presence of teacher of special education in the classroom, particularly, in communication and language related activities.

3.2.3.4 Sign bilingualism in the mainstream: Tasks to be tackled

As for sign bilingualism in the mainstream, several studies remark on remaining shortcomings regarding (a) the students’ sign language skills, (b) the qualifications of teachers and interpreters involved, (c) the teaching-learning situation, and (d) role models.

Students language skills. A particularly critical aspect of interpreted education concerns deaf student’s acquisition of sign language. Mastery of the language needs to be ensured, sign language not only identified as her L1, for “this language is the means by which she is going to access education” (Monikowski 2004: 50). Unfortunately, it is often taken for granted that students attending this type of education either know the language or acquire it

through interpretation. In other cases, interpreters only obtain vague information about the child's preferred language or communication means. As pointed out by Ramsey (2004: 221), for many children not native in sign language the label of "pidgin sign English" is used as a descriptor that is of little help for interpreters (apart from being an inaccurate term), because it "often describes, not the existence of language ability, but its absence". As Swanwick et al. (2014: 299) remark, the challenges faced by deaf students in the mainstream, including the demands of the mainstream curriculum, the number of teachers they interact with, and the increased use of group work should not be underestimated. A fundamental question that needs to be addressed concerns the learning opportunities for deaf children in the mainstream, for example, concerning opportunities to participate in group work, and group discourse.

Professionals' qualifications. Another issue concerns qualifications of teachers and interpreters involved in this type of education. While some authors highlight the role of the interpreter as a liaison between the two worlds as "a key player in the inclusion process" (Antia 1998: 158), other scholars raise the question of whether the teachers involved are adequately prepared to meet the needs (cognitive, linguistic, learning) of deaf children (Lang 2003: 17). There is, indeed, substantial variation concerning the qualifications of the personnel involved (including sign language competence). In her detailed study of the bilingual programmes established in France, Leroy (2005: 82) notes that the offer of bilingual education in a mainstream context (with deaf support teachers or interpreters) is not always appropriately prepared beforehand. For example, at the Toulouse school, the principal teacher remarks on the lack of knowledge about deafness and sign language the staff had, neither were they informed about the legislation that supports the implementation of sign bilingual structures in France:

... la directrice nous confie qu'auparavant elle ne connaissait pas du tout le monde des sourds et qu'elle avait dû apprendre sur le terrain ce qu'impliquait la surdit . On notera de ces paroles, le manque d'information aupr s des entendants professionnels de l' cole en ce qui concerne la surdit , et donc un manque au niveau national de l'information en g n ral de la population entendant sur la communaut  sourde. Cette directrice n'a pas suivi de formation au pr alable et n'a  t  inform e que de la pr sence d'une classe bilingue dans sa structure sans aucune autre explication... On rel ve l  les lacunes du syst me fran ais. [... the head of school confides to us that previously she did not know anything at all about the world of deaf people and that she had had to learn as she went along what deafness was about. These words highlight how much the hearing school staff lack information concerning deafness, therefore, how much at national level the hearing population lacks general information about the deaf community. This head of school did not receive any prior training and has only been informed about the presence of a bilingual class in her school without any further explanation... Here we can clearly see the shortcomings of the French education system.]

The teaching/learning situation. The teaching/learning situation of deaf children in interpreted education settings raises several questions about the relation of and communication between teachers, interpreters and students. For example, hearing (non-signing) teachers' are confronted with the challenge of assessing deaf children despite their lack of access to the interaction between the interpreter and the deaf child (Ramsey 2004: 216). The situation bears the risk of limiting deaf children's access to participation in class (for example, because discourse conventions that invite participation are not directed to them). Ramsey (2004: 223), a former educational interpreter herself, concludes that "[t]he teacher-interpreter-deaf student triad must be examined carefully to determine whether intersubjectivity between teacher and student is possible when an interpreter is in the middle, whether establishing intersubjectivity among three people is possible, and if so, how participants manage it".

Role models. One of the fundamental tenets of many bilingual education programmes is that deaf students should have both deaf and hearing role models (G nther et

al. 1999; Günther et al. 2004; Ardito et al. 2008; Krausneker 2008; Morales-López 2008; Yang 2008). Due to the circumstance that many children only experience their bilingualism in the classroom, the team-teaching approach adopted in several bilingual programmes (e.g., in Berlin) and co-enrolment settings (e.g. in Madrid) whereby both deaf and hearing teachers or, in some situations, deaf advisors teach together in the classroom, is of particular importance. It is important to note that deaf children in interpreted education settings only seldom have this opportunity, although they may profit from interaction with other deaf peers in the classroom. Bilingual education offered in mainstream or integration schools may also involve the collaboration of different specialists. This is the case of the bilingual programme established at a regular school in Cossato, Italy (cf. (17) for an overview). The cooperation of these specialists is deemed essential for an appropriate assessment and documentation of the teaching/learning situation in the classroom (Preto 2003: 21).

(17) Specialists involved in the Cossato bilingual programme (cf. Preto 2003: 19)
At preschool (two experimental sections, with 20 hearing and deaf pupils):

- 4 regular teachers
- variable number of support teachers
- 1 deaf educator expert in LIS (employed by the Cossato community)
- 1 interpreter

At primary school (5 full time experimental classes):

- 2 regular teachers per class
- variable number of support teachers (1 deaf)
- 1 interpreter per class
- 1 LIS deaf educator (LIS mother tongue, DCDP)
- 2 external experts (advisers of teachers)

Co-enrolment programmes offered in four integration schools in Madrid also engage a team of specialists including (Pérez Martín et al. 2014: 377)

- deaf LSE specialists (responsible for the teaching of LSE to deaf and hearing students, teachers, and teaching/training of LSE and visual communication for families)
- two co-tutors per class (two teachers with equal status in the classroom who plan and teach the subject areas together, acting as language reference points for the children in LSE and Spanish)
- SALTs (Speech and language therapists) (responsible for the stimulation of speech and listening skills, in close collaboration with the co-tutors)
- interpreters (in infant and primary schools they are primarily engaged in internal meetings and in the contact situations with the families, whereas in secondary education they take over a more active role).

Hermans et al. (2014: 400) also explain that the co-enrolment programme established in the Netherlands combined the benefits of special education with those of mainstreaming. Students are instructed by a trained teacher of the deaf, NGT (*Nederlandse Gebarentaal*, Sign Language of the Netherlands), and sign supported Dutch are used (additionally) as a medium of instruction, and Deaf culture is considered in the curriculum.

Depending on the institutional framework, hearing and deaf teachers, sign language interpreters and speech therapists may have different functions, as was described above (section 3.2.1) for the bilingual service offered in Poitiers. Moreover, in her analysis of the role of interpreters in Spanish educational settings, Gras (2008) remarks upon deaf students' difficulties in coping with changes ensuing the introduction of new actors in their classrooms (e.g., interpreters instead of co-tutors), changes that were undertaken without a previous evaluation of the pros and cons of such measures in specific teaching situations.

While there is some consensus that children benefit from integration into regular schools with respect to their cognitive development, some authors have raised the question of whether there is an improvement regarding deaf students' interactions with hearing peers (Keating & Myrus 2003; Nunes et al. 2006). The increasing role of spoken language skills in the linguistic repertoires of CI children might reduce the challenges; nevertheless, the role of sign language as an identity marker should not be underestimated. The transfer of deaf students from regular to special schools observed in the USA and other countries (Knors & Marschark 2012: 300) can be taken as an indicator of the relevance of language and peer-to-peer relations. Reports of deaf and hearing students' interactions in co-enrolment provides a different picture, especially regarding hearing students' attitudes towards their deaf peers and the use of sign language and oral language in the classroom (Krausneker 2008), as well as the deaf students' positive attitude towards their own deafness (Yiu & Tang 2014: 360).

The latter observation leads us to the more fine-grained differentiation of the notions of integration and inclusion, currently under debate. In the literature, these notions are commonly distinguished in relation to the extent to which diversity is recognised. Whereas integration is commonly associated with the notion of assimilation (in the sense of eliminating diversity), the notion of inclusion is understood as a response to accommodate or manage diversity (Kusters et al. 2015: 19-20).

3.2.3.5 A note on the bicultural component of sign bilingual education

The sociolinguistic and cultural dimensions of bilingualism in the deaf communities have received little attention in the area of deaf education. An aspect that continues to be controversial, and is also of relevance in the discussion about the most appropriate educational placements, concerns the notion of biculturalism in the education of deaf students (Massone 2008; de Klerk 1998; Mugnier 2006). Whilst sign bilingual education is also bicultural for some educational professionals, the idea of deaf culture and related bicultural component of deaf education is rejected by others. In the end, what this discrepancy reveals is that there are diverging views about whether sign bilingualism is the intended outcome (following the type of maintenance bilingual education) or rather regarded as a transitional phenomenon in terms of an “educational tool”, which patterns with the variation observed in other types of linguistic minority education (Baker 2001: 204). The latter view, widespread among teaching professionals (cf. Mugnier 2006 for a discussion of the situation in France, Massone 2008 for Argentina), commonly attributes sign language the status of a teaching tool, without acknowledging its cultural component. We are confronted then with a restricted view of bilingualism, reducing the language of choice to a tool to improve academic achievement, without acknowledging that the latter is a much more global concept than language skills alone. In her discussion about the inclusion of French Sign Language (LSF) in France, Mugnier (2006: 145) underlines the discrepancy as follows:

Le fait que la LSF soit entrée dans les écoles et les textes constitue en soi une avancée, mais il semble tout aussi important de savoir ce que l'on en fait. Or, l'aménagement d'approches éducatives bilingues se fait actuellement encore bien souvent à partir d'un besoin réel d'intégrer la LSF dans la salle de classe et nettement moins à travers une réflexion globale sur ce que peut impliquer le bilinguisme et le biculturalisme dans un contexte pédagogique. [The fact that LSF has found its way into the school system and the texts constitutes in itself some progress, but it seems just as important that we know what we do. However, the adjustment of bilingual teaching approaches is still being caused nowadays by a real need to integrate the LSF in the classroom and clearly less by a global reflection on the implications of bilingualism and biculturalism in a teaching situation.]

Apart from the question about the inclusion of deaf culture as a separate subject, the discussion also affects the role assigned to deaf teachers as adult role models, linguistically and culturally. As pointed out by Humphries and MacDougall (2000: 94), “[t]he cultural in a 'bilingual, bicultural' approach to educating deaf children rests in the details of language interaction of teacher and student, not just in the enrichment of curriculum with deaf history, deaf literature, and ASL storytelling”.

3.2.4 Students' profiles

Sign bilingual education programmes cater for a heterogeneous student population. The linguistic profiles of the students enrolled vary with respect to (a) hearing status, (b) linguistic background, (c) use of hearing aid technology, and (d) additional learning problems.

Hearing status. As was explained previously, deaf and hearing children are taught in the same classroom in some types of bilingual education (co-enrolment, interpreted education). Variation in students' profiles is often overlooked in these educational settings, even though adaptations to meet the linguistic abilities and learning needs of deaf children would also be necessary (Marschark et al. 2005). As we mentioned previously (section 3.2.2), professionals involved in the co-enrolment settings established in Madrid take special care in the “linguistic planning” of the bilingual classrooms.

Linguistic background. Demographic changes relating to migration are also reflected in the deaf student population (Andrews & Covell 2006). It is clear that the concept of bilingual education, if taken literally (that is, involving two languages only) is not doing justice to the diversity that characterises deaf student populations in many countries. There is a general awareness of the challenges this imposes on the teaching/learning situation, in particular, among professionals working in special education. Moreover, because of the differences in the educational systems across countries, some deaf students with a migration background reach deaf schools without any language knowledge because in their country of origin deaf education was not available.

Hearing aid technology. There is agreement that improvement in hearing aid technology and cochlear implants have increased the potential for the attainment and use of the spoken language. The increasing number of deaf children with cochlear implants – more than half of the population in the UK (cf. Swanwick & Gregory 2007: 14), for example – adds a new dimension to the heterogeneity of linguistic profiles in deaf individuals. While most of the children are educated in the mainstream, there are many cochlear-implanted children attending bilingual programmes, either because of their low academic achievements in the mainstream or because the provision of a CI occurred at a later age. The generalised rejection of sign language in the education of these children in many countries contrasts with the continuing bilingual orientation of the education policy in Sweden, where the views put forward by professionals and parents of cochlear-implanted deaf children in favour of the bilingual option follows a pragmatic reasoning that acknowledges not only the benefits of bilingual education but also the circumstance that the cochlear implant is not a remedy for deafness and its long-term use remains uncertain (Svartholm 2007). A different situation obtains in Spain where “[b]ilingual education and CI were closely related from the beginning” Pérez Martín et al. (2014: 370) owing to the parallel development of a bilingual approach to deaf education in selected educational institutions and the increasing provision of deaf children with cochlear implants.

In general, we have little knowledge of the language practices and experiences of children with a CI. The rejection of sign language in the education of this population is commonly stressed. However, some authors have remarked on the rather flexible use of communication modes in the everyday lives of CI children. Swanwick et al. (2014: 297), for

example, state that “[w]e have much to learn from families of deaf children who speak of the “communication journey” that takes place after implantation”. On their view (Swanwick et al. 2014: 297), “[t]he pragmatic and responsive approach that deaf children and their families adopt toward the use of sign and spoken language informs us of the need to move beyond policy-driven distinctions between spoken and sign language use and to look for a more plural view of language and learning”.

Variation in the results obtained for children with a CI indicates that too little is known about the factors that affect this variation (Becker 2014: 400). As a result, no predictions can be made about the success of this option, even in the case of an early implantation.

In a similar vein, though based on the observation of remaining uncertainties concerning children's eventual success, Bavelier et al. (2003) argue in favour of the use of sign language as a *safety net*. Möbius (2011: 161) goes a step further, when he argues that hearing status should not be the criterion that determines whether bilingual education is an option or not.

Additional learning problems. Finally, many deaf students that are catered for in bilingual education programmes have additional learning (problems) that need to be tackled. Leroy (2005: 53), for example, describes the situation for the bilingual programme offered at the Laurent Clerc school in France:

La structure admet aussi des enfants en grand échec scolaire dans les structures oralistes, et qui sont réorientés ici dans des circonstances catastrophiques: âgés de 10 ans ou plus, ne parlant pas, connaissant mal la LSF, en grande difficulté avec l'écrit (lecture et écriture), et présentant souvent des comportements difficiles. (...) Les solutions à mettre en oeuvre sont donc souvent très variées et demandent une grande adaptabilité de la part de l'équipe. Pour certains de ces enfants, l'objectif est une resocialisation et la reconstitution d'une identité et d'une confiance en soi, avant de réintégrer le cycle normal. Pour d'autres, l'objectif n'est pas les acquis scolaires ou cognitifs mais l'exploitation au maximum des facultés restantes. [The structure accepts also children facing a deep academic failure in oralist structures who happen to be re-orientated here in catastrophic circumstances: aged 10 or more, not speaking, not fluent in LSF, having great difficulties with the written language (reading and writing) and often displaying a problematic behaviour. (...) The solutions to be put in place are often very varied and require great adaptability from the team. For some of these children, the objective is to be re-socialised and regain their identity and self-confidence, before returning to normal school life. For some others, the aim is not to acquire any school or cognitive knowledge but to learn how to make best use of their other faculties.]

Unfortunately, the impact of a sign bilingual promotion in this population remains largely unexplored.

4 Sign bilingualism in deaf education: Challenges along the research, policy, practice axis

Since the implementation of the first bilingual programmes in the late 20th century, there has been little room for a critical appraisal of bilingual education, its main objectives, the spectrum of its variation, and the challenges that need to be confronted for its further improvement. Instead, because the discussion in the field of deaf education is still polarised, deficits, where acknowledged, have often been minimised by those in favour of the bilingual method, while those who oppose bilingual education typically question the educational method as such and not the circumstances that might prevent it from being implemented in a better way. Today, the relevance of such a critical appraisal seems even more pertinent in the face of a revived debate about the most adequate type of deaf education and renewed efforts to call the benefits of sign bilingual education into question.

With the present work, we have sought to contribute to filling this gap by tracing the major developments leading to the inclusion of sign language in bilingual approaches to deaf education, and discussing the spectrum of variation of sign bilingual education programmes. We turn now to a discussion of the insights obtained with a focus on the advances that have been made and the challenges that remain to be tackled regarding the promotion of sign bilingualism in deaf education in the areas of research, policy and practice.

4.1 Language planning and deaf education: On the relevance of coordinated action

Today, sign bilingual education though established as an option in the spectrum of intervention types targeting deaf students remains the exception rather than the norm. From a linguistic perspective the spectrum of intervention types targeting deaf students that is available in various countries throughout the world can be seen on a continuum that ranges from a strictly monolingual (oralist) to a (sign) bilingual model of deaf education, with intermediate options characterised by the use of signs as a supportive means of communication or the teaching of sign language as a second language (Plaza-Pust 2004) (cf. Figure 4.1).

