Language Therapy in British Sign Language:

A study exploring the use of therapeutic strategies and resources by Deaf adults working with young people who have language learning difficulties in British Sign Language (BSL).

This thesis forms part of the UCL

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Clinical Communication Sciences

Joanna Helen Hoskin

Declaration

I, Joanna Hoskin confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

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I am very grateful for the generosity and support of all those involved in this research project.

I have been privileged to work with wonderful Deaf practitioners. I want to thank them for their willingness to develop ideas and enable our shared work to flourish.

My thanks, too, to the children and parents who have been involved. Not only those reported in this thesis, but all those who have helped us develop our work over several years.

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Abstract

Deaf practitioners, with varied backgrounds, training experience, roles and qualifications, currently work with d/Deaf children who have difficulties in their development of sign language. With the long term aim of improving practice, three questions were addressed:

1. How do Deaf practitioners (DPs) currently work with d/Deaf children who have language difficulties?
2. Can language therapy strategies and resources developed for spoken language be adapted for language therapy in BSL?
3. Can therapy strategy and resource use bring observable change to DPs' therapeutic skills?

The study had three phases. In Phase 1, questionnaires and focus groups asked DPs about current practice. In Phase 2, 4 DPs and the Speech and Language Therapist (SLT) researcher collaborated to deliver language therapy in BSL. Questionnaires, observation schedules and discussion gathered feedback from DPs. Phase 3, based on findings from Phases 1 and 2, comprised a training course for 17 DPs and SLTs. Theoretical information, with data examples from Phases 1 and 2, provided a basis for the training. Course participants provided information about their knowledge and confidence about language therapy in BSL before and after the course with their reflections on the usefulness of the information presented.

In summary, the study confirmed that DPs have varying skills, knowledge and confidence. There are challenges for DPs, including accessing information on language disorder, language context, language mixing, and bilingualism. The roles of DPs and the availability of other professionals, such as SLTs, for co-working can make it challenging for practitioners to provide therapeutic intervention. DPs reported training and co-working aided their work.

Participants identified a need for shared terminology to discuss language difficulties and intervention in English and BSL. A shared framework for assessment, goal setting, therapy and evaluation is needed. More accessible information, resources, training and supervision would support DPs and SLTs in this work.

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Introduction

Where young people have speech, language and communication difficulties in spoken language, they receive assessment and intervention from Speech and Language Therapists (SLTs). Information and resources are available to support their parents, carers and teachers. (http://www.thecommunicationtrust.org.uk/resources/ , http://www.ican.org.uk/Book-shop.aspx , http://www.youtube.com/user/RALLIcampaign) as well as resources and tools to support the work of SLTs (https://www.rcslt.org/, http://www.thecommunicationtrust.org.uk/projects/what-works.aspx). Comparable services provided to those with spoken language difficulties are not available for people with language and communication difficulties in signed languages even though similar language difficulties exist in this modality (Quinto-Pozos, 2014). Language and communication deprivation, delay and disorder are known to be key issues in the mental wellbeing of d/Deaf[1] young people (Dammeyer 2010; Fellinger et al 2009; Stevenson et al 2010). However, there is little research either on how staff can be trained and supported to assess and intervene in the area of signed language difficulty or disorder, or on the impact of intervention, especially where those working with the young people are Deaf practitioners.

In England, the National Deaf Child and Adolescent Mental Health Service (NDCAMHS) employs a number of practitioners whose roles include some focus on language and communication skills. As well as sign language interpreters and SLTs, these include practitioners who are Deaf (Family Support Workers, Child Mental Health Workers and Specialist Deaf Outreach Workers). As deaf people, these practitioners have lived experience of deafness and have been in situations where their hearing loss has had an impact on their interaction and communication. These roles enable these Deaf practitioners to use their experience of Deaf culture and deafness in their work. Through working together to undertake mental health assessments and interventions, the clinical teams identified that clear information about language and communication is needed in order to achieve the best mental health intervention outcomes (Walker, 2013; Wright et al., 2012). From 2008, a Quality Improvement, Development and Initiative Scheme (QIDIS) earmarked funds within NDCAMHS to support the training and development of Deaf practitioners. In order to embark on aspects of this work, the language working group focused on Deaf practitioners' work with communication and language. The first initiative, Deaf practitioner training in the use of communication profiles by members of the working group, was completed in 2011. Communication profiles were included in a language

care pathway approved by the NDCAMHS management team in July 2012. Training in communication profiles helped identify best practice for NDCAMHS staff in communicating with children, young people and their families. It also helped identify a group of children who needed further language assessment or intervention. This clinical context has prompted the present study, which focuses on the work of Deaf practitioners with deaf young people aged 8-17 years. The study is structured in three phases: Phase 1 used questionnaires and focus groups to gather information from Deaf practitioners about current practice, Phase 2 included language therapy sessions with Deaf practitioners and children, and Phase 3 provided a two day training course.

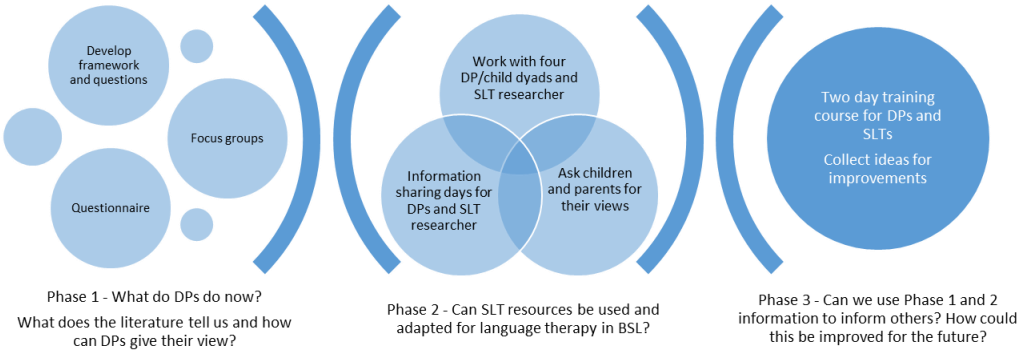


Figure 0-1 Overview of project plan

These phases were designed to achieve five research aims:

To describe how Deaf practitioners currently work with Deaf young people who have language difficulties in BSL.

To identify whether language therapy strategies and resources used by Deaf practitioners are similar to those used for spoken language by SLTs.

To explore whether language therapy strategies and resources developed for spoken language can be adapted or developed with Deaf practitioners to provide language therapy in BSL.

To use these therapy strategies and resources with Deaf practitioners, and evaluate their usefulness in enabling practitioners to develop their own

[1]therapeutic skills and in supporting d/Deaf children's language skills development.

To compile information and resources to share with Deaf practitioners undertaking work with children who have language learning difficulties in BSL.

The thesis begins by describing the clinical context in more detail in Chapter 1. Chapter 2 provides a summary of the research literature underpinning the area. Chapters 3, 4 and 5 give detailed descriptions of each of the three study phases, and their results. The final chapter summarises the study findings from all three phases and identifies implications for future language therapy intervention for children who use BSL.

[1] 'deaf' refers to audiological definitions of hearing impairment; 'Deaf' refers to cultural, social and linguistic definitions. d/Deaf is used to include both these groups as well as those young people whose identity in relation to their deafness is not yet established.

Chapter 1 Clinical background and context

This study arose from a clinical need identified by co-working clinicians in NDCAMHS. This chapter provides the clinical background to the study to enable an understanding of the clinical context and service history. The service objectives linked to the research questions for this project are then outlined.

1.1 Service history and context

In 1991, a specialist mental health service was established in London within the National Health Service to provide outpatient assessment and intervention for children, young people and families where members of the family were d/Deaf[2]. This was because it was known that issues in deaf young people related to language, communication, and access to information could impact on mental health and wellbeing within a family. Lack of access to appropriate services left d/Deaf children and families without support and contributed to deaf young people experiencing mental health difficulties into adult life (Sessa & Sutherland, 2013). It was also recognised that a dedicated in-patient unit was also needed when a d/Deaf young person was admitted to hospital for mental health care, as only adult placements were available. One such unit, Corner House, was established in 2001. In 2004 a pilot project, evaluated by the Social Policy Research Unit at York University, established the need for an out-patient service across England. In 2009, this led to the funding of the National Deaf Child and Adolescent Mental Health Service (NDCAMHS) as a national service in England (Wright et al., 2012). There are currently four main out-patient teams, in London, York, Dudley and Taunton, with outreach bases in Cambridge, Maidstone, Newcastle, Manchester, Oxford and Nottingham. Together, these now provide specialist mental health services to d/Deaf children, young people and their families. In addition, they work with education, health and social care professionals to increase awareness of the mental health vulnerabilities of d/Deaf children who, in the UK, are twice as likely as their hearing peers to experience social, emotional, behaviour and mental health difficulties (Gentili & Holwell, 2011).

[2] ‘deaf’ refers to audiological definitions of hearing impairment; ‘Deaf’ refers to cultural, social and linguistic definitions. d/Deaf is used to include both these groups as well as those young people whose identity in relation to their deafness is not yet established.

1.2 Service objectives

For many years, difficulties with the development of language and communication by d/Deaf children has been linked to their learning and behaviour as has the need for an individualised approach to assessment and intervention (Denmark, 1970). More recently, Hindley (2005) suggested that effective early communication could prevent many mental health problems, and that assessments and interventions should be adapted to meet the language and developmental needs of the d/Deaf young person. When the NDCAMHS was established, its key aim was to provide mental health assessment and interventions that were suitably adapted to meet the cultural and linguistic needs of d/Deaf young people and their families.

The service provides input to young people who are unable to access local, mainstream mental health services because their d/Deafness impacts directly on their mental health, its assessment or any intervention that could be offered. This may be for linguistic and cultural reasons or because their d/Deafness has impacted on the family and friendship systems within which they function, contributing to the mental health issue. For some d/Deaf children and young people, language deficits make it difficult to access the therapies recommended by NICE (National Institute for Health and Care Excellence) guidelines, an example being the psychological therapies delivered through the IAPT (Improving Access to Psychological Therapies) programme where 'talking therapies' are used to discuss and understand a child's difficulties and possible ways forward. http://www.youngminds.org.uk/training_services/vik/children_young_peoples_iapt/about_cyp_iapt. Whilst these therapies can be adapted for use in BSL, some young people do not have the level of language or communication experience required to develop good emotional understanding and effective coping strategies (Rieffe, 2012). Before mental health interventions can be successfully undertaken and completed, these children and young people need language support or language therapy to enable them to participate in and benefit from therapeutic interventions.

NDCAMHS supports other CAMHS teams in identifying clients where consultation, joint working or onward referral may be appropriate. In addition, the service was required, as part of the service specification, to increase the recruitment and involvement of Deaf staff as well as working towards the development of training and career pathways for Deaf professionals.

Current position

The eleven NDCAMHS teams, one for in-patients and ten community teams, are now established across England. Many referrals include concerns about communication in a general, systemic sense as would be expected in all CAMHS teams (Schoon, et al 2010). They also identify issues linked to language competence within particular environments and specific language learning difficulties, e.g. lack of spoken English affecting placements in mainstream educational settings, family language mismatch, issues with language deprivation and language disorder.

Deaf staff appointments have increased since the establishment of NDCAMHS, and all teams have Specialist Outreach Deaf Workers, Family Support Workers or Child Mental Health Workers who are Deaf. For the purposes of this study all these workers are referred to as Deaf practitioners. Currently, there are more than 17 staff employed in these roles. Their work includes participation in the production of communication profiles, assessment and intervention sessions for children and young people who use BSL and identification of those in need of further language assessment or intervention. Some teams have recruited other professionals with varying levels of hearing and d/Deaf identities, e.g. Primary Mental Health Worker, Clinical Psychologist, Psychology Assistant, and Social Worker. Deaf consultants have also been appointed in two teams to support the development of a service that is d/Deaf friendly and culturally aware.

With research information about the links between mental health difficulties and language, NDCAMHS has developed training to ensure that Deaf practitioners develop an awareness of their role, skills and training needs in relation to language and communication. Training has also supported other mental health professionals and interpreters in understanding the issues relating to language deprivation and disorder in this population. As an SLT working in NDCAMHS with Deaf people, the researcher is involved in Special Interest Groups with therapists and Deaf practitioners from other services, where issues are discussed relating to training, adapting materials for use with children, young people and adults and providing language therapy in BSL.

The researcher and colleagues were involved in a language working group, which developed the concept of a communication profile to support Deaf practitioners in completing observational assessments of a child's language skills and their use in different settings. Workshops, information and guidelines were provided to support

Deaf practitioners in sharing this work with other members of the clinical team as well as enabling the wider team to understand and value this work within the context of mental health assessment and intervention (Holwell, Hoskin, & Gentili, 2013).

Following initial training sessions and work with the communication profile, some Deaf practitioners have shown an interest in additional training in order to provide more comprehensive interventions for their clients and further their career progression. This study explored the current skills and knowledge of Deaf practitioners, the strategies and resources needed to provide such training and worked with Deaf practitioners to develop resources to undertake this work to begin to address four key service issues:

Do we have staff with the right qualifications and experience? – It is not clear what the expectations are from hearing and Deaf practitioners of their, and each other's, roles in language and communication assessment. Clarity is lacking about the knowledge, skills and supervisory arrangements that Deaf practitioners need to provide communication profiles, language assessments and therapeutic intervention. It is unclear for some Deaf practitioners if language work is one of the main aspects of their role. A study that evaluated teaching skills of Deaf practitioners in education settings (Sutton-Spence & Ramsey, 2010) identified that whilst some are aware of their own skills, how to use them and how they fit into an overall plan, others are working more intuitively and are therefore less able to describe or make the best use of their skills. Those teachers in the study with specific training were more able to use their skills to achieve clearly defined learning outcomes.

What tools are needed to support the development of vocabulary and narrative skills? – Deaf practitioners strengthen the development of vocabulary and narrative skills of children in preparation for therapy linked to mental health needs. Vocabulary skills enable young people to identify and name emotions, responses and behaviours linked to their mental health presentation (Ziv, Most, & Cohen, 2013). Narrative or 'story telling' skills enable young people to describe characters, their motivations, intentions, conflicts and any resolutions (Morgan, 2006); these skills are needed for many 'talking therapies'.

Are tools that have been shown to support the development of narrative skills in a hearing population suitable for use with a d/Deaf population? If not, what adaptations are needed? Similar questions have been explored in studies

investigating the effectiveness of a language intervention programme delivered by hearing Teaching Assistants in educational settings with hearing students (Joffe, 2011; 2012).

Is there evidence that language interventions support mental health interventions for d/Deaf young people with severe mental health issues?
There is currently limited clinical or research evidence available about the impact that work on language skills (narrative or vocabulary) has on therapeutic interventions and outcomes in d/Deaf inpatient and outpatient populations. Measures to identify the range and extent of young people's difficulties are regularly used at admission, review points and discharge. However, these measures may not be sensitive enough to detect language or communication change, therefore, additional assessments are needed. Possible tools and assessment methods are explored further in the literature review. These measures could then be used alongside CGAS (Children's Global Assessment Scale, Shaffer et al., 1983) and HONOSCA (Health of the Nation Outcome Scale for Children and Adolescents, Gowers et al., 1998) in order to make comparisons between changes to general functioning, externalising behaviours and language or communication skills use. An additional tool to investigate how working with d/Deaf practitioners impacts on young people's Deaf identity, self-perception and personal narrative would provide information about the benefits of having a d/Deaf workforce.

1.3 Research questions

The five study aims stated in the introduction can be summarised into three research questions which will begin to contribute to our understanding of the broad Service issues outlined above.

- How do Deaf practitioners currently work with Deaf young people who have language difficulties in BSL?
- Can therapy strategies and resources developed for spoken language be adapted or developed, with Deaf colleagues, to provide language therapy in BSL; and do Deaf practitioners find the therapy strategies and resources useful for their own therapeutic skills or for developing d/Deaf children's language skills?
- Can the information gathered in answering the first two questions be shared in an accessible and useful format with a larger group of Deaf practitioners working with d/Deaf children in different settings?

In the next chapter, the study will be set within the context of current literature on three topics: Speech and Language Therapy processes and frameworks for intervention, language development and disorder in BSL, and supporting Deaf practitioner practice.

Chapter 2 Literature Review

This chapter gives an overview of current literature pertinent to practitioners' skills for language therapy in BSL. Following a summary about processes and frameworks for intervention in spoken language, current knowledge about BSL development and language difficulties is described. The chapter concludes with a review of information related to Deaf practitioners' knowledge and learning.

2.1 Speech and Language Therapy processes and frameworks for intervention

Speech and Language Therapy has developed as a profession over more than seventy years, with the Royal College of Speech and Language Therapists established in 1945. Practices have developed that are "core processes for intervention, such that knowledge and skills can be applied flexibly across client groups" (Bunning, 2004, p.vii). Three key frameworks and core processes underpinning the delivery of language therapy are described here in more detail: the intervention cycle, intervention format, and intervention techniques.

Bunning (2004) describes the intervention cycle as including techniques such as assessment, diagnosis, goal setting, therapy, and evaluation. She comments that the cycle may not be a linear process, and that aspects of each component may recur at different points in the cycle. Bunning highlights the importance of practitioners from any field sharing a core vocabulary to describe the intervention cycle. This enables the integration of theory and practice, ensuring that practitioners use problem solving skills and clinical decision making throughout their interventions regardless of their client group.

The format of intervention can vary depending on the setting, goals of intervention and client presentation. Bunning describes five formats: one-to-one, in groups with peers, with an adult other than the therapist, environmental change and advocacy. The selection of a format may be made by the SLT or it may be standardised within clinical guidelines or established practice for a setting. It may be appropriate to work in one-to-one sessions with a client and provide direct, face-to-face intervention. For other clients, providing intervention with peers in a group may be more suitable. The selection of format may relate to the needs and availability of clients or setting constraints such as time, staffing levels and the physical environment. Working with another adult to develop communication opportunities and partnerships may also be an effective format for intervention. If the target of intervention is environmental change, sessions with the client may not occur. Instead, the therapist may support others in the client's environment to make changes that will impact on language and

communication. Finally, advocacy-based interventions may be indicated whereby the therapist supports the client to make their own changes in their environment to enhance their effective use of language and communication.

Bunning (2004) also describes seven intervention techniques that practitioners use to facilitate the therapeutic process between the practitioner and client or other significant stakeholder. Engagement techniques are used to support the client or others in engaging with the therapeutic process. Modification techniques enable the practitioner to adapt his or her own use of communication in response to the client's needs, ensuring the client's competencies can be identified and a balanced interaction achieved. Facilitation techniques help provide timely support to maintain interaction and the use or practise of skills. Feedback techniques are used by the therapist to enable the client to recognise any behaviours or strategies that promote therapeutic change. Personal maintenance techniques recognise and support an individual's needs and behaviours. Context maintenance techniques ensure that the client can engage with the environment and any materials in a positive way. Finally, transection techniques facilitate the sharing of information (for example, details of therapeutic input and change) about the client's language and communication skills, in a timely way with others (the client, families, carers, or other professionals).

Other research studies provide more detail about modification and facilitation techniques used by SLTs working with children (Farmer & Fleur, 2006; Joffe, 2011). These refer to basic language support strategies, including listening skills, timing, turn-taking, and adapting language to meet the child's language needs, and physically getting to the child's level. Similar strategies have been observed in use by Deaf adults to promote sign language development (Smith & Sutton-Spence, 2005). In response to questionnaires about their practice a range of professionals working with d/Deaf children including SLTs report suggesting the use of similar strategies to the parents of pre-school children (Rees et al., 2014). These studies indicate that similar strategies can be usefully used by a range of practitioners with different client groups.

These techniques of intervention fit well with a recent review of current practice of professionals working with children with speech, language and communication needs (Roulstone et al., 2012). Roulstone et al (2012) define an intervention broadly as "an action or technique or activity or procedure (or indeed a combination of these) that reflects a shared aim to bring about an improvement or prevent a

negative outcome, related to a child's speech, language and communication skills" (p326). They provide two frameworks of intervention useful for comparison to Deaf practitioners' current practice. The first framework - types of intervention - describes provision of intervention at three different levels relating to a hierarchy of need and provision. At the first level, universal interventions would be available to all children to facilitate language learning and may include access to good language role models and language rich settings. The second level, targeted interventions, would be aimed at children with additional needs who require more support to develop language skills. This support may include small group work with the assistance of trained adults as described by Fleur and Farmer in their 2006 study. The third level, specialist interventions, are undertaken for children with the highest level of need for support in learning language. These children often have very specific needs and require use of the language intervention cycle as described above by Bunning, delivered by a practitioner with additional training in language and intervention. The second of Roulstone's frameworks identifies eight categories of interventions which are used in work with children to deliver interventions or with parents or other practitioners to support them to deliver interventions themselves. These are programmes, intervention activities, principles or approaches, service developed programmes, resources, training, models or theories of intervention and targets of intervention.

SLTs working with children in spoken English use a range of standardised assessments to identify a child's receptive and expressive language skills as well as their use of these skills (Dockrell and Marshall, 2015). However, limitations in the use of standardised assessments has increasingly been identified, and other methods for understanding children's language needs (Hasson & Joffe, 2007) are being explored, for example, dynamic assessment and mediated learning experience (MLE) techniques (Martin, 2012). These techniques are reported to provide better information for differential diagnosis and to be more helpful than static assessment in intervention planning. Assessment techniques that compare a child's skills in different languages have also been identified as useful for understanding the language development of bilingual children (Pena & Bedore, 2011). These themes are explored further in the next section in relation to studies with d/Deaf children.

For SLTs providing intervention in more than one language, co-working with bilingual co-workers is important. Croft et al (2011) with reference to bilingual,

hearing, aphasic adults showed how working in a patient's dominant language brought about cross-linguistic generalisation. Their findings supported the use of bi-lingual co-workers in therapy delivery. Bilingual interventions in spoken English and Spanish have also shown benefits for d/Deaf children (Bunta et al., 2016). Of the twenty children studied, ten received intervention in both languages and this group outperformed the English-only intervention group on two of the three measures used. Whilst this study may not relate directly to the experience of d/Deaf children who sign, it demonstrates how bilingual interventions are valued within SLT.

To summarise, the Speech and Language Therapy literature demonstrates that practice, knowledge, techniques and skills are transferrable across client groups. It provides us with frameworks that outline the core features of 'intervention'. When student SLTs are trained, they are encouraged to use problem-solving skills and clinical decision making within these frameworks to facilitate therapeutic change for their clients. This, alongside their knowledge of language development and disorder, enables them to plan, deliver and evaluate intervention. In comparison, Deaf practitioners working with children who have language learning difficulties in the signed modality have very little training. This study explores the validity of SLT frameworks for Deaf practitioners and considers other areas of training required by this group.

2.2 Language development and disorder in BSL

SLT training includes information about language development and disorder in spoken language. Before considering language development and disorder in BSL, it is useful to briefly compare BSL and English. BSL and spoken English differ in the modalities in which they are produced and perceived: BSL is manual/visual and spoken English vocal/auditory. Quinto-Pozos (2014) states that these modality differences produce differences in the linguistic signal, as well as in the use of articulators and space. The range of movement for the articulators in spoken language is very different to that of signed language articulators. These differences in the speed and size of movement have an impact on vocabulary and grammar. However, both signed and spoken languages have multiple levels of structure and are processed in the same regions of the brain, and typically developing children show similar milestones for language acquisition in BSL and English (Herman & Morgan, 2011) if they are exposed to full, natural language models from their care givers from birth. Children developing BSL in this context are sometimes referred to

as ‘native signers’ and represent a small group in comparison to deaf children who learn sign language later, often outside the home. This latter group of children, who represent the majority of sign language learners, may need professional support as late first language learners (See section 3.2.2). There may also be children who have good, early access to BSL but need professional support because of specific language learning difficulties (see section 3.2.5). Research on this latter group is relatively recent; they form a small group of children (around 6% of deaf children needing professional support (Mason et al 2010).