<i><-- monolingualism ----- simultaneous communication ----- bilingualism --></i>				
no sign language	signs, signed systems	sign language as a supportive means of communication	sign language as an L2	sign language as a language of instruction

Figure 4.1: Sign language input continuum in deaf education.

The spectrum of intervention types including the use of sign language can be understood as the result of a convergence of developments pertaining to a changing perception of deaf individuals and sign languages, on the one hand, and, on the other hand, the continuing search for alternatives to a monolingual (oral only) model of deaf education that fails to meet the expectations it raises.

From a language planning perspective, as we explain in Plaza-Pust (2016), different models are commonly distinguished with respect to the policies adopted toward languages and their users in a given social context. Roughly, bottom-up, top-down and holistic models

differ regarding (a) the agents involved, and (b) the extent to which the planning processes are coordinated. In Plaza-Pust (2016: 29) we distinguish three main language planning scenarios targeting sign languages according to the agents involved and the activities organised. The key characteristics of these scenarios are summarised in Table 4.1. As we argue in Plaza-Pust (2016: 30) bottom-up and top-down activities are necessary for the maintenance of sign bilingualism and its recognition on a par with other types of bilingualism. Co-ordinated action and involvement of all actors would characterise a holistic approach of sign language planning (cf. also Gras 2008, Morales-López 2008). As we explain next, the inclusion of sign language in a bilingual model of deaf education in the late 20th century occurs largely as a result of bottom-up activities.

Table 4.1: Language planning scenarios (from Plaza-Pust 2016: 29).

<i>Type</i>	<i>Agents</i>	<i>Activities / aims</i>
Top-down	<ul style="list-style-type: none"> • administration 	<ul style="list-style-type: none"> • policies and planning activities <ul style="list-style-type: none"> ○ to facilitate accessibility ○ to facilitate integration
Bottom-up	<ul style="list-style-type: none"> • language community • related interest groups 	<ul style="list-style-type: none"> • political demands and planning activities <ul style="list-style-type: none"> ○ to obtain political attention ○ to raise the status of the language
Holistic	<ul style="list-style-type: none"> • all agents 	<ul style="list-style-type: none"> • analysis of the needs of all parties • objectives and outcomes of measures studied in relation to broader social context • coordination of measures and activities to meet the needs of the users

4.1.1 Bottom-up processes

Our portrayal of the developments leading to the establishment of sign bilingual education programmes in diverse social contexts reveals that the introduction of a sign bilingual approach to deaf education is based on a bottom-up model of language planning in the majority of cases (cf. among others Krausneker 2008 for Austria, Morales-López 2008 and Pérez Martín et al. 2014 for Spain, Yang 2008 for China, Ardito et al. 2008 for Italy, Leroy 2010 for France). This type of language planning patterns with processes that led to the inclusion of native languages in the education of other linguistic minorities around the world (García et al. 2006: 35; Hornberger 1997; 2003; Romaine 1995). Typically, these bilingual programmes are established mainly as a result of bottom-up activities of several interest groups or NGOs, including parents' associations and deaf associations, and also educational professionals. Komesaroff (2001: 300) describes the situation of the bilingual programmes established in Australia as of the 1990s, highlighting also how changes at the institutional level followed bottom-up processes:

The establishment of bilingual programs in Australia has largely been the result of efforts by small groups of teachers, parents, and Deaf people. Most education authorities, teacher registration authorities, and universities qualifying teachers of the deaf have not acknowledged the need for teachers to be proficient in Auslan and able to adopt bilingual pedagogy. The growth of bilingual programs has preceded changes in registration requirements and professional development.

Where bottom-up processes are not followed by top-down measures taken at the institutional level, bilingual education runs the risk of winding up in a kind of “invisible policy of deaf education” (Pérez Martín et al. 2014: 371, Morales-López 2008). At the level of practice, much effort is required on the side of the professionals involved to secure the continuity of the programme, and to organise the human and financial resources necessary for this purpose. In their report on the bilingual programme established at the Cossato school (Italy), the specialists involved remark on the challenges faced with respect to the conception of a bilingual education programme (involving new actors) and its continuity (the task of finding new financing means where community support is not available) (Preto 2003: 24):

Per poter gestire tale struttura complessa diventa così sempre più importante poter individuare nuove figure e nuove forme di decentramento, ed attivare nuove forme di partenariato e di finanziamento, ... [In order to be able to manage such a complex structure it has become ever more important to be able to identify new figures and new forms of decentralisation, and activate new forms of partnership and of financing, ...]

Crucially, where language policies lag behind the developments at the level of practice, other platforms are created to ensure the continuity and further development of the bilingual approach. In some countries NGOs, including parents organisations or mixed organisations in which professionals, teachers and parents work together (such as the LASER group in the UK, Knight and Swanwick 2002: 24, or the 2LPE association in France, Leroy 2010) have contributed to the establishment and maintenance of bilingual programmes. They provide a forum for the exchange of ideas, discussion of practical issues or development of concepts.

Worthy of mention is the Stars School Project in the USA (Nover & Andrews 1998), a 5 year (1997-2002) teacher training project comprising three central components (Bagga-Gupta 2004: 142), namely (a) the aim to improve language teaching practices through teacher training in bilingualism and bilingual education, (b) the leadership of researchers and teacher-educators competent in Deaf and hearing cultures, and in the two languages, and (c) the systematic incorporation of best practice principles of Deaf bilingualism in teacher education departments in the USA. What is remarkable about this programme is that it was research based, involved the parents and disseminated the knowledge obtained in the course of the study.¹⁵ The language teaching model developed was used first in one school (New Mexico School for the Deaf), where mentors from other schools were trained and collaborated in the 5 revisions of the syllabi upon the feedback obtained by the teachers using the model in their schools. In their fifth report of the project, Nover et al. (2002: 14-5) conclude that the project “resulted in a nationwide ASL/English bilingual education learning community that is focusing on improving deaf students’ proficiency in two languages – ASL and English”.

Networking and knowledge sharing platforms are important, particularly, because bilingual education is often provided in isolated settings, that is, at individual schools, individual classes or even for individual children. It is interesting to note in this context, that in the interviews and informal conversations I have conducted over the last years, teachers and principals working in bilingual programmes have expressed, without exception, their interest for greater opportunities to network and to share ideas. Hence the relevance of initiatives, such as the one reported in Swanwick et al. (2014: 300), undertaken by practitioners in a group of bilingual schools in the UK who have been engaged in a critical review of their practices and conception of how to cater better for the abilities and needs of deaf students. Based on their evaluation of the available language assessment and planning as inadequate they call for more adequate ways of assessing the students’ multilingual skills.

¹⁵ The ASL/English bilingual learning community created involved a core group including the director of the project, mentors from 11 residential schools, and 5 educational researchers, with the larger community including deaf and hearing members with various professions in the academic, educational and administration areas.

Exchange of information is important, not only among professionals but also between professionals and researchers whose work is marked by different traditions and paradigms. As Pérez Martín et al. (2014: 389) remark, “there is a distance between what researchers do and how educational professionals carry out their work in isolation from each other”. Several initiatives aim at bridging this distance by bringing together researchers and practitioners. Swanwick et al. (2014: 303), for example, call for a network of researchers (“research-practice partnerships”), providing “a forum for the identification of shared professional priorities. Through collaborative working and sharing of data, this network could develop training techniques and approaches that build on local established expertise but that are globally relevant”. As they argue (Swanwick et al. 2014: 303), “[s]uch an initiative may provide avenues for importing knowledge from research into classroom practice in order to improve deaf children’s learning and achievement”. In the UK, action research partnerships between practitioners and researchers has been found to contribute to the empowerment of the professionals by providing them the opportunity to develop their own research agenda (Swanwick et al. 2014: 300).

4.1.2 Top-down processes

The top-down model of sign language planning has been applied only in a few social contexts, notably in the Nordic countries.¹⁶ Sweden, for example, is commonly taken as a reference regarding the institutionalisation of bilingual education of deaf students (Ahlgren 1994; Bagga-Gupta 2004; Bergman 1994; Svartholm 1993; Mahshie 1997). However, there has also been some criticism suggesting that the top-down model is not devoid of shortcomings. For example, in her critical evaluation of the implementation of sign bilingual education in Sweden, Bagga-Gupta (2004) remarks on the lack of research that would have supported such a shift. Furthermore, she notes that the new “dominant discourse” or ideology prevented research from being undertaken for too long a time (Bagga-Gupta 2004: 182):

The Swedish model was essentially a “top-down” model of bilingualism, where the regional special schools in the 1980s were (to put it simply), required to replace the “Total Communication” ideologies of the 1970s with a new ideology. It was not, therefore, probably deemed necessary to pursue a critical empirically driven research agenda on the model itself. It was not until the second half of the 1990s that legitimate educational-political reasons arose and which pushed for the critical examination of different aspects of the Swedish bilingual school model. While evaluation studies by the National Agency for Education (...) and other indicators (...) constitute one kind of critical examination, a limited number of studies and projects that have focused on communication practices at the Swedish upper secondary schools and compulsory schools for the Deaf represent a different and newer kind of research agenda.

Not only does this author (Bagga-Gupta 2004: 159) criticise the isolated manner in which this model was implemented (see section 3.1.1) (no exchange at the international level concerning information about practices elsewhere), she also remarks on the circumstance that the transition between the different school levels was not appropriately taken into consideration, a problem that we also noted with respect to deaf education in other countries, such as Spain, where students from bilingual schools later attend regular classes with interpreters at secondary level.

¹⁶ According to Bagga-Gupta (2004: 134-5), the “national-one-track-model” implemented in Sweden, which she compares to the diversity of coexisting models in the USA (a variation that characterises also the situation in other countries) is related to “demographic structures of the two countries, from local linguistic, cultural, sociohistorical and socioeconomical influences”. As pointed out by Bagga-Gupta (2004: 134), the uniformity of the model is the result of “a largely top-down administrative implementation of a bilingual model”.

The situation is slightly different in the case of those bilingual education programmes that have been determined by both bottom-up and top-down processes, the former being decisive for the consideration of a bilingual concept as an option at the political level, the latter for the modelling of the educational requirements these programmes would have to fulfil. In Quebec, for example, upon the initiative of the *Association du Québec pour enfants avec problèmes auditifs* (AQEPA) that had approached the Gadbois school for the deaf in Montréal and the LSQ research group at the University of Quebec at Montréal, a committee was established in 1997 with representatives from the schools, the university and the ministry of education (Vercaingne-Ménard et al. 2005: 2). The committee defined the political mandate for the development and establishment of a bilingual project at the Gadbois school. The focus would be on the longitudinal study of the students' bilingual development and the elaboration of teaching activities and material (Vercaingne-Ménard et al. 2005: 2).

Pilot programmes as the ones established in Montréal or Berlin can profit from the political mandate to undertake concomitant research and contribute to a more balanced information flow in the research-policy-practice axis that would work toward the eventual consolidation of the bilingual education option and its improvement.

In this context, a note is due on legislation. While the official recognition of sign languages continues to be on the agenda of many associations worldwide, the legal recognition of the use of sign language in deaf education in some countries has not been translated into the expected changes concerning the provision of sign bilingual education. In France for example, the 1991 so-called law Fabius grants parents the right to choose between different communication modes in the education of their deaf child (cited in Mugnier 2006: 150), as it is stated in the relevant passage:

... dans l'éducation des jeunes sourds, la liberté de choix [existe] entre une communication bilingue – langue des signes et français – et une communication orale est de droit. [... in the education of young deaf children, one has the right to be at liberty to choose between bilingual communication– sign language and French – and oral communication.]

However, at the level of practice, the situation in France reflects what could be dubbed as the paradox of legal recognition: the right of choice is granted albeit without stipulation that the necessary measures be taken to make a true choice possible. Mugnier (2006: 150) describes the impact of this paradox as follows:

En définitive, la loi laisse aux établissements et aux services pédagogiques le soin d'organiser les modalités d'éducation dans leur projet éducatif, sans leur donner pour autant les moyens nécessaires pour le faire. La situation semble s'inscrire dans une certaine circularité puisque l'institution, en légiférant – ou pas – sur les questions pédagogiques, tend à reproduire les freins qu'elle-même crée. [Eventually the law leaves it up to the schools and educational services to organise the modalities of education in their educational project without giving them the necessary means to do so. The situation seems to go full circle since the institution, whilst making laws – or not – on educational matters, tends to reproduce the brakes which it itself creates.]

A similar paradox obtains in Spain where bilingual education is regulated by the 2007 law (BOE 2007) recognising Spanish sign languages and parents' choice of a bilingual model of education for their deaf child. However, thus far, the law has not been applied in any of the 17 autonomous communities and there is neither reliable information on the number of educational institutions offering bilingual education (Pérez Martín et al. 2014: 371).

Paradoxical situations like the ones described remind us to consider the major hindrances to the implementation of bilingual/bicultural education programmes (Plaza-Pust 2004), an issue that we will take up further below.

Finally, a note is due on the changes envisaged by those authors who advance major transformations in those countries in which the bilingual option is firmly established or institutionalised (such as The Netherlands or Sweden). Knoors and Marschark (2012: 299), for example, envisage a “change in educational policy” in the face of the changes observed regarding the enhanced spoken language skills of deaf students that receive cochlear implants early in their lives combined with early intervention measures. Unfortunately, however, the transformation envisaged is not conceived of in terms of a diversification of options that could be more in accord with the diversity of the linguistic profiles of deaf students described before. Instead, a change is advanced regarding the status granted to sign language, namely, that of a useful tool. Because information perceived through the visual modality is regarded as useful in addition to auditory input, the use of signs is not completely disregarded. Instead, signs are attributed the status of a useful tool (cf. Knoors & Marschark 2012: 299):

[W]e believe it is still worthwhile to encourage parents to learn and use sign language regularly, especially as a support to the spoken language. Signs will support the auditory perception of speech, contribute to language comprehension, and, as we indicated earlier, add to an already improved spoken language vocabulary.

Notice that the “useful tool” character attributed to this mixed communication relates to its use in (a) enhancing the processing of spoken language, in particular, in the early development, (b) ensuring communication when CIs do not work, and in (c) not interfering with learning processes of the spoken language. The preceding observations make it clear that the change of direction envisaged though involving multimodal communication represents a clear retraction of a bilingual approach to deaf education.

4.1.3 Holistic model envisaged

There is a consensus among practitioners and academics that a better coordination of the stakeholders involved (that is, administration, teachers, parents, deaf associations) is needed to address the remaining shortcomings of sign bilingual education. From a language planning perspective, we have argued in favour of a coherent *holistic* planning of bilingual education that would aim at guaranteeing an alignment of the different measures that need to be taken, such as the provision of appropriate teacher training, the development of materials specifically devised for sign bilingualism and the peculiarities that distinguish it from other forms of bilingualism (e.g. two different modalities, the lack of or limited access to the spoken modality) (Plaza-Pust & Morales-López 2008). Clearly, the lack of co-ordinated action misses the chance of using effectively the human and financial resources available. In the majority of social contexts where a clear policy is lacking, specialists remark on resources lost, not only at the level of the poor academic achievements of the students, but also at the level of those uncoordinated but often costly measures put into practice.

It is important to note in this context that the demand for a holistic model of language planning should not be confused with a demand for the exclusive implementation of sign bilingual education. As some authors have recently warned against a “one-size-fits-all” approach (Knoors & Marschark 2012: 298), the diversification of the education options, on the one hand, and the coordinated provision of each of these options, on the other hand, need to be distinguished. Unfortunately, this differentiation is not always taken into consideration. Furthermore, it is also important to distinguish between the provision of bilingual education and the eventual choice of type education at the individual level. Knoors and Marschark (2012: 301), for example, argue that the demand for bilingual education as an option for all children is neither “realistic” nor any “longer strictly essential” (Knoors & Marschark 2012: 301). What is overlooked in this type of argumentation is that, with a few exceptions,

bilingual education remains an exception with the effect there is not really a choice for many parents of deaf children, an issue that we will elaborate further below.

4.2 Modelling bilingualism as an option: Challenges at the level of practice

The generalised lack of a holistic planning of sign bilingual education is reflected in a number of challenges that need to be tackled at the level of practice. Issues that arise pertain to (a) the institutional status of the programmes, (b) the availability of teaching and evaluation materials, (c) the status and qualifications of the professionals involved, (d) the heterogeneity of the student population, and (e) service provision for parents and children.

4.2.1 Lack of institutionalisation

Certainly, the exceptional status of sign bilingual programmes in most social contexts where they have been implemented makes them stand out as “beacons” for advocates of bilingual education. However, many of these programmes are confronted with an increasing complexity of individual and social demands that cannot be solved in the educational institutions alone. Professionals involved are confronted with diverse pressures, to the extent that the continuity of many bilingual pilot projects is threatened because what is being done still needs to be defended, financed, and organised. Unfortunately, these circumstances also work against one of the crucial aims of bilingual education, namely, the early promotion of sign language. As pointed out before, many deaf children only reach bilingual education programmes at a later age, often with only rudimentary language skills, because medical advice and early intervention is still predominantly oralist (Günther 2012).