Whilst acknowledging these similarities and differences, researchers continue to explore atypical sign language development to support our understanding of language development in general (Mann, Roy, & Marshall, 2013). As well as understanding the similarities and differences between signed and spoken languages in atypical development, it is important to review current knowledge about typical development in BSL.

Marshall & Morgan (2015) point out that there are significant limits in our understanding of children’s BSL development and their language difficulties. They argue that four key areas of knowledge are important. Firstly, for BSL development, the incomplete linguistic description of BSL makes developmental comparisons difficult both between languages and between children. Secondly, the relatively late or limited exposure to BSL as a first language by most d/Deaf children in hearing families complicates our understanding of their language development. Thirdly, there are few assessments available for use with this group of children to identify when development is typical or atypical. Finally the skills required by practitioners to use these tests and to understand children’s language necessitate the involvement of people from a variety of disciplines. An overview of these four areas is given below and followed by a more detailed description of studies involving assessment and intervention with d/Deaf children.

2.2.1 BSL development

Although our understanding of the linguistics of BSL and its development is incomplete, there are a number of studies of developmental patterns. Many are of other signed languages which can add to our knowledge about typical development. This information is needed as, without data on typical development, it is more difficult to describe and identify atypical development (Quinto-Pozos, 2014).

Phonology

The phonological system in BSL is based on contrastive handshapes, movements, locations, orientations and non-manual features (Sutton-Spence & Woll, 1999). When babies see people around them using sign they start using manual babble and later copy lexical targets in a similar way to how children learning spoken language imitate the speech sounds and words they hear. Manual babbling has been reported to occur at around 9 months in a number of signed languages and is followed by the use of first signs (Mayberry & Squires, 2006). In these early signs, reductions in phonological representations are seen; at two years a limited range of handshapes is used, movements are simplified, and the earliest signs are those which are located in the space in front of the signer (DfES Publications, 2006; Morgan, Barrett-Jones, & Stoneham, 2007). The development of phonology is impacted by phonetic complexity (Mann et al 2010), as in spoken languages. A child's motor skills impact on the signs they can produce (Klein, 1982). Again, as in spoken languages, more complex phonological rules and phonetic components develop later than simple ones.

Mann et al (2010) showed how visual and motoric factors impact on processing of linguistic information in a sign repetition task. Their study focused on handshape and movement. A third parameter, not explored in their study, is location, which is reported to be the simplest aspect of sign phonology for children to acquire (Meier, 2006). The development of a non-sign repetition test, which is now available via an online assessment portal, may further extend practitioners' ability to monitor development and difference in this area (Marshall, Denmark, & Morgan, 2006).

Vocabulary

Using adult-reported retrospective ratings for age of acquisition, iconicity and familiarity, typical ages of vocabulary acquisition for the purpose of developing BSL norms were described by Vinson et al (2008). Norms for vocabulary development have also been reported on a small sample of native signing d/Deaf children aged 8 months – 3 years using a BSL adaptation of the MacArthur Communicative Development Inventory (CDI) (Woolfe et al 2010). This study demonstrated the development of receptive and expressive vocabulary from first signs appearing when children were around one year old to some 3 year old native signing children reaching ceiling on the 500 signs in the CDI.

In a semantic fluency task (Marshall, et al 2013) BSL users, aged 4 – 14 years, showed similar ways of grouping lexical items as is seen in hearing children acquiring spoken language. When asked to name items in a semantic category,

children's fluency in this task increased with age. They named items in bursts of groups from the same category. For example, when asked to name animals, they named groups of pets or groups of zoo animals. This study indicates that storage and retrieval of vocabulary is similar for spoken English and BSL.

There has been much discussion of how sign languages exploit iconicity, which is the visual motivation linking a sign and its referent. Iconicity has been explored in relation to sign language acquisition (Schick, Marschark, & Spencer, 2006; Perniss & Vigliocco, 2014; Thompson et al., 2012) and, although there have been conflicting results, the most recent studies indicate that iconicity has a role to play in enabling all children to link language and their experiences in everyday life. The "iconicity advantage" appears greater in older children (Thompson, 2011), who have broader world knowledge, and this may need to be considered in relation to lexical development (Anderson, 2006; Mann & Marshall, 2012; Marshall et al 2013) and phonological development (Thompson et al., 2012; Vinson et al., 2008) in sign language when considering intervention planning.

Syntax and morphology

Verbs

In adult production of BSL, some verb types include morphemes that contain information about action, movement and location. Children gradually develop and link these aspects of meaning within a verb as they master the verb system. From 2-2.5 years, linguistic pointing to people develops into more sophisticated referencing of people. From 2.5-3 years, verbs and nouns are differentiated, but not always as an adult model would be (Baker & Woll, 2008).Children under 6;0 years continue to simplify complex verb constructions, including perspective shift, breaking down more complex constructions into component parts (Morgan, Herman, & Woll, 2002). As with spoken languages, aspects of syntax may be overgeneralised in a rule-governed pattern which can happen within and between languages (Yip and Mathews 2007).

Classifiers

Classifiers represent some physical component of a previously specified noun and can be used as a morphological element in verbs. The use of classifiers first starts around the age of 2 years. Some correct classifier use is established by the age of 3 years with correct spatial functions occurring first. By eleven years of age, classifiers are understood and used more consistently (Herman et al., 2004; Morgan et al 2008).

Facial expression

In BSL, among other functions, facial expressions can be used with manual features of a sign to signify negation and adverbials (Morgan and Woll 2002). In ASL, a range of syntactic markers using facial expression are mastered by the age of 6;0 (Mayberry & Squires, 2006).

Narrative

Research on narrative skills (Morgan, 2006; Rathmann, Mann, & Morgan, 2007; Sutton-Spence, 2010) has identified the linguistic and cultural importance of storytelling within the Deaf community. By describing the developmental progression from vague and poorly constructed narratives at 3 years, through the use of basic story structure and content in older infant school-age children, to increasing understanding of linguistic and pragmatic rules through the junior school years, researchers have been able to show the importance of these skills for educational and personal development. As children are able to develop narratives, they are able to use these skills in school alongside literacy skills and with friends in play and social activities.

The development of other skills, such as play, attention and motor skills, also impact on a child's ability to develop and use language. A developmental profile covering these areas was produced for practitioners working with d/Deaf children in the UK and provides a useful guide (DfES Publications, 2006). Development in all these areas is dependent on a child's opportunity to acquire and use new skills which, in turn, is dependent on their learning environment, which we now turn to.

2.2.2 Late exposure to language

Some d/Deaf children are delayed in learning a first language through absence of accessible language models (Lyness et al 2013). This language deprivation can lead to poor language outcomes (Cormier et al., 2012; Skotara et al., 2012). The poor outcomes for this group are not necessarily indicative of any intrinsic developmental language disability. Research about the quality and quantity of exposure to sign language required for typical development is beginning to be undertaken (Lu, Jones, & Morgan, 2016). In this study, Lu et al begin to detail the impact of exposure to sign language provided by parents of d/Deaf children where the parents are also new learners of that language.

A 'critical period' hypothesis has been explored for hearing children's development of aspects of written and spoken English (Stackhouse, 1997), and for first and

second language acquisition in BSL (Cormier et al 2012). Children who acquire a sign language as a delayed first language show differences from those who learn it early (Ramirez, Lieberman, & Mayberry, 2013). These studies indicate the importance of early language access and acquisition. It has also been identified that some young people who have access to good models of BSL do not make the progress expected (Spencer & Marschark, 2010), indicating that such individuals may have language problems not related to their deafness. Whilst both the late language learning group and the group with specific language learning difficulties may need professional support, the type of support and its aims may be different for the two groups as is seen in the hearing population (Roulstone 2012).

The more knowledge we have about typical development in BSL, the more possible it is to identify atypical development. Indeed, researchers have begun to explore how research on atypical sign language development can support our understanding of language development in general (Mann, Roy, & Marshall, 2013; Herman et al., 2014).

2.2.3 Assessment of BSL development

As highlighted above, research on typical BSL development has been limited by the small number of children who grow up in families using fluent BSL (Marshall & Morgan, 2015). However, by working with children who have had early exposure to BSL, a small number of measures have been developed which can be used in clinical assessments aimed at identifying children with language learning difficulties in BSL. As well as others mentioned previously, a test of receptive skills has been produced which assesses children's ability to understand a range of BSL structures (*Assessing British Sign Language Development: Receptive Skills Test* Herman, Holmes, & Woll, 1999). Additionally, by establishing a description of acquisition of aspects of BSL grammar, story structure and content, a clinically usable test for BSL narrative skills detailing information in an accessible format and language for SLTs and Deaf practitioners has been produced - *Assessing British Sign Language Development: Production Test (Narrative Skills)* (Herman et al., 2004). These tests are helpful in detecting delays in language acquisition, and can support identification of specific language impairments now known to exist in BSL (Herman, et al 2014b; Mann & Marshall, 2012; Marshall et al., 2014; Mason et al., 2010).

In the absence of a broad range of assessment tools, with the complex range of factors influencing language development and the heterogeneity of this population, it is often unclear whether d/Deaf children's language difficulties are the result of

innate difficulties the child has with acquiring language, lack of opportunity to use language, additional difficulties in other areas of learning, or the absence of appropriate intervention programmes (Edwards & Crocker 2008, Spencer & Marschark 2010). A broader range of assessment tools and styles of assessment, including dynamic assessment, is beginning to differentiate groups of children and is explored further in the next section (Asad et al 2013; Mann & Marshall, 2012, 2010; Mann, Peña, & Morgan, 2014).

2.2.4 Practitioner skills and tools

For BSL learners who have additional language difficulties, assessment and the need for intervention in signed languages is starting to be reported in the literature (Mason et al., 2010; Quinto-Pozos, Forber-Pratt, & Singleton, 2011; Woll & Morgan, 2011). The importance of having suitable assessment tools and practitioners with appropriate skills has been stressed (Herman et al., 2014a; Mann & Haug, 2014; Marshall & Morgan, 2015). Assessment and intervention are important as, in addition to the issues raised by lack of early language learning discussed above, poor language skills can have a significant impact on social, emotional and cognitive development as well as on mental health and emotional wellbeing (Gentili & Holwell, 2011; Hindley, 2005).

These studies on language development and disorder in BSL suggest some useful avenues for intervention. Use of the BSL Production Skills Test has prompted further development of narrative assessment tools that enable intervention planning (Herman et al. 2014a). An increased understanding of the role of iconicity in language development may help the development of tools and resources that support the bridge from visuo-gestural to language-based information for use in therapeutic activities. As phonological processing theories have provided therapeutic frameworks for intervention in spoken languages, the emerging evidence on phonological processing in signed languages may support similar developments in BSL intervention.

2.2.5 Intervention studies with d/Deaf children who sign

In recent years researchers have identified the need for assessment tools and for practitioners specifically trained to meet the needs of d/Deaf children who use signed languages and have language learning difficulties (Mason et al., 2010; Quinto-Pozos et al., 2011). Some recent studies have sought to explore strategies and resources that would support practitioners working with d/Deaf children's language. Asad et al (2013) explored the use of tools that measure how a child

responds to mediated learning experiences (MLE). MLE offer a child opportunities to learn and practise new skills with an adult who is able to explain the aim of activities, their relevance to the child's life and learning, offer graded support and withdraw support in light of the child's responses and their increase in independent use of a skill. The mediator in this study, an SLT, was also the principal researcher. Whilst these tools provide useful guidelines for practitioners, the value of the study is limited by the small number of children (3, aged 7;4, 7;8 and 12;3) and the focus on spoken language. Although one child was identified as being a signed language user, language in the signed modality was not studied.

Mann et al (2014) explored the use of dynamic assessment and mediated learning for vocabulary intervention in another small study, with two d/Deaf children (aged 7;4 and 8;6) who used American Sign Language (ASL). They showed that these techniques are useful for practitioners in understanding and supporting children who have difficulties in acquiring a signed language, with the potential to distinguish between disordered language development and delay. Whilst one of the children was able to move quickly through the mediated learning activities, the other needed more time and repetition to develop skills. Their results indicated that children with language difficulties in the signed and spoken modalities respond in a similar way to intervention by practitioners who are trained to deliver a mediated learning experience to support a specific aspect of vocabulary skills development: categorisation. The authors recognise that their study was limited by the small number of child - practitioner sessions. In addition, the ability to transfer the intervention to a diverse range of settings would be limited by the need for intense training of mediators and the focus on a small language skill set: a specific vocabulary intervention.

The narrative skills of 17 d/Deaf children (aged 5;00-14;8) with BSL difficulties were explored by Herman et al (2014b). By comparing typically developing deaf signing children with those with specific language impairment (SLI) in BSL, they were able to identify difficulties with the length and structure of narratives as well as with a range of grammatical features in the SLI group. These difficulties were comparable to the difficulties experienced by hearing children with SLI in spoken language. This study did not explore interventions and focussed solely on children already identified with SLI, but the findings suggest that exploring transfer of interventions from spoken language to signed languages may be useful.

Beal-Alvarez & Easterbrooks (2013) evaluated a six week intervention study based on repeated viewings of ASL stories with scripted teacher mediation to improve the use of classifiers. Although the intervention group was small (10 children, aged 7;8-10;7), the study showed that children's use of classifiers improved with intervention. This study did not use a control group, instead using a multiple-baseline-single-subject-design. As with the Mann et al study (2014), this intervention focused on a specific language skill and required intense and specific training for the teachers delivering the intervention, in addition to their previous teaching and sign language qualifications. Providing this level of training for staff makes applicability to a wider range of language skills or practitioners more difficult due to the availability of time and funding as well as appropriate trainers and supervisors.

In a larger study, Wellman & Peterson (2013) recruited 43 d/Deaf children (aged 5-13 years) to develop a Theory of Mind skills intervention study, using a program developed for hearing children with autism. The children in the study all used Australian Sign Language, did not have an ASD diagnosis and had hearing parents. Their findings showed that the 13 children (mean age 9;10, range 7;8-13;0) in the Theory of Mind intervention group responded well to the intervention and findings were strengthened by the study design which included a control group and a 'non-Theory of Mind' training group, both matched for age. The study also highlights one of many challenges in this area: the researchers did not have direct communication with their d/Deaf child participants but instead worked with sign language interpreters. The authors do not discuss how focusing on Theory of Mind and a child's understanding of another's perspective may be impacted by introducing complex communication dynamics where communication is via an interpreter.

Chilton & Beazley (2014) avoided this challenge when working with 10 d/Deaf participants to develop understanding and use of mental state language in order to avoid everyday communication breakdown. Participants were aged from mid-teens to 50s, and the researchers identified their language use and preferences, and adapted language and communication within the research team to meet their participants' needs. The participants comprised four BSL users, three spoken English users and three who used a mixture of both languages. The study used a language-modified version of the Strange Stories text (Happé, 1994), an intervention previously developed for hearing children with autism using spoken language. The two hearing tutors who provided the intervention were an SLT and Teacher of the Deaf (ToD). Participant feedback and tutor reflection showed that the intervention was valued by participants, and that adapted materials could be used

with a group including those who used signed language. The study is unfortunately limited by a lack of detail on how communication, language and intervention tools were adapted.

These research studies indicate that children and young people with language learning difficulties in signed languages can benefit from assessment and intervention that draws on findings from studies of hearing children with spoken language difficulties. They demonstrate that practitioners who deliver language interventions need training as do practitioners working with hearing children in spoken languages. In order to make assessment and intervention approaches more widely available to d/Deaf children, training is required which provides practitioners with a framework within which to meet the specific language and learning needs of an individual.

2.3 Deaf practitioners and training needs

Deaf practitioners who use BSL as a first or preferred language have an important role to play in the language acquisition and education process with young people who use a signed language (Batterbury et al 2011; Hermans, Knoors, & Verhoeven, 2010; Reeves et al 2000). They can provide language, identity and folk models for Deaf young people which may not be available within the family or local community (Holcomb, 1997; Sutton-Spence, 2010; Sutton-Spence & Ramsey, 2010).

Assistant practitioners currently work with SLTs in many settings. The Royal College of Speech and Language Therapists supports additional training for SLTs and for bilingual practitioners to ensure that appropriate assessment and intervention is available for young people who are bilingual in spoken languages. (https://www.rcslt.org/members/professional_development/bilingual_children_elearning). The role of Deaf practitioners in providing language therapy is currently being explored (Quinto-Pozos et al., 2011). The cultural and linguistic role of Deaf practitioners with children who have sign language difficulties needs further exploration (Spencer & Marschark, 2010), as do the learning and training needs of sign bilingual practitioners, whether hearing or Deaf (Marshall & Morgan, 2015).

Interventions are needed for children with signed language difficulties (Marshall & Morgan, 2015), as well as training of Deaf practitioners to deliver these interventions. ‘Deaf staff working in educational contexts generally have high levels of language fluency but require training in developing, delivering and evaluating language interventions’ (p64 Herman et al., 2014a). As adult learners, with

identified skills and experience in practice, Deaf practitioners will need training that is appropriate to their learning needs and style.

Kolb and Lewis' model of adult experiential learning (Kolb & Lewis, 1986) provides a framework for integrating experience, reflection, thinking and acting. Within this model, specific tools are used to support and monitor individuals' learning, as well as strengthening the links between personal, education and work development. Many SLTs have studied collaborative working (e.g. Clegg & Ginsborg, 2006; Wright, 1998). One study by Wilson et al (2010) explored the use of Concept Mapping when SLTs worked with teachers to support vocabulary development of hearing children within secondary education settings by using techniques similar to mind maps to record children's use of vocabulary within learning settings. The use of Concept Mapping enabled the SLT trainer to identify subtle changes in how teachers thought about and understood their pupils' language learning needs. Although the authors acknowledged that Concept Mapping did not confirm that collaboration with the SLT brought about these changes, it was a useful way to monitor how teachers' understanding of language tasks and children's needs changed.

Other studies have described what hearing practitioners need to know to develop assessment and intervention skills (Bunning, 2004; Joffe, 2008; Law et al., 2012; Radford, 2008; Radford, Blatchford, & Webster, 2011; Radford, 2010). Farmer et al (2006) considered how nursery staff use of 'Talking Tables' could be used to enhance the language development of children in nurseries. Nursery staff were given training so they were aware of basic language support strategies they could use with children, including how to use their own language and listening skills as well as the use of timing and turn-taking, and were given support in setting up a context for language use which facilitated children's involvement. The staff were also asked to provide feedback on the longer term usefulness of these strategies. Some of the challenges they raised included maintaining skills and momentum; having continued access to time, resources and space to continue the work; and receiving support from colleagues. Understanding how practitioners integrate knowledge into their practice and providing mechanisms to support this is key to developing useful programmes for training and education.

There is a broad understanding of current practice in SLT amongst practitioners working with children with language learning difficulties in spoken English (Roulstone et al., 2012), and some understanding of how Deaf practitioners

perceive their role in encouraging language development (Quinto-Pozos et al., 2011; Sutton-Spence & Ramsey, 2010). By using what is known for hearing practitioners, work with Deaf practitioners using reflective learning and reflective practice may support our understanding of their work and learning needs. Understanding people's learning style and their motivation for extending their skills and knowledge is vital for success, both in terms of providing training at the right level and for the development of skills that can be used in the work place. A study of SLT students in the UK with non-traditional entry qualifications identified differences for this group in academic and clinically-focused assessments (Smith, Mahon, & Newton, 2013). Whilst these students achieved lower academic grades than their peers with traditional entry qualifications, their success on placements and in case study reviews was equal and they were more likely to be in employment as an SLT six months post-qualification. The learning style and motivations of a learner can impact on how they develop and use skills. Motivation for learning was explored by Cliff (1998) in a study of the learning processes of student teachers. At a basic level the student teachers in the study acquired knowledge for utilitarian purposes; at a higher level they wanted to apply knowledge to their life or work and learn from their experiences. Beyond this, they wanted to learn in order to change themselves or give something to their community. As Deaf identity and community are key for many Deaf practitioners (Sutton-Spence & Ramsey, 2010) an understanding of these as motivational factors should inform any training.

It is vital to consider carefully what Deaf practitioners need to know and how to support this learning. Just like novice student SLTs or Teaching Assistants, some Deaf practitioners will not have had access to information about language: their own experience of education may also have presented them with additional challenges including those related to their peer group, the context and literacy (Chilton & Beazley, 2014; Spencer & Marschark, 2010). Understanding how collaboration and training may impact on an individual's practice and using a model that integrates learning, experience and reflective practice are important in planning such work. Deaf learners may have a 'reproductive conception' of learning (Richardson 2008) where the retention of facts rather than integration of concepts is the learner's goal. Richardson also highlights that working with interpreters can exacerbate this learning style for Deaf learners and can undermine a 'student-centred' approach to teaching if the teacher, learner and interpreter have different expectations about the learning process and outcomes.

Any training must ensure a move from solely intuitive (Sutton-Spence & Ramsey, 2010), rote or mechanical learning to meaningful learning which can be integrated flexibly into practice. The 3D model of debriefing (Zigmont, Kappus, & Sudikoff, 2011) considers the individual, the learning environment and key experiences; these key experiences may have already taken place, or may occur in present learning or future learning opportunities. By establishing a safe learning environment in which learning and reflection opportunities are presented, the adult learner is enabled to apply new information in a work context.

Evaluation of training is needed to ensure that what is presented on a course is received well, has impacted on participant's learning, promoted behaviour change and produced results in the work place (Kirkpatrick, 2006). Kirkpatrick suggests it is important to design and implement evaluation that enables participants to demonstrate the benefits they have received. He suggests gathering information before and after training to enable trainers to evaluate and improve their training effectively in four areas which are participants' reaction to the course, their learning, any subsequent behaviour change and the result of these in the work place. Where larger groups of people are trained, he identifies that it is possible to use statistical approaches for evaluation. However, when smaller groups are involved the use of statistics is more difficult.

The research methods used to understand current practice and training in an as yet under-researched area are often qualitative. These methods lend themselves to exploring people's thoughts about the work they do and the processes that occur when new ideas or changes are introduced. Thematic analysis can be deductive and consider how data relate to previously identified themes or frameworks, or inductive, where new themes are identified. Literature is available to help researchers apply these methods to research in health and social science areas (Gale et al 2013; Onwuegbuzie, 2009; Yardley, 2000). The concept of 'action research' (Costello, 2003) is also useful when considering how research projects can be set up and data collected within a field of study that is new and has limited numbers of people involved. By identifying issues in professional practice through critical reflection, a researcher can undertake systematic and rigorous enquiry in their own field of work to further understand the issues which can inform strategic planning, identify actions and instigate change.

2.4 Summary

Our knowledge about language development and language impairment in the signed modality is expanding (Marshall & Morgan, 2015), and current research evidence demonstrates the many similarities between children learning spoken English and BSL in terms of developmental milestones. Whilst evidence-based language therapy is available to those who communicate in spoken English (Law et al., 2010), d/Deaf children and young people who use BSL do not have access to similar interventions. Such interventions, and the upskilling of practitioners to undertake these interventions, are needed for signed languages (Herman et al., 2014a; Marshall & Morgan, 2015).

This review of the literature has established that additional information about Deaf practitioner skills and BSL interventions is needed to add to the knowledge base in this field. However, whilst some researchers have signposted the need, there is limited published research in this area. This study can be seen as early research during which, Robey & Schultz (1998) suggest, it is important to identify activities that are involved in the intervention under investigation. In view of this, during Phase 1 of the current study, data were gathered on what Deaf practitioners currently do and how this compares to the work of SLTs. The following chapter describes Phase 1 of the study. Subsequently, Phases 2 and 3 explore how current practice can be supported and improved.

Chapter 3 Phase 1 - Questionnaire and focus groups

3.1 Introduction

This chapter describes the use of a questionnaire and focus groups to explore Deaf practitioners' current practice. The methods section describes the participants, materials, procedure, and model of analysis. Results are reported for the questionnaire and the focus groups separately. Finally a discussion of the results and a summary of issues that inform Phase 2 and 3 of the project are given.

3.1.1 Aim of Phase 1

Phase 1 was designed to answer the project's first research question:

> How do Deaf practitioners currently work with children who have language learning difficulties in BSL?

This phase aimed to describe what Deaf practitioners currently use as an intervention framework in their work with children who have language difficulties. It also aimed to identify what practical activities Deaf practitioners undertake in completing this work.

The data collection tools used to achieve these aims were an on-line questionnaire and three focus groups involving practitioners from across England.

3.2 Ethics

This study was ethically reviewed by the UK National Research Ethics Service (NRES) Research Ethics Committee Number: 14/LO/1045 (Appendix 1.1). Site-specific approval was given by local NHS trusts where focus groups were held. Consent for filming for transcription of the focus groups was obtained from all staff involved. Participants were kept informed as the study progressed via information emails and information sharing events. Ethical approval letters, information and consent sheets are in Appendix 1.

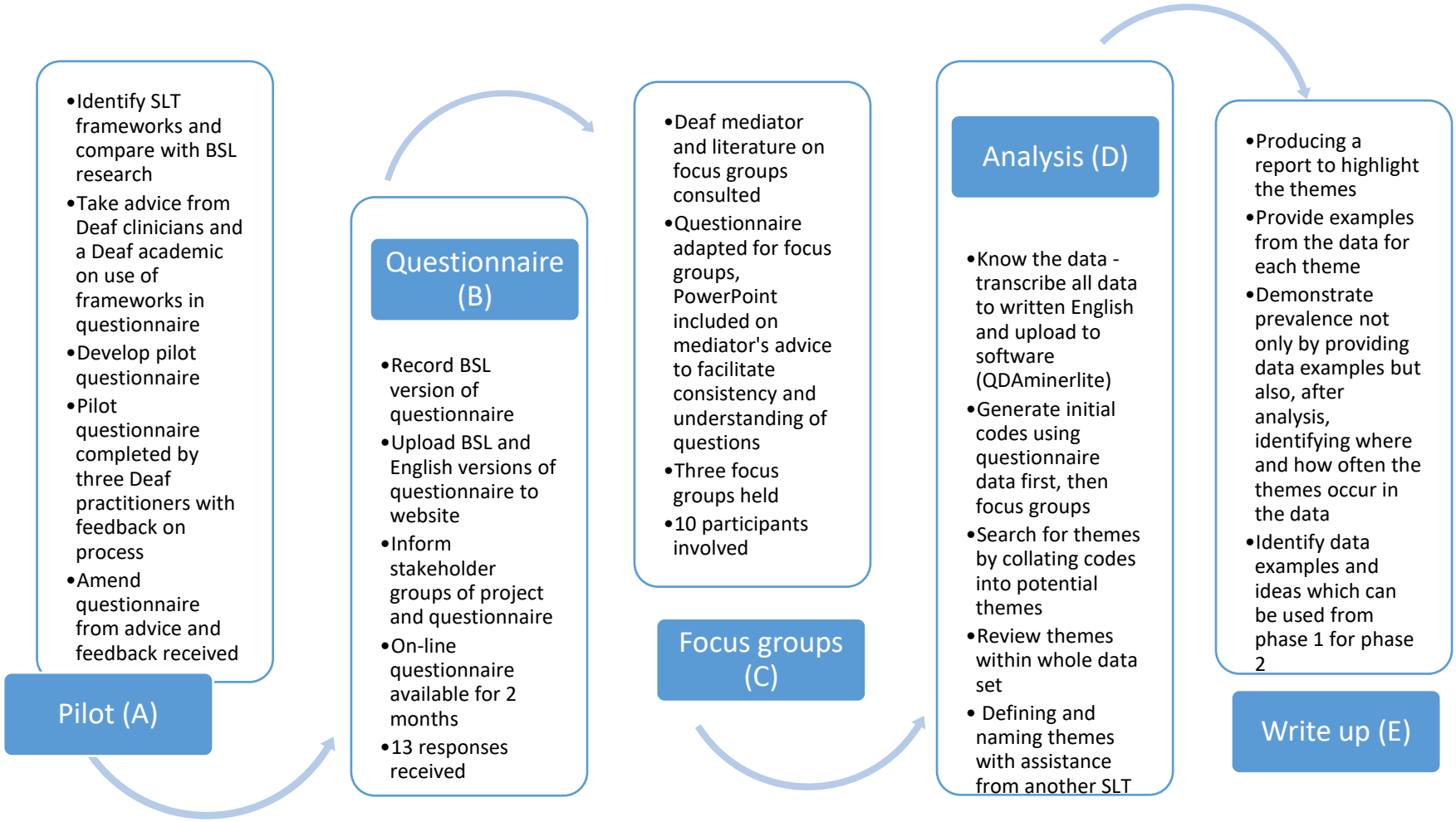
3.3 Method

This section describes the methods used in Phase 1 in three parts: participants, materials and procedure, and model of analysis. The flow chart below in Figure 3-1 provides an overview of the process that was followed during Phase 1.

The flow chart shows five areas of the process. The Pilot (A) included the construction of appropriate frameworks, development and subsequent modification of a questionnaire in liaison with Deaf advisors. Work related to the questionnaire

(B) involved creating, placing on-line BSL and English versions and collecting responses. This process included feedback from Deaf practitioners who were not participants and BSL/English interpreters. The focus group process (C) was completed with input from the Deaf mediator who led the focus groups and included preparation of materials for the groups, running the groups and data collection. Analysis (D) of the data collected from the questionnaires and focus groups was completed by the researcher in line with the procedure suggested by Braun and Clarke (2006). Reliability checks were completed by a second SLT researcher. Finally, the write up (E) was completed to provide data examples, as suggested by Braun and Clarke (2006) and information for progression to Phase 2 was highlighted. More detail for each of these five areas is included in later sections of this chapter.

Figure 3-1 Flow chart to demonstrate process of Phase 1 development



3.3.1 Participants

In the first part of Phase 1, Deaf practitioners were invited to complete a questionnaire through National Deaf Child and Adolescent Mental Health Service (NDCAMHS) communication channels (team email, managers and Deaf Service Consultants) and a Royal College of Speech and Language Therapists Clinical Excellence Network members' internet site (Speech and Language Therapy in Bilingualism and Deafness [SALTIBAD] Basecamp Group). These channels enabled recruitment of practitioners from a range of health and education settings across England. All the participants were employed in the NHS or educational settings where their role included working with young people who have language difficulties. Thirteen questionnaires were completed.

In the second part of Phase 1, Deaf practitioners were recruited for the focus groups from NDCAMHS via service communication channels. Information about the groups was circulated and interested practitioners sought their manager's approval to attend. Ten practitioners were recruited. Focus groups, led by a native BSL user, were held in Leeds, central London and south London. Four practitioners attended the focus group in Leeds, which was included as part of a whole day meeting. Two participants attended the central London group; two other practitioners were unable to attend this focus group due to ill health and a clinical priority. The south London group was attended in person by three participants with one additional participant attending via Skype due to transport costs and time constraints.

In total 23 participants provided data for the questionnaires and focus groups. Due to the anonymous nature of the questionnaire responses, it is not possible to know if any participants who responded to the questionnaire were also involved in the focus groups.

Sixteen participants of the 23 participants were female, 7 were male. All participants fell within four age categories. Twenty were within the two categories aged between 36 and 55 years (range 26-65 years). The distribution of age, gender, educational background and location, for both questionnaire and focus group participants, is shown in Table 3-1.

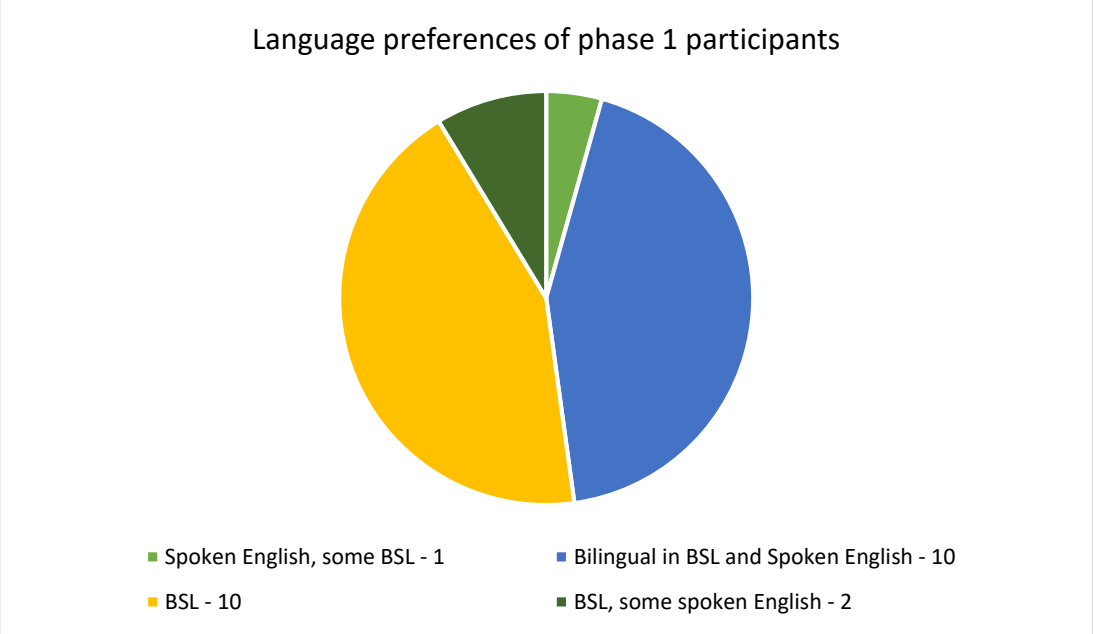
Table 3-1 Demographics for Phase 1 participants

		Questionnaire	Focus groups
Gender	Male Female	4 9	2 8
Age	26-35 years 36-45 years	1 6	2 3

	46-55 years 56+ years	4 2	4 1
Education	School and 'on-the-job' Post-school qualifications Graduate or post-graduate	5 3 5	1 4 5
Region	London South East England North East England North West England South West England	8 1 0 2 2	3 2 3 1 1

Information about the language preference of the participants is shown in Figure 3-2. It provided useful information about Deaf practitioners' language which helped guide development of resources for Phase 2 and 3. Most participants belonged to one of two language preference groups: BSL/spoken English bilingual (n= 10) and BSL-only (n=10). One person reported that their preferred language was spoken English, whilst two reported they preferred BSL but used some spoken English. Although the questionnaire was available in both BSL and written English formats, all responses were submitted in written English. Some of these responses were from Deaf practitioners working with the support of a BSL/English interpreter who recorded their responses in written English.

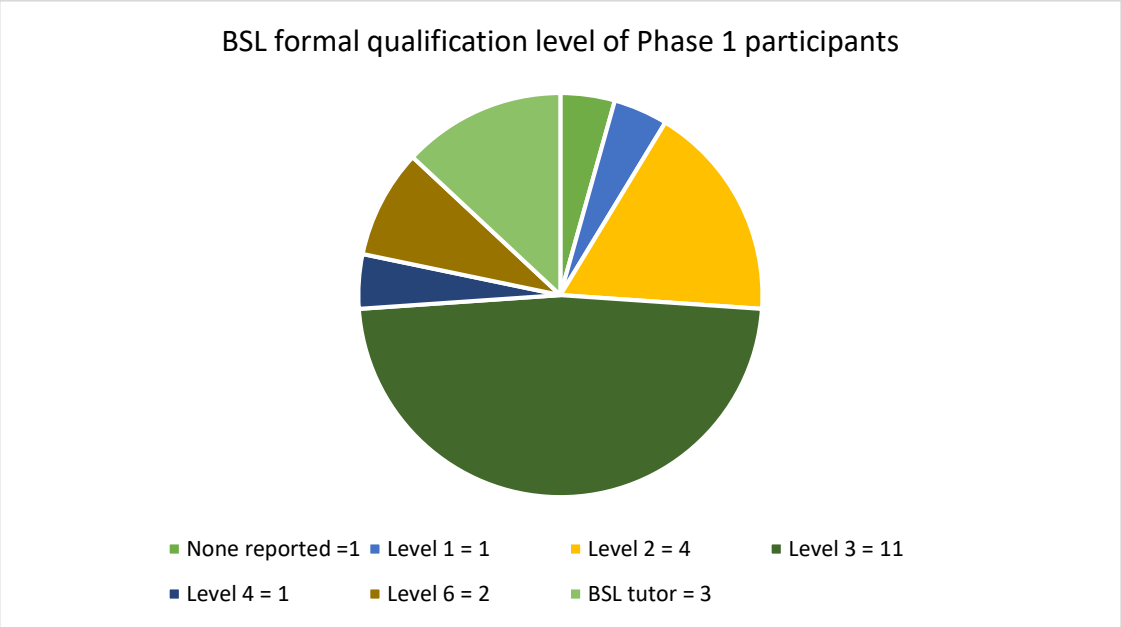
Figure 3-2 Language preferences of Phase 1 participants



Most participants reported some formal qualification in BSL (Figure 3-3). These qualifications have changed over recent years and, at the time of data collection, a course to gain a Level 4 qualification was not available and the Level 3 qualification specifications had recently changed. Information about date of qualification and

course content was not collected. Qualifications in BSL are currently offered by Signature http://www.signature.org.uk/british-sign-language: Level 1 is entry level, and Level 6 is an NVQ certificate. There is no level 5 qualification. The largest group of participants (n=11) had a Level 3 qualification. Some information on BSL linguistics is included in training courses for Level 3 and above.

Figure 3-3 BSL qualification level of Phase 1 participants



Just over half the respondents (n=12) reported that they had received no training to work with children who had language learning difficulties in BSL. The remaining respondents (n=11) reported additional training and cited participation in the BSL Production Test training course (n=3), National Deaf Children's Society Family Sign Curriculum training course (n=5), BSL linguistics courses (n=5) and in-service training sessions with their employer (n=6).

3.3.2 Materials and procedure

The decision to use both a questionnaire and focus groups was taken for two reasons. Firstly, the online questionnaire was available to a wider group of Deaf practitioners who worked in different settings. As had been anticipated, Deaf practitioners shared the information email with interested colleagues, broadening the participant group. Secondly, the two data collection methods provided an opportunity to examine the difference and similarities in results between a distance data gathering method - the questionnaire - and a face-to-face data gathering method - the focus group.

Questionnaire

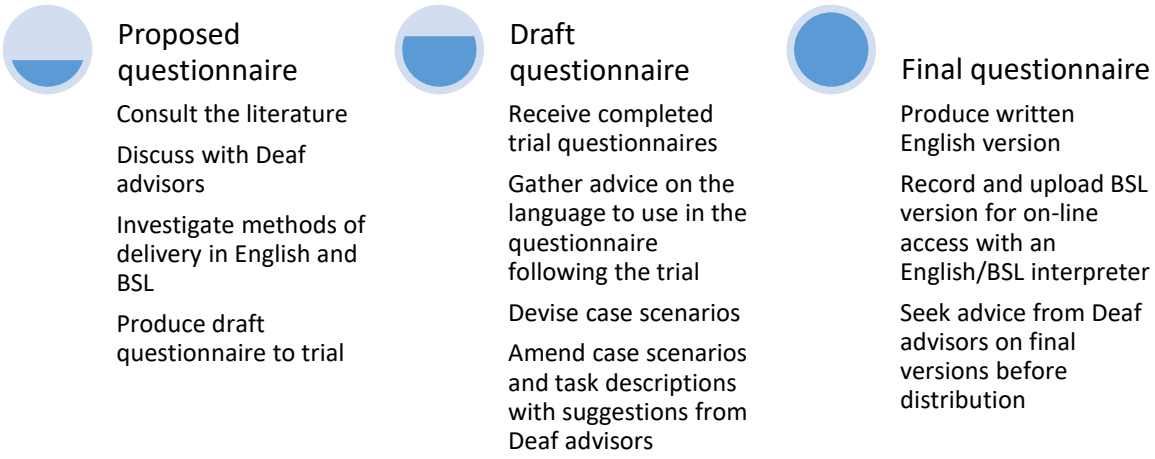
An on-line questionnaire, in written English with BSL translation, was provided for Deaf practitioners with the option to respond in written English or in BSL via video capture. The questionnaire (Appendix 2.1) had four sections: demographics and current work; language background; ideas based on scenarios; and additional ideas based on the Deaf practitioner's own work. The content of each section is outlined below.

The demographics and current work section gathered information on the age, education, and region where participants worked. Details of participant's language preferences, BSL qualifications and training in BSL language difficulties was gathered in the language background section. This information has been reported above within the demographics. Participants were asked to indicate the age range of the children they worked with. One participant did not respond to this question, eight reported they worked with 3-18 year olds and five indicated they worked with children from 6-18 years. The other respondents reported a variety of age ranges: two worked with children aged 5-17 years; and one worked with each of the following age groups; 0-7 years, 5-11 years, 3-25 years, 6-16 years, 8-14 years, 3-12 years, and 11-16 years.

Ideas for assessment and intervention were based on three case scenarios. These scenarios were designed to gather information that related to the SLT frameworks by Bunning and Roulstone which were to be used in the deductive thematic analysis (See Chapter 2, Literature review section 2.1). This approach was taken following feedback from a trial of the questionnaire with three Deaf practitioners who did not participate in the study: a clinical psychologist, assistant psychologist and social worker. Advice was also sought from a Deaf linguist. In discussion about the development of the trial questionnaire, these four Deaf advisors suggested that many Deaf practitioners would not be aware of the terminology found within the SLT frameworks which had been selected for the deductive coding categories. They indicated that basing data collection on clinical scenarios would enable Deaf practitioners to understand the questions and reflect on their own clinical work more effectively. Case scenarios were therefore produced by the SLT researcher, adapted with feedback from the four Deaf advisors, and presented within the questionnaire. Participants in the study were told that the scenarios focused on children who are with adults who use BSL at home and in school and were asked to give information about how they would proceed in working with each child. For

example, ‘Child 1 is eight years old and has difficulty learning and using new signs. Her sign vocabulary is very small. The team ask you to work with the child to develop their BSL. Please tell me what you do, what you think is important, what you think about and how you would start work with each child’. The set of scenarios can be found in Appendix 2 within the online questionnaire and focus group PowerPoint presentation. The final part of this section asked practitioners to describe strategies or games they used with children to develop skills in BSL and to give examples of children with language difficulties with whom they had worked. The link to the online questionnaire was emailed and posted to individuals who had expressed interest via the networks previously described. The questionnaire was available for two months via Eye Gaze, a website used by NDCAMHS for bilingual questionnaires. The data were then downloaded for analysis.

Figure 3-4 Development of the questionnaire



Focus groups

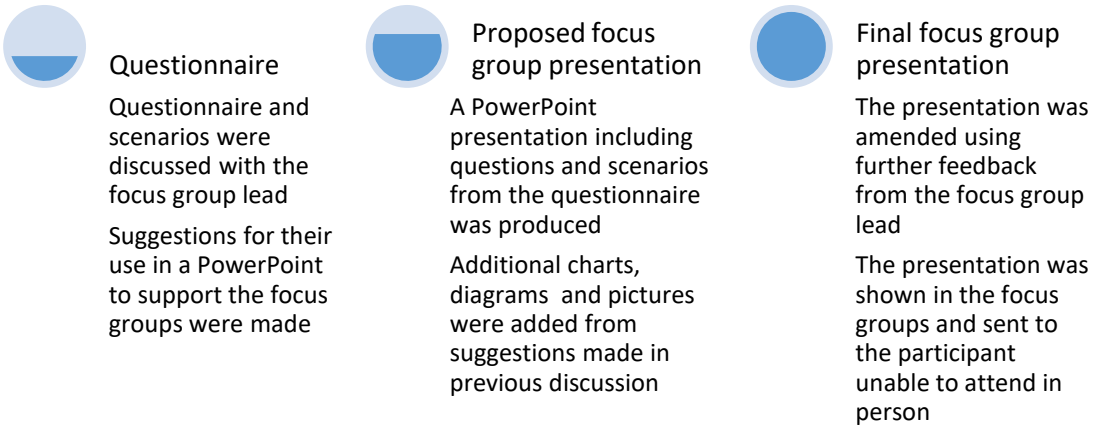
The focus groups discussed the same case scenarios as those in the questionnaire. Key elements of the language therapy process were explored in depth, including participants’ views on assessment, skills of practitioners, skills of the young person and successful session planning. Eight questions were included in each focus group

- When a child has language difficulties, what process would you follow to help them?
- In your experience, which areas of language do people work on with children who have language difficulties?
- How do you assess the different areas of language?

- Describe some difficulties a child might have with learning language
- Which of your skills do you think about when working on a child's language skills?
- Which of the child's skills do you think about when working on a child's language skills?
- What do you do to make a session run well?
- How do you evaluate your work with children's language?

These were presented to participants in each group by a Deaf person with experience of leading focus groups. A PowerPoint presentation of written questions and scenarios from the questionnaire was used to give visual reinforcement of the questions (Appendix 2.2). Additional visual information including diagrams and pictures was included with advice from the Deaf focus group lead.

Figure 3-5 Development of the focus group PowerPoint presentation from the questionnaire



For the participant who attended a group via Skype, the PowerPoint presentation was emailed prior to the session to ensure the information was accessible. Spoken English translation was provided for each group by registered BSL/English interpreters. For focus groups 1 and 3, English interpretation was recorded as part of the video record of the group. For group 2, translation was added subsequently as the BSL/English interpreter booked for the group had to attend a clinical priority with the participant who was unable to attend. The spoken English translation was then transcribed into written English by the researcher and used for coding. Additionally, the researcher reviewed the recordings of the focus groups to identify

specific BSL vocabulary and language used by the Deaf practitioners which would provide examples in BSL for review and use in Phase 2.

3.3.3 Analysis model

Thematic analysis (inductive and deductive) was used to analyse data from the questionnaires and focus groups (Braun & Clarke, 2006; Gale et al., 2013). Throughout this process the researcher attended to the characteristics of good qualitative research: sensitivity to context, commitment and rigour, transparency and cohesion, and impact and importance (Yardley, 2000). The deductive analysis investigated whether themes that have previously been identified as important in the process of delivering language therapy for hearing children in spoken English were also important for Deaf practitioners (Bunning, 2004; Roulstone et al., 2012) These are described in detail in the Literature review in the section Speech and Language Therapy processes and frameworks for intervention. This framework of coding categories for the deductive analysis was in five parts: intervention cycle; intervention techniques; intervention format; types of intervention; and categories of intervention. Further detail of these deductive coding categories based on existing theory for SLT are shown in Table 3-2 (Bunning, 2004; Roulstone, 2012).

Table 3-2 Deductive coding categories for Phase 1 analysis

Coding category	Description
Intervention cycle	
Assessment	Undertaking tasks and activities in order to assess a child's language skills or use
Diagnosis and goal setting	Identification of a language need/deficit or setting a goal/desired outcome linked to a need
Therapy	Providing direct or indirect intervention with the aim of improving the child's language skills or language use
Evaluation	Measuring, reflecting on, and evaluating the success of therapy for a child
Intervention techniques	
Engagement techniques	Techniques used to support the client or others in the therapeutic process
Modification techniques	Techniques used to adapt the practitioner's own use of communication in response to the clients, ensuring their competencies can be identified and a balanced interaction achieved e.g. adapting communication, ascribing meaning, checking interpretation and understanding
Facilitation techniques	Techniques used to provide timely support to facilitate language understanding or use e.g. encouraging contribution, modelling, assisting

Feedback techniques	Techniques used to promote therapeutic change through feedback e.g. checking contribution and providing differential, evaluative or summative feedback, acknowledging contributions
Personal maintenance techniques	Techniques used to recognise and support an individual's needs and behaviours e.g. emotional, physical, sensory or behavioural acknowledgement or support
Context maintenance techniques	Techniques used to ensure that the client can engage with the environment and any materials in a positive way e.g. equipment or setting
Transection techniques	Techniques used to share information in a timely way with others about the client's language and communication skills including therapeutic input and change e.g. gathering information, recording and providing information, advice or instruction, framing, negotiating, explaining or rationalising
Intervention format	
1:1	Sessions for therapy including the child and the practitioner only
With peers	Sessions for therapy including the child, one or more peers and the practitioner
With another adult	Sessions for therapy including another adult in order to develop the child or adult's skills and to develop communication opportunities and partnerships
Environmental change	Supporting others in the environment to make changes
Advocacy	Supporting the young person to make their own changes in their environment
Types of intervention	
Universal	Language activities that are available to all children
Targeted	Language activities for children identified as having additional needs e.g. bilingual, language deprived
Specialist	Language activities for children with the highest levels of specific language need that involve assessment, diagnosis and delivery of intervention
Categories of intervention	
Programmes	A package of activities, arranged in a hierarchical structure, sometimes a published package or reported in a journal
Intervention activities	A discrete activity targeting a specific skill or deficit.
Principles or approaches	Techniques or actions or styles
Service developed programmes	Locally developed, sometimes adapted from published programmes, a novel combination of activities, or delivered in a mode particularly suited to local needs.