4.2.1.1 Teaching conceptions, materials and assessment tools

Because sign bilingual education is not institutionalised in the majority of countries, bilingual programmes do not only often struggle for survival, as we mentioned previously. Professionals working in these settings also face the task of developing their own teaching conceptions, teaching materials and assessment tools (Komesaroff 2001, Morales-López 2008, Pérez Martín et al. 2014, Plaza-Pust 2004). There is a generalised lack of a bilingual methodology specifically devised for sign language – oral language bilingualism. In some countries (Spain, Germany, UK), policy reference documents (guidelines or white papers) have been written up for this purpose (cf. Staatsinstitut für Schulqualität und Bildungsforschung München 2005, for the guidelines published in the Federal State of Bavaria; CNSE 2004 for the white paper published by the National Confederation of the Deaf in Spain; Swanwick & Gregory 2007 for a policy reference document used in the UK). These works, however valuable, remain theoretical “guidelines”.

4.2.1.2 Teacher qualifications

In many cases, the teaching personnel involved in bilingual education have no adequate training in bilingualism in general, and sign bilingualism in particular. Today, the qualification of the professionals involved in deaf education varies substantially (Swanwick et al. 2014: 303), and so does their professional status.

In sign bilingual education, written language is taught as an L2, but teachers are seldom informed about the theoretical underpinnings of this type of acquisition (Bagga-Gupta & Domfors 2003; Morales-López 2008) and the alternative routes that deaf children may take in

their development of writing and reading (see Supalla & Cripps 2008; Padden & Ramsey 1998). Further, contrastive teaching is assigned an important role, but there is a general lack of knowledge about the latest insights in sign language linguistics and the impact of a critical language awareness on the developmental process, an issue that is at the focus in education of other linguistic minority students (Siebert-Ott 2001).

Where intervention measures are oriented toward an improvement of such complex learning tasks as the acquisition of the written language as an L2 in the framework of a bilingual model of education, the lack of a theoretical foundation of the actual bilingual teaching, as remarked upon by Mugnier (2006: 145-6), is certainly surprising:

Ainsi, loin d'être ancrée sur une véritable théorisation pédagogique, la pédagogie bilingue repose, actuellement encore, essentiellement sur les représentations sociales des principaux acteurs de terrains (enseignants, éducateurs, parents, etc.), sur une « philosophie de pensée ». Or, seule une véritable théorisation permettrait effectivement d'enseigner le français comme langue étrangère ou seconde. [So, far from being anchored in a true educational theorisation, bilingual education still essentially rests on the social representations of the main grass-roots actors (teachers, educators, parents, etc.), on a "philosophy of thoughts". However, only a true theorisation would effectively make it possible to teach French as a foreign or second language.]

Turning to the language competencies of the different professionals involved in the teaching of deaf students, a (near-)native level in sign language should be a necessary requirement for their qualification; however, for multiple reasons, this requirement is often not met, and in-service training, where it is available, is often insufficient to fill the remaining gaps (Bagga-Gupta & Domfors 2003). In our description of the developments leading to the establishment of bilingual programmes we mentioned the paradoxical situation with which the professionals involved at the time were confronted, given the lack of qualified deaf teachers and specifically developed materials in sign language.

The discrepancy between expectations and practice becomes apparent even in Sweden where, more than a decade after the implementation of the revised curriculum, competences of the hearing teaching personnel in Swedish Sign Language were still found to be wanting (mentioned by Ahlgren 1991; Svartholm 1993), despite the "developmental program" that was still in progress at the time (Svartholm 1993: 300). According to Bagga-Gupta & Domfors (2003: 75) teachers at the five regional schools estimated that they were competent in sign language (no interpretation is provided in this school setting). Teaching staff at the High school for the Deaf evaluate their sign language skills as less than competent. Some of them reported to rely on interpreters in their classroom (Bagga-Gupta & Domfors 2003: 76). The case of Sweden shows that the gaps are not only a result of a bottom-up type of planning or a temporary phenomenon bound to the initial phase of a new type of education, but are rather due to a lack of a coherent long-term planning.

Teacher qualifications not only bear on the *quality* of the educational programme, they are also decisive concerning the *type* of education that is actually implemented. In their survey about deaf education in Scotland, Grimes et al. (2007: 532) remark on the influence of teachers' language preferences concerning the type of education approach eventually put into practice. In addition, as policies have been changing over the last decades teachers have been expected to adapt to the requirements. For Grimes et al. (2007: 532) skills and knowledge gaps under such circumstances are perhaps not surprising.

Turning to the deaf professionals involved in sign bilingual education, at least two dimensions need to be distinguished in relation to the conception of deaf teachers as role models, namely, (a) they are deaf adults and thus models in particular for deaf children who do not socialise with deaf people otherwise (and who could believe that "deafness disappears with adulthood"), and (b) they are fluent or native speakers of sign language. According to Vercaingne-Ménard et al. (2005: 2), for example,

... dès le début, il était clair pour tous les membres du comité qu'une telle entreprise supposait la présence en classe d'une personne sourde qui assurerait l'enseignement de la LSQ et qui, de concert avec l'enseignante entendante, interviendrait en classe pendant les activités de français écrit. [... right from the start it was clear for all the members of the committee that such an endeavour presupposed the presence in the classroom of a deaf person who would take over the teaching of the LSQ and who, in agreement with the hearing teacher, would play an active role in class during the activities in written French.]

Further, there is also the critical question of the status of deaf teachers in bilingual settings. First, it must be noted that the number of deaf teachers continues to be extremely low. Therefore, it comes as no surprise that the lack of deaf teachers is commonly mentioned as a major factor when it comes to identifying the major hindrances that work against the set-up of further bilingual programmes. Taken on the whole, the information available about deaf adults' status in the classroom suggests that most commonly this corresponds with the figure of the support teacher or co-tutor. This holds equally of those contexts where the team teaching method is used, as the form teacher usually is a hearing teacher. On a critical note, the institutions in charge need to be mindful that what must be regarded as a temporary status (owing to the circumstance that it takes time until a cohort of deaf teachers is available on the job market) does not wind up in a fixed role distribution. The inequality that could be institutionalised at the level of human resources would then be strikingly similar to the status of a crutch attributed to sign language in those programmes that do not fully recognise it as a language in its own right.

Apart from the lack of deaf individuals with the qualification of a teacher, there is also the issue that not all deaf individuals are native users of a sign language (because of various circumstances, including their education and socialisation patterns), an issue that often goes unnoticed, probably, because the number of deaf teachers is so small in the majority of countries anyway. However, in her study on the politics of language practices in deaf education in Australia, Komesaroff (1998: 8) mentions that for Australia the percentage of non-signing deaf teachers is slightly below 50 percent.

4.2.2 Heterogeneity of the student population

For diverse circumstances, the spectrum of linguistic profiles that can be encountered in the deaf student population varies substantially, ranging from the mastery of both languages to only rudimentary skills in one or both languages (cf. Table 4.2).

Table 4.2: Linguistic profiles (based on Plaza-Pust 2005: 277).

<i>Oral language</i> \ <i>Sign language</i>	L1	L2	partial	rudimentary	no competence
L1	A	B	C	D	E
L2	B				
partial	C		F		
rudimentary	D			G	
no competence	E				

This variation is indicative of the complex interplay of internal and external factors that determines the development of sign bilingualism. While early diagnosis and cochlear

implantation have increased deaf students' opportunities to attain the spoken language, other factors need to be considered (including variation in linguistic background, additional learning problems) when it comes to the portrayal of variation in the linguistic abilities and needs of deaf students. Schooling is one factor among others determining variation in the linguistic profiles of deaf individuals; however, as we have argued throughout the preceding sections, it is a decisive one.

The different approaches to deaf education portrayed in this book are based on diverse idealised profiles of deaf students, ranging from the ideal of a monolingual oral language speaker to the ideal of a bilingual user of sign language and spoken/written language. Independently of the approach adopted, however, the reality in the classroom is much more complex – far from homogeneous. Teachers in bilingual settings are confronted with the task of serving a heterogeneous student population, with marked individual differences not only at the level of the degree of hearing loss, but also regarding their prior educational experiences, their linguistic profiles and often additional learning needs. If we consider, additionally co-enrolment contexts in which hearing and deaf children are taught together, the diversity increases. As Pérez Martín et al. (2014: 374) put it “[c]lassrooms are full of different children, including deaf children, and such a composition means diversity. If we add to languages and two teachers working together, a great amount of time must be devoted organizing teaching”.

In addition, we need to consider that, for multiple reasons, including the temporary character of some bilingual programmes, or the change in orientation from primary to secondary education, many deaf students are exposed to diverse methods and placed in different types of educational settings in the course of their development. Often they are unprepared for the changes affecting the communication and teaching situation in their new classroom (Gras 2008; Plaza-Pust 2004). Another variable that is generally acknowledged but remains largely unconsidered pertains to the diversity of the students' linguistic profiles related to their migration background. At the level of teaching conceptions, the impact of a lack of alignment of the oral languages (and, at times, also sign languages) used at home and in school remains largely unexplored. As for the increasing number of deaf children with a CI, the challenge for those institutions at which sign bilingual education is offered lies in definition of sign bilingual conceptions that would take the spectrum of student profiles and their evolution seriously by adopting a flexible conception of what might be the dominant or more advanced language in the course of the deaf child's development. Against the backdrop of the variation observed in spoken language development in CI children, the flexibility of such an approach seems to be more suitable to meet the demands and needs of this population (Günther 2014: 29). At the same time, a flexible conception requires regular evaluation and diagnostic tools to assess the students' development and competences in the respective languages, as well as the provision of teacher training in the teaching of sign language as a mother tongue, second language or foreign language (also Becker 2015: 404). The preceding observations underline the relevance of understanding and managing the dynamics of linguistic resources in the classroom. Students' profiles are neither uniform nor static. At the level of classroom practice, methods need to be devised and adopted that allow children with diverse linguistic profiles and learning strategies to learn together in the same classroom. Pérez Martín et al. (2014: 375), for example, explain how the structure of a conventional classroom can be broken down, creating enough room for activities with different levels of difficulty to accommodate all children.

4.2.3 Service provision and language choice for the deaf child

Parents' lack of access to information about chances and shortcomings of the different educational options available continues to represent a persistent problem in the decision-

taking process regarding language choice for the deaf child. The preference of oral education by hearing parents is commonly taken for granted, but is seldom elaborated in relation to the influence of the hearing aid/CI industry, medical advice and social environment (Günther & Hennies 2015: 500).

The questionnaire we distributed in a survey on the status of sign language in deaf education in the early 2000s (Plaza-Pust 2004) included a section on circumstances that participants would consider to represent major hindrances to the implementation of bilingual/bicultural education programmes. The feedback obtained indicated that the predominance of those professionals who insist on the exclusive promotion of the spoken/written language is hindering even the preliminary steps in the implementation of bilingual education. In his discussion of the requirements that need to be fulfilled for the successful establishment of a bilingual programme at a regular school, Preto (2003: 22) notes that the collaboration with speech therapists is a critical factor because they are the first specialists meeting the deaf children and, depending on the educational philosophy they adopt, they would send the child to an oral or to a bilingual programme.

The persistent lack of information provided to the parents, reflecting also the consequences of the lack of a consistent and comprehensive planning, occurs at the expense of bilingual programmes that cannot be truly implemented and developed further. By way of illustration of the circularity of the problem consider Leroy's (2005: 101) description of the situation in France:

... éducation pro-oraliste ou pro-LSF? Le problème n'est toujours pas résolu, car les parents d'enfants sourds n'ont toujours pas accès à l'information : dans quelle structure doit-on inscrire mon enfant afin qu'il évolue au même titre que tout enfant ? Pourquoi favoriser la LSF pour cet enfant sourd profond ?... De telles associations et structures comme IRIS, se battent depuis des années contre ce manque d'informations et luttent afin que les services médicaux soient aussi plus compétents, c'est-à-dire plus informés sur les solutions éducatives adaptées à cet enfant sourd. Mais tant que ces classes ne seront pas nationalement officielles et officieuses, le système ne pourra se développer (bien qu'il évolue en son sein) et l'information ne pourra se diffuser. [... pro-oralist or pro-LSF education? The problem is still unresolved for the parents of deaf children because they are still denied access to information: In which structure should I register my child so that he is given the same chances to develop as any other child? Why should we favour LSF for this profound deaf child?... Such organisations and structures as IRIS have been fighting for years against this lack of information and fight on so that the medical services as well be more competent, that is to say better informed on the educational possibilities adapted to a particular deaf child. Nonetheless as long as these classes are not nationally official and unofficial, the system will not be able to develop (although it evolves within itself) and the information will not be passed on.]

Unfortunately, the lack of information often runs parallel with a lack of options when it comes to early intervention. Indeed, the diversification of approaches in primary and secondary education we described in previous chapters contrasts with the predominance of aural methods in the domain of early intervention (Günther 2014: 18). According to Günther, because early intervention tends to focus on the promotion of one language only (either spoken language, as for example, in Germany or sign language, as it would be have been the case until recently in Sweden), a truly *bilingual* promotion only begins at school age.

The persistent shortcomings in the area of early intervention are not only attributed to the resistance against bilingual-bimodal education in the medical area and in the domain of deaf pedagogy, but also to a lack of theoretical/practical conceptions and resources where a bilingual-bimodal promotion in early intervention is advocated (Günther 2014: 4). Unfortunately, this deficit, undermining the objective of a bilingual promotion early on, might ultimately increase the risk of bilingual education winding up in a sort of “repairing business” (Günther 2014: 18), catering for those deaf children that have failed in other models (recall,

for example, the case of the French girl aged 10 arriving at the bilingual service IRIS lacking literacy and sign language skills, cf. section 3.2.1.1). Moores (2013:102) goes a step further when he remarks on the moral obligation of ensuring a variety of educational options also for early intervention,

For two generations now, people have been talking about the need for a cascade of services. And individualized education programs. To some extent we have achieved this, but not with children below the age of 3 or even 6 years. A full range of options should be open to all children from the time of identification. We have a moral obligation to ensure this.

Crucially, these observations hold equally of children provided with a cochlear implant. Several authors remark on the benefits of an early exposure to sign language also for these children and the risks of not doing so. Particularly during the early development sign language can fulfil a key role, described by Pérez Martín et al. (2014: 387) in terms of a bootstrapping function, a well-known notion in research on other bilingual acquisition situations where it has been dubbed *bilingual bootstrapping* (cf. Gawlitzek-Maiwald & Tracy 1996):

[e]arly sign exposure means that children and parents / professionals are not losing valuable time, waiting for the cochlear implant to be functional or auditory stimulation to become interpretable; instead, concepts are developing and crucial communicative skills are being honed. Once the cochlear implant begins to facilitate spoken language development, the children already understand the referential nature of language, the need to pay attention to interlocutors when they are speaking and to use the pragmatic inferences they have acquired previously via LSE. This “sign language bootstrapping” is very important in early and rich bilingual environments.

Against the backdrop of the ongoing debate about the most appropriate education approach, Pérez Martín et al. (2014: 389) call for a revision of the opposed views in the controversy when they claim that “[i]t is time to consider that whatever linguistic skills a child can obtain (mono/bi/trilingual), these are all valuable and will be appropriate at different points in a child’s development”.

As for deaf children’s parents, little is known about their attitudes towards sign language and a multilingual promotion of deaf children. One issue that is seldom addressed explicitly concerns the concept of otherness that underlies the decision making process when it comes to language choice for the deaf child. According to Sabria (2006: 25), (mis-)understandings at this level lie at the heart of a conflict that is commonly addressed only as a linguistic one:

Dans les discours étudiés, les représentations des langues et les représentations de la surdit  sont r guli rement en interf rence. Le choix de langue varie selon les repr sentations de la surdit . Le conflit de surface opposant deux langues, la LSF et le fran ais, ou d’une fa on g n rale les langues des Signes aux langues nationales orales, cache, en fait, un conflit beaucoup plus inavouable, derri re la question linguistique. Il s’agit de la place de l’alt rit  dans une organisation humaine. Il est vrai que la LSF ne se diff rencie pas seulement du fran ais par sa structure, elle est   la fois diff rente et diff rence. C’est surtout ce qu’elle renvoie d’alt rit  qui d range, car la diff rence, le stigmate, se conjuguent dans l’espace, dans un donn    voir. Toutes les strat gies seront mises en oeuvre et surtout en mots pour  viter de dire la diff rence ou pour la rendre supportable, quitte   recourir   des entreprises d’euph misation dans la d signation du sourd. [In the discourses studied, the representations of the languages and the representations of deafness regularly interfere with each other. The choice of language varies according to the way deafness is represented. The superficial debate bringing two languages to conflict, LSF and French, or more generally Sign languages against oral national languages, hides, behind the linguistic debate, in effect, a conflict that is far more

shameful to mention. This is about the place of otherness in a human organisation. It is true that the LSF does not only differ from French by its structure, it is at the same time different and difference. It is above all the displayed otherness that disturbs, for the difference, the stigma, merge in space: they can be seen. Every possible strategy is put in place and especially in words to avoid telling the difference or to make it bearable, would it be only to resort to projects of finding euphemisms to name the deaf.]