Resources	Resource names used as shorthand, sometimes referring to an area of language (e.g., narrative) or to an approach (e.g., visual approaches).
Training	Targeting parents or other practitioners, to skill them to deliver interventions.
Models or theories of intervention	Theories underpinning interventions.
Targets of intervention	Child's speech, language and communication, underpinning cognitive and processing skills or broader psychosocial aspects of interaction

Guidelines for qualitative research (Yardley, 2000) were applied throughout the study. The researcher carefully considered her differing experience as a hearing individual and SLT ("sensitivity to context"). Whilst the deductive analysis considered all data examples related to an SLT research perspective, 207 comments from the focus groups and 48 from the questionnaires were unanalysed during this process, indicating that further inductive analysis was needed.

The inductive analysis looked at data not analysed by the deductive coding categories and, at the end of the process, identified themes specific to Deaf practitioners working with young people who use BSL. Initially, a working analytical framework of coding categories for the inductive analysis was developed by the researcher from reading the questionnaire transcripts. This was done by generating coding categories on QDAminer lite (http://www.provalisresearch.com) as each questionnaire was read. These coding categories were then used and expanded on when reading the focus group transcripts. The focus groups provided more data and yielded more examples for each of the coding categories. This increased number of examples facilitated the categorisation of coding categories into themes from the English transcripts for the focus groups. As part of the process of developing sub-themes, transcripts were coded for each possible emerging theme. This allowed the data to be traced from initial comments to initial clustering of themes, resulting in the final structure of themes (Smith et al., 2009). The two key themes are shown in Table 3-3 below. Further detail of the history of the development and changes made as the coding categories were generated during the inductive process is in Appendix 3.

Table 3-3 Inductive coding categories for Phase 1 analysis

Coding Category	Description
Meta-linguistic language	
Linguistic terms	Terms (or identified lack of terms) to discuss a child's, carer's or practitioner's language skills

English and BSL mixing	Discussion of BSL and English skills supporting or in conflict with each other
Foreign language learning	Aspects of additional spoken or signed languages mentioned that impact on child's language access or learning
Communication Profile	Service based language and communication screening tool and protocol
Deaf cultural perspective of discussing d/Deaf children's language learning	
Deaf or sign language models	Child's access or lack of access to Deaf people and people who have good language skills in BSL
Knowledge, resources or skills in language difficulties in sign	Availability (or identified lack) of training, information, resources and practitioners for children with language difficulties in BSL

Once all data were coded, these were grouped to provide the themes for reliability checks. The reliability checks identified that some categories could be linked as the coders did not reliably differentiate between them. This process is discussed further in the description of reliability checks below and expanded upon within the discussion of findings at the end of this chapter.

Reliability and quality assurance

An independent review of one focus group and all questionnaire transcripts was conducted by an SLT who was also a doctoral student at UCL undertaking qualitative research. Details of the analysis were discussed by the researcher with the SLT, with researchers familiar with qualitative data analysis, and with supervisors. These processes are in accordance with principles of "commitment and rigor" and "transparency and coherence" (Yardley, 2000) and the need to ground qualitative research in examples. The researcher considered the importance of reflexivity (Yardley, 2000) by using a reflective diary throughout the research process.

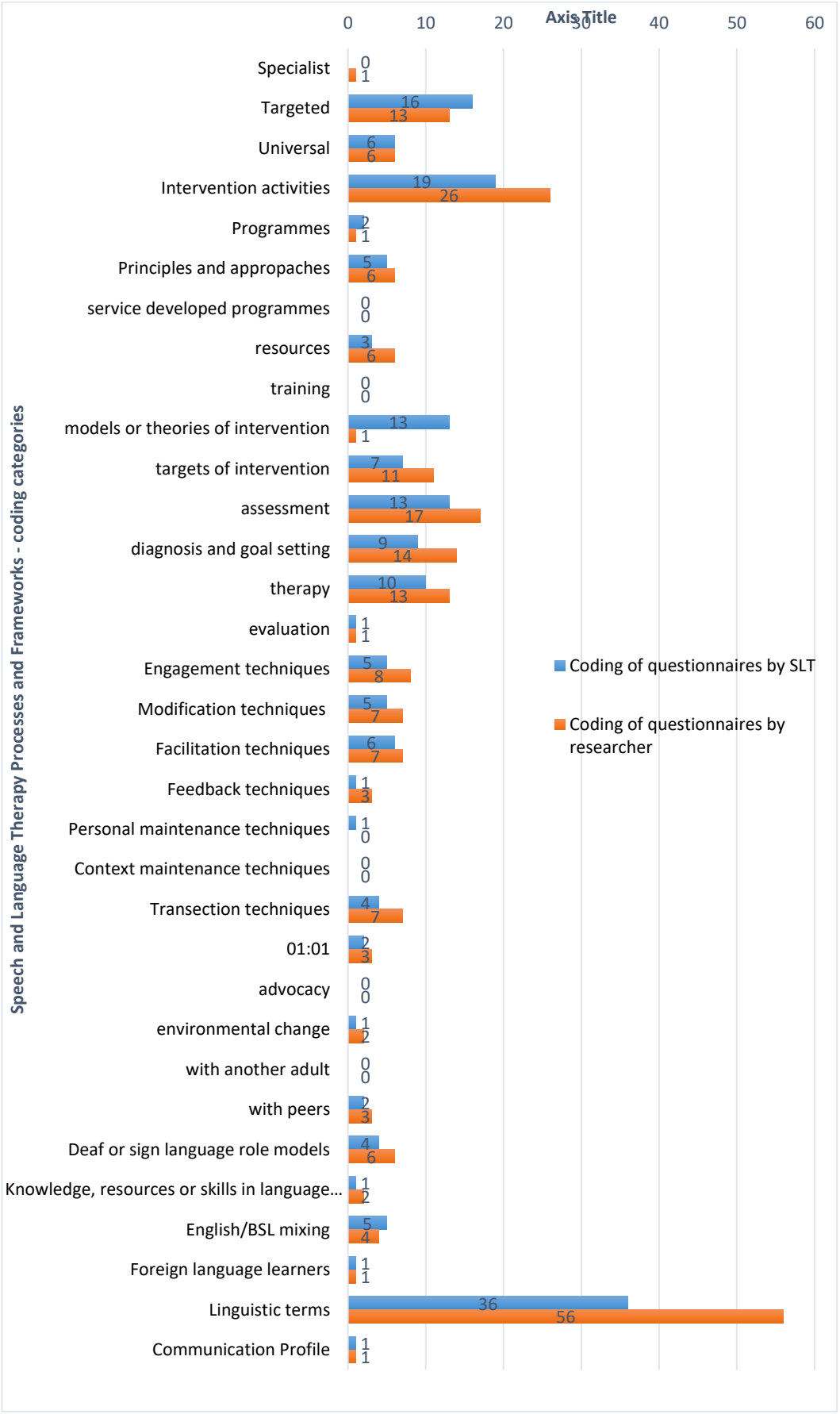
The reliability checks were supported by the creation of an information pack detailing the approach to take when coding. This contained an analytical framework document including all coding category descriptions, the deductive framework for data analysis and reporting (Gale et al 2013), linguistic terms in BSL, inductive coding categories generated before refinement, and a reliability check document describing how the process was planned and fitted into the overall project. These documents ensured that the coding process was transparent (Appendix 3).

An initial meeting between the researcher and SLT was held to discuss the information pack, data storage and the analysis tool (QDAminer lite). Email exchanges and one meeting followed to clarify the meaning and use of some coding

categories and the use of QDAminer lite prior to the SLT coding all questionnaires and one randomly selected focus group transcript independently. Comparison of the researcher and SLT coded data was completed by the researcher for identification of agreement and disagreement.

Issues with coding were identified at this stage. Visual inspection of the questionnaire data showed good overlap between coding by the researcher and SLT. Overall agreement in coding between SLT and researcher was over 85%; however, four areas of discrepancy were identified and resolved as follows. Firstly, some coding categories (intervention and intervention techniques) taken from Bunning and Roulstone were too finely graded for the coders to differentiate the information given by the Deaf practitioners. The SLT and researcher had used these coding categories interchangeably. When the items coded were reviewed by the SLT and researcher together, it was agreed that broader categories would be more helpful. Secondly, the SLT was less knowledgeable about BSL linguistic terms than the researcher and so coded them less frequently. Thirdly, perspectives on the types of intervention - specifically universal versus targeted - differed between the SLT and researcher: the SLT tended to see all d/Deaf children using BSL as requiring targeted intervention because of needs linked to bilingualism whereas the researcher viewed access to BSL as a universal intervention based on access to a first language. It was agreed that for the children under consideration, access to BSL was a universal intervention. This issue with coding linked to one of the inductive themes ‘Deaf cultural perspective of language learning of d/Deaf children’. Finally, two coding categories added by the SLT during the focus group coding ‘Culture’ and ‘Confusion’ were the same as coding categories identified by the researcher during the inductive coding process. Culture was included in the coding category of ‘Deaf and sign language role models’ and ‘confusion’ was included in the coding category ‘Knowledge, resources or skills in language difficulties’. These two additional coding categories were discussed and subsumed into the two themes, as had been done by the researcher. With the amendments to the coding framework discussed above, agreement between the SLT and researcher was over 95% for the focus group data (see fig 3-3).

Figure 3-6 Questionnaire coding by researcher and SLT



3.4 Results

In this section the results are initially reported separately for the questionnaire data and the focus group data. It is important to consider the two sets of data separately because of issues related to ecological validity. As the questionnaires were completed by individual Deaf practitioners, the results provide information about what each practitioner considers in their work without being influenced by other Deaf practitioners. The Deaf practitioners in focus groups provided responses in an interactive forum, with opportunities for influence and discussion with others. Providing two different settings for data collection enabled a comparison of results, which is presented at the end of this chapter section. The comparison of questionnaire and focus group data enables consideration of the extent to which findings can be generalised to 'real world' practice.

3.4.1 Results for the questionnaire

Two questionnaires were not completed fully; the data provided was included in the analysis. One Deaf practitioner provided demographic data but provided no detail of their work; a second provided information related to the scenarios but did not provide additional ideas from their own work. The deductive analysis shows whether Deaf practitioners consider the same issues that are identified as important for SLTs. The inductive analysis identifies other themes that are important to Deaf practitioners.

Deductive analysis for questionnaires

The deductive analysis of questionnaire data aimed to identify whether Deaf practitioners consider as significant the areas that have been identified as important for SLTs. The analysis was completed using the five themes: three themes related to the core processes for intervention addressed in SLT student training by Bunning (2004) and two related to working practitioner feedback (Roulstone et al. 2012).

Firstly the themes identified by Bunning will be considered. Deaf practitioners mentioned aspects of all three of Bunning's themes. In relation to the intervention cycle, Deaf practitioners referred to all four aspects of the cycle but mentioned assessment most and evaluation least frequently.

Deaf practitioners reported different formats for providing intervention including one-to-one settings, with peers and to promote environmental change. No Deaf practitioners reported providing intervention by co-working with another adult or to promote advocacy.

Deaf practitioners indicated they consider different intervention techniques including engagement, modification, facilitation, and feedback techniques. They also reported that they share information they have gathered with others (transection). However, there was no report of personal maintenance or setting maintenance techniques within the questionnaire data.

The second part of the deductive analysis considered the themes identified by Roulstone: types of intervention and categories of intervention.

Deaf practitioners reported in the questionnaires that they consider all three intervention types, universal, targeted and specialist. Universal interventions were mentioned most frequently and specialist interventions reported least.

Deaf practitioners considered intervention activities far more frequently than other categories of intervention, with models or theories of intervention mentioned rarely. Targets of intervention were identified in the data less frequently than activities but more frequently than both principles, approaches and resources. Service developed programmes and training were not mentioned by Deaf practitioners in the questionnaire data.

In summary, the questionnaire data results from the deductive analysis indicate that Deaf practitioners consider many of the same topics and complete some of the same activities as SLTs when working with children with language difficulties. A more detailed discussion of these findings is given in Section 3.5 Discussion. Numerical counts of coding for themes emerging from the questionnaire data are included in appendix 4.1.

Inductive analysis of questionnaire data

In addition to the deductive coding process, an inductive process was completed. The two themes that emerged from the data were:

- Metalinguistics – using language to discuss language
- Deaf cultural perspective of discussion about d/Deaf children's language learning.

Analysis of the questionnaire data showed that each of the inductive themes, which had been refined following analysis of the focus group data, can be seen within the comments made by Deaf practitioners. This, alongside the high level of reliability, supports the triangulation process. Each coding category within the two themes has

some representation within the data, but there is a large difference in the frequency with which the different coding categories were found.

Within the first theme, ‘Metalinguistics’, data examples were found for each of the coding categories: linguistic terms, English and BSL mixing, foreign language learning and Communication Profiles. Deaf practitioners used linguistic terms frequently. Other coding categories within this theme were referred to less frequently. This topic will be explored further later in this chapter (within section 3.4.2).

Both coding categories within the second theme, ‘Deaf cultural perspective about d/Deaf children’s language learning’, were identified in the questionnaire data. Deaf practitioners provided data examples for sign language or Deaf role models. They also provided examples of consideration of knowledge, skills and resources needed for working in BSL with children with language difficulties. Code counts for the inductive analysis were noted after the analysis of the questionnaire data was completed and are contained in appendix 4.1.

Apart from linguistic terms, the data set from the questionnaire provided more examples for deductive than inductive coding. The value of the questionnaire as a data collection tool is described in section 3.4.3, and as previously mentioned, provides results from individuals that can be compared to data from the focus groups where Deaf practitioners provided information in a more interactive forum.

3.4.2 Results for focus groups

Comparison between the three focus groups

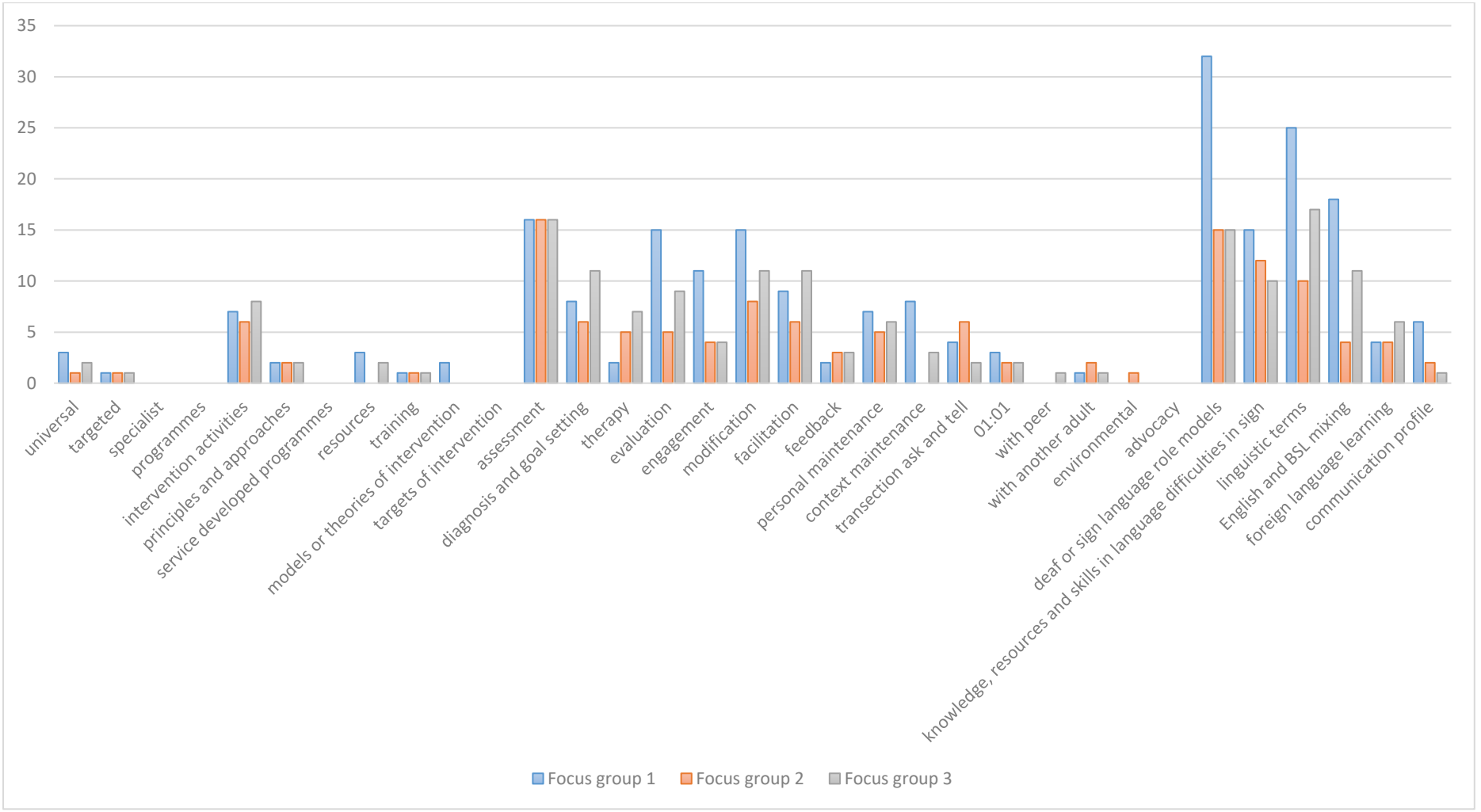
The amount of data produced by each of the three focus groups differed as did the number of participants: Group 1 had four participants in the room and lasted 1 hour 28 minutes. During this time the facilitator took 96 turns, and participants took 266 turns. Participant 1 took 71 turns, participant 2 102 turns, participant 3 67 turns and participant 4 26 turns. Group 2 had two people in the room and lasted 51 minutes. The facilitator took 68 turns whilst participants took 106 turns: participant 1 took 56 and participant 2 took 50. Group 3 had three people in the room and one on Skype and lasted 1 hour 9 minutes. The facilitator took 45 turns and the participants took 90. In the room, participants 1 and 2 took 27 and 31 turns respectively. Participant 3 took 14 turns. The participant on Skype took 18 turns. There were other reasons, apart from group size, why the focus groups produced different quantities of data. The focus group leader for all three groups was a work colleague of participants in Group 1. Group 1 was held as part of a team day whilst Groups 2 and 3 were held

at the end of a normal working day. Both these factors could have had implications for the volume of data collected. Additionally the number of turns was impacted by attendance method and experience. The participant on Skype took fewer turns than other group members as did the participants with least clinical experience: participant 4 in group 1 and participant 3 in group 3.

As recommended by Braun and Clarke (2006) and Gale et al (2013), the themes that emerged from the focus group data are reported without reference to coding counts. This information is included in appendix 4.2.

As can be seen from Figure 3-7, distribution of data across the coding categories shows a similar distribution between groups. As previously discussed each group produced different quantities of data and this can be seen in the comparison. As the distribution of data from each of the coding categories is similar for the three groups, the data are presented as one data set within the results.

Figure 3-7 Comparison of coding data totals for three focus groups



The focus group results are reported in two parts to represent the different analysis models. Firstly, the deductive analysis compares how Deaf practitioners report their work when coded into themes reported as important for SLTs working in spoken language. Secondly, the coding of data through the inductive process is reported and analysed. The format used for describing the data follows guidelines suggested for analysing and reporting qualitative data (Gale et al., 2013).

Approximately 30% of comments from the focus group were not allocated to a code with either analysis. The researcher and the SLT reliability coder showed similar numbers of uncategorised comments, which were subsequently categorised in three ways:

- Comments on the individual's thinking process – 'I've got a bit of a mind block….' , 'oh I'm just thinking about something else, but it's not related to language'
- Comments on interaction in the room – 'oh we've got two people signing at the same time', 'someone's come in'
- Agreement and confirmation – repetition of the previous comment in full or amended form – 'yes, I'll tell them about my life too'.

Deductive analysis for focus groups - Coding for comparison to themes used by SLT working in spoken language

Bunning provided three themes for student training in SLT which can be compared to what Deaf practitioners tell us they do: intervention cycle; intervention techniques; intervention format. The focus group data were coded for each of these themes and data examples are provided. Details of each coding category are given at the start of each section.

Theme 1: Intervention cycle (Bunning, 2004)

This theme describes the four part cycle of intervention for language therapy. Four coding categories were used to analyse the data: assessment, goal setting, therapy, and evaluation.

Table 3-4 Description of coding categories - Intervention Cycle

Coding category	Description
Intervention cycle	
Assessment	Undertaking tasks and activities identified as being completed in order to assess a child's language
Diagnosis and goal setting	Identification of a language need/deficit or setting a goal/ desired outcome linked to a need

Therapy	Providing direct or indirect intervention with the aim of improving the child's language skills or language use
Evaluation	Measuring, reflecting on and evaluating the success of therapy for a child

Deaf practitioners gave examples from all four coding categories in all of the focus groups (Table 3-5). It is evident that Deaf practitioners do consider the intervention cycle within their work with children who have language learning difficulties in BSL.

Table 3-5 Intervention cycle - focus group data

Coding category	Data examples
Assessment	Included reference to the two standardised BSL assessments *We'd ask one of us who has been trained in the BSL productive or receptive test* Use of communication profiles *I'd start by doing a communication profile* Referral for further assessment activities *They needed a language therapist to do further assessment*
Goal setting	*Find out which area it is – productive, receptive or processing* *He understands receptively but productively he's not good at producing language*
Therapy	*We would look for strengths and use those strengths to build on the weaknesses* *Give them all of that language linked to maths so that they understand it better. So that they can hold onto something and understand things better and give them all the sign language they need for that topic*
Evaluation	*I say first were going to talk about this, then that, then you tell me what you've learnt from the session and then we'll play the game* *At the end you have an intuition if it's gone well or if it's been frustrating and hasn't and you think you could have done something differently* *You kind of get that gut response in terms of their responses*

Overall, like SLTs, Deaf practitioners relate their work to the cycle of intervention, with assessment mentioned most consistently. However, some participants felt they relied on 'intuition' rather than a knowledge base to complete parts of the cycle.

Theme 2: Intervention techniques (Bunning 2004)

For this theme, techniques used in language therapy intervention were coded. The coding categories are provided with examples from the data in Table 3-6 below, preceded by a description of the coding categories.

Table 3-6 Description of coding categories - Intervention techniques

Coding category	Description
Intervention techniques	
Engagement techniques	Techniques used to support the client or others in the therapeutic process
Modification techniques	Techniques used to adapt the practitioner's own use of communication in response to the clients, ensuring their competencies can be identified and a balanced interaction achieved e.g. adapting communication, ascribing meaning, checking interpretation and understanding
Facilitation techniques	Techniques used to provide timely support to facilitate language understanding or use e.g. encouraging contribution, modelling, assisting
Feedback techniques	Techniques used to promote therapeutic change through feedback e.g. checking contribution and providing differential, evaluative or summative feedback, acknowledging contributions
Personal maintenance techniques	Techniques used to recognise and support an individual's needs and behaviours e.g. emotional, physical, sensory or behavioural acknowledgement or support
Context maintenance techniques	Techniques used to ensure that the client can engage with the environment and any materials in a positive way e.g. equipment or setting
Transection techniques	Techniques used to share information in a timely way with others about the client's language and communication skills including therapeutic input and change e.g. gathering information, recording and providing information, advice or instruction, framing, negotiating, explaining or rationalising

Examples of all the coding categories occurred in all three focus groups except for context maintenance, which did not occur in focus group 2. From this data it appears that Deaf practitioners consider intervention techniques in their work.

Table 3-7 Language therapy intervention techniques – focus group data

Coding category	Data examples
Engagement techniques	*Perhaps other people are not comfortable with them but if you're comfortable and you understand them* *You know for other people it might not make sense but for you it does*
Modification techniques	*We would repeat these ideas through different activities as well but keep it very simple*
Facilitation techniques	*It's better in particular areas to just do repetition and reinforcement before, way, way before it happens and every time use that reinforcement*

Feedback techniques	*You might not understand but when they explain it to you, you think ah ok that's what they mean. It's about helping them understand by expanding their use of language. Hearing people don't do the nodding all the time to validate, which we do automatically, and these kids will get that; and hearing staff will not reinforce that; the deaf staff - we're much more expressive, reinforce and give much more validation, which is what they need from us*
Personal maintenance techniques	*Try to match that child's needs and go at the child's own pace, not at my pace, so that they are leading me, not that I'm leading them*
Context maintenance techniques	*(I consider) the environment, the room, who's in the room*
Transection techniques	*It's difficult when you're writing a report because you can be challenged and basically you're challenging them and their work. so you have to be very careful about how you write those reports*

Consideration during the coding process was given as to whether this seven point definition was too detailed and whether a simpler definition, more easily translated and applicable to BSL, would suffice to support the training and work of Deaf practitioners. 'Modification' and 'facilitation' seemed broadly aligned and were difficult to differentiate, as were 'context' and 'personal maintenance'. Both these coding categories relate to how the adult uses their skills and different strategies to mediate the child's learning experience. These issues are explored further in the discussion section at the end of this chapter.

Theme 3: Intervention format (Bunning 2004)

Bunning's five formats were coded. The coding categories, number of mentions within each group and data examples are provided in Table 3-8 below.

There was more variability within this theme across the three groups. Working one-to-one and with another adult was mentioned in all three groups. Working with a peer and making environmental changes were only identified in one group each. The category Advocacy was not found in any groups. Categories within this theme were not identified as frequently within the groups as the two previous themes.

Table 3-8 Intervention format – focus group data

Coding category	Data examples
One-to-one	*I'm the one who can discuss directly with the child 1:1* *I think it's that you work one to one*
With peer	*Sometimes we'd have two or three in a group it might be more fun to make sandwiches in a group they'd help each other and work would be collaborative so we'd compare it*

	so …….. have they got it right have they got it wrong and they'd realise they'd made a mistake on their own
With another adult	*Maybe you could do 2:1 and focus on things in those session*
Environmental change	*So we would teach a lot in nursey and they would have nothing when they went home*
Advocacy	No examples

To summarise Table 3-8, whilst some Deaf practitioners consider a variety of intervention formats in their work, these were relatively infrequently mentioned compared to the other themes of practice identified by SLTs within the literature considered in this deductive analysis.

A possible explanation of these findings is that Deaf practitioners may not be aware that language intervention can take place in a range of settings. Alternatively, different formats of intervention may not be possible within the working practices of some Deaf practitioners. These issues were considered further in Phase 2.

Deaf practitioners' practice can be considered in relation to two further themes in the context of Roulstone's model: Types of intervention and Categories of intervention.

Theme 1: Types of intervention (Roulstone 2012)

Roulstone's (2012) three coding categories and examples from the data are provided in Table 3-9 below.

Table 3-9 Types of intervention - focus group data

Coding category	Data examples
Universal	*Hearing children have lots of incidental learning as people are playing around them, they're picking up all the language around them form behind their heads. The deaf kids don't get that.*
Targeted	*I'd start by doing a communication profile and if I still had concerns I would refer them on for a language assessment* *I've noticed that those who are deaf from a deaf family have a very rich level of language. They can sign and that is fine. But from the hearing families there is quite often weakness in different areas of language*
Specialist	No examples

These data indicate that Deaf practitioners consider two different types of intervention in their work, with universal and targeted aspects of intervention

mentioned. Specialist intervention was not identified by any focus group participants.

A key issue as to whether intervention in BSL is universal - providing access to a first language, or targeted - providing access to one language for a bilingual child, was raised during coding of the responses. Consideration needs to be given as to whether access to good language role models could be seen as 'universal' and Language Therapy in BSL as 'specialist' if both were more widely available. However, within the current data set, it is clear that access to adequate language role models is a key issue for Deaf practitioners as this impacts on differential diagnosis between language deprivation and language disorder.

Theme 2: Categories of intervention (Roulstone 2012)

This theme uses Roulstone's eight coding categories to represent the resources or style of intervention used by the practitioner. The coding categories and examples from the data are provided inTable 3-10 below. While Deaf practitioners consider categories of intervention in their work, not all coding categories were found in all groups.

Table 3-10 Categories of intervention - focus group data

Coding category	Data examples
Programmes	No examples
Intervention activities	*I'd use pictures of a birthday party for example; it would have a picture of a cake and things that I'd cut from a magazine and there would be one picture that was odd, that wasn't a birthday party* *Something simple without any words, just pictorial, so I can see how their imagination can put a story together and give it back to me*.
Principles or approaches	*Asking them to pretend to be someone else, to see if they are able to do that; to see if they can put themselves in the character of somebody else*
Service developed programmes	No examples
Resources	*I have the shopping trolley game; I have Headbanz Pictures, sequencing and pointing, using a story board, using three or four pictures*
Training	*We can educate staff at the same time, educate staff and the deaf child; we can say the child's nodding and what I do when a child nods: I repeat or I would ask them to repeat back what I was talking about*
Models or theories of intervention	*We wanted to see why that was; whether it was the children that he was mixing with or the TA or something like that*
Targets of intervention	No examples

Consideration during the coding process was given as to whether this 8- point coding scheme was too detailed and whether a simpler structure would reflect the training and work of Deaf practitioners more effectively. ‘Intervention activities’ and ‘Principles and approaches’ seemed broadly aligned and were difficult to differentiate, as were ‘Targets of intervention’ and ‘Models and theories of intervention’.

Some coding categories (Programmes and Service developed programmes) were unlikely to be mentioned by Deaf practitioners as few, if any, programmes for intervention have been developed for this client group.

Inductive analysis for focus groups

The inductive coding process highlighted two key themes: metalinguistics, and the Deaf cultural perspective on d/Deaf children’s language learning. More detail about the coding categories in each theme has been given above in Table 3-3 Inductive coding categories for Phase 1 analysis. Further information about the process by which they were developed is described in the Analysis Methods section above and in Appendix 3.

Theme 1 - Metalinguistics

This theme relates to terms for describing language and skills (or lack of these) that practitioners use when discussing language or language difficulties in BSL. The coding categories and examples from the data are provided in Table 3-11.

Examples of each coding category were found in all groups. These data indicate that Deaf practitioners often consider metalinguistic issues when they and others are discussing children’s language,

Table 3-11 Metalinguistics - focus group data

Coding category	Data examples
Linguistic terms	*Narrative skills, Timelines, Handshapes, Language elements, Turn taking, Vocabulary*
English and BSL mixing	*If parents are using fluent BSL and the child in school is learning Sign Supported English and they come home it's a bit of a mind shift and it can be quite difficult for them to integrate the two* *At school he has to speak because he's in a mainstream school, he goes home and dad's a fluent BSL signer, and then mum's talking and signing so he's exposed to all of them and he's very confused* *We use a visual language in terms of sign language and when children start fingerspelling it's like changing between the two languages*

Foreign language learning	*I've got an example of a child who could be an asylum seeker so they could have some signing ability and I'm sure they would flourish in their home country.* *Families that have moved from abroad from strong cultural backgrounds and perhaps they (the child) don't even have any language at all, and then perhaps BSL becomes their third language.*
Communication profile	*I use the communication profile and look at their conversational skills.* *We do use communication profiles, and that can be helpful in assessing somebody.*

When discussing language, language influences and language learning, several aspects of a child's linguistic environment need to be considered (see examples relating to English and BSL mixing in Table 3-11). In Phase 2 attention was given to how the language used by professionals among themselves, as well as with parents and carers, can support the understanding of the issues for a child and clarify their assessment and intervention needs.

Theme 2- Deaf cultural perspective on d/Deaf children's language learning

This theme refers to how Deaf practitioners discuss d/Deaf children's language learning using Deaf perspectives of a cultural, historic or social nature.

From the data it appears that Deaf practitioners often consider the linguistic, language and cultural context in which their work takes place. This context has provided a culture for the discussion of language learning difficulties and can make it complex to unpick the issues involved for any child learning BSL. As outlined in the literature review, SLTs have a culture and frameworks for discussing language, acquired through their initial training and through subsequent continuing professional development, Deaf practitioners also have an understanding of why some children have difficulties, often based on their own experience growing up or experiences in the work force. This theme relates to these areas. Once the coding categories were identified through the iterative process, examples of each coding category were found in all groups.

Table 3-12 Deaf cultural perspective of discussion about d/Deaf children's language learning - focus group data

Coding category	Data examples
Deaf or sign language role models (or lack of them)	Lack of appropriate language models *They don't get the exposure (to language) from parents…. or school and they're not getting anything from home.*

	Also they have less opportunity for that two way conversation and lots of children are isolated and working with a TA they haven't got opportunity to mix with other deaf peers and so they never learn those narrative skills, they never learn turn taking. Lack of Deaf role models *I have an example of a child that I visited and they asked how did you get here and I said oh I drove, and they replied, oh you're not allowed my granddad said deaf people aren't allowed. Deaf children can be very concrete and they accept what hearing people have said and that that information is right without any explanation or questioning that so often their view of the world is very limited and they have the view that deaf children aren't allowed to do things.* Good access *And it's about being creative in that deaf cultural way' They (colleagues) ask me to meet that child and I adjust my register to communicate with that child but they can't communicate with others.*
Knowledge, resources or skills in dealing with language difficulties in sign (or lack)	*It could be that they just don't understand, that they can't access lip reading or they just don't have a full understanding of English. And again maybe, they could have something like dyslexia or something like that where there are other difficulties in them being able to access the language.* Describing facial expression *Is it affect, linguistic or both, facial expressions, if they are blank you can see. Quite often children present with very blank facial expressions you don't .., perhaps they don't smile. It's hard to explain really but perhaps they don't….* Describing grammar *I can't think of the word for that but they're missing some of the features, they're missing exposure to the full sign language and that's a problem.* Describing pragmatic difficulties *I can think of one child who repeated what they were saying, well, copied what I was signing so they weren't understanding, and they were asking me very inappropriate direct questions like How old are you?, so they were too direct. They would repeat the same thing again and again, they would go off topic but also insist on not changing the topic and continuing. I don't know if that was just habit that they would repeat things.* Using intuition *At the end you have an intuition if it's gone well.* *You use your gut, it's a gut feeling isn't it? You can just sense where the language has gone whether that's developed or not.* *We'd assess them, we'd have a gut feeling that something was a problem.* Discussion between two practitioners about assessment *DP1 -but how do you do it? Is it gut instinct or your experience?*

	DP2 - you bring materials in and you see. You ask the kids to draw something …., or you'll say I'll sign this can you ….? That kind of interaction can be helpful.

The focus groups also provided information about how Deaf adults communicate with d/Deaf children using their own personal experience, such as being straight or blunt in a culturally appropriate way, or knowing what it's like for the child. The groups highlighted that Deaf practitioners often report using a 'gut feeling' or instinct in their work. Whilst these implicit skills may support the work of Deaf practitioners, their usefulness needs to be considered more explicitly with practitioners if they are to manage, modify and teach others to use these skills effectively. Whilst experiential and instinctive skills are important, further consideration is needed as to how the Deaf experience fits with theoretical knowledge, models of therapy and Deaf practitioners' learning.

3.4.3 Comparison of focus group and questionnaire data

Figure 3-8 provides a comparison of the questionnaire and focus groups. The data displayed show the mean number of comments on each topic for the participants of all the focus groups in comparison to the mean for 12 of the questionnaire respondents (as one questionnaire respondent only gave demographic information, this participant was not included in the total of questionnaire respondents for this analysis). Whilst visual inspection of the data shows similar patterns of response across the groups for the two data collection tools, there are some clear differences in the quantity of data collected. Targeted interventions, intervention activities and targets of intervention were the only coding categories described more in the questionnaires than the focus groups. The two inductive coding categories, Deaf and sign language role models, and the Deaf cultural perspective, were discussed more in the focus groups, as were the language therapy cycle and therapeutic techniques used by the Deaf practitioners. For both groups, information on categories of intervention was limited. Two possible reasons for these differences are discussed here.

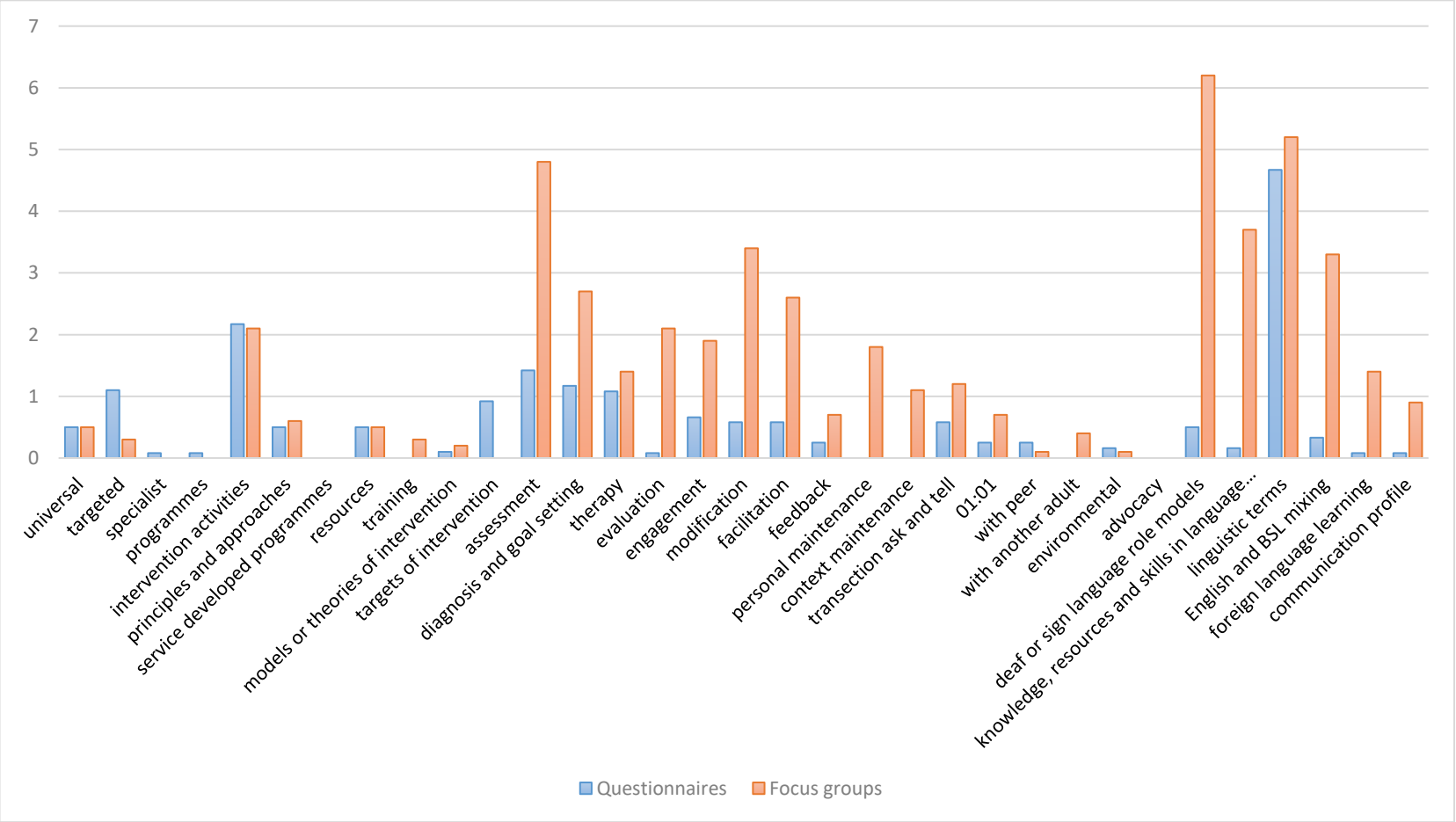
Firstly, there are linguistic considerations. All responses for the questionnaire were in English, even though almost half the respondents reported their preferred language to be BSL. Reasons for this are speculative, but this may relate to the format of the questionnaire or the language of the topic: perhaps we have an agreement on terms to describe d/Deaf children's language in English but not in BSL, or perhaps discussion of aspects of this topic in English occurs more often

than in BSL. By responding in English, where this is not a preferred language, Deaf practitioners may have been limiting or influencing their responses. The focus groups, in comparison, were conducted solely using BSL with the opportunity to discuss and agree terms with others present.

Secondly, there are data quantity and quality considerations. Participants mostly reported that they were bilingual or preferred BSL. The focus group format offered more opportunities for individuals to respond to or prompt thoughts in others. The questionnaire format did not offer this. The focus groups were led by a practitioner familiar to most participants and a work colleague for some. This familiarity in the focus groups may have increased participants' communicativeness compared to the online questionnaire format. The difference in format may explain the limited amount of data collected in the questionnaire and large amount of data collected in the focus groups. Where the questionnaire did not support discussion of all the themes, in groups the focus group lead was able to ask people to expand on an idea, enabling the inductive themes to be expressed more clearly. Examples from the focus group transcripts include phrases that asked for more information '*Anymore?*'; clarified and personalised the question '*we're asking about the process, if you think that a child has a language difficulty what would you do?* '; and provided summaries of a participant's contribution in relation to the question '*So when you're doing the assessment what do you do, it's looking at their strengths, playing with toys, looking at interaction and conversation'.*

Although there were some differences in the quantity and quality of data in the two data collection models, similarities and agreements can be seen. This indicates that the themes identified do reflect Deaf practitioners' current practice.

Figure 3-8 Comparison of questionnaire and focus group data



Graph showing mean number of comments on each topic for the participants of all focus groups and 12 questionnaire respondents

3.5 Discussion

The first phase of this project was designed to describe the intervention framework Deaf practitioners currently use in their work with Deaf young people. It aimed to identify similarities and differences between the work of Deaf practitioners and SLTs when working with children who have language difficulties. Whilst the culture and history of experience of language difficulties is different for Deaf practitioners and SLTs, as discussed previously in the focus group results section Theme 2, overarching frameworks for language intervention appear similar. However, Deaf practitioners' reports of specific assessments, interventions, strategies and resources lack detail. There are four possible reasons.

Firstly, the lack of a shared language and understanding of concepts to discuss language difficulties is identified as an issue by participants. Deaf practitioners describe using 'gut feelings' but cannot always describe what they do or why they do it. An appropriate, accessible and relevant lexicon that reflects the cultural background for discussion of language difficulties in BSL is needed. The process of developing such a lexicon will be iterative through Phases 2 and 3. Such a lexicon must be useful for both groups of Deaf practitioners working in this field: those who describe themselves as bilingual in BSL and spoken English and those who describe themselves as only using BSL. It must also be useful for different groups of professionals: those who have had training in language development and disorder (SLTs and some qualified Teachers of the Deaf - TODs) and those who may have practical experience but who have yet to develop skills in this specific area. This group will include some Deaf practitioners. In considering the language used, the terminology in 'Intervention techniques' was identified as being overly detailed in this phase. A simplified framework was therefore used in Phase 3 of this study. This linked personal and context maintenance as one item and facilitation and modification as another.

Secondly, consideration is needed of the knowledge base and training needs of Deaf practitioners. What knowledge and skills do people need? Over half the respondents in this study report that they have not been given specific training for working with children with language learning difficulties. Deaf practitioners provide non-specific discussion of the need to match the child's language level, modify their own language and to choose equipment to meet the child's needs. Whilst experienced practitioners may be able to do this, newer recruits may have to learn 'on the job'. Consideration needs to be given as to how Deaf practitioners can be supported to pass on their knowledge effectively. An appropriate lexicon, as

suggested above, will make discussions and explanations more frequent and detailed. This would enable the intuitive knowledge held by some Deaf practitioners to become underpinned by theoretical knowledge and shared with others. Training is needed to support Deaf practitioners to be more specific about the work they do. This training will need to include information and tasks that differentiate between BSL and English but also highlight similarities in the learning of any language.

The third issue highlighted was access and availability of research information on typical and atypical language development in BSL. We must ensure that research findings are accessible to practitioners with a range of different language skills and preferences. Specific tools and resources will be needed to enable this.

Finally, consideration needs to be given to the Deaf practitioners' role, both in employment and in the Deaf and hearing communities. This includes understanding of several aspects of role: what people are employed to do, what employers think are the skills of Deaf practitioners, what employer's expectations are, what Deaf practitioners think of their own skills, and what their expectations are in relation to their roles and responsibilities. The focus groups provide some views and perspectives on the roles and responsibilities of Deaf practitioners which can serve as a basis for further development.

To summarise, d/Deaf children – like all children- need a first language, acquired within the sensitive period for language development (Lyness et al 2013). Deaf practitioners discussed in this phase of the study whether this is a language therapy or language access issue. This in turn links to whether intervention should be universal, targeted or specialist. If children are not enabled to learn an accessible language in their early years or have specific language difficulties, language therapy intervention is needed. Practitioners must be able to identify the types of intervention that are appropriate and communicate this information to parents and other practitioners. Currently, Deaf practitioners undertake many aspects of this work but do not have the underpinning theoretical knowledge or training to describe their work as other professional groups do.

Issues to consider from this phase

Data collection was from a narrow group of participants, mostly working in NDCAMHS. Travel costs and clinical commitments impacted on Deaf practitioners' ability to attend focus groups. Increasing the inclusion of Deaf practitioners working in a variety of settings and including other professional groups, such as SLTs and

ToDs (in particular, teachers who are themselves Deaf), would have provided useful points of comparison.

Data analysis in this phase depended on prior translation from BSL to English, which may have resulted in loss of information. Increasingly, video tools are available (e.g. ATLAS) which enable qualitative data analysis from video source materials. More use of ELAN would have enabled analysis directly from BSL. However, data collection and analysis in BSL is dependent on the researcher's skills both in BSL and in the use of computer aided data analysis. Whilst permission was not sought for focus group clips to be used for further training it may be useful for future projects to consider this, as Deaf practitioner examples could provide an excellent training resource and could potentially reduce some of the translation issues identified as a limitation.

Progress to next phase

Phase 1 highlighted three areas for further attention in Phase 2. These are, firstly, the language professionals use both to describe what they do and to discuss how children use their language; secondly, how Deaf practitioners understand or explain a child's language learning difficulties in terms of access to language role models, family language context and the individual's skills (strengths and difficulties), as these will impact on their intervention and advice. Thirdly, examples from Phase 1 will be used in training in Phase 2 to develop resources and activities and to further explore how Deaf practitioners think about and support children who have language difficulties. This will start the process of Deaf practitioners sharing information about Language Therapy with each other.

Chapter 4 Phase 2 – Deaf practitioners working with d/Deaf children

4.1 Introduction

This chapter reviews the aims of Phase 2, then describes it in four sections: context, methods, results, and discussion. Firstly, the context for data collection is outlined through a description of the people and place involved. The chapter then describes in detail the methods and results for Phase 2. Finally, a discussion of the results is given, with a summary of issues to be carried over into Phase 3 and discussed further when considering future directions for research.