Between the two alternative views of deafness, the parents are trapped in the circularity of relying on specialists (technicians) that, in turn, seem to deprive them from their parental functions (Sabria 2006: 19):

L'aspect technique lié à l'option oraliste contraint de nombreux parents à s'en remettre aux professionnels médicaux, paramédicaux, scolaires qui «maîtrisent les techniques». Ce point alimente, entre autres, la relation paradoxale établie avec les institutions. Les parents adhèrent au projet oraliste mais disent leur frustration de se sentir dépossédés de leurs fonctions parentales en déléguant la socialisation langagière de leur enfant à des professionnels. [The technical aspect related to the oralist option forces many a parent to put themselves into the hands of medical, paramedical, school professionals who “master the techniques”. This state of affairs adds to the paradoxical relation established with the institutions, amongst others. The parents subscribe to the oralist project but tell their frustration to feel deprived of their parental functions as they delegate the language socialisation of their child to professionals.]

Against this backdrop, the relevance of early intervention measures that include the advice of deaf adults upon diagnosis needs to be emphasised. Yet more often than not contact with deaf adults is eluded precisely due to a lack of information. Negative attitudes of hearing parents towards deaf associations were emphasised by some participants in our European survey in comments such as “deaf associations are little transparent to the “new” parents of deaf children”. At the same time, we noted above that parents and parents' associations have been one of the major driving force for the conception and implementation of bilingual programmes where this has occurred in a bottom-up fashion. Not surprisingly, a questionnaire survey conducted with the parents of the children enrolled at the Twin school project established in the Netherlands revealed that the parents considered sign language as a vital part of their child's educational programme (Hermans et al. 2014: 415).

Other issues arise once the choice of education type has been made, including cultural aspects and communication practices in the family. In her report of the Berlin bilingual programme Krausmann (2004a: 4) notes that the bilingual programme also includes a bicultural component, as one of its main objectives is to prepare the students for an adult life in the two worlds (hearing and deaf). Hence, the parents' decision to participate in this programme (Krausmann 2004a: 4) “... *ist deshalb zunächst das Ergebnis einer sprachlich-kulturellen Entscheidung der hörenden oder gehörlosen Eltern.* [... is therefore primarily the result of a linguistic-cultural choice made by the hearing or the deaf parents.]”

The mismatch in the sign language competence levels attained by children and parents, and the variation in their progress bears a potential for conflict that needs to be addressed in this type of education. In this respect, Hansen's (1991: 67) description of the first years of experimentation of the bilingual approach in Denmark is revealing. Not only did the parents of the first experimental class demand the provision of sign language courses, they also learned sign language based on the language their children were using. In the course, they were exposed to video recordings of their own children, which proved to affect the learning motivation positively (notice, though, that Hansen also mentions the parents' uneasiness as their children progressed faster in sign language than they did). However, these measures remain exceptional and often the language that is used in the family remains a variety that is closer to that of a signed system than to the natural sign language the child is acquiring and using at school.

Finally, there is a more fundamental issue we raised in our introductory discussion of bilingual education regarding the alignment of registers and repertoires used in the home and in school. Recall that in section 1.2.4 we remarked on the relevance of language practices at home that would be more in tune with the academic language used in school. Language choice in families with deaf children is commonly discussed in relation to the modality of expression of the languages involved (spoken language vis-à-vis sign language). Yet it is seldom regarded in relation to the type of language used, which might be a more fundamental issue when it comes to academic achievements.

4.3 Sign bilingualism in deaf education: Navigating expectations

As can be gleaned from the preceding sections, the demands, measures and expectations of the different parties involved in language planning targeting sign languages and sign bilingualism vary substantially. This variation, reflected in the diversity of education options discussed previously, not only raises the question about the educational objectives pursued at the levels of policy and practice, it also raises the question about the role of research in the conception, implementation and evaluation of sign bilingual education.

It is important to note in this context that a comprehensive understanding of the development of sign bilingualism at the individual and societal levels requires a cross-disciplinary perspective that would allow for a convergence of the different lines of research in such diverse areas as sociolinguistics, pedagogy, developmental linguistics and educational linguistics (cf. Plaza-Pust 2016). Beyond the problem-resource dichotomy that characterises debates about bilingualism in the educational domain, an integrated perspective would allow for a better assessment of the needs and abilities of deaf individuals as bilingual deaf learners and communicators.

4.3.1 Variation in sign bilingual education: Unravelling the objectives

Sign bilingual education, as we have learned throughout the preceding sections does not represent a monolithic phenomenon. Variation in didactic conceptions and educational placements make apparent that in sign bilingual education, much like in other types of bilingual education, different, and often conflicting, objectives need to be reconciled.

In our introductory discussion of bilingual education (section 1.2.4), we noted that the lack of an academic consensus on the benefits of bilingualism in general represents one of the main impediments to articulate change at the level of policy. The apparent dilemma is also reflected in the ongoing discussion about the benefits of sign bilingual education, although, in this case, the discussion is additionally characterised by the specific circumstances that determine this particular type of bilingualism. If the value attributed to bilingualism involving two spoken languages in hearing individuals is primarily determined by the status of the languages involved (that is, prestige languages), the question arises about the potential value of a type of bilingualism that involves a language that is neither territorial nor associated with a prestige value in the society at large.

As we explain in Plaza-Pust (2016), over the last decades, sign language has become a symbol of (social) identity for sign language users. Political activism and sign language linguistics research have contributed to a greater visibility of and interest in a group of languages that use a different modality of expression. However, thus far, this “prestige” value has not been translated into a generalised recognition of sign language competence as a value in the education of deaf students. Instead, as we have explained previously, it is primarily regarded as a means to an end (that is, academic achievement).

Clearly, language choice in education is not only a decision about what language competences are envisaged. Language choice is also bound to more general objectives pertaining to the academic and social development of the students. Academic achievements of deaf students, as we learned in the initial sections of this chapter, have been a topic in scientific research since the second half of the 20th century. The role attributed to language in the aim to comply with the expectations at this level is a central one, for it is not only the means through which knowledge is attained but it is also the means used to demonstrate the knowledge acquired.

Morales-López (2008) argues that because sign languages do not represent territorial languages or elite languages, sign bilingual education is faced with the task of fulfilling “practical social functions”. Thus, as we have remarked in previous work (Plaza-Pust & Morales-López 2008), beyond the “politically correct discourse” (Calvet & Varela 2000: 52f.) which would include the argument of the equality of the world's languages, a more practical line of argument is used in favour of the bilingual education of deaf students, namely, that the inclusion of sign language serves as an educational measure to improve the academic achievements of deaf students. In their critical appraisal of sign bilingual education, Knoors and Marschark (2012: 292) remark that “full integration” is a social desire, and that this includes “having the best possible proficiency in reading and writing”. In view of the greater opportunities of deaf children to attain the spoken language, on the one hand, and the special circumstances determining an early access to sign language input, on the other hand, these authors (Knoors & Marschark 2012: 292) call for a revision of “current language policies and practices relating to the role of early sign language in combination with or in lieu of spoken language”. As they (Knoors & Marschark 2012: 292) argue “[t]he issue here is not a political or philosophical one but one of providing deaf children with the best possible opportunities for educational and personal success”.

Günther and Hennies (2011: 136), in turn, argue that the goal-oriented advocacy of bilingual education should focus on the effectiveness of this option, and not necessarily on the delivery of better results than alternative options:

Nach unserer Auffassung müsste ein bilinguales Unterrichtsmodell in der Hörgeschädigtenpädagogik keineswegs nachweisen, dass es deutlich bessere Ergebnisse erzielt als konkurrierende Unterrichtsmethoden, da es eigentlich genügt, dass es einen in sich erfolgreichen Ansatz zur Förderung der sprachlichen, emotionalen und kognitiven Kompetenzen der SchülerInnen darstellt: Die guten bis sehr guten Ergebnisse gegenüber gleichartigen Vergleichsgruppen sind ein wichtiges, aber nicht das entscheidende Argument für den bilingualen Unterricht. [According to our opinion, a model of bilingual education in deaf education should not have to prove itself by yielding significantly better results than competing educational models, since it actually suffices to see that it does provide a successful approach in supporting the linguistic, emotional, and cognitive competencies of the students: the good to excellent results compared with similar comparison groups are an important but not the decisive argument in favour of bilingual education.]

The goal-oriented argumentation in favour of the inclusion of sign language in deaf education has proven to be fruitful to the extent that many bilingual programmes have been implemented in the last years in various countries around the world. Indeed, as we remarked upon in section 3.1.1 this functional dimension of the bilingual approach was a driving force in the developments leading to the implementation of the bilingual programmes in Hamburg and in Berlin (Günther & Hennies 2011).

However, as we have argued elsewhere (Plaza-Pust & Morales-López 2008), beyond the overarching aim of academic achievement and literacy in the majority language, the practice of bilingual education needs to be based on a well-defined conception of sign bilingualism that would necessarily include a bi-cultural component and promote the development of deaf students as *bilingual* communicators (Mugnier 2006; Padden 1998b). In

other words, sign bilingual education cannot be footed on a temporary concept of bilingualism that is often inherent to the conception of bilingualism as an “educational tool” because it would deprive it from the meaningful dimensions that are necessary for an appropriate unfolding of the two languages. In this respect, research needs to inform both policy and practice.

A note is due regarding the functional dimension attributed to sign language. Commonly, this is related to its full accessibility to deaf learners *qua* language that uses the visual-gestural modality of expression. Unfortunately, however, the “modality benefit” attributed to the use of signs often supersedes the perception of sign language as a *language*, which is why the notion of a bilingual promotion often winds up in some type of simultaneous communication in practice. As we have argued previously, the point is not about code-switching and code-blending in communicative interactions and other cross-modal language contact phenomena as these are phenomena that serve as indicators of a creative use of the linguistic resources available in *bilingual* language users. The critical issue pertains rather to the advocacy of the use of individual signs in combination with speech in the place of the attainment of a natural language, a line of argumentation that clearly reflects the little prestige attributed to sign languages.

In addition, it must be noted that the attainment of linguistic skills also constitutes a component of identity building that is institutionally shaped, as is succinctly remarked upon by Sabria (2006: 9):

La question du choix, linguistique et de son importance dans l'élaboration identitaire de l'enfant sourd se pose aussi à l'institution scolaire. Le modèle linguistique diffusé par l'école agit sur l'appréhension et la formulation des identités individuelles et collectives en amont et en aval des établissements scolaires. Les évaluations scolaires (examens, concours, orientations) sanctionnent les compétences langagières normées et régulent les relations institutionnelles, individuelles, interactionnelles. La construction d'identité linguistique n'est pas une opération linguistico-linguistique reposant sur une maîtrise auto-centrée du code mais s'inscrit dans un processus socio-centré et régi par la norme linguistique dans les instances ou/et situations participant de sa dynamique. [The school institution also takes up the question of the linguistic choice and of its importance for the deaf child in the process of building up his identity. The linguistic model spread by the school interacts on the apprehension and on the formulation of individual and collective identities before the children come to school and after they leave school. School evaluations (exams, competitive examinations, orientations) sanction standard language competences and regulate institutional, individual, international relations. The building up of a linguistic identity is not a linguistico-linguistic operation resting on a self-centred mastering of the code but it is part of a process that is socio-centred and governed by the linguistic norm in the instances or/and situations originating in its dynamics.]

Advocates of an increased flexibility in the status attributed to the languages in deaf education argue against the rigid distinction or separation of educational approaches that have created boundaries between the different options. According to Swanwick et al. (2014: 296), “[t]he emergence of these boundaries around language, policy, and approach actually works against a concept of bilingual education by constraining language choices in educational provision, rather than opening up bilingual and bicultural educational environments for all”. Roughly, the idea behind such an “opening up” is that children are not denied access to and promotion of sign language skills or oral language skills when enrolled in one or the other type of education. According to Swanwick et al. (2014: 296), this would contrast with the current differentiation of approaches that they describe as “inflexible” and which would “not reflect how children develop and use languages in their daily lives, or how they make transitions between languages. It is also “undemocratic”, as it removes true language choice from children placing it in the hands of policymakers”.

These observations point to the need for more flexibility in the everyday practice at school. However, what seems to represent an “everything-goes” approach needs to be distinguished from well-founded conceptions of bilingual education such as the one developed in Hamburg and later adopted in Berlin. The notion of a “continuous bilinguality” introduced in the Hamburg bilingual education conception referred to the availability of the two languages in the school, not to a constant mixture of codes. Pérez Martín et al. (2014: 374), too, remark that the

[s]imultaneous and constant use of both languages is in fact a misconception in discussions of sign bilingualism. Centers develop plans that define how each language is used in anticipation of which children are involved in each of the activities.

Much like in bilingual education in general, the bilingual label is being used in a generic sense to designate a variety of educational programmes that include the use of signs or sign language to a greater or lesser extent. In the initial sections of this work, we proposed to narrow the scope of the term “bilingual” and reserve it to education where some, most or all subject content is taught through two or more languages. This understanding does not exclude language contact phenomena in the bilingual classroom, as we explained previously. However, it does require the acquisition and use of sign language as well as the promotion of metalinguistic awareness about a type of bilingualism that includes two languages of different modality. Again, this distinction seems to be particularly pertinent against the backdrop of the revived popularity of mixed communication approaches calling the use of a bilingual promotion into question while advocating the use of signs together with speech.

4.3.2 Bilingualism as a chance: Deaf learners’ pooling of linguistic resources

Over the last decades, several studies have been conducted with a view to determine whether bilingual education benefits deaf students. While the research has been undertaken from various theoretical perspectives, the insights obtained coincide in the appreciation of deaf students’ skilful use of their linguistic resources. There is no evidence of linguistic confusion or a negative impact of a bilingual promotion on the attainment of literacy skills in the oral language. Nevertheless, the knowledge available about bilingual deaf learners remains limited when compared to bilingual hearing learners.

4.3.2.1 Insights into the organisation of multilingual knowledge in deaf learners

In the domain of developmental linguistics, there is a consensus that bilingualism *per se* does not constitute a problem. Studies conducted over the last four decades have amply documented that the human mind is well equipped to deal with the acquisition of two or more languages (Plaza-Pust 2016). The situation is markedly different when it comes to the knowledge gathered about bilingual deaf learners. Descriptive accounts of deaf learners’ language development, particularly those dedicated to the acquisition of the written language, commonly remain idiosyncratic to specific language acquisition scenarios of deaf students. Developmental models, where they are proposed, are seldom based on theoretically sound descriptions of the target grammar, nor do they take into consideration what is known about the development of the respective language in other acquisition situations. Consequently, the knowledge that underlies learner productions is not captured and developments in different grammatical areas are not seen in relation to each other. Nor are learner errors or language contact phenomena interpreted in a systematic way.

Research on the bilingual *development* of deaf students conducted from a developmental linguistics perspective is virtually non-existent (but see Plaza-Pust 2016). Studies have focused either on sign language or on spoken/written language skills but have

not addressed the scope of the developmental asynchrony between both languages and the role of cross-modal language contact phenomena. The scarcity of research on the type of family bilingualism¹⁷ – largely at the focus in the broader domain of bilingualism – is reflected in a lack of comparison of acquisition scenarios. We are thus left with a fragmentary picture of the bilingual deaf learner that marks an important difference to the situation in research on bilingual hearing learners acquiring two spoken languages. As we argue in Plaza-Pust (2016) commonalities and differences between bilingual deaf learners and other types of learners can only be assessed appropriately within a common theoretical framework.

Beyond the theoretical interest in clarifying the question of the nature of language learning in deaf students, there is also the applied dimension of the measures that need to be taken to ensure the necessary conditions are met for deaf learners to successfully develop a bilingual competence. This seems to be particularly relevant in the face of a prevailing uncertainty about the nature of the learning processes involved in deaf students' attainment of the written language. This uncertainty reflects a longstanding debate about the relation of spoken language and written language, and the question of whether the latter can be attained without or with only limited access to the spoken language. First insights into bilingual deaf learners' acquisition of written German indicate that structure-building processes apply in this acquisition situation, too, although the development proceeds at a much slower pace (cf. Plaza-Pust 2016, chapter 4).

Another dimension that remains controversial pertains to the role of language contact phenomena in the bilingual acquisition of sign language and a spoken/written language. As we elaborate in Plaza-Pust (2016) an account of language mixing that would provide information about the elements mixed and their timing in relation to the development of the learner grammar cannot be provided without a developmental model that would be based on what we know (a) about the structure of the target languages, on the one hand, and (b) of the development of the languages in other acquisition situations, on the other hand (cf. Plaza-Pust 2016 for the elaboration of an approach along these lines and the presentation of a longitudinal investigation of bilingual DGS-German deaf learners). Unfortunately, thus far, the relevant information is only available for a few sign languages.

On a more general level, it must be noted that the focus of research has been generally limited to the institutional framework. Hence, the knowledge about the multilingual lives of deaf students, their language acquisition and communication practices at home and in their leisure time remain limited. Issues that deserve further attention pertain to later language development and the use of linguistic means for narrative and other discourse purposes.