4.1.1 Aims of Phase 2

The second phase of this project was designed to explore how Deaf practitioners and an SLT researcher could work together to provide Language Therapy in BSL to children identified as having language learning difficulties. Using a set of practical activities, this phase aimed to gather additional data to answer the research questions:

1. How do Deaf practitioners currently work with deaf young people who have language difficulties?
2. Can language therapy strategies and resources developed for spoken language be adapted or developed, with Deaf practitioners, to provide language therapy in BSL?
3. Can implementation of therapy strategies and resources bring observable change to Deaf practitioners' therapeutic skills or their understanding of d/Deaf children's language skills?

Data were gathered during a two day language therapy training course, followed by language therapy sessions for Deaf practitioner/deaf child dyads, supported by the SLT researcher. The course and sessions aimed to:

- Use language therapy strategies and resources developed for spoken language alongside strategies and resources used by Deaf practitioners, to provide language therapy in BSL for d/Deaf children in an inpatient setting.
- Review this process with Deaf practitioners during training, intervention and review sessions.
- Evaluate the success of various activities for Deaf practitioners during Phase 2 so that these could be used or adapted for Phase 3.

The researcher worked alongside four Deaf practitioners to provide training and share information during the two day course. Subsequently, the Deaf practitioners worked with d/Deaf children in language therapy sessions. Each Deaf practitioner/child dyad and the outcome of the intervention will be described in detail within the results section.

4.2 Context and ethics

Data collection took place within an in-patient unit for d/Deaf children with mental health needs. The Deaf practitioners who volunteered to participate in this project work as Child Mental Health Workers (CMHW) on the unit and are part of the nursing team. Gathering data in an inpatient unit had benefits and challenges. The benefits included access to children, parents and staff who were willing to be involved in the project as well as the resources and structures to support the work. The challenges included the organisation of the unit: nursing shifts involve a 24 hour work pattern across three shifts; the presentation and needs of the children: admission to an inpatient unit indicates a high level of mental health need; and consideration of the needs of others: those children, young people, parents and staff on the unit who were not participants in this project.

This study was ethically reviewed by the National Research Ethics Service (NRES) Research Ethics Committee Number: 14/LO/1045 (Appendix 1.1). A substantial amendment was approved to increase the age range of the children and young people who could be considered for the project (Amendment 1 submitted 27/3/15 – appendix 1.2). This amendment is described in more detail in section 4.5.3. Consent for involvement including filming was obtained from all staff involved. Parents gave written consent for the involvement of their children and the children gave consent at the start of the intervention and before each session. Parents were kept informed as the study progressed via individual meetings. Staff were kept informed of the progress of the whole project via in service training sessions. Information and consent sheets provided to Deaf practitioners, parents and children are in Appendix 1.

4.3 Method

The methods used for Phase 2 were designed to allow more focus on language therapy in BSL whilst this work was integrated into a child's overall care plan within the clinical setting. There were two distinct parts to Phase 2: a two day training programme for Deaf practitioners led by the SLT researcher, and language therapy intervention sessions for each dyad. Specific sessions were provided for each dyad

and the outline of the tools and resources for these is given within this section. Additional adaptations made for each dyad during the course of the sessions are reported in detail in the results section below as they relate to how changes were needed for individual practitioners. The focus of this project was the Deaf practitioner and their interest, knowledge and skills in delivering language therapy in BSL. Whilst the Deaf practitioners commented on the development of a child's skills, the results cannot be linked solely to the work undertaken in the sessions, as these were provided in the context of a therapeutic milieu which emphasises the importance of effective communication and language use for d/Deaf children's development.

When children are in-patients in the unit, the team have regular handover and feedback sessions with parents about all aspects of their child's care. The specific work related to this project was highlighted to parents and carers, but it would not have been possible for them or staff to differentiate the inputs and benefits of this work from other work undertaken in the unit.

A description follows of the participants: Deaf practitioners, d/Deaf children, and parents; tools and materials: questionnaires, training sessions, language assessments, and session evaluation tools; and procedures: recruitment, meeting, training, intervention and review. The Analysis Model will also be described.

4.3.1 Participants

Deaf practitioner participants for Phase 2 were volunteers from the NDCAMHS in-patient unit, enabling all assessment, therapy sessions and discussion to be completed in the therapy rooms and offices of the unit. Four Deaf practitioner volunteers were recruited following team discussion and routine team training sessions. Volunteers, who were working with a child who met the inclusion criteria, gained the ward manager's agreement to allocate time to participate in training, liaison and intervention tasks. Information sheets were provided for the Deaf practitioners and consent forms were completed (Appendix 1).

Children attending the in-patient unit were invited to participate if:

- They were aged 8-15yrs (8-17yrs following the amendment)
- They had capacity to consent to participation in sessions
- They had language difficulties identified as a need in their care plan
- They and their carers were willing and able to be involved in the project and enable the children to attend the therapy sessions.

Children were excluded if they had a diagnosis of Autism Spectrum Disorder, severe mental illness, or risk factors that would make intervention unsafe. Their inclusion in the project would have been ended or suspended, in consultation with their carers, if any of these criteria were met during the intervention. This did not occur for any participant.

Two children who met the participation criteria were admitted to the unit during the course of Phase 2. Consent was given by the parents, children and clinical team for both children to work with the four adult participants. As the focus of the study was the Deaf practitioners, it was agreed that one child would work with two Deaf Practitioners consecutively, with a different focus of intervention with each practitioner: either vocabulary or narrative skills, both of which were linked to the clinical needs of each child. Three dyads were able to complete the course of intervention. The fourth dyad was unable to complete all sessions due to issues of ill health, holidays and care planning. For this fourth dyad, only information from the Deaf practitioner's engagement in the training is reported below, as session data were incomplete.

The child in Dyads 1 and 2 was 11 years old. She was profoundly deaf from birth and had received bilateral, sequential cochlear implants, the first when she was aged 5 years. She had limited or no access to audiology services and the local spoken language aged 0-3 years, as she was not living in the UK at that time. At 4 years, when she moved to the UK, she had access to some basic sign support and hearing aids. She moved to a family where the only language spoken was English. Her parents and older sibling developed some basic signing skills when she came to live with them but had used spoken English to communicate within the family in recent years. Her parents reported that the hearing aids gave her very limited access to sound. From 5-11 years, parental and professional focus was on developing spoken English skills. Although she had good access to sound via her cochlear implants, she was reported by her implant team SLT to have specific speech perception and production difficulties. Cognitive assessment indicated she was functioning within the average range. She had no additional difficulties with movement or co-ordination. On moving to England, this child had attended a local mainstream school with additional support from a teacher of the deaf and teaching assistant. More recently, she had attended a school for deaf children. At the start of the intervention she used Sign Supported English, with limited vocabulary, to meet her everyday needs. More detail of her language use is given in the reporting of the dyads. The mother and father of this child provided information about their

understanding of their child's language difficulties, how they helped her and supported communication both before and after their involvement in the project. This is detailed in the Results section (4.4.3 Feedback from children and parents).

The child in Dyad 3 was 8 years old. He was severely deaf from birth and had bilateral hearing aids, which he wore inconsistently during the period of intervention. His deafness was identified soon after his birth. His parents and siblings are all deaf and are part of the Deaf community. The family home language is BSL. Professional focus in his educational settings has been on developing his spoken and written English skills, sometimes in environments that use Sign Supported English. He had initially attend a local mainstream nursery, then transferred to an infant school with a resource base for deaf children. More recently he had moved to a school for deaf children. His mother reported that he had not learnt sign language as his siblings had, and that some members of the family adapt their language to meet his needs. A cognitive assessment indicated he was functioning in the low average range. However, the clinical psychologist who completed the assessment felt this could be an underestimate of his abilities and suggested follow-up assessment after intervention in this setting. He had no motor or co-ordination difficulties but showed some sensory seeking behaviours and difficulties with attention, planning and impulse control. Further detail on the parent's perspective of his difficulties, and how the family supported and communicated with him is given in section 4.4.3 Parent feedback – mother of Child 2. His mother provides a good description of his ability to understand and use language in everyday settings before and after their involvement in the project.

4.3.2 Tools and materials

Tools and materials comprised questionnaires and rating scales, training sessions, language assessments, and session evaluation tools. The questionnaires and rating scales were developed by the researcher and are in appendix 2. These, along with other tools and materials were based on those used in clinical practice by the SLT researcher and her colleagues within the clinical setting. Their use was evaluated through discussions with Deaf practitioners as part of Phase 2, both during the training and the language therapy intervention sessions. Materials were adapted, refined or excluded for subsequent dyads in Phase 2, and for use in Phase 3 (Appendix 5).

Questionnaires and rating scales

Five questionnaires and rating scales were used to gather information from each of the three sets of participants at different time points in Phase 2. Table 4-1 gives an overview of the tools used, including from whom and when data were collected. More detail about each is then given below the table. The questionnaires and rating scales are in Appendix 2. All questionnaires were in written English on paper; the questions were explained and discussed with the Deaf practitioner, parents or child in BSL where necessary. Where participants chose to respond in BSL, their responses were video-recorded or translated live. BSL interpreters were available for translation or interpretation; however one parent preferred to communicate directly with the SLT researcher. The Deaf practitioners chose to communicate in a variety of ways: directly with the SLT researcher, with BSL/English interpreters and independently in written English to complete questionnaires and rating scales. This is described in detail in the individual case studies in section 4.4.2.

Table 4-1 Overview of questionnaires and rating scales used in Phase 2

Questionnaires and rating scales	Focus	Respondent	Data collection points
Confidence rating scale (Appendix 2.4)	A Likert scale of Deaf practitioner confidence in language therapy tasks	Deaf practitioner	Start and end of involvement
Child Rating Scale (Appendix 2.6)	A Likert scale of child views on sessions	Child	End of each session
Parent questionnaire (Appendix 2.7)	Open questions asking parents to describe their child's language	Parent	Start and end of involvement
Language Therapy Knowledge (Appendix 2.3)	Open questions about language therapy knowledge	Deaf practitioner	Start and end of involvement
Expectations from training questionnaire (Appendix 2.5)	Open questions about expectations and reflections on training and learning	Deaf practitioner	Start and end of involvement

RATING SCALES

Deaf practitioners were asked about their confidence in working with children who have language learning difficulties. This scale was completed at the start and end of their involvement in the project. The use of a Likert Scale provided some quantitative descriptive statistics. The deaf child participants were offered a questionnaire after each session asking about their views on their involvement in

the session (Duncan, Miller, & Sparks, 2003). It included ‘smileys’ to support the child’s understanding of the tool.

PARENT QUESTIONNAIRE

Information was collected from parents about their understanding of their child’s language difficulties: what difficulties their child had, how they helped them, and what gains they anticipated or had seen from involvement in the project. This was completed at the start and end of their involvement in the project.

LANGUAGE THERAPY KNOWLEDGE QUESTIONNAIRE

This tool gathered qualitative data from Deaf practitioners on their knowledge of the language therapy process. The questions were based on current practice in SLT with hearing children (Law, Plunkett, & Stringer, 2011; Roulstone et al., 2012b). It asked practitioners to describe the language difficulties children might have, the process they personally would follow to work with a child, and about important skills for the practitioner and the child.

QUESTIONNAIRE ON EXPECTATIONS FROM TRAINING

This questionnaire gathered qualitative data on Deaf practitioners’ expectations and reflections on their training within the project (Cliff, 1998). It asked why the practitioner had volunteered to take part, what they hoped to gain or had gained, and whether they felt the experience had been was useful. It also asked for suggestions for changes to the project.

Training sessions

The training sessions used four PowerPoint presentations: project outline, language development and disorder, the language therapy intervention cycle, and language therapy interventions. The sessions were attended by four Deaf practitioners and led by the SLT researcher. The sessions ran over two Fridays in a training room located in the hospital where the Deaf practitioners worked. During part of the first morning, the presentation on the project outline was presented with opportunities for group discussion. The language development and disorder presentation included video examples of typical language development in BSL and opportunities for discussion; this presentation ran from the morning break until the end of Day 1. The language therapy intervention cycle was presented, with discussion, before the morning break on Day 2. The rest of the day focused on language therapy interventions and included video examples, practical activities and discussion.

Language assessments

Language assessment tasks were completed within each dyad. Most tasks concerned the collection of descriptive data about the child's language and their language use e.g. narrative content/structure, vocabulary use. For detailed descriptions of the first four tasks described below see Herman et al (2014a). The tasks were matched to the age and language needs of the deaf child but could include:

BSL Receptive Skills Test (Herman, Holmes, & Woll, 1999). This standardised assessment for 3-13yr olds assesses understanding of BSL. The child watches a number of signed phrases and points to the pictures described.

BSL Production Test (Herman et al., 2004). This standardised assessment for 4-11year olds assesses use of BSL grammar, story structure and content in retelling a story.

BSL vocabulary test - Lexical development tasks are presented via a web based tool where the child names pictures and matches signs to pictures (Mann & Marshall, 2010).

Semantic fluency task - The child names items within a semantic category for one minute, e.g. animals or foods.

Semantic links picture task -A child categorises or pairs pictures by their semantic link, e.g. socks and shoes, knife and fork, animals (Mann & Marshall, 2012).

Story telling/retelling task - The child watches a story being told, looks at sequenced pictures or a scenario picture and tells a story from this prompt. (adapted from Leitao & Allan 2003)

Mediated learning environment observation sheets ((Asad et al., 2013; Mann et al., 2014) which are used to assess the child's engagement with and use of the therapeutic session.

Session evaluation tools

When intervention sessions with the children were undertaken, three tools were available for evaluating the Deaf practitioner's use of strategies and resources in sessions. These were the reflective log and session plan; video observation schedule; and checklist for evaluation of sessions. These can be found in

Appendices 3. They are described further, with their use, in the ‘intervene’ section of the procedure below.

4.3.3 Procedure

For Phase 2, a five part procedure was outlined in the project plan: recruit, meet, train, intervene, and review. Amendments and changes were expected as Deaf practitioners became involved in the development of tools and resources. Practical issues related to running sessions with children and their families were also anticipated so, included in the project plan, sessions were held in negotiation and at intervals to be agreed with the children and their parents. The five planned stages of the procedure are described below with details of amendments made.

Recruit

Recruitment of Deaf practitioners has previously been described in the participants section of this chapter. The recruitment process for children included discussion with the child and their parent once the child had been identified by the clinical team as meeting the inclusion criteria. These discussions included information about the project, their NDCAMHS care plan and treatment goals, and the link between these goals and language learning. The information sheets and consent process ensured participants were aware of the use of video, the need to meet with their Deaf practitioner regularly and the language therapy review process with the SLT researcher.

Meet

The planned procedure was that once consents were received, the Deaf practitioner and SLT researcher would plan activities together, and then an initial meeting would be booked for the Deaf practitioner, SLT and child. During the meeting several tasks were planned to take place: a pre-intervention video of the child working with the Deaf practitioner, if one was not already available; structured language assessment activities; and planning of the next meetings. This sequence was only possible for two dyads for reasons outlined in the next paragraph.

Train

The Deaf practitioners completed a two day training course and additional sessions for individual discussion and reflection. The two day course was classroom based. Four PowerPoint presentations were used in the two day classroom based sessions for Deaf practitioners as described in the Materials section. Session 1, the project outline presentation, ensured expectations and ethical issues were clearly understood by the Deaf practitioners with discussion providing opportunity to clarify

any points that needed further explanation. The sessions were interactive to ensure Deaf practitioners were able to learn from each other as well as providing some insight into their understanding of the issues for the SLT researcher.

Session 2, later on Day 1, on language development and disorder, included activities and video materials to demonstrate typical language development. The difference between communication skills and language skills was explored. Language development and disorder research in BSL was provided to inform this process (Quinto-Pozos et al., 2013; Rathmann et al., 2007; Smith & Sutton-Spence, 2005; Woolfe et al., 2010). Some formal assessments that provide normed data were available and discussed during the information sharing sessions and are described in the assessment section. Children's understanding and use of language was discussed within a framework used in SLT. This focused on the form, content and use of language (Bloom & Lahey, 1988). This provided a theoretical framework within which children's language development could be discussed. The framework was chosen to provide a simple, but slightly more detailed perspective, beyond the differentiation of receptive and expressive skills which the Deaf practitioners were already familiar with. Deaf practitioners were given information about the form, content and use of language. Content was described as 'the meaning or information the young person can understand or express. The technical word for this is semantics'. Form was described as 'what the young person's language looks or sounds like, either at the single word/sign level or as they put these units together. The technical words for this include grammar, morphology, phonology and syntax'. Use was explained simply as 'how the young person uses language to interact with others. The technical word for this is pragmatics'. Introducing these concepts was important to support Deaf practitioners' awareness of the different elements of language they may be observing and different areas where a child may have difficulties. The theoretical information was supported by watching video examples of typically developing children using BSL and comparing the sign form, content and usage in children of different ages. Sign form observations included looking for aspects of developing phonology, morphology, linking of signs, use of space, and proforma use. Observation of content in the children's sign included looking at their understanding or use of a range of vocabulary items. It also included looking at strategies used by the child or an adult for carrying meaning or adding content when a child did not know a sign. Focus on the child and their communication partners' use of language or communication skills in interaction included observation of different language functions such as information sharing, rejection, questioning and direction giving. These video

examples were used to introduce discussion of when language learning is not typical or is delayed. This led to discussion, using this framework, of children the practitioners had worked with and where their language difficulties lay.

On Day 2, the language therapy intervention cycle was described. This focused on the skills of the Deaf practitioner in providing children with appropriate language learning opportunities within a framework for language therapy; assessment; identification of need/diagnosis with goal setting, therapy and evaluation. Finally a session on language therapy interventions explored practical activities. These were discussed and demonstrated for each part of the language therapy intervention cycle and used to refer to information that had previously been given throughout the two days.

Additional discussion sessions were provided more flexibly to review the Deaf practitioner's own videos and to meet in the workplace. A range of information collection and language topics were covered during the three days including:

- Language Therapy knowledge questionnaire
- Expectations for learning questionnaire
- Background to Language Therapy
- Introduction to therapy skills including reflective log and session evaluation tools
- Interventions for vocabulary skills
- Interventions for narrative skills
- Reflection on their own videos and those of children interacting with others

Due to workforce planning, the ward manager asked that all Deaf practitioners attend training at the same time. For two Deaf practitioners, it was possible to complete the class-based training after their child participant had been identified. However, two practitioners did not yet have an identified child participant when attending the training and so were unable to complete the initial 'meeting the child' session as described in the previous paragraph. This meeting and planning phase was therefore completed once their child participant had been recruited.

Intervene

During the intervention phase, each dyad's language therapy sessions were reviewed with regard to timing, structure and content. The timing and number of sessions were agreed for each dyad and were dependent on the child's clinical needs and presentation. For each dyad, the Deaf practitioner completed session evaluation tools during this process either independently, with the SLT, or with

interpreter support, as they preferred. Three tools were planned for use; the purpose of each is described here.

Reflective log and session plan

Deaf practitioners reflected on each language therapy session they completed by noting or discussing what they had done, considering what had worked well and what they would do differently next time. Kolb (1986) points out that when a person has participated in an activity, linking this to prior and future experiences aids learning. Additionally the session log acted as a session plan and record for discussion. Recording of these logs was adapted to meet the language preferences and literacy skills of the Deaf practitioners.

Video observation sheet

The Deaf practitioner and SLT researcher watched and discussed video recordings of language therapy sessions for that practitioner's dyad. These discussions gathered data on the Deaf practitioner's perceptions and reflections on the language skills of the child and their own language therapy skills, using the frameworks outlined above. The video observation sheet and reflective log were integrated into one document with feedback from Dyad 1 (reflective log, version 2, in Appendix 5).

Checklist for evaluation of sessions

Video recordings of language therapy sessions for each dyad were evaluated using a framework based on current SLT practice (Bunning, 2004; Farmer & Fleur, 2006; Joffe, 2011, 2012; Law, et al 2008; Roulstone et al., 2012b). This framework focused on the skills and strategies used by the Deaf practitioner.

The SLT researcher and Deaf practitioner undertook reviews together to identify key processes in language assessment and therapy that were perceived as important by the Deaf practitioner. The SLT researcher was able to raise topics covered in the training sessions, which the Deaf practitioner reflected upon, giving feedback as to whether they felt this was relevant for their practice. This enabled adaptation of the structure and content of the sessions, including strategies the Deaf practitioner could use in future sessions.

Six recorded language therapy sessions were completed and reviewed for each dyad. Challenges for completing therapy sessions included the clinical presentation and needs of the young person, shift patterns for Deaf practitioners and availability of rooms. These challenges sometimes meant the schedule for completing sessions had to be adapted.

Review

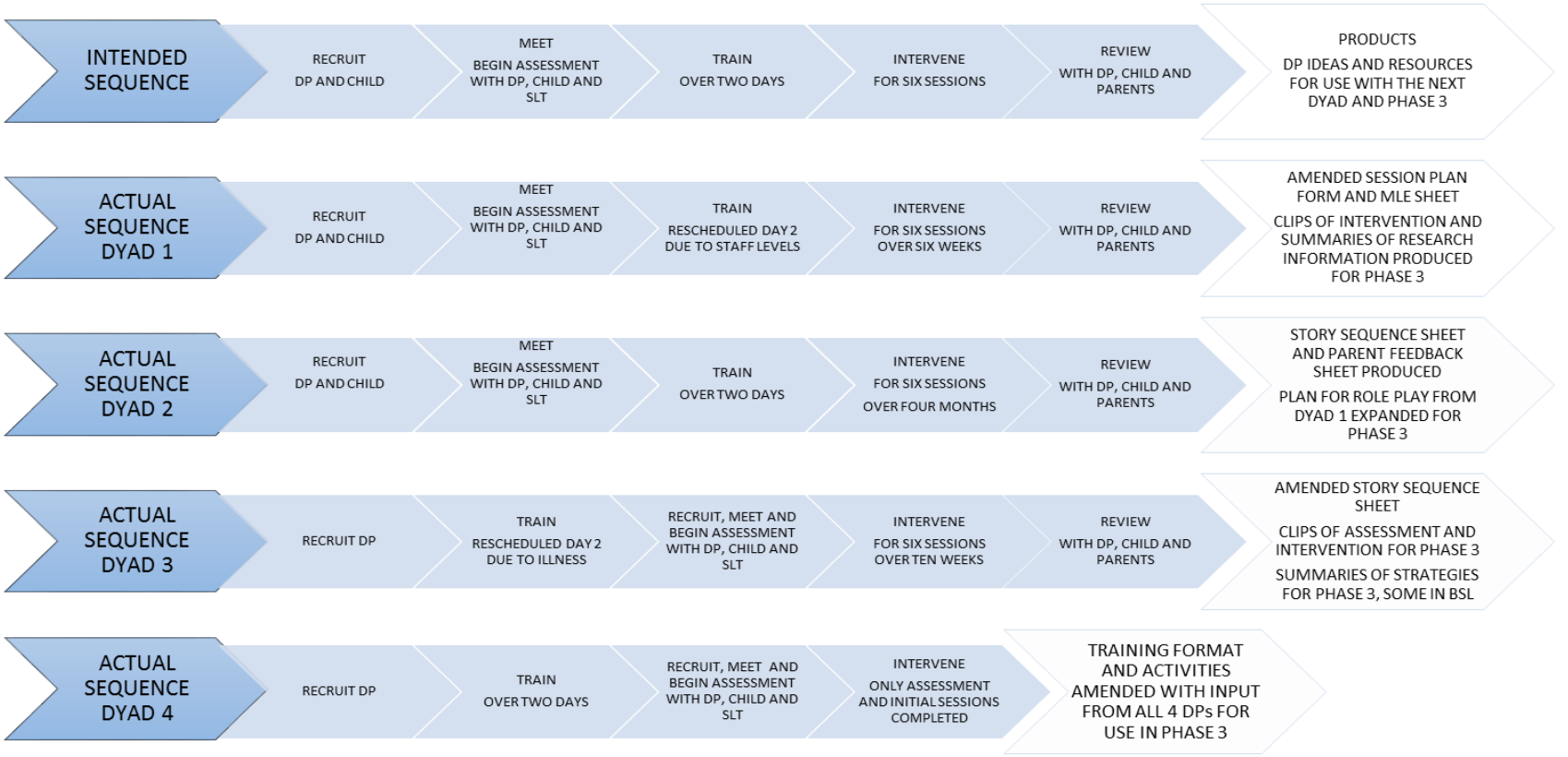
A final review meeting was offered to the young person and their carer to provide intervention feedback and gather post-involvement feedback. Parents of each of the children involved in the dyads participated in these meetings, as did both children.