4.3.2.2 Sign language, academic language and literacy skills

Research undertaken from an educational linguistics' perspective has sought to obtain further insights into the impact of bilingualism on deaf children's literacy skills, the key to academic achievement (recall the relevance attributed to academic language for all learners elaborated in section 1.2.2.5). For this purpose, scholars have focused on the identification of those linguistic skills attained in sign language and spoken/written that could be inter-related. At the theoretical level, this line of research has been marked by a heated debate on whether Cummins' (1979) Interdependence hypothesis applies also to the particular acquisition situation of bilingual deaf learners.

It is important to acknowledge in this context that the Interdependence hypothesis has been widely used in the field of deaf education as a theoretical basis for the justification of the

¹⁷ The longitudinal study into deaf learners' bilingual acquisition of NGT and Dutch remains a remarkable exception, cf. van den Bogaerde 2000, and Baker & van den Bogaerde 2008.

inclusion of sign language in a bilingual approach to deaf education.¹⁸ To a certain extent, the education of linguistic minority students and deaf students bears some similarities (Strong & Prinz 2000: 131) given that the promotion of sign language, a minority language, is regarded as instrumental for the cognitive and communicative development of deaf students, including their literacy attainment. But there are also important differences between the acquisition scenarios of deaf children and children with a linguistic minority background.

The attribution of a primary status to sign language even though it is seldom the home language (Kuntze 1998: 3) is related to the limited role of spoken language in the linguistic and academic development of deaf children (Niederberger 2008; Hoffmeister 2000). Apart from the choice of the language that is attributed the status of an L1, there is another difference between the acquisition scenarios of deaf and hearing children, namely, that sign languages have no written form that would be used in literacy-related activities.

Thus, in this acquisition situation, the notion of transfer or interaction of academic language skills needs to be conceived of independently of ‘print’ which has led to an ongoing controversy about whether or not sign language can facilitate the acquisition of L2 literacy (see Niederberger 2008 for a detailed discussion). Roughly, the position of those scholars who argue that sign language cannot facilitate the acquisition of L2 literacy is that “there are not specific text-based proficiencies to transfer from a signed L1 to a spoken L2” (Mayer & Leigh 2010: 181). Other scholars, by contrast, have argued that the positive correlations of spoken/written language and sign language skills documented for ASL-English (Hoffmeister 2000; Strong & Prinz 2000) and other language pairs (Dubuisson, Parisot, & Vercaingne-Ménard 2008, for Quebec Sign Language [LSQ]-French; Niederberger 2008, for French Sign Language [LSF]-French) provide support for the assumption that good performances in both languages are linked. Niederberger (2008: 45), for example, concludes that “[t]hese findings strongly support the hypothesis of a positive relationship between SL and reading/writing development and suggest that Deaf children benefit from early exposure to a natural sign language for their literacy development”.

On a critical note, it is important to remark that the correlations documented do not provide any direct information about a *causal* relationship between skills attained in the two languages (Plaza-Pust & Morales-López 2008, cf. also Verhoeven 1994: 388 for a general discussion). Furthermore, assumptions about potential relations (for example, between grammatical properties and higher level processes involved in reading and writing) remain highly speculative so long as they are not accounted for on the basis of a sound theory of the organisation of multilingual knowledge and multilingual literacy. The identification of dimensions of interaction in the organisation of multilingual knowledge requires a distinction of different levels of linguistic analysis that needs to be based on a sound theory of language. Language used for academic purposes does not constitute a monolithic skill, but rather involves the choice of particular registers, syntactic structures, and discursive means, all of

¹⁸ Roughly, the Interdependence hypothesis, originally developed in relation to the situation of linguistic minority students, targets functional distinctions in language use and the relevance of their mastery for academic achievements in acquisition situations in which the home language (L1) differs from the language used in school (L2). Cummins’ emphasis on a strong foundation in the L1 as a requisite for bilingual children’s academic success concerns the academic disadvantages that result from a mismatch between L1 and L2 skills. If children are expected to cope with academic tasks through a second language prior to its mastery and have not developed academic skills in their L1 it is assumed that this will bear on their cognitive and academic development (Cummins 1979). Hence, the claim for a bilingual mode of education in which L1 academic skills are fostered prior to their use in the L2. With respect to the acquisition of academic skills in the latter, the assumption is that children can draw on the knowledge developed in their L1, as academic skills in the L1 and the L2, unlike conversational skills, are assumed to develop *interdependently* and to make up what is referred to as the “Common Underlying Proficiency”. According to Cummins (1991: 85), correlations between L1 and L2 academic language skills “reflect underlying cognitive attributes of the individual that manifest themselves in both languages”.

which are specific to a given language. These language-specific characteristics must all be learned (Gogolin 2009; Paradis et al. 2011; Schleppegrell & O'Hallaron 2011). Hence, it comes as no surprise that the development of literacy skills represents a protracted development, even in the L1 acquisition of hearing learners.

Unfortunately, our understanding deaf children's language use is quite limited if we consider that we know little about how sign language is used in the institutional setting. Mugnier (2006) and Millet and Mugnier (2004) provide important insights into the dynamics of bilingual communication in the classroom. However, we continue to know little about whether there is a differential use of the languages depending on the subject taught and the activities organised in the school context. In other words, we do not know whether different registers are used and to what extent a metalinguistic awareness about the differential use of the languages is promoted. The issue is particularly critical regarding the use of sign language because sign language may serve different functions in the school context. Apart from its use as a medium of instruction, it might also be used for the teaching of the oral language (e.g. through contrastive teaching, or in translation exercises), it may represent a curriculum subject or it might be resorted to as a supportive language or for the sake of clarification.

Another issue that remains to be tackled concerns the promotion of written language skills. Despite the generalised emphasis on the written language in bilingual education programmes, systematic comparative research on theoretical models applied and methods used for the teaching of the written language is scarce. Information about the methods used in individual programmes varies substantially, more detailed accounts being available for those pilot programmes that were established with a political mandate to conduct concomitant research (the case of the Hamburg and Berlin bilingual programmes, cf. the contributions in Günther & Schäfke 2004; Günther & Hennies 2011).

4.4 Concluding remarks: Sign bilingualism as a challenge and as a resource

The perception of deaf individuals using a sign language and a spoken/written language as bilinguals, as we remarked at the beginning of this work, is a relatively new phenomenon, and so is the (re-)introduction of sign language as a language of instruction in the educational area. From the first attempts at including sign language in deaf education until today, the status of sign bilingualism in deaf education has been marked by the problem-resource dichotomy that has also characterised educational discourse in the broader domain of bilingualism in general. As we elaborated at the beginning of this work, attitudes towards bilingualism differ markedly depending on the values associated with the respective languages and their users. This holds equally of sign languages and their users, although the case of bilingualism in deaf individuals requires the consideration of the additional dichotomy of a pathological vis-à-vis a cultural view of deafness. Not surprisingly, the intersection of these two dimensions derives a variety of attitudes towards bilingualism and deafness and, by extension, the inclusion of sign language in deaf education (cf. Plaza-Pust 2016).

Sign bilingual education, as we remarked previously, is established as an option in the spectrum of approaches adopted in deaf education. Yet, the increasing diversification of educational approaches that characterised deaf education at the turn of the 21st century has not been translated into their equal availability across countries or regions in the last years. Numerous bilingual education programmes have been run in the course of the last decades. However, many of these programmes only had a temporary character, and many programmes that continue to be run face a number of challenges that might affect their continuity in the near future. With the exception of a few countries, sign bilingual education continues to represent the exception rather than the norm. As we advanced at the beginning of this work,

the reasons for this situation are multiple. Throughout the preceding sections we have learned about remaining challenges at the levels of policy and practice, and we have also raised the question about the role of research in the conception, establishment and evaluation of sign bilingual education programmes.

Sign bilingual education appears to be vulnerable as an option because of various circumstances that affect its continuity, including (a) the lack of a holistic language planning approach, (b) the predominance of oralism and advances in hearing aid technology, and (c) the increasing heterogeneity of the student population. Newborn hearing screening and cochlear implantation are dramatically changing the opportunities of deaf children to acquire and use spoken language, and, by extension, our understanding of the bilingual signer and the factors that affect the development and maintenance of sign bilingualism. Current developments are reflected in a revived debate over the most useful approaches to deaf education to account for an increasing heterogeneity of the deaf student population regarding their linguistic background, abilities and needs.

Indeed, several authors have called for a revision (“rethinking”) of sign bilingual education, its status as an option, and its objectives. This development needs to be understood as a reaction to changing needs and abilities of new generations of deaf students that are benefiting from advances in hearing aid technology, cochlear implantation and inclusive education approaches. To a certain extent it is not without irony that the increasing heterogeneity of the population of deaf students is reviving a controversy that has lasted for more than two hundred years rather than giving new impetus to the advocacy of multilingualism as a framework that could comprise the multiple dimensions of the diversity of profiles in the deaf student population. Yet again, sign bilingual education represents a vulnerable option vis-à-vis monolingual approaches to deaf education. What is more, because it often constitutes a “last resort option” left for those learners who do not achieve in monolingual (oral) settings, some authors have remarked on the danger of it winding up in some sort of a “repairing business”. Certainly, the discrepancy between the understanding of bilingual education as an opportunity to foster deaf students’ multilingual resources, on the one hand, and the association of sign bilingual education with deaf students’ educational failure, on the other hand, couldn’t be more striking.

As the debate between rejection, tolerance and support of the promotion of sign bilingualism in education continues, it is worth the while to emphasise the work of all those who have contributed in one way or another to the resilience of a type of bilingualism that is neither territorial nor commonly the result of parent-to-child transmission. Further, there is a consensus in the research undertaken that a bilingual promotion has no negative effect on deaf students’ linguistic and academic development. Quite to the contrary, educational and developmental studies have provided valuable insights into bilingual learners’ skilful use of their linguistic resources. Statistical studies coincide in results that reflect positive correlations of skills in the two languages, and studies into the organisation of their multilingual competence indicate how deaf students creatively use their linguistic resources. These are important results that need to be emphasised in view of the remaining myths surrounding a bilingual promotion of deaf students, and the recent trend to call the provision of this educational option into question. At the same time, we must concede that the picture that emerges about bilingual deaf learners and their linguistic and academic achievements remains fragmentary. We thus conclude this work with the hope that all those involved in the development of sign bilingualism in some way or another remain interested in contributing to its maintenance and in expanding our knowledge about it.

5 References

- Ahlgren, Inger. 1991. Schwedische Verhältnisse: Die Gebärdensprache in der Gehörlosenpädagogik. In Siegmund Prillwitz & Tomas Vollhaber (eds.), *Gebärdensprache in Forschung und Praxis*, 107-113. Hamburg: Signum.
- Ahlgren, Inger. 1994. Sign language as the first language. In Inger Ahlgren & Kenneth Hyltenstam (eds.), *Bilingualism in Deaf Education*, 55-60. Hamburg: Signum.
- Akamatsu, Tane C. & David A. Stewart. 1998. Constructing simultaneous communication: The contributions of natural sign language. *Deaf Studies and Deaf Education* 3(4). 302-319.
- Andrews, Jean F. & John A. Covell. 2006. Preparing future teachers and doctoral level leaders in deaf education: Meeting the challenge. *American Annals of the Deaf* 151(5). 464-475.
- Antia, Shirin D. 1998. School and classroom characteristics that facilitate the social integration of deaf and hard of hearing children. In Amatzia Weisel (ed.), *Issues Unresolved: New Perspectives on Language and Deaf Education*, 148-160. Washington, D.C.: Gallaudet University Press.
- Antia, Shirin & Kelly K. Metz. 2014. Co-enrollment in the United States: A critical analysis of benefits and challenges. In Marschark, Marc, Gladys Tang & Harry Knoors (eds.), *Bilingualism and Bilingual Deaf Education*, 424-444. Oxford: Oxford University Press.
- Ardito, Barbara, M. Christina Caselli, Angela Vecchietti & Virginia Volterra. 2008. Deaf and hearing children: Reading together in preschool. In Carolina Plaza-Pust & Esperanza Morales-López (eds.), *Sign Bilingualism: Language Development, Interaction, and Maintenance in Sign Language Contact Situations*, 137-164. Amsterdam: John Benjamins.
- Bagga-Gupta, Sangeeta. 2004. *Literacies and Deaf Education: A Theoretical Analysis of the International and Swedish literature*. Forskning I Fokus 23. The Swedish National Agency for School Improvement.
- Bagga-Gupta, Sangeeta & Lars-Ake Domfors. 2003. Pedagogical issues in Swedish deaf education. In Leila Monaghan, Constanze Schmaling, Karen Nakamura & Graham Turner (eds.), *Many Ways to be Deaf: International Variation in Deaf Communities*, 67-88. Washington, D.C.: Gallaudet University Press.
- Baker, Colin. 2001. *Foundations of Bilingual Education and Bilingualism*. Clevedon: Multilingual Matters.
- Baker, Colin. 2007. Becoming bilingual through bilingual education. In Peter Auer & Li Wei (eds.), *Handbook of Multilingualism and Multilingual Communication*, 131-152. Berlin: Mouton de Gruyter.
- Baldwin, Leslie D. 1997. Negotiating meaning in a deaf bilingual setting. Paper presented at the Annual Meeting of the American Educational Research Association, March 24-28, 1997. Chicago.
- Bauermann, Anne, Christian Borgwardt, Markus Fertig, Sabine Fries, Sieglinde Lemcke, Angela Staab, Olaf Tischmann & Sylvia Wolff. 2011. Lehrplangentwurf für das Unterrichtsfach Deutsche Gebärdensprache (DGS) und Gehörlosenkunde Primarstufe. In Klaus-B. Günther & Johannes Hennies (eds.), *Bilingualer Unterricht in Gebärden-, Laut- und Schriftsprache mit gehörlosen SchülerInnen in der Primarstufe: Zwischenbericht zum Berliner bilingualen Schulversuch*, 335-362. Berlin: Druckerei der Humboldt-Universität.
- Bavelier, Daphne, Elissa L. Newport & Ted Supalla. 2003. Signed or spoken, children need natural languages. *Cerebrum* 5, 19-32.

- Beattie, Rod G. 2006. The oral methods and spoken language acquisition. In Patricia E. Spencer & Marc Marschark (eds.), *Advances in the Spoken Language Development of Deaf and Hard-of-hearing Children*, 103-135. New York: Oxford University Press.
- Bebee, Helen Hulick. 2014 [1989]. An auditory-verbal retrospective: A personal account of individual effort and international organisation. In Lyn Robertson. *Literacy and Deafness: Listening and Spoken Language*, 340-347. San Diego CA: Plural Publishing.
- Becker, Claudia. 2014. Sprachliche Vielfalt hörgeschädigter Kinder und Jugendlicher – Bilingual-bimodale Sprachbildung in heterogenen Lerngruppen. *Das Zeichen* 98: 14. 398-413.
- Berenz, Norine. 2003. Surdos venzeremos: The rise of the Brazilian deaf community. In Leila Monaghan, Constanze Schmalings, Karen Nakamura & Graham Turner (eds.), *Many Ways to be Deaf: International Variation in Deaf Communities*, 173-193. Washington, D.C.: Gallaudet University Press.
- Bergman, Brita. 1994. Signed languages. In Inger Ahlgren & Kenneth Hyltenstamm (eds.), *Bilingualism in Deaf Education*. Hamburg: Signum.
- Boban, Ines & Andreas Hinz. 2009. Schulische Sonderpädagogik im internationalen Raum. In Günther Opp & Georg Theunissen (eds.), *Handbuch schulische Sonderpädagogik*, 54-60. Bad Heilbrunn: Julius Klinkhardt.
- BOE (2007) LEY 27/2007, de 23 de octubre, por la que se reconocen las lenguas de signos españolas y se regulan los medios de apoyo a la comunicación oral de las personas sordas, con discapacidad auditiva y sordociegas. *Boletín Oficial del Estado* 255. 43251-43259.
- Brennan, Mary & David Brien. 1995. Defining the bi in bilingualism. In Heleen Bos & Trude Schermer (eds.), *Sign Language Research 1994*. Hamburg: Signum.
- Calvet, Louis-Jean & Lia Varela. 2000. XXIe siècle: Le crépuscule des langues? Critique du discours politico-linguistiquement correct. *Estudios de Sociolingüística* (1/2). 47-64.
- Celo, Pietro. 2003. La lingua Italiana dei segni. In Lilia Andrea Teruggi (ed.), *Una Scuola, due Lingue. L'Esperienza di Bilinguismo nella Scuola dell'Infanzia ed Elementare di Cossato*, 29-35. Milano: Franco Angeli.
- Chamberlain, Charlene & Rachel I. Mayberry. 2000. Theorizing about the relation between American Sign Language and reading. In Charlene Chamberlain, Jill P. Morford & Rachel I. Mayberry (eds.), *Language Acquisition by Eye*, 221-260. Mahwah, NJ: Erlbaum.
- Clahsen, Harald. 1982. *Spracherwerb in der Kindheit: Eine Untersuchung der Syntax bei Kleinkindern*. Tübingen: Gunter Narr.
- Clahsen, Harald. 1988. *Normale und gestörte Kindersprache: Linguistische Untersuchungen zum Erwerb von Syntax und Morphologie*. Amsterdam: John Benjamins.
- Clahsen, Harald. 1988. Parameterized grammatical theory and language acquisition: A study of the acquisition of verb placement and inflection by children and adults. In Suzanne Flynn & Wayne O'Neil (eds.), *Linguistic Theory in Second Language Acquisition*, 47-75. Dordrecht: Kluwer.
- Cokely, Dennis. 2005. Shifting Positionality: A critical examination of the turning point in the relationship of interpreters and the deaf community. In Marc Marschark, Rico Peterson & Elizabeth Winston (eds.), *Sign Language Interpreting and Interpreter Education: Directions for Research and Practice*, 3-28. Oxford: Oxford University Press.
- Conrad, Richard. 1979. *The deaf school child*. Harper Row: London.
- Cook, Vivian. 2002. Background to the L2 user. In Vivian Cook (ed.), *Portraits of the L2 User*, 1-28. Clevedon: Multilingual Matters.
- Cummins, Jim. 1979. Linguistic interdependence and the educational development of bilingual children. *Review of Educational Research* 49. 222-251.

- Cummins, Jim. 1991. Interdependence of first- and second-language proficiency in bilingual children. In Ellen Bialystok (ed.), *Language Processing in Bilingual Children*, 70-89. Cambridge: Cambridge University Press.
- de Courcy, Michele. 2005. Policy challenges for bilingual and immersion education in Australia: Literacy and language choices for users of aboriginal languages, Auslan and Italian. *The International Bilingual Education and Bilingualism* 8(2/3). 178–187.
- de Klerk, Annet. 1998. Deaf identity in adolescence. In Amatzia Weisel (ed.), *Issues Unresolved: New Perspectives on Language and Deaf Education*, 206–214. Washington, D.C.: Gallaudet University Press.
- Diller, Gottfried. 2009. Assessment. In Günther Opp & Georg Theunissen (eds.), *Handbuch schulische Sonderpädagogik*, 167-173. Bad Heilbrunn: Julius Klinkhardt.
- Diller, Gottfried. 2012. Gebärde – Lautsprache – a never ending story. *Hörgeschädigtenpädagogik*, 232-243.
- Domínguez Gutiérrez, Ana Belén & Pilar Alonso Baxeiras. 2004. *La Educación de los Sordos Hoy. Perspectivas y Respuestas Educativas*. Málaga: Alijbe.
- Drasgow, Erik. 1993. Bilingual/bicultural deaf education: An overview. *Sign Language Studies* 81. 243–266.
- Dubuisson, Colette, Anne-Marie Parisot & Astrid Vercaingne-Ménard. 2008. Bilingualism and deafness: Correlations between deaf students' ability to use space in Quebec Sign Language and their reading comprehension in French. In Carolina Plaza-Pust & Esperanza Morales-López (eds.), *Sign Bilingualism: Language Development, Interaction, and Maintenance in Sign Language Contact Situations*, 51-71. Amsterdam: John Benjamins.
- Esser, Hartmut. 2006. Migration, Sprache und Integration: AKI-Forschungsbilanz 4.
- Fischer, Susan D. 1998. Critical periods for language acquisition: Consequences for deaf education. In Amatzia Weisel (ed.), *Issues Unresolved: New Perspectives on Language and Deaf Education*, 9–26. Washington, D.C.: Gallaudet University Press.
- Fischer, Susan D., Dale Evan Metz, Paula M. Brown & Frank Caccamise. 1991. The effects of bimodal communication on the intelligibility of Sign and Speech. In Patricia Siple & Susan D. Fischer (eds.), *Theoretical Issues in Sign Language Research, Vol.2*. Chicago: University of Chicago Press.
- García, Ofelia, Tove Skutnabb-Kangas & Maria E. Torres-Guzmán. 2006. Weaving spaces and (de)constructing ways for multilingual schools: The actual and the imagined. In Ofelia García, Tove Skutnabb-Kangas & Maria E. Torres-Guzmán (eds.), *Imagining Multilingual Schools: Languages in Education and Glocalization*, 3-47. Clevedon: Multilingual Matters.
- Gascón-Ricao, Antonio & José Gabriel Storch de Gracia y Asensio. 2004. *Historia de la Educación de los Sordos en España y su Influencia en Europa y América*. Madrid: Editorial Universitaria Ramón Areces.
- Gogolin, Ingrid. 1994. *Der monolinguale Habitus der multilingualen Schule*. Münster: Waxmann.
- Gogolin, Ingrid. 2006. Linguistic habitus. In Keith Brown (ed.), *Encyclopedia of Language & Linguistics*, 2nd edn., 194-196. Amsterdam: Elsevier.
- Gogolin, Ingrid. 2007. *Institutionelle Übergänge als Schlüsselsituationen für mehrsprachige Kinder*. München: Deutsches Jugendinstitut e.V.
- Gogolin, Ingrid. 2009. Zweisprachigkeit und die Entwicklung bildungssprachlicher Fähigkeiten. In Ingrid Gogolin & Ursula Neumann (eds.), *Streitfall Zweisprachigkeit - The Bilingualism Controversy*, 263-280. Wiesbaden: VS-Verlag.
- Gogolin, Ingrid. 2011. Bilingual education. In James Simpson (ed.), *The Routledge Handbook of Applied Linguistics*, 229-242. New York: Routledge.

- Gogolin, Ingrid & Ursula Neumann (eds.). 2009. *Streitfall Zweisprachigkeit - The Bilingualism Controversy*. Wiesbaden: VS-Verlag.
- Gras, Victoria. 2006. La Comunidad Sorda como Comunidad Lingüística: Panorama Sociolingüístico de la/s Lengua/s de Signos en España. PhD dissertation, University of Barcelona.
- Gras, Victoria. 2008. Can signed language be planned? Implications for interpretation in Spain. In Carolina Plaza-Pust & Esperanza Morales-López (eds.), *Sign Bilingualism: Language Development, Interaction, and Maintenance in Sign Language Contact Situations*, 165–193. Amsterdam: John Benjamins.
- Grimes, Martin, Ernst D. Thoutenhoofd & Delma Byrne. 2007. Language approaches used with deaf pupils in Scottish schools. 2001-2004. *Deaf Studies and Deaf Education* 12(4). 530-551.
- Grosjean, François. 1992. Another view of bilingualism. In Richard Jackson Harris (ed.), *Cognitive processing in bilinguals*, 51-62. Amsterdam: Elsevier.
- Grosjean, François. 2008. *Studying Bilinguals*. Oxford: Oxford University Press.
- Große, Klaus-Dietrich. 2001. Systemisch-handlungsorientierte Pädagogik für Hörbehinderte: Theorie und Methodik der Förderung. Neuwied: Luchterhand.
- Günther, Klaus-B. 1996. The role of the manual alphabet in deaf education in the 16th/17th centuries. In Renate Fischer & Tomas Vollhaber (eds.), *Collage: Works on International Deaf History*, 107-116. Hamburg: Signum.
- Günther, Klaus-B. 1999a. Einführung. In Klaus-B. Günther (ed.), *Bilingualer Unterricht mit gehörlosen Grundschulern: Zwischenbericht zum Hamburger bilingualen Schulversuch*, 11–22. Hamburg: hörgeschädigte kinder.
- Günther, Klaus-B. 1999b. Schulversuch Bilingualer Unterricht an der Hamburger Gehörlosenschule – konzeptuelle Grundlagen und vorläufige Zwischenbilanz. In Thomas Kaul & Claudia Becker (eds.), *Gebärdensprache in Erziehung und Unterricht*, 21–47. Hamburg: hörgeschädigte kinder.
- Günther, Klaus-B. 1999c. Vorbemerkungen und Erläuterungen zu den Untersuchungen. In Klaus-B. Günther (ed.), *Bilingualer Unterricht mit gehörlosen Grundschulern: Zwischenbericht zum Hamburger bilingualen Schulversuch*, 99-102. Hamburg: hörgeschädigte kinder.
- Günther, Klaus-B. 2008. Hörschädigung = Sprachentwicklungsstörung?! *Forum*. 16-22.
- Günther, Klaus-B. 2013. Bilingual-bimodale Sozialisation, Erziehung und Bildung hörgeschädigter Kinder – a real new story. *Hörgeschädigtenpädagogik* 5, 207-209.
- Günther, Klaus-B. 2014. Der fehlende Grundbaustein: Bilingual-bimodale Früherziehung hörgeschädigter Kinder. Stand der Diskussion und Perspektiven. Paper presented at the *Plattform Integration & Gebärdensprache*, Wien. Retrieved on April 3rd, 2015 from www.plig.at.
- Günther, Klaus-B & Johannes Hennies. 2011. Hörgeschädigtenpädagogische sowie lern- und entwicklungstheoretische Fundierung der bilingualen Erziehung als Förderkonzept für gehörlose und hochgradig schwerhörige Kinder. In Klaus-B. Günther & Johannes Hennies (eds.), *Bilingualer Unterricht in Gebärden-, Schrift- und Lautsprache mit hörgeschädigten SchülerInnen in der Primarstufe: Zwischenbericht zum Berliner bilingualen Schulversuch*, 133-148. Hamburg: Signum.
- Günther, Klaus-B & Johannes Hennies. 2015. Stand und Perspektiven einer bimodal-bilingualen Erziehung und Bildung für gehörlose und schwerhörige Kinder. *Das Zeichen* 101. 498-508.
- Günther, Klaus-B., Ilka Schäfke, Mv. K. Koppitz & Michaela Matthei. 2004. Vergleichende Untersuchungen zur Entwicklung der Textproduktionskompetenz und Erzählkompetenz. In Klaus-B. Günther & Ilka Schäfke (eds.), *Bilinguale Erziehung*

- als Förderkonzept für gehörlose SchülerInnen: Abschlussbericht zum Hamburger Bilingualen Schulversuch*, 189–267. Hamburg: Signum.
- Günther, Klaus-B., Verena Thiel-Holtz & Susanna Tollgref. 1999. Zur Stellung der Lautsprache im Bilingualen Schulversuch. In Klaus-B. Günther (ed.), *Bilingualer Unterricht mit gehörlosen Grundschulern: Zwischenbericht zum Hamburger bilingualen Schulversuch*, 83-86. Hamburg: hörgeschädigte kinder.
- Hansen, Britta. 1991. Tendenzen auf dem Weg zu einer bilingualen Erziehung und Bildung gehörloser Kinder in Dänemark. In Siegmund Prillwitz & Tomas Vollhaber (eds.), *Gebärdensprache in Forschung und Praxis*, 51-64. Hamburg: Signum.
- Hermans, Daan, Annet de Klerk, Loes Wauters & Harry Knoors. 2014. The Twin School: A Co-enrollment program in the Netherlands. In Marschark, Marc, Gladys Tang & Harry Knoors (eds.), *Bilingualism and Bilingual Deaf Education*, 272-291. Oxford: Oxford University Press.
- Hoffmeister, Robert J. 2000. A piece of the puzzle: ASL and reading comprehension in deaf children. In Charlene Chamberlain, Jill P. Morford & Rachel I. Mayberry (eds.), *Language Acquisition by Eye*, 143–163. Mahwah, NJ: Erlbaum.
- Hornberger, Nancy H. 1997. *Indigenous Literacies in the Americas: Language Planning from the Bottom up*. Berlin: Mouton de Gruyter.
- Hornberger, Nancy H. 2003. *Continua of Biliteracy: An Ecological Framework of Educational Policy, Research, and Practice in Multilingual Settings*. Clevedon: Multilingual Matters.
- Hornberger, Nancy H. 2006. Voice and biliteracy in indigenous language revitalization: Contentious educational practices in Quechua, Guarani, and Maori contexts. *Language, Identity, and Education* 5(4). 277-292.
- Humphries, Tom & Francine MacDougall. 2000. “Chaining” and other links making connections between American Sign Language and English in two types of school. *Visual Anthropology Review* 15(2). 84–94.
- Hult, Francis M. & Sarah E Compton. 2012. Deaf education policy as language policy: A comparative analysis of Sweden and the United States. *Sign Language Studies* 12(4). 602-620.
- Jann, Peter A. 1991. *Die Erziehung und Bildung des gehörlosen Kindes: Zur Grundlegung der Gehörlosenpädagogik als Wissenschaft*. Heidelberg: HVA/Edition Schindele.
- Johnson, Robert E., Scott K. Liddell & Carol J. Erting. 1989. *Unlocking the Curriculum: Principles for Achieving Access in Deaf Education*. Washington, D.C.: Gallaudet University Press.
- Kaufmann, Peter (ed.). 1995. LBG-Projektbericht (Julius Groos Verlag) ISBN 3-87276-721-6.
- Kaul, Thomas. 2009. Erziehung und Bildung im Sekundarbereich. In Günther Opp & Georg Theunissen (eds.), *Handbuch schulische Sonderpädagogik*, 185-188. Bad Heilbrunn: Julius Klinkhardt.
- Keating, Elizabeth & Gene Myrus. 2003. Examining interactions across language modalities: Deaf children and hearing peers at school. *Anthropology and Education Quarterly* 34(2). 115–135.
- Klein, Wolfgang. 2000. Prozesse des Zweitspracherwerbs. In Hannelore Grimm (ed.), *Enzyklopädie der Psychologie. Vol. 3: Sprachentwicklung*, 537–570. Göttingen: Hogrefe.
- Knight, Pamela A. & Ruth A. Swanwick. 1999. *The Care and Education of a Deaf Child: A book for parents*. Clevedon: Multilingual Matters.
- Knight, Pamela A. & Ruth A. Swanwick. 2002. *Working with Deaf Pupils: Sign Bilingual Policy into Practice*. London: David Fulton.
- Knoors, Harry. 2006. Educational responses to varying objectives of parents of deaf children: A Dutch perspective. *Deaf Studies and Deaf Education* 12. 243–253.

- Knooks, Harry & Marc Marschark. 2012. Language planning for the 21st Century: Revisiting bilingual language policy for deaf children. *Journal of Deaf Studies and Deaf Education* 17(3). 291-305.
- Komesaroff, Linda R. 1998. *The Politics of Language Practices in Deaf Education*. Unpublished doctoral dissertation, Deakin University, Geelong.
- Komesaroff, Linda. 2001. Adopting Bilingual Education: An Australian School Community's Journey. *Deaf Studies and Deaf Education* 6(4). 299–314.
- Krausmann, Beate. 2004a. *Hör-Sprecherziehung mit gehörlosen Grundschulern der bilingualen Klasse in den ersten Schulbesuchsjahren*. Unpubl. report to the Senatsverwaltung für Schule, Jugend und Sport in Berlin.
- Krausmann, Beate. 2004b. *Arbeitsbericht der wissenschaftlichen Begleitforschung zum 3. Schulversuchsjahr der bilingualen Klasse im Schulversuch "Bilinguale Erziehung gehörloser Schülerinnen und Schüler."* Unpubl. report to the Senatsverwaltung für Schule, Jugend und Sport in Berlin.
- Krausneker, Verena. 2008. Language use and awareness of deaf and hearing children in a bilingual setting. In Carolina Plaza-Pust & Esperanza Morales-López (eds.), *Sign Bilingualism: Language Development, Interaction, and Maintenance in Sign Language Contact Situations*, 195–221. Amsterdam: John Benjamins.
- Krifka, Manfred. 2014. Einleitung. In Manfred Krifka, Joanna Blaszczak, Annette Leßmöllmann, André Meinunger, Barbara Stiebels, Rosemarie Tracy & Hubert Truckenbrodt (eds.), *Das mehrsprachige Klassenzimmer*, 1-11. Berlin: Springer.
- KMK Kultusministerkonferenz. 2013. Bericht: Konzepte für den bilingualen Unterricht – Erfahrungsbericht und Vorschläge zur Weiterentwicklung. Beschluss der Kultusministerkonferenz vom 17.10.2013. Retrieved 31.3.2015 from http://lakk.bildung.hessen.de/netzwerk/faecher/bilingual/bildungspolitik/material_bipo/201_10_17-Konzepte-_bilingualer-_Unterricht.pdf/details/
- Kuntze, Marlon. 1998. Literacy and deaf children: The language question. *Topics in Language Disorders* 18. 1-15.
- Ladd, Paddy. 2003. *Understanding Deaf Culture: In Search of Deafhood*. Clevedon: Multilingual Matters.
- Lane, Harlan, Robert Hoffmeister & Ben Bahan. 1996. *A Journey into the Deaf-World*. San Diego: DawnSignPress.
- Lang, Harry G. 2003. Perspectives on the history of deaf education. In Marc Marschark & Patricia E. Spencer (eds.), *Deaf Studies, Language and Education*, 9-20. Oxford: Oxford University Press.
- LeMaster, Barbara. 2003. School language and shifts in Irish Deaf identity. In Leila Monaghan, Constanze Schmaling, Karen Nakamura & Graham Turner (eds.), *Many Ways to be Deaf: International Variation in Deaf Communities*, 153-172. Washington, D.C.: Gallaudet University Press.
- Lengyel, Drorit. 2012. Early childhood education in multilingual settings. In Zvi Bekerman & Thomas Geisen (eds.), *International Handbook of Migration, Minorities and Education: Understanding Cultural and Social Differences in Processes of Learning*, 169-192. Dordrecht: Springer.
- Leonhardt, Annette. 2009. Erziehung und Bildung im Grundschulbereich: Allgemeine Schule. In Günther Opp & Georg Theunissen (eds.), *Handbuch schulische Sonderpädagogik*, 181-184. Bad Heilbrunn: Julius Klinkhardt.
- Lerda, Maria Teresa & Elisabetta Minola. 2003. Note metodologiche sull'invento logopedico nell'ambito dell'educazione bilingue. In Lilia Andrea Teruggi (ed.), *Una Scuola, due Lingue. L'Esperienza di Bilinguismo nella Scuola dell'Infanzia ed Elementare di Cossato*, 36-85. Milano: Franco Angeli.