After the review meeting, the Deaf practitioner reflected on their early videos and completed the 'Language Therapy Knowledge' and 'Expectations for Learning' questionnaire review. They also, with the SLT researcher, compared the first and final language therapy session videos and identified aspects of their work that could be used in Phase 3 or developed further to be used in training or intervention work. Adaptations and changes suggested by Deaf practitioners in one dyad were used and reviewed in subsequent dyads. Following the final review of dyad 1, the Deaf practitioner suggested a meeting with the Deaf practitioner from dyad 2. The Deaf practitioner in dyad 1 was able to meet with the SLT researcher and Deaf practitioner from dyad 2, before the intervention sessions for dyad 2 started. In this meeting, the Deaf practitioner, who had suggested changes to the session planning document and trialled this in dyad 1, was able to discuss and explain this to another Deaf practitioner. This meeting not only helped the Deaf practitioners understand the process more clearly but also enabled the researcher to participate in a discussion which would feed into the Phase 3 training course preparation.

The flow chart below (Figure 4-1) provides a summary of how the intended sequence of the five-part procedure compared with the actual procedure for each dyad. Within the flow chart, it can be seen that each dyad contributed to the development and use of specific resources or 'products'. In dyad 1 the session planning document, clips for use in Phase 3 training and written English research summaries were the key items developed with the support of the Deaf practitioner. In dyad 2, the development of story planning and parent feedback sheets was started following session discussion and feedback with the Deaf practitioner. Clips for use in Phase 3 training were identified from this dyad and the Deaf practitioner supported the researcher's interest and understanding of the use of role play by this group of practitioners. This led to a more detailed exploration of this topic in Phase 3 and in consideration for further work in Chapter 6. In dyad 3 the story sequence sheet and activities to use it were developed further, with clips of this process being collected for use in Phase 3 training. The Deaf practitioner in dyad 3 also suggested and made some BSL clips of strategies she found useful so that they could be used in future training sessions. Although the Deaf practitioner in dyad 4 did not complete the intervention process she, along with the other three Deaf practitioners, was able

to identify aspects of the initial training that were more or less useful and how these could be improved. More detail about the adaptations for each dyad are given within the results section.

Figure 4-1 Flow chart for Phase 2 showing intended and actual sequence



4.3.4 Analysis model

Where Likert scales were used, simple descriptive statistics are reported. For data from reflective logs, discussions and sessions, data examples are given and summarised into themes to provide key points that the Deaf practitioners and SLT researcher found interesting or useful in this process. This process was completed by the SLT researcher with feedback discussions with supervisors and Deaf practitioners to check interpretation of data. The benefits and limitations of this data analysis model are discussed further in the final discussion in chapter 6.

4.4 Results

The results are reported in three parts: training sessions, language therapy sessions (with a case study for each dyad), and feedback from children and parents.

4.4.1 Training sessions

Class based training sessions were planned to run for two consecutive Fridays. All four Deaf practitioners were able to attend the first day. However, due to staff shortages and ill health, only two were able to attend the second day of training. This second day was therefore repeated one week later. This reduced the amount of interaction and discussion possible on the second day of training for all four participants.

Whilst most aspects of the training were found to be useful, adaptations of other aspects were suggested by the Deaf practitioners. These adaptations fed into the training sessions planned for Phase 3. Examples of Deaf practitioner feedback is given below, and the key findings from the training are then summarised in two sections; teaching methods and content.

Feedback on the training sessions from Deaf practitioners

Feedback was gathered through the evaluation questionnaires and comments recorded during the course. Two practitioners were confident to give feedback in written English; two preferred to give feedback in BSL either directly to the SLT researcher or for translation by a BSL/English interpreter. Some of these decisions were based on the availability of interpreters or the SLT researcher at the moment that the practitioner wanted to give feedback. Variation in the language used for feedback potentially had an impact on the feedback given.

PREFERRED ACTIVITIES

Participants reported that they preferred more activity based parts of the class-based sessions. They liked the practical aspects of the course such as watching

and discussing videos with colleagues ‘I like the video clips when you ask Deaf people what they think, get their ideas, theories and perspective. That engages people and will make the project successful and useful for the future’. They reported that they felt they benefitted from the opportunity to learn from each other during these activities – ‘It’s interesting to find out about language disorder background, variation in language, and language development from the group’. The use of video and discussion had other benefits too.

Initially, video example case discussions were focused on the language background of the child even when the child’s language background had been described e.g. whether the child spent time with adults fluent in BSL. These discussions appeared to be linked to cultural issues relating to language access for d/Deaf children. These were previously described in one of the themes that emerged in Phase 1 (see Inductive Analysis. Theme 2 - Deaf cultural perspective on d/Deaf children’s language learning in Sections 3.4.1 and 3.4.2). As all video examples of typically developing children were from families where BSL was used by a number of adults, these discussions reduced as the session continued. Practitioners were encouraged, and became more able, to focus on the language of the child in the context they saw. Some of the video examples showed children who were not deaf but were learning BSL because of their family context. This reinforced for the participants that the focus was on language rather than audiology or culture.

As the sessions progressed, working from video examples helped practitioners to focus wholly on the language the child used. They liked having specific children to discuss: ‘Video examples were useful as we were all discussing the same child. We didn’t know their background so we needed to look at what was in the clip’. This focus on a single video example with a single child helped to overcome some of the issues raised in Phase 1 regarding access to language models. It helped Deaf practitioners focus on aspects of language, even where their knowledge or vocabulary was limited, and supported their understanding of that child’s language skill in that moment. This learning process fits well with an experiential model for adult learning (Kolb & Lewis, 1986; Zigmont et al., 2011). It was particularly useful to have a range of video examples to explore discussion points that related to Deaf practitioners’ own experiences. This was seen as important for other reasons by the Deaf practitioners: ‘I thought it was really important to have the project because it’s really important for the hearing professional to know how to do BSL therapy; maybe they have no experience so need Deaf people involved who have grown up with BSL as a first language to help engage and to understand how to modify language,

how to help the child understand, how to synchronise with the child's need'. These points highlight the importance of SLTs and Deaf practitioners working and learning together to understand each other's perspectives and skills.

Language Therapy knowledge

As seen in Phase 1, Deaf practitioners had limited knowledge of the topic and limited vocabulary to describe what they did know. When asked, as a warm up activity, to list things they already knew about language difficulties, the list was short. It comprised 'Speech, sign, articulation, phonology, tone, Paget-Gorman, Makaton'[3]. While the context may have reduced practitioners' willingness to contribute at this point, the recurring difficulty of their not having metalinguistic terminology (limited language to discuss language) is again in evidence. As the training progressed, the Deaf practitioners suggested developing a glossary of terms related to language therapy. They felt this needed to be a shared activity between themselves, as BSL users, and the SLT researcher who knew more of the terminology.

Discussion of language therapy and the availability of language to discuss the topic was explored further within the sessions. Individual Deaf practitioners used different signs for some concepts. The physical production of these signs was discussed in relation to what the sign meant. Signs that were produced in slightly different ways by different practitioners were sometimes thought to differ slightly in meaning. One example of this was the sign CONCRETE which was related in meaning for some practitioners to 'basic' and for others to 'fixed'. English language examples of other concepts discussed included: *abstract, form, meaning, content, use, pragmatics, translate,* and *interpret*.

Understanding the research project

In addition to vocabulary challenges related to the topic 'Language therapy in BSL', some Deaf practitioners had not previously been involved in research projects. Understanding the project and the research context was an important aspect highlighted by the Research and Ethics Committee. They had advised that all practitioners should see the full three phase project plan as well as individual information and consent forms for the phase(s) in which they were participating. Whilst practitioners had read the project information sheet, seen an interpretation into BSL and discussed the information sheet, their understanding of the structure

[3] Paget-Gorman and Makaton are augmentative sign systems designed to support the development of spoken language and communication for children with speech, language and communication needs.

and process of the project was helped by the presentation about the project plan. Discussions about ethics, consent, data collection and reporting helped them understand the expectations of their role more explicitly. For example, during a discussion on assessment, one practitioner suggested secret filming. It was possible to refer back to the discussion on ethics and consent, then agree that secret filming would not be appropriate.

The classroom based days offered an opportunity to provide background and underpinning information for the project. When asked for ideas for changes, one practitioner responded ‘None, but next time I’ll get the information more’. This comment highlighted the progressive and iterative nature of the work for some. It reinforced the need to think about how practitioners expect to understand the information presented. This quote suggests that the two class based days were seen by this Deaf practitioner as providing context, whereas the on-going work would provide understanding. Other practitioners had a different perspective, possibly related to their individual educational backgrounds. One asked ‘Would I perform better if I was better prepared by reading research papers?’ This variety of responses within such a small group highlights the diverse backgrounds, experience and expectations of different Deaf practitioners and has implications for the design of training in the future.

Summary of key findings

Content

It was useful to have a variety of child language examples within the video clips. These clips helped Deaf practitioners relate the theoretical information presented to their own experiences of communicating with children. The theoretical information was of interest to the Deaf practitioners but they felt it would have been helpful to have more documentation for future reference. However, the terminology used and the presentation of written content needs to be carefully considered to ensure accessibility. Specifically, Deaf practitioners requested information on terminology relating to language therapy and BSL development identifying the need for a brief summary of language therapy terms, a BSL development summary, adaptation of the language in the MLE forms (Asad et al., 2013; Mann et al., 2014) and a checklist for evaluation of sessions, including terminology for intervention techniques.

Including content on the research process and ethics was useful as it supported discussion of the ethics of language therapy, assessment and intervention.

Teaching methods

The presentation and discussion of video clips worked well for the Deaf practitioners. They liked learning from each other as well as with the SLT researcher. However, teaching methods need to take account of different prior learning to ensure different practitioners have opportunities to discuss and reflect on their current knowledge and learning needs. Another aspect of the teaching and learning process that needs further consideration is whether direct communication or working with interpreters is most beneficial at different points in the training and for different practitioners.

4.4.2 Language therapy sessions

Whilst an outline procedure for language therapy intervention sessions was established before Phase 2 started, this needed adaptations to fit with work practice and child availability. Each dyad's results are presented as individual case studies and considered in relation to the project's research questions. The case study for each dyad is reported in five parts: dyad description, data to answer each of the three research questions, and summary.

Case study Dyad 1

Dyad description

Deaf practitioner A was multilingual in a number of signed and spoken languages; she reported fluent use of at least three signed and four spoken languages. At the time of her participation in the project she was completing a Master's degree related to psychological aspects of her clinical work. Her English literacy skills enabled her to complete tasks associated with her degree independently. She had more than ten years' experience of working with children - hearing and deaf - in a range of social, health and educational settings.

Language therapy intervention was agreed by the clinical team because the child in dyad 1 presented with emotional and behavioural regulation issues. She had difficulties engaging in therapy to explore thoughts, feelings and behaviour, in part because of limited language skills. Developing her expressive and receptive language skills was identified as a goal in her care plan in order to facilitate her engagement with the therapeutic milieu and other individualised therapies. For Dyad 1, the intervention focused on vocabulary development. Vocabulary was selected that related to her emotional and behavioural difficulties. Her assessment and intervention sessions for this dyad were completed over a two month period.

An assessment summary was completed by the Deaf practitioner prior to the start of the intervention sessions. This included any information gathered through formal and informal assessment that the Deaf practitioner thought relevant. Whilst the BSL receptive skills test and BSL vocabulary assessment had been undertaken, both gave qualitative data more related to the child's ability to engage with a task rather than the language skills the tests were designed to assess. She was unable to respond within the standardised format of either assessment. Informal language activities based on a semantic fluency task, picture description and everyday interaction were completed. These indicated that the child's vocabulary in sign was limited and that she found it difficult to retrieve signs or words. Her sign production was variable, with frequent changes in dominant hand and variability in sign location. The Deaf practitioner identified that one-to-one sessions might be helpful and that 'discussing or agreeing on signs' would be a target of intervention. In liaison with the SLT, this target was refined to improving the child's awareness of sign location and handshape, focusing on signs for parts of the body and behaviour management (self and other). Sets of vocabulary were then identified for these areas – body parts, self-management signs, and emotions.

Research question 1 - How do Deaf practitioners currently work with Deaf young people who have language difficulties?

At the start of the intervention sessions, the Deaf practitioner used several intervention techniques, but her initial focus was more on the skills of the child and less on her own skills. Whilst she explicitly mentioned some intervention technique skills, there was no reference to 'personal maintenance' and 'feedback'.

The Deaf practitioner showed some use of aspects of the therapy cycle, mentioning assessment and intervention. However there was little detail in her description of either and her reflections showed her awareness of this lack of knowledge. When asked 'How do you make a session run well?' her response before the first session was 'interactive play and interesting stories', but after the first session she commented: 'I still struggled to probe further how I would carry (out) these tasks'.

From previous BSL training, Deaf practitioner A knew about some aspects of BSL linguistics but not the developmental progression or linguistic relevance of these. She described the child as having difficulties with 'placement' and 'location' of signs, not using the terms or her observations to differentiate the phonological aspects of sign location from the grammatical aspects of sign placement. The child had difficulty with both. Location difficulties caused issues with her productive language

skills and, therefore, how she was understood by others. The child's placement difficulties impacted on both her receptive and productive skills.

Whilst Deaf practitioner A showed an awareness that the child had language needs and linked these to identified needs within the care plan: 'needs team vocabulary for behaviour management e.g. relax, safe, patient, calm down', setting goals and planning activities was more difficult. When asked 'How will you help them change their language?' her response before the first session was 'Discussion and agreeing on signs, one-to-one sessions'. Following discussion with the SLT, the practitioner was able to describe the child's language needs in more detail. The Deaf practitioner's reflection after Session 6 was: 'During the sessions which were videoed and reviewed, I realised how little I knew about BSL language difficulties and disorder'.

Information from Deaf practitioner A indicates that she had some knowledge and skills in working with d/Deaf children who have language difficulties. However the training and intervention sessions increased her awareness of skills she needed to consider and develop.

Research question 2 - Can language therapy strategies and resources developed for spoken language be adapted or developed, with Deaf practitioners, to provide language therapy in BSL?

Adaptation of session planning and monitoring tools

Language Therapy strategies and resources were adapted through shared discussion between the SLT researcher and Deaf practitioner A before and after most sessions. At times, this was challenging because of time limitations discussed in more detail in the summary for this dyad. When discussions took place, they facilitated a better shared understanding of the language therapy process. During these discussions it was agreed to revise the session planning sheet to separate the planning and reflection tasks and to provide more space for notes on video reviews. This revised document was then used for this and the two subsequent dyads. Focusing on a longer term aim, and breaking it down into session objectives, helped to identify needs and goal setting for each session. These could then be discussed in terms of skills and behaviours Deaf practitioner A needed to use herself and those which were wanted from the child. For Dyad 1, activity planning and evaluation were primarily undertaken by the Deaf practitioner. Deaf practitioner A

reported she would have liked more support with activity planning and use from the SLT.

MLE record sheets that recorded the child's engagement in the language therapy process were used for this dyad. The sheets used initially (Asad et al., 2013), whilst useful, were written in a style of English that Deaf practitioner A felt was not very helpful for her. A different form (Mann et al., 2014) was adapted and the Deaf practitioner reported this was easier to use. The process of considering mediated learning was reported to be useful by Deaf practitioner A.

ADAPTATION OF PICTURE RESOURCES

Picture resources were used in several sessions. Some pictures included written words, which confused the activity for the child who focused on trying to read the words rather than concentrate on the vocabulary in BSL, as her decoding skills for written English did not always reflect her vocabulary knowledge. The complexity and overshadowing effect of literacy skills and language blending and mixing was discussed between the Deaf practitioner and SLT researcher and it was agreed to remove written English from tasks for this child.

Research question 3 - Can implementation of therapy strategies and resources bring observable change to Deaf practitioners' therapeutic skills or their understanding of d/Deaf children's language skills?

The 'Checklist for evaluation of therapy sessions' was used to rate use of therapy intervention techniques in Session 1 and Session 6. From review of these session videos it was not possible to observe a clear change in Deaf practitioner A's skills in working with the child as the practitioner used a range of strategies to engage and support the child in both sessions (See appendix 7 for detail of the observed changes in the Deaf practitioner's therapeutic skills). The specific skills used differed slightly between the first and last session but this appeared to be in response to the child's needs and the activities being undertaken, rather than changes in her skill set. Variation in sessions, for this dyad, was dependent on the child's presentation. Whilst observation of sessions did not provide much evidence to answer Question 3, the Deaf practitioner's feedback provides more.

From planning to evaluation of the first session, there was a shift in focus by the Deaf practitioner from the child's language and engagement skills to her own skills in planning and running a session. The use of video review and discussion supported the process of self-reflection and the Deaf practitioner was able to suggest changes to support future dyads, including adapting the reflection sheet

and using more role play for the SLT and practitioner in order to practise skills in running a session. These suggestions are discussed further in the dyad summary. At the end of her participation, the Deaf practitioner reported that she had developed new skills in setting and running tasks. She reported that she felt more able to support the child to develop the content of their language through engaging in tasks that enabled, in her words:

- Steady growth of vocabulary and its use
- Concrete examples of use, related to life experience of the child
- Understanding of signs and putting them together
- Ability to discuss parts of signs (handshape, location, non-manual features)

The practitioner also reported that she felt she had supported the child's language use by practising turn taking and other communication skills, such as clarification and repetition.

Another example showed her knowledge and understanding of the importance and diversity of her own skills. When asked: 'Which of your skills do you think about when working on a child's language skills?' before the sessions she replied: 'some knowledge of intervention, BSL' and after the sessions she responded: 'observation of child's language ability (assess), then set goals and tasks for possible interventions'. These responses show an increased awareness of the process of intervention with a focus on assessing and developing the child's skills.

Deaf practitioner A's feedback showed changes in her thoughts about the intervention process. One example of this is her changed response to the question: 'How do you make a session run well?' Before the sessions, her response was: 'interactive play and interesting stories'; after the sessions it was: '(making it) interesting, introduce the agenda, prepare well, the child's willingness to engage and learn'. She reported she was more able to identify adaptations needed in activities, allowing flexibility of tasks depending on the young person's improvement and engagement.

Asked at the start of her involvement in the project to rate her confidence in the component elements of intervention, Deaf practitioner A reported her knowledge of language assessment, ability to set goals, skills in planning activities, and evaluation skills as all being at 3 on a 5 point scale, and rated her confidence in working with a child in a session at 4.. She reported a 1 point increase in confidence in

assessment, goal setting, working with a child, and evaluation, with no change in her self rating for planning activities.

Summary for Dyad 1 – with adaptations for Phase 2 and progress to Phase 3

Deaf practitioner A reported that she has worked with d/Deaf children with language learning difficulties in BSL in several settings. Prior to her participation in this project she was aware of strategies that helped her engage with these children, but was less aware of how to identify their individual difficulties and needs. She reported that involvement in the project had helped her develop skills in planning, running, and evaluating sessions, including identifying adaptations needed.

As mentioned above, issues with time allocation and teaching and learning strategies were identified during reflections and review sessions. From the Deaf practitioner's perspective, these were described as:

'Limited time [in the] sessions – [It was] difficulty to achieve goals in a short time, [because of the difficulties with] attention/focus from [the] young person, [I needed] plan B if plan A does not go well. Proper understanding of [ways of] achieving the goals – [I]need more time to think, practise sessions with supervisor, making clear [what resources I needed and how I could] input for the sessions'
'Teaching and learning – [Making sure I had done my] own research for BSL sessions – [that I was] up to date, [that I had a] better understanding for myself, confidence of the topic, confidence to guide young person through the sessions, where to look for resources, ideas and examples, [I would] suggest more role play [for the practitioner prior to the session]'.

The SLT researcher's log recognises the same issues:

1. Time allocation for discussion – SLT had underestimated need for support, supervision, and resource development, dedicated time to focus, think and learn together.
2. Teaching and learning strategies – more practical examples needed, more simulated learning opportunities or 'role play', cannot rely on Deaf practitioner to generate own ideas and learning within this context.

In order to address these issues, the practitioners in the subsequent dyads were given more explicit, practical support with activity development and adaptation. The amended session planning sheet was used, with more emphasis on joint recording

and reflection between the Deaf practitioner and SLT researcher, and was also used in Phase 3.

Case study Dyad 2

Dyad description

Deaf practitioner B was multilingual in signed languages. His education was predominantly 'on the job learning' relating to his clinical work, with additional training in BSL (level 6). His English literacy skills enabled him to complete everyday tasks related to his job. When providing feedback, he preferred to communicate directly with the SLT researcher in BSL or work with a BSL/English interpreter who translated his feedback into written English. He had seven years' experience of working with d/Deaf children in social and health settings.

The child in Dyad 2 was the same child as in Dyad 1. Her participation in this dyad started three weeks after ending her intervention for Dyad 1. The sessions for this dyad were completed over a four month period. For Dyad 2, intervention focused on the development of receptive and expressive skills for narrative (content and structure). Narrative skills were selected as these skills would help her access other therapeutic support for her emotional and behavioural difficulties.

An assessment summary was completed prior to intervention sessions for Dyad 2. The BSL Production Test and informal story telling activities were also completed prior to the commencement of intervention sessions for this dyad. The informal activities included story retelling, picture description, and picture sequences. Deaf practitioner B was able to identify from his observations and the information available that the child's stories were not clear and that she did not always understand, but he was unsure which areas he would focus on and asked for support from the SLT in thinking about targets. It was agreed to focus on developing the child's skills in story structure and content, combining activities that supported receptive and expressive skills.

Research question 1 - How do Deaf practitioners currently work with Deaf young people who have language difficulties?

Deaf practitioner B had previously trained and worked as a BSL tutor in adult education classes for people learning BSL as an additional language. In the first session filmed he used techniques and strategies he had used in the context of teaching BSL to adult learners, 'You need to sign more fluently, don't keep stopping and starting'. His previous training had focused on three areas: the acquisition of

sign skills by adult learners, the linguistic structure and vocabulary in the trainee teacher's BSL , and the adult learners' desire and responsibility to learn, and did not include training on pragmatic skills of the teacher in enabling this learning process or on children's language needs. Reflection after the first session indicated that the Deaf practitioner was aware that a different approach was needed in the present context: 'I need to understand my own language production and modulate it better to match (child's name)'

In the same session, when the child told a story from a picture sequence, the Deaf practitioner reported that the child 'needed to attend to detail to understand the story'. She had misunderstood elements of the picture (confusing a lipstick for a bar of chocolate), however the Deaf practitioner had not checked or clarified this with her. The SLT reflected on whether failure to check that the child understood the picture related to the Deaf practitioner's limited skills in facilitation and feedback, the new language therapy session setting, or the influence of being videoed on his behaviour. The Deaf practitioner focused on feedback on the child's lack of fluency. In their discussion, Deaf practitioner B and the SLT together agreed that providing more language models, including clarification of any misunderstandings, would support the child's language learning in the next session.

The second session included materials which were more familiar to the child, Deaf practitioner B provided a language model before asking her to produce a story. The Deaf practitioner's continued focus on fluency in language led him to suggest that she had improved so much she no longer needed further sessions. In the session discussion, the Deaf practitioner and SLT reflected further on this, thinking about the difference in the activities in each of these sessions and how this may have impacted on her language use. It was agreed that these facilitative strategies had led to the changes observed and there had not yet been significant change in her language skills. This was supported by observation outside the sessions.