- Leroy, Elise. 2005. *Didactique de la LSF. Fondement pédagogique dans l'éducation de l'enfant sourd*. Mémoire de DEA, Université Paris 8. Retrieved online December 12th, 2007 from www.cultura-sorda.eu.
- Leroy, Elise. 2010. *Didactique de la Langue des Signes Française, langue 1, dans les structures d'éducation en langue des signes: Attitudes et stratégies pédagogiques de l'enseignant sourd*. PhDissertation, Université Paris 8.
- Leuninger, Helen. 2000. Mit den Augen lernen: Gebärdenspracherwerb. In Hannelore Grimm (ed.), *Enzyklopädie der Psychologie. Bd. III: Sprachentwicklung*, 229–270. Göttingen: Hogrefe.
- Lim, Susan S.Y.C & Judith Simser. 2005. Auditory-Verbal Therapy for Children with Hearing Impairment. *Annals Academy of Medicine*. 34(4). 307-312.
- List, Günther. 2009. Ein Phantom namens “Zweisprachigkeit”. Die Jagd nach ihm als Sprachspiel. In Ingrid Gogolin & Ursula Neumann (eds.), *Streitfall Zweisprachigkeit - The Bilingualism Controversy*, 249-260. Springer online.
- Lou, Mimi W. 1988. The history of language use in the education of the Deaf in the United States. In Michael Strong (ed.), *Language Learning and Deafness*, 75-98. Cambridge: Cambridge University Press.
- Lucas, Ceil & Clayton Valli. 1992. *Language Contact in the American Deaf Community*. New York: Academic Press.
- Luetke-Stahlman, Barbara. 1988. The benefit of oral English-only as compared with signed input to hearing-impaired students. *The Volta Review* 90(7). 349–361.
- Luetke-Stahlman, Barbara. 1990. Types of instructional input as predictors of reading achievement for hearing-impaired students. In Ceil Lucas (ed.), *Sign Language Research: Theoretical Issues*, 325-336. Washington, D.C.: Gallaudet University Press.
- MacSwan, Jeff & Kellie Rolstad. 2006. How language proficiency tests mislead us about ability: Implications for English language learner placement in special education. *Teachers College Record* 108. 2304-2328.
- Mahshie, Shawn Neal. 1995. *Educating Deaf Children Bilingually*. Washington, D.C.: Gallaudet University Press.
- Mahshie, Shawn Neal. 1997. *A First Language: Whose Choice is it?* (A sharing ideas series paper, Gallaudet University Laurent Clerk National Deaf Education Center). Retrieved February 19 2003. from <http://clerccenter.gallaudet.edu/Products/Sharing-Ideas/index.html>.
- Marschark, Marc, Harry G. Lang & John A. Albertini. 2002. *Educating Deaf Students*. Oxford: Oxford University Press.
- Marschark, Marc, Patricia Sapere, Carol Convertino & Rosemarie Seewagen. 2005. Educational interpreting: Access and outcomes. In Marc Marschark, Rico Peterson & Elizabeth Winston (eds.), *Sign Language Interpreting and Interpreter Education: Directions for Research and Practice*. Oxford: Oxford University Press, 57–83.
- Marschark, Marc & Patricia E. Spencer. 2006. Spoken language development of deaf and hard-of-hearing children: historical and theoretical perspectives. In Patricia E. Spencer & Marc Marschark (eds.), *Advances in the Spoken Language Development of Deaf and Hard-of-hearing Children*, 3-21. New York: Oxford University Press.
- Mason, David G. 1994. Bilingual/bicultural deaf education is appropriate. Association of Canadian Educators of the Hearing Impaired. Occasional Monograph Series.
- Massone, Maria Ignacia. 2008. Ideological signs in deaf education discourse. In Carolina Plaza-Pust & Esperanza Morales-López (eds.), *Sign Bilingualism: Language Development, Interaction, and Maintenance in Sign Language Contact Situations*, 277–295. Amsterdam: John Benjamins.

- Mayberry, Rachel I. 2002. Cognitive development of deaf children: The interface of language and perception in neuropsychology. In Sidney J. Segalowitz & Isabelle Rapin (eds.), *Handbook of Neuropsychology*, 2nd edn. Vol. 8. Part II, 71-107. Amsterdam: Elsevier.
- Mayberry, Rachel I. 2007. When timing is everything: Age of first-language acquisition effects on second-language learning. *Applied Psycholinguistics* 28. 537-549.
- Mayer, Connie & Gregory Leigh. 2010. The changing context for sign bilingual education programs: issues in language and the development of literacy. *International Bilingual Education and Bilingualism* 13(2). 175-186.
- Millet, Agnes, Saskia Mugnier. 2004. Français et langue des signes française (LSF): Quelles interactions au service des compétences langagières? Étude de cas d'une classe d'enfants sourds de CE2. *Repères* 29. 1–20.
- Möbius, Ulrich. 2011. Im Windschatten des bilingualen Schulversuchs: Eine subjektive Betrachtung über Entwicklungen an der Ernst-Adolf-Eschke-Schule. In Klaus-B. Günther & Johannes Hennies (eds.), *Bilingualer Unterricht in Gebärden-, Schrift- und Lautsprache mit hörgeschädigten SchülerInnen in der Primarstufe: Zwischenbericht zum Berliner bilingualen Schulversuch*, 159-168. Hamburg: Signum.
- Monaghan, Leila. 2003. A World's Eye View: Deaf cultures in global perspective. In Leila Monaghan, Constanze Schmalin, Karen Nakamura & Graham Turner (eds.), *Many Ways to be Deaf: International Variation in Deaf Communities*, 1–24. Washington, D.C.: Gallaudet University Press.
- Monaghan, Leila, Constanze Schmalin, Karen Nakamura & Graham Turner (eds.). 2003. *Many Ways to be Deaf: International Variation in Deaf Communities*. Washington, D.C.: Gallaudet University Press.
- Monikowski, Christine. 2004. Language myths in interpreted education: First language, second language, what language? In Elizabeth A. Winston (ed.), *Educational Interpreting: How it can succeed*, 48-60. Washington, D.C.: Gallaudet University Press.
- Moore, Donald F. 2007. Educational practices and assessment. *American Annals of the Deaf* 151(5). 461–463.
- Moore, Donald F. & David S. Martin. 2006. Overview: Curriculum and instruction in general education and in education of deaf learners. In Donald F. Moore & David S. Martin (eds.), *Deaf learners: Developments in Curriculum and Instruction*, 3–13. Washington, D.C.: Gallaudet University Press.
- Morales-López, Esperanza. 2008. Sign bilingualism in Spanish deaf education. In Carolina Plaza-Pust & Esperanza Morales-López (eds.), *Sign Bilingualism: Language Development, Interaction, and Maintenance in Sign Language Contact Situations*, 223–276. Amsterdam: John Benjamins.
- Mugnier, Saskia. 2006. Le bilinguisme des enfants sourds: de quelques freins aux possibles moteurs. *GLOTTOPOLO Revue de sociolinguistique en ligne*. Retrieved March 8th, 2006, from <http://www.univ-rouen.fr/dyalang/glottopol>.
- Nakamura, Karen. 2003. U-turns, Deaf shock, and the hard-of-hearing: Japanese deaf identities at the borderlands. In Leila Monaghan, Constanze Schmalin, Karen Nakamura & Graham Turner (eds.), *Many Ways to be Deaf: International Variation in Deaf Communities*, 211-229. Washington, D.C.: Gallaudet University Press.
- Neis, Cordula. 2006. *Holder, William (1616-1698)*. In Keith Brown (ed.), *Encyclopedia of Language and Linguistics (ELL)*. 2nd edn, 373-374. Oxford: Elsevier.
- Neumann, Ursula. 2009. Der Beitrag bilingualer Schulmodelle zur Curriculuminnovation. In Ingrid Gogolin & Ursula Neumann. (eds.), *Streitfall Zweisprachigkeit - The Bilingualism Controversy*, 317-331. Springer online.

- Niederberger, Nathalie. 2004. *Capacités Langagières en Langue des Signes Française et en Français Écrit chez l'Enfant Sourd Bilingue: Quelles Relations?* PhD dissertation, University of Geneva, Switzerland.
- Niederberger, Nathalie. 2008. Does the knowledge of a natural sign language facilitate deaf children's learning to read and write? Insights from French Sign Language and written French data. In Carolina Plaza-Pust & Esperanza Morales-López (eds.), *Sign Bilingualism: Language Development, Interaction, and Maintenance in Sign Language Contact Situations*, 29-50. Amsterdam: John Benjamins.
- Noordegraaf, J. 2006. Johann Conrad Amman (1669–1730). In Keith Brown (ed.) *Encyclopedia of Language & Linguistics*, 2nd edn., 197-198. Amsterdam: Elsevier.
- Nover, Stephen M. & Jean F. Andrews. 1998. *Critical Pedagogy in Deaf Education Bilingual methodology and staff development. Year 1 Report 1997-1998*. USDLC Star Schools Project Report. Santa Fe, NM: New Mexico School for the Deaf.
- Nover, Stephen M. & Jean F. Andrews. 2000. *Critical Pedagogy in Deaf Education Bilingual Methodology and Staff Development. Year 2 Report 1998-1999*. USDLC Star Schools Project Report. Santa Fe, NM: New Mexico School for the Deaf.
- Nover, Stephen M., Jean F. Andrews, Sharon Baker, Vicki S. Everhart & Mindy Bradford. 2002. USDLC Star Schools' USDLC Engaged Learning Project No. 5: ASL/English bilingual staff development project in Deaf Education, Final Report 1997-2002. Santa Fe, NM: New Mexico School for the Deaf.
- Nunes, Terezinha, Ursula Pretzlik & Jenny Olsson. 2006. Deaf children's social relationships in mainstream schools. *Deaf Education International* 3. 123-136.
- Padden, Carol. 1998a. From the cultural to the bicultural: The modern deaf community. In Ila Parasnis (ed.), *Cultural and Language Diversity: Reflections on the Deaf Experience*, 79–98. Cambridge: Cambridge University Press.
- Padden, Carol. 1998b. Early bilingual lives of deaf children. In Ila Parasnis (ed.), *Cultural and Language Diversity and the Deaf Experience*, 79–116. Cambridge: Cambridge University Press.
- Padden, Carol & Claire Ramsey. 1998. Reading ability in signing deaf children. *Topics in Language Disorders* 18. 30–46.
- Paradis, Johanne; Fred Genesee & Martha B. Crago. 2011. *Dual Language Development and Disorders*. Baltimore: Brookes.
- Paul, Peter V. 1998. A Perspective on the special issue of literacy. *Deaf Studies and Deaf Education* 3(3). 258–263.
- Pérez Martín, Mar, Marian Valmaseda Balanzategui, & Gary Morgan. 2014. Sign bilingual and co-enrollment education for children with cochlear implants in Madrid, Spain. In Marschark, Marc, Gladys Tang & Harry Knoors (eds.), *Bilingualism and Bilingual Deaf Education*, 368-395. Oxford: Oxford University Press.
- Plann, Susan. 1997. *A Silent Minority. Deaf Education in Spain, 1550-1835*. Los Angeles.
- Plann, Susan. 2004. *Una Minoría Silenciosa*. Madrid: Fundación CNSE.
- Plaza-Pust, Carolina. 2004. The path toward bilingualism: Problems and perspectives with regard to the inclusion of sign language in deaf education. In Mieke Van Herreweghe & Myriam Vermeerbergen (eds.), *To the Lexicon and Beyond: Sociolinguistics in European Deaf Communities*, 141–170. Washington, D.C.: Gallaudet University Press.
- Plaza-Pust, Carolina. 2008b. Why variation matters: On language contact in the development of L2 written German. In Carolina Plaza-Pust & Esperanza Morales-López (eds.), *Sign Bilingualism: Language Development, Interaction, and Maintenance in Sign Language Contact Situations*, 73–135. Amsterdam: John Benjamins.
- Plaza-Pust, Carolina & Esperanza Morales-López. 2008. Sign bilingualism: Language development, interaction, and maintenance in sign language contact situations. In

- Carolina Plaza-Pust & Esperanza Morales-López (eds.), *Sign Bilingualism: Language Development, Interaction, and Maintenance in Sign Language Contact Situations*, 333–379. Amsterdam: John Benjamins.
- Poppendieker, Renate. 1999. Zum Mathematikunterricht. In Klaus-B. Günther, Angela Staab, Verena Thiel-Holtz, Susanna Tollgreef & Hubert Wudtke (eds.), *Bilingualer Unterricht mit gehörlosen Grundschulern: Zwischenbericht zum Hamburger bilingualen Schulversuch*, 56-58. Hamburg: hörgeschädigte kinder.
- Power, Desmond John & Mervyn Bruce Hyde. 1997. Multisensory and unisensory approaches to communicating with deaf children. *European Journal of Psychology of Education* 12(4). 449-464.
- Powers, Stephen. 2002. From concepts to practice in deaf education: A United Kingdom perspective on inclusion. *Deaf Studies and Deaf Education* 7(3).
- Preto, Ermes. 2003. Introduzione. In Lilia Andrea Teruggi (ed.), *Una Scuola, due Lingue. L'Esperienza di Bilinguismo nella Scuola dell'Infanzia ed Elementare di Cossato*, 15-19. Milan: FrancoAngeli.
- Prillwitz, Siegmund. 1991. Der lange Weg zur Zweisprachigkeit Gehörloser im deutschen Sprachraum. In Siegmund Prillwitz & Tomas Vollhaber (eds.), *Gebärdensprache in Forschung und Praxis*, 17-33. Hamburg: Signum.
- Prillwitz, Siegmund & Hubert Wudtke. 1988. *Gebärden in der vorschulischen Erziehung gehörloser Kinder. Zehn Fallstudien zur kommunikativ-sprachlichen Entwicklung gehörloser Kinder bis zum Einschulungsalter*. Hamburg: hörgeschädigte kinder.
- Ramsey, Claire L. 2004. Theoretical tools for educational interpreters, or “The true confessions of an ex-educational interpreter”. In Elizabeth A. Winston (ed.), *Educational Interpreting: How it can succeed*, 206-226. Washington, D.C.: Gallaudet University Press.
- Ramsey, Claire & Carol Padden. 1998. Natives and newcomers: Gaining access to literacy in a classroom for deaf children. *Anthropology and Education Quarterly* 29(1). 5–24.
- Robertson, Lyn. 2014. *Literacy and Deafness: Listening and Spoken Language*. San Diego CA: Plural Publishing.
- Rodríguez, Pilar. 2003. Instituto Hispano Americano de la Palabra. Madrid. Cervantesvirtual, Biblioteca de Signos. Available at <http://bib.cervantesvirtual.com>.
- Romaine, Suzanne. 1995. *Bilingualism*, 2nd edn. Oxford: Blackwell.
- Romaine, Suzanne. 2004. The bilingual and multilingual community. In Tej K. Bhatia & William C. Ritchie (eds.), *The Handbook of Bilingualism*, 385-405. Oxford: Blackwell.
- Sabria, Richard. 2006. Sociolinguistique de la Langue des Signes Française. *Glottopol* 7. 6-30.
- Schäfer, Ilka. 2005. *Untersuchungen zum Erwerb der Textproduktionskompetenz bei hörgeschädigten Schülern*. Hamburg: Signum.
- Schick, Brenda. 2003. The development of American Sign Language and manually coded English systems. In Marc Marschark & Patricia Elizabeth Spencer (eds.), *Deaf Studies, Language, and Education*, 219-231. Oxford: Oxford University Press.
- Schleppegrell, Mary J. & Catherine L. O'Hallaron. 2011. Teaching Academic Language in L2 Secondary Settings. *Annual Review of Applied Linguistics* 31. 3–18.
- Siebert-Ott, Gesa Maren. 2001. Frühe Mehrsprachigkeit: Probleme des Grammatikerwerbs in multilingualen und multikulturellen Kontexten. Tübingen: Niemeyer.
- Singleton, Jenny L., Samuel J. Supalla, Sharon Litchfield & Sara Schley. 1998. From sign to word: Considering modality constraints in ASL/English bilingual education. *Topics in Language Disorders* 18(4). 16–29.