<u>Research question 2 - Can language therapy strategies and resources developed for spoken language be adapted or developed, with Deaf practitioners, to provide language therapy in BSL?</u>

Clarification and adaptation of therapy planning

As mentioned above, the Deaf practitioner was very impressed by the change in the child's use of skills between Session 1 and Session 2, reporting 'her recall of story was almost perfect and she was able to include minor details. Her BSL structure was also much improved, with good use of placement. She doesn't need any more

sessions'. In the review of this second session, four aspects were discussed. Firstly, her prior knowledge and enjoyment of the resources enabled her to engage more with the session. A Mr Bean DVD was used instead of picture sequences as this was of more interest to her. Secondly, the aim of using her knowledge and enjoyment of a resource to facilitate her use of language was considered. Thirdly, her use of language was reviewed and it was agreed that her retell of the story was very gesturally based, showing few of the more complex aspects of BSL e.g. vocabulary, morphology, role shift. Finally the need to support her to provide a story with structure was discussed. This structure needed to indicate how and why things happened and how they related in time or consequence. In this second session her story represented a memory test. She narrated lots of detail with a reasonably structured narrative but with little internal cohesion.

ADAPTING A STORY PLANNING RESOURCE

A story planner sheet was introduced to support the summary of story content into a structure which emphasised main events rather than a string of equally weighted details. Whilst there were challenges in the adaptation, understanding and use of this sheet, it supported Deaf practitioner B in modelling the skills required. Challenges in adaptation and use of the sheet related firstly to the use of written English on the sheet, which shifted the practitioner's focus from BSL examples to English ones. Secondly the challenge in understanding how the sheet could be used related to teaching and learning style. Where the SLT researcher thought its use had been explained, a demonstration would have been more helpful. More role play or 'simulated learning opportunities' with Deaf practitioner B and the SLT in the use of this resource would have been indicated but time frames did not allow for this. This lack of appropriate learning opportunity (role play) meant Deaf practitioner B was unclear whether use of the story planner sheet was to support the understanding and delivery of an activity by the Deaf practitioner (a tool) or whether the child was to engage with it and use it to aid her language use (a resource). Opportunity to discuss these challenges helped explore the issues further. Using more visual plans and diagrams helped support the discussion and planning process, where written English notes were not helpful. Clearer differentiation in discussion was needed between a tool that helps a Deaf practitioner understand the task and the child's response, as opposed to a resource that is used with and explained to the deaf child. Both the Deaf practitioner and SLT researcher learnt from this process, providing information for development of training for Phase 3.

SHARED LEARNING AND COACHING OPPORTUNITIES

When working with such a skilled and experienced Deaf practitioner, the SLT reflected on how to discuss his use of strategies and resources both in terms of maximising his engagement and learning and minimising the impact of their different language backgrounds. This was undertaken through the clarification and exploration of activity objectives. The SLT's concerns related to appearing patronising, undermining the good engagement skills the Deaf practitioner was able to use, and to ensuring his understanding of the multi-levelled continuum from visual information input to language output for the child. In order to support Deaf practitioner B, the structure of each activity and the session objectives were linked to the intervention techniques discussed in the training course. This started with Deaf practitioner B and the child watching a familiar or unfamiliar DVD and sharing this experience (engagement). It then progressed to focus on the child developing receptive skills by watching the Deaf practitioner produce a story presented at her language level (modification). The practitioner had to ensure he was not displaying all his language skills as this was not her language level. Activities progressed to her producing a story after his model, which he was able to recast (facilitation). The links between activities, objectives and strategy use were further explored with other resources such as picture sequences.

When an SLT uses a picture sequence resource, a range of strategies can be employed depending on the objective of the session. Whilst the Deaf practitioner was aware of many strategies, he was less aware of which strategies to consider in relation to the objective and skill being targeted. Session reviews were useful to discuss how to use a resource and why. One example of this was when he asked the child to turn over the picture cards in order to remember and retell a story. When considering why he was doing this, Deaf practitioner B reflected that he wanted to make it interesting. On reviewing the session, it appeared to make the task too difficult. Whilst the Deaf practitioner was able to use the adapted resources in BSL, he needed on-going guidance in planning and strategy use.

<u>Research question 3 - Can implementation of therapy strategies and resources bring observable change to Deaf practitioners' therapeutic skills or their understanding of d/Deaf children's language skills?</u>

Review of the first and last sessions showed a clear change in the Deaf practitioner's therapeutic skills. From initially presenting as a person who was qualified to teach BSL to adults and adapting his skills to become a therapist, he showed a marked change in the use of his own language skills, which he

commented on in self-reflection: ‘I sign first, her second; she’s confident;, I summarised well’. The Deaf practitioner reported that he had developed skills in enabling the child to use her language skills, reporting ‘I waited well’ when reviewing session videos. Whilst his facilitation skills developed in sessions, the Deaf practitioner also reported transfer of skills learnt. The most useful strategy he reported learning was waiting 10 secs (Coleyshaw, Whitmarsh, & Hadfield, 2009) reporting he had been advised to: ‘Either give her time to process, or encourage and ask “what do you think”? I’ve used it in other sessions. Let her think about it and it’s worked well, really useful and very important.’ See appendix 7 for detail of the observed changes in the Deaf practitioner’s therapeutic skills.

These observations from review sessions changed Deaf practitioner B’s practice and he reflected on these changes when watching himself. The SLT noted that in session discussions the Deaf practitioner was able to identify what had not gone well but needed support to think about what to change and how. The Deaf practitioner acknowledged this in the final feedback: ‘Quite often we had some good conversations and spotted things, so we know why it’s successful or not, so we can tailor our communication to meet the young person’s needs’. However Deaf practitioner B did not feel confident enough to use the tools for planning and developing his own sessions by the end of the intervention, preferring to continue having planning and review sessions with the SLT for each session.

Deaf practitioner B identified other changes that related to his awareness of the therapy cycle as well as his skills: ‘This gave me different ways to engage with a child so that I could focus on achieving our aim and being successful’ and ‘I could be more concrete with my aims for the work I do’. In acknowledging the changes, he recognised the importance of co-working:

> ‘It’s also about me bringing something and improving my communication and developing this warmth between (me and the child) which is really important; and if I’m not sure, I can inform the SLT and you can help by giving me extra information which I can take on board and then use different ways of working with the patient’.

Liaison time was really important, with the SLT noting the change in the dynamic of their relationship, with more shared responsibility and respect for co-working.

Changes in Deaf practitioner B’s understanding of the child’s language skills were shown in his responses to the language therapy knowledge questionnaire. Before involvement in the project, when asked to describe areas of language, language

therapy processes or language difficulties, the Deaf practitioner either gave no response or indicated he would ask another member of the team. After the sessions, he was able to describe areas of language which might be worked on: ‘Receptive skills, productive skills, handshapes, [and] facial expression; maybe they don’t have any facial expression so might need to be worked on’. He was able to reflect on parts of the language therapy intervention cycle: ‘If I’m going to work with a child, before working with them I need information about their background, their receptive skills and think about how I might need to modify my language to match theirs’. He was also able to give some details about the sort of language difficulties a child might experience and what to do next:

> ‘Over a period of one or two weeks when you’re repeating something, you can check if they are remembering something or not; and if they are, you can add some more in which means you’re supporting their language development. If I realise it’s not working and they don’t seem to understand I’ll inform the language therapist and we can do more language assessment’.

The Deaf practitioner B reported an increase in confidence in all areas following his involvement in the project. Before the project, he rated his confidence as 4 out of 5 in language assessment and working with a child in a session, and his confidence in setting goals, planning activities and evaluation as 3/5. Following his participation in the project, Deaf practitioner B rated his confidence in setting goals at 4, and in all other areas he rated his confidence at 5. This high level of confidence in his own skills may link to Deaf practitioner B’s over-confidence in the child’s skills following their first session. An ability to evaluate our own and other people’s skills are key to effective therapeutic intervention. Data from confidence rating in Phase 3 provide further information on this topic.

<u>Summary for Dyad 2 – with adaptations for Phase 2 and progress to Phase 3</u>

The Deaf practitioner brought skills from previous training and experience, which he and the SLT were able to acknowledge and reflect upon in relation to their usefulness for this child. The Deaf practitioner learnt new skills and used these, reporting that he was able to transfer these skills to other sessions.

A very structured approach to reviewing, giving feedback and developing new skills was needed from the SLT researcher to ensure the Deaf practitioner understood the strategy, tool or resource that was being used. The style of supervision or coaching needed to be adapted to provide more opportunities for learning through

experience; video example review and role play/simulated learning were key for this dyad.

Review sessions and adapting of resources were both challenging, taking place in two languages with reduced access to English literacy skills. The Deaf practitioner reported the session planning document and reflective sessions were useful: ‘The paper helps me as it’s got those bullet points on there already’ and that he ‘then discussed them with (the SLT) and (the SLT) ask me about things in the session we look at the film’. He and the SLT acknowledged on-going language challenges. From the Deaf practitioner’s perspective, some of the English based tasks required support: ‘Often I’ve worked with an interpreter to write up the forms’. From the SLT researcher’s perspective having a shared vocabulary, theoretical background and vision of a child’s needs could be challenging. However the process of working through these areas of challenge enabled better shared working and promoted collaboration. Working with Dyad 2 provided the opportunity to develop a clearer way to explain the differences between strategies, tools and resources. This proved useful for Dyad 3 and for Phase 3.

Case study Dyad 3

Dyad description

Deaf practitioner C was a BSL user with some skills in other signed languages. Her education included ‘on the job learning’ relating to her clinical work, with on-going training in Health and Social Care (NVQ level 3). She had attended but not completed the BSL Production Test training. Her English literacy skills enabled her to complete everyday tasks related to her job. When providing feedback about sessions, she preferred to communicate directly with the SLT researcher in BSL. When completing feedback forms, she preferred to work with a BSL/English interpreter who translated her feedback into written English. She had over ten years’ experience of working with d/Deaf children in this mental health setting.

Language therapy intervention was agreed because the child in dyad 3 presented with emotional and behavioural regulation issues. He had difficulties engaging in therapy to explore thoughts, feelings and behaviour, in part because of limited language and executive function skills. Developing his expressive and receptive language skills was identified as a goal in his care plan with the aim of facilitating development of executive function skills and engagement in the therapeutic programme. For Dyad 3, intervention focused on narrative skills, both receptive and

expressive, as he had limited skills in narrative sequencing, content and structure. His assessment and intervention sessions were completed over a 10 week period.

Deaf practitioner C completed an assessment summary prior to the intervention sessions. The BSL Production Test was completed along with informal story telling activities. The Deaf practitioner identified the goal for the child as: 'Telling simple and short stories with visual pictures or film'. She was less confident in planning activities to achieve this goal and worked with the SLT to identify session objectives which included learning of vocabulary for the stories, sequencing events in stories that the child had watched on film and had also seen told in BSL, and, finally, telling his own stories.

Research question 1 - How do Deaf practitioners currently work with Deaf young people who have language difficulties?

At the start of the intervention sessions, the Deaf practitioner stated that she helped children by: 'adapting and changing [her] language skills to meet a child's needs' but was unsure that she could describe what the child needed, reporting she: 'would get help from SLT or group discussion'. The Deaf practitioner identified that the child had a limited vocabulary during the first session. In the review of the session, she suggested working on simple vocabulary for colour. Through discussion it was agreed to focus on vocabulary related to the stories the child was going to tell and that this vocabulary should be relevant to his life. Whilst aware of a child's needs and, in some situations able to identify what they were, Deaf practitioner C initially found it difficult to identify suitable strategies and resources to use to address those needs.

From the first assessment sessions, the Deaf practitioner engaged well with the child, demonstrating skills in engaging and adapting her linguistic and non-linguistic behaviours to meet his needs. These therapeutic intervention skills enabled her to ensure his engagement in activities.

Research question 2 - Can language therapy strategies and resources developed for spoken language be adapted or developed, with Deaf practitioners, to provide language therapy in BSL?

As the sessions progressed, the review sessions helped Deaf practitioner C to identify language objectives and communicate these to the child. She felt able to: 'maintain the positives and explain what positive outcome (he) can expect from the session'. She recognised the positive impact this had on the child: 'If he feels good

at the end of the session, he grows in confidence'. Communication of her objectives was supported by the use of a session plan. The clear structure the practitioner used to explain and deliver the session helped the child, in her view, to: 'watch and attend' and 'want more' as he was successful.

The structured planning of sessions enabled focus on strategies to facilitate the child's language use. Deaf practitioner C reported the child 'tricking' her, by looking at cards and giving false information, which was observed from the session recording in a session review. This enabled discussion of why he would do this and what language facilitation opportunities it presented. It was agreed that the child looked at the cards because he found the task difficult, did not want to fail and found it difficult to ask for help. This led to the inclusion of an additional strategy in the next session to be implemented by the Deaf practitioner: modelling, as the Deaf practitioner described it, of 'asking for help' and for clarification.

Over the first three sessions the Deaf practitioner was able to shift her focus to receptive skills from her previous focus on the child's expressive skills. She described a strategy to use in a session plan as: 'Focus on receptive skills, no force. When he is ready, he will begin to sign'. This strategy did facilitate the child's language use.

Research question 3 - Can implementation of therapy strategies and resources bring observable change to Deaf practitioners' therapeutic skills or their understanding of d/Deaf children's language skills?

Review of the sessions for Dyad 3 showed a change over time in the Deaf practitioner's therapeutic skills. The Checklist for evaluation of therapy sessions was used to rate the use of intervention techniques in Sessions 1 and 6 (See appendix 7 for detail of the observed changes in the Deaf practitioner's therapeutic skills). When examining these sessions, it could be seen that the practitioner used a range of strategies to modify her own language and manage herself. Additionally, in Session 6, she used more strategies to manage the room and equipment, and facilitate the child's language use.

The activities she presented differed substantially over the sessions, in response to the improvement in the child's language skills and the extended activities needed to support his language objectives. The change in sessions arose from session planning with the SLT/researcher. Both the Deaf practitioner and SLT found the video reviews useful for reflection. Deaf practitioner C stated: 'Using the video clips to review the child signing was most helpful as I was able to pick up on any subtle

language I had missed due to the speed of his signing'. In reviews of sessions, the SLT researcher found it was easier to discuss the child's language by viewing and reviewing video examples as this meant less reliance on both adults having the metalinguistic skills and terminology to discuss the child's language, as concrete examples could be seen by them both. Additionally, the video examples enabled shared discussion of the Deaf practitioner's use of strategies and resources through watching, discussion and re-watching.

The Deaf practitioner reported that the structure of the sessions helped her: 'I like to be better prepared and set up. I like resources, plan and detail. It's better than general language work'. The structure helped the practitioner focus on the goals of intervention and use strategies and resources in a more targeted way, through self-reflection and review sessions with the SLT.

Deaf practitioner C's confidence was at the same level before and after her involvement in the project for ability to set goals (3/5) and ability to work with a child in a session (4/5). Her confidence increased from 3 to 4 in planning activities and evaluation. For knowledge of language assessment, this practitioner's confidence dropped from 4 to 3. Having completed the BSL production test training before starting her involvement in the project, she was confident in this area, but the training and intervention sessions provided insight into other assessments available.

Summary for Dyad 3 – with adaptations for Phase 2 and progress to Phase 3

Most change for Deaf practitioner C was in her language facilitation skills. She reported the experience had been useful: 'I definitely learnt a lot about the child's language expectations and needs, I found it very useful as it helped me improve my awareness of the child's language development'. This awareness enabled her to help the child to progress through increasingly challenging activities whilst increasing his language use. The recording of the sessions provided many examples of good practice and showed change in the child's language skills. These examples provided excellent teaching tools for use in Session 6 of the Phase 3 training course which is described in the next chapter.

4.4.3 Feedback from children and parents

Feedback from children was not collected in documents as had been planned. Neither of the children wanted to complete feedback forms, although, when presented with session feedback forms in the first dyad, the child was willing to tell Deaf practitioner A what she had and had not enjoyed. Both children showed their

willingness to participate by attending or not attending sessions; this varied depending on the clinical situation for each child. At the end of their participation the children were offered the opportunity to provide feedback and this is reported here. However as stated earlier, it is not possible to differentiate the outcomes for this project and other work that was undertaken as part of the young person's care plan.

Parent feedback was collected before and after their child's participation in the project, using a form containing three questions. They were asked to describe their child's language difficulties, explain how they helped their child and describe what they hoped to gain or had gained from taking part in this project. Parent reflections and any changes in skills and knowledge cannot be attributed to participation in this project as other interventions were taking place alongside the language therapy sessions. However, the parental feedback indicates how an increased awareness and knowledge of language difficulties can impact on parental understanding of their child.

Child 1

Child 1 frequently requested sessions but, at times, found it difficult to attend and engage in these sessions even when she had requested them. After the sessions with the practitioners in Dyad 1 and 2 had finished, she requested the opportunity to start them again. On completion of both dyads, she was asked if the sessions had helped and if her language had changed. She responded:

> 'Really improved. Before my signs weren't very clear. I'd start to sign and I couldn't remember, I couldn't understand. Now I get it, I understand, I can take in lots of information, that's really improved and my signing is more fluent. Now I can understand and express myself, both. I can't hear properly, I need to practice my listening and talking'.

This feedback was given in BSL and translated by an English/BSL interpreter who was supported by Deaf practitioner B.

Child 2

Child 2 engaged with sessions that were planned into his timetable. He was not always able to tolerate or engage in the activities presented in sessions but these skills improved as sessions continued. Edited video examples from his language therapy sessions were put into a short film to demonstrate improved skills which related to his whole care plan. This was shared with his parent. He was keen to share this film with other members of staff, including those in his school setting. Child 2 was not able to reflect on his participation in the project, although he was

able to report that he had enjoyed working with the two Deaf practitioners and that he had liked watching DVDs and telling stories.

Mother of child 1

Feedback from this mother was collected by means of the pre and post involvement feedback form, in written English.

Before the project, she described her child's language difficulties as: 'She has difficulty understanding complex statements. Her signing is limited. She cannot articulate her thoughts and feelings leading to great frustration and aggression'. After participation in the project this mother appeared more hopeful and focused on what could be done to help. She wrote: 'She has communication difficulties with language and understanding. She is improving by using BSL and speech. She struggles with longer sentences, BSL helps her follow the dialogue'.

When describing how she helped her child, this mother reported a greater range of strategies after involvement in the project. There was also an increased focus on shared communication and language. Before the sessions she reported: 'We are trying to improve our signing. I practise new words with her to encourage her to pronounce them clearly', and after the sessions, she wrote: 'We have started learning BSL so we can help her communicate. Breaking down a word to help her learn to say it properly. We use subtitles on TV and watch some BSL clips together'. This increased range of activities also demonstrates a focus on use of language in context in everyday settings.

This mother reported a better understanding of her child's difficulties and the impact of these language difficulties after involvement in the project: 'It has helped us see how badly her communication levels affected her. By seeing the video clips we could see how much better she coped with a BSL speaker. Regular communication with speech and language therapist also helped us see what work was needed'.

Father of child 1

Feedback from this father was provided in written English on the pre and post involvement feedback form.

This father described his child's language difficulties very differently at the two time points. Initially he focused on a range of difficulties she had: 'Frustration, leading to anger at not being able to express herself. Lack of understanding of complex issues. Unable to focus, easily distracted'. After involvement in the project his focus was more on language: 'She has difficulty with understanding subtle language.

Needs yes/no, not maybe in spoken communication. Her development in BSL has shown us (through BSL interpreter) an increased vocabulary in BSL that she cannot always demonstrate vocally'. He was able to differentiate between the language difficulties she had in spoken English and the skills she was developing in BSL.

When asked how he helped with language, this father gave a more detailed response after the project. His initial response: 'Simplify language and sentences, Repetitions questions and responses, more frequent use of BSL, Getting her to maintain eye contact' showed less focus on interaction and communication than his later response: 'Primarily we are taking BSL Level 1 …. This has also meant more face to face communication which I think has helped her associate sound/lip patterns and sign with us when in conversation'. This increased focus on the interpersonal use of language was also reflected in that he felt the project had helped him to have: 'a better understanding of how difficult language can be, how easy it can be to misinterpret words, leading to potential upset'.

Mother of child 2

Feedback from this mother was collected on the pre and post involvement feedback form. The form was read by the parent and then the questions were asked in BSL by the SLT researcher. The mother's responses were recorded in written English during the feedback session by the SLT researcher and reread by the parent. A BSL/English interpreter was available but the parent preferred to communicate directly with the SLT researcher.

This mother reported a clear understanding of her child's language difficulties before her involvement in the project: 'He has limited vocabulary, difficulty recalling events or information but he can remember things he has done. He can't explain things, if I don't understand he will repeat, I can ask him to do this. He cannot understand long explanations or stories'. She was able to identify improvements in his language after his involvement: 'He's using more [signs] like BEFORE, AFTER, WHEN, WHERE, WHAT. He will ask and let me explain. He's more interested in books and stories. He looks at a book and asks me what it's about, what's happened in the story, he asks me about characters'.

Within their family, this mother used several strategies to help her child. Some were also used by other members of the family: 'When I don't understand him, I give him choices of what he might mean. I keep information brief and repeat it. We use signs he knows well within the family'. After her involvement in the project, she continued to use similar strategies: 'He will watch and wait now, let me explain and ask me to

explain. If I don't understand he will repeat now, more patient. Sometimes he asks me about something'. She also reported introducing new strategies which stretched him: 'I tell him we discussed it before, ask can he remember, he thinks'.

This mother felt her son's language had altered: 'He's improved. He's more patient, if I don't understand he will repeat. I can ask 'You mean…' and he will agree or change it. Lots has changed'. From this mother's feedback, it appears her understanding of and support for her son's difficulties was helpful both before and after her involvement in this project.

These parental reports indicate that the two children had very different language therapy needs and, although the children are not the focus of this project, this will be discussed further in Chapter 6.

4.5 Discussion

This section provides a discussion of this phase in five parts: what worked well, what didn't work well, limitations of the study, information from Phase 2 to answer the research questions, and conclusions.

In discussing what worked well, four key areas are considered: getting the team on board, bringing cultures together, enabling experiential learning, and producing useable tools and resources. Several issues arose during Phase 2 which were not expected and which will be considered in the section titled 'What didn't work well'. These were managed during the project, but further consideration needs to be given to four areas: timing, past learning and experience, role play, and models of coaching and supervision.

Some aspects of the setting, job roles, and language will be addressed in 'Limitations of Phase 2' which is followed by a summary of the information from Phase 2 that answers the research questions. Finally, the conclusion will help set the scene for progression to Phase 3 of this study.

4.5.1 What worked well

GETTING THE TEAM ON BOARD

The Deaf practitioners identified the importance of allocating time and how difficult it was to complete the tasks when this time was not protected. The findings from Phase 2 indicate how Deaf practitioners and the SLT had underestimated the time that was needed to provide training, supervision, complete sessions and review work. If a range of discussion and visual methods like Concept Mapping or Visual Mapping are to be used effectively (Parow, 2009; Wilson, Nash, & Earl, 2010), time

in addition to face to face sessions needs to be set aside. This time allocation may need to be greater than if the co-workers shared a first language and an established vocabulary for their area of work.

It was important to take the time to develop skills and shared working practice whilst acknowledging change and identifying challenges. The ward manager's support was vital in getting support from the whole clinical team in valuing the work of the Deaf practitioners in their targeted language work: a particular feature of NDCAMHS which referrers have highlighted as distinguishing the service from other CAMHS teams (Wright et al., 2012). The manager's commitment to allocating time and giving agreement was one important aspect but if co-workers on the team did not see this work as a priority, they could be left feeling burdened with the other 'day-to-day' tasks that Deaf practitioners would otherwise be doing. However, this support increased expectations about the rate of change in the practitioner and children's skills. Ensuring awareness of the child or Deaf practitioner's generalisation of skill or lack of it was important for the team. Whilst the Deaf practitioners were able to describe what was making a child successful in a session, it was more difficult for them to describe for the team whether this was likely to be maintained in a different setting