- Singleton, Jenny L. & Elissa L. Newport. 2004. When learners surpass their models: The acquisition of American Sign Language from inconsistent input. *Cognitive Psychology* 49. 370–407.
- Spencer, Patricia E. & J. Bruce Tomblin. 2006. Speech production and spoken language development of children using “Total Communication”. In Patricia E. Spencer & Marc Marschark (eds.), *Advances in the Spoken Language Development of Deaf and Hard-of-hearing Children*, 166-192. New York: Oxford University Press.
- Strong, Michael. 1988. A bilingual approach to the education of young deaf children: ASL and English. In Michael Strong (ed.), *Language Learning and Deafness*, 113-131. Cambridge: Cambridge University Press.
- Strong, Michael & Philip Prinz. 2000. Is American Sign Language skill related to English literacy? In Charlene Chamberlain, Jill P. Morford & Rachel I. Mayberry (eds.), *Language Acquisition by Eye*, 131-142. Mahwah, NJ: Lawrence Erlbaum.
- Supalla, Samuel. 1991. Manually Coded English: Modality in Signed Language Development. Patricia Siple & Susan D. Fischer (eds.), *Theoretical Issues in Sign Language Research, Volume 2*. Chicago: University of Chicago Press.
- Supalla, Samuel J. & Jody H. Cripps. 2008. Linguistic accessibility and deaf children. In Bernard Spolsky & Francis M. Hult (eds.), *The Handbook of Educational Linguistics*, 174-191. Oxford: Blackwell.
- Sutton-Spence, Rachel. 2003. British manual alphabets in the education of deaf people since the 17th century. In Leila Monaghan, Constanze Schmaling, Karen Nakamura & Graham Turner (eds.), *Many Ways to be Deaf: International Variation in Deaf Communities*, 25-49. Washington, D.C.: Gallaudet University Press.
- Svartholm, Kristina. 1993. Bilingual education for the deaf in Sweden. *Sign Language Studies* 81. 291-332.
- Svartholm, Kristina. 2002. Reading strategies in bilingually educated deaf children Some preliminary findings. Available at <http://www.acfos.org/publication/ourarticles/pdf/acfos2/svartholm.pdf>.
- Svartholm, Kristina. 2007. Cochlear implanted children in Sweden's bilingual schools. In Linda Komisaroff (ed.), *Surgical Consent: Bioethics and Cochlear Implantation*. Washington, D.C.: Gallaudet University Press.
- Svartholm, Kristina. 2010. Bilingual education for deaf children in Sweden. *International Bilingual Education and Bilingualism* 13(2). 159-174.
- Swanwick, Ruth & Susan Gregory. 2007. *Sign Bilingual Education: Policy and Practice*. Coleford: Douglas McLean.
- Swanwick, Ruth, Ola Hendar, Jesper Dammeyer, Ann-Elise Kristoffersen, Jackie Salter & Eva Simonsen. 2014. Shifting contexts and practices in sign bilingual education in Northern Europe: Implications for professional development and training. In Marschark, Marc, Gladys Tang & Harry Knoors (eds.), *Bilingualism and Bilingual Deaf Education*, 292-312. Oxford: Oxford University Press.
- Szagun, Gisela. 2001. *Wie Sprache entsteht: Spracherwerb bei Kindern mit normalem und beeinträchtigtem Hören*. Weinheim: Beltz.
- Szagun, Gisela. 2003. Spracherwerb bei Kindern mit Cochlea-Implantat im Vergleich zu normal hörenden Kindern. *forum* 11. 71-82.
- Tellings, Agnes. 1995. The two hundred years' war in deaf education: A reconstruction of the methods controversy. Ph Doctoral dissertation, University of Nijmegen. Mediagroep Katholieke Universiteit Nijmegen.
- Teruggi, Lilia Andrea. 2003. *Una Scuola, due Lingue: l'Esperienza di Bilinguismo nella Scuola*. Milan: FrancoAngeli.
- Thomas, Wayne P. & Virginia P. Collier. 1997. Two Languages Are Better Than One. *Educational Leadership*, 55(4). 23-26.

- Tollgrief, Susanna. 1999. Bericht über die ältere Klasse. In Klaus-B. Günther (ed.), *Bilingualer Unterricht mit gehörlosen Grundschulern: Zwischenbericht zum Hamburger Bilingualen Schulversuch*, 23-36. Hamburg: hörgeschädigte kinder.
- Tollgrief, Susanna & Jutta Schwarz. 1999. Team Teaching von hörenden und gehörlosen Lehrerinnen im bilingualen Unterricht. In Klaus-B. Günther (ed.), *Bilingualer Unterricht mit gehörlosen Grundschulern: Zwischenbericht zum Hamburger Bilingualen Schulversuch*, 59-60. Hamburg: hörgeschädigte kinder.
- Tracy, Rosemarie & Ira Gawlitzek-Maiwald. 2000. Bilingualismus in der frühen Kindheit. In Hannelore Grimm (ed.), *Enzyklopädie der Psychologie. Vol. 3: Sprachentwicklung*, 495–535. Göttingen: Hogrefe.
- United Nations. 2006. Final report of the Ad Hoc Committee on a Comprehensive and Integral International Convention on the Protection and Promotion of the Rights and Dignity of Persons with Disabilities [A/61/611 - PDF, 117KB]. Retrieved November 22nd, 2016 from <http://www.un.org/disabilities/convention/conventionfull.shtml>.
- Vercaingne-Ménard, Astrid, Anne-Marie Parisot & Colette Dubuisson. 2005. *L'approche bilingue à l'école Gadbois. Six années d'expérimentation. Bilan et recommandations*. Rapport déposé au ministère de l'Éducation du Québec. Université du Québec à Montréal.
- Verhoeven, Ludo T. 1994. Transfer in bilingual development: The linguistic interdependence hypothesis revisited. *Language Learning* 44(3). 81-415.
- Volterra, Virginia. 2003. Prefazione. In Lilia Andrea Teruggi (ed.), *Una Scuola, due Lingue. L'Esperienza di Bilinguismo nella Scuola dell'Infanzia ed Elementare di Cossato*, 9-13. Milano: Franco Angeli.
- Werner, Hans. 1932. *Geschichte des Taubstummenproblems bis ins 17. Jahrhundert*. Jena: Fischer.
- WHO. 2001. International classification of functioning, disability and health : ICF. Geneva: World Health Organization.
- Wilbur, Ronnie. 2000. The use of ASL to Support the Development of English and Literacy. *Deaf Studies and Deaf Education* 5(1). 81–104.
- Winzer, Margret A. 1990. *Children with Exceptionalities: a Canadian Perspective*. Scarborough, Ont.: Prentice-Hall Canada.
- Winzer, Margret A. 1993. *The History of Special Education: from Isolation to Integration*. Washington, D.C.: Gallaudet University Press.
- Wisch, Fritz-Helmut. 1990. *Lautsprache und Gebärdensprache: Die Wende zur Zweisprachigkeit in Erziehung und Bildung Gehörloser*. Hamburg: Signum.
- Wode, Henning. 1995. *Lernen in der Fremdsprache: Grundzüge von Immersion und bilinguaem Unterricht*. Ismaning: Hueber.
- Woll, Bencie. 2003. Modality, universality and the similarities among sign languages: A historical perspective. In Anne Baker, Beppie Van den Bogaerde & Onno Crasborn (eds.), *Cross-linguistic Perspectives in Sign Language Research. Selected papers from TISLR. 2000*. 17–27. Hamburg: Signum Press.
- Wudtke, Hubert. 1993. Schriftspracherwerb: Schreibentwicklungen gehörloser Kinder. *Das Zeichen* 24. 212-223 and 25. 332-334.
- Wudtke, Hubert. 1999. Grundschulpädagogische Reflexionen zur bilingualen Unterrichtspraxis. In Klaus-B. Günther, Angela Staab, Verena Thiel-Holtz, Susanna Tollgrief & Hubert Wudtke (eds.), *Bilingualer Unterricht mit gehörlosen Grundschulern: Zwischenbericht zum Hamburger bilingualen Schulversuch*, 87-98. Hamburg: hörgeschädigte kinder.
- Yang, Jun Hui. 2008. Sign language and oral/written language in deaf education in China. In Carolina Plaza-Pust & Esperanza Morales-López (eds.), *Sign Bilingualism: Language*

- Development, Interaction, and Maintenance in Sign Language Contact Situations*, 297–331. Amsterdam: John Benjamins.
- Yoshinaga Itano, Christine & Allison L. Sedey. 2000. Speech development of deaf and hard of hearing children in early childhood: Interrelationships with language and hearing. *The Volta Review* 100(2). 181-212.

Index

- Academic achievement 4, 5, 7, 9, 10, 11, 12, 14, 15, 28, 34, 35, 36, 37, 39, 42, 46, 47, 76, 77, 82, 84, 92, 93, 96, 97, 99
- Academic language 6, 7, 15, 56, 59, 68, 92, 96, 97
- Acquisition of sign language 57, 73, 96
- Alignment
 language competences 7, 88, 92
 language planning 84
- Assessment 3, 34, 40, 75, 81, 85, 92, 107
- Attitudes
 attitudes towards bilingualism 98
 attitudes towards multilingualism 1
 attitudes towards sign language 26, 90
- Auditory training 29
- Auditory-verbal approach 28, 29, 32, 33
- Awareness
 cultural awareness 5
 metalinguistic awareness 7, 31, 41, 60, 67, 95, 98
- Background
 language background 6, 9, 11, 12, 13, 56, 59
 literacy distant background 15
 migration background 7, 11, 12, 77, 88
- Bilingual education
 bilingual education continuum 4
 immersion bilingual education 5, 6, 9, 16
 maintenance bilingual education 4, 76
 transitional bilingual education 4, 5, 6
- CI *see Cochlear Implants*
- Cochlear implants 28, 36, 63, 77, 84, 108
 cochlear implantation 2, 28, 33, 34, 88, 99
- Code-blending 94
- Code-switching 64, 68, 94
- Co-enrolment 56, 59, 63, 65, 68, 69, 70, 73, 75, 76, 77, 88
- Communication
 classroom communication 7, 12, 41, 44, 50, 68, 98
- Conceptual literacy 6, 7
- Content and Language Integrated Learning (CLIL) 10, 13
- Contrastive teaching 12, 63, 86, 98
- Curriculum 5, 6, 7, 8, 9, 10, 11, 12, 16, 35, 40, 44, 51, 53, 54, 56, 57, 58, 60, 63, 65, 66, 67, 68, 71, 73, 74, 75, 77, 86, 98
- Deaf community 30, 35, 40, 43, 50, 53, 74
- Development
 development of sign bilingualism 87, 92, 99
 developmental linguistics 1, 15, 39, 48, 56, 92, 95
- DGS 44, 64, 65, 66, 96
- Early intervention 28, 29, 36, 38, 41, 42, 46, 53, 57, 58, 84, 85, 89, 91
- Educational placement 8, 32, 34, 63
 inclusion 69, 72, 73, 74, 76
 mainstreaming 4, 6, 8, 9, 11, 35, 56, 70, 71, 72, 73, 74, 75, 77
 segregation 6, 8, 32, 56, 69, 70, 71, 72, 73
- Empowerment 30, 82
- Exposure
 exposure to sign language 56, 57, 58, 90
- Fingerspelling 18, 19, 39, 40, 46, 66, 67
- German Sign Language *see DGS*
- Hearing aids 26, 28, 29, 36, 40
- Hearing screening 28, 36, 99
- History of deaf education 17, 18, 21, 25, 27, 105
- Immersion *see Bilingual education*
- Institutional framework 8, 59, 69, 72, 75, 96
- Institutionalisation
 institutionalisation of sign bilingual education 53, 82, 85
- Interdependence hypothesis 61, 96, 97
- Interpretation
 interpreted education 56, 59, 63, 68, 69, 70, 73, 74, 75, 77, 107
 interpreter 60, 63, 68, 74, 75, 109
- Language contact 2, 26, 67, 94, 95, 96
- Language of instruction 7, 11
- Language planning 1, 11, 41, 63, 79, 80, 82, 84, 92, 99
 coordinated action 12, 79
- Language skills
 sign language skills 45, 61, 73, 86, 90, 97

- spoken language skills 2, 21, 22, 31, 32, 42, 62, 76, 84
- LBG 40, 41, 42, 44, 54, 59, 64, 65, 66
- Linguistic diversity 11, 15, 59
- Linguistic homogeneity 1, 3, 11, 14
- Linguistic minority 8, 43, 76, 86, 97
- Lipreading 19, 21, 25, 26, 27, 31, 32, 33, 62
- Literacy 7, 12, 15, 16, 31, 32, 34, 36, 38, 39, 45, 55, 56, 60, 90, 93, 95, 96, 97
- Mainstream education 3, 4, 8, 15, 56, 59, 69, 70
- Majority language 1, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 56, 93
- Manual alphabet 18, 19, 20, 22, 25, 103
- Minority language 5, 6, 8, 15, 97
- Modality of expression 2, 41, 49, 92
 - spoken modality 47, 84
 - visual modality 33, 51, 84, 94
- Monolingualism 1, 8, 11, 79
- Multilingualism 1, 16, 99
- Oralism 24, 25, 26, 27, 29, 30, 31, 33, 34, 38, 39, 42, 43, 44, 50, 55, 99
- Parents
 - deaf parents 39, 42, 91
 - hearing parents 37, 40, 42, 44, 54, 57, 89, 91
 - parental involvement 15, 36, 52
 - parent-child communication 43, 45
- Policy 1, 2, 3, 11, 12, 13, 14, 41, 53, 57, 69, 77, 78, 79, 81, 83, 84, 85, 92, 94, 99
- Promotion
 - promotion of bilingualism 3, 14
 - promotion of listening skills 27
 - promotion of sign bilingualism 2, 56, 79, 99
 - promotion of sign language 2, 35, 56, 58, 60, 61, 85, 94, 97
 - promotion of the mother tongue 4, 7, 8, 9
 - promotion of the oral language 30, 60
 - promotion of the spoken language 44, 62
 - promotion of the written language 61, 62
- Qualifications 36
 - qualifications of teachers 8, 73, 74
 - qualifications of the school personnel 9
 - teacher training 9, 71, 81, 84, 88
- Second language 1, 4, 5, 10, 13, 51, 57, 60, 62, 63, 66, 79, 86, 88, 97
- Sign language
 - language of instruction 27, 41, 53, 59, 98
 - primary language 51, 56
 - sign language competence 33, 45, 58, 59, 74, 91, 92
 - sign language input 79
 - sign language input continuum 79
- Signed system 24, 42, 91
- Speechreading *see Lipreading*
- Spoken language
 - primacy of the spoken language 21, 25
 - spoken language acquisition 21, 39, 40
 - spoken language development 27, 28, 33, 42, 88, 90, 110
- Status
 - status of sign language 2, 3, 17, 55, 57, 89
 - status of signed systems 48, 49
 - status of the written language 32
- Submersion education 4, 5, 6, 11
- TC *see Total Communication*
- Teaching
 - teaching materials 16, 54, 63, 85
 - team teaching 64, 65, 67, 69, 87
- Total Communication 37, 38, 39, 51, 53, 82
- Written language 19, 21, 22, 31, 34, 38, 43, 45, 47, 56, 60, 61, 62, 66, 68, 78, 85, 86, 88, 89, 95, 96, 97, 98
 - teaching of the written language 17, 18, 19, 20, 21, 24, 25, 27
 - written language acquisition 2, 21, 32, 62

Sign bilingualism in education: challenges and perspectives along the research, policy, practice axis

Carolina Plaza-Pust

From the first attempts at including sign language in deaf education until today, the status of sign language in deaf education has been marked by changing perspectives on deafness and the needs and abilities of deaf students. The perception of deaf individuals using a sign language and a spoken/written language as bilinguals is a relatively new phenomenon, and so is a bimodal bilingual conception of deaf education. The present work elaborates on the status of sign language in deaf education from a historical perspective with a view to tracing the current diversity of approaches to the education of deaf students. It portrays the developments leading to the establishment of sign bilingual education programmes in diverse social contexts, and discusses the major components and objectives of sign bilingual education based on a comparison of bilingual programmes implemented in Europe and North America. Commonly, the primary promotion of sign language is a characteristic of sign bilingual education conceptions at the programmatic level. Yet, how is this demand put into practice? Are the sign bilingual education programmes established in the last decades based on a common didactic conception? If they are not, what are the main dimensions of variation? And what does the variation observed reveal about the objectives pursued?

The systematic analysis of the information gathered about the conception, establishment and evaluation of sign bilingual education reveals the advances that have been made and the challenges that remain regarding the promotion of sign bilingualism in deaf education in the areas of research, policy and practice.



ISBN 978-0-9929221-3-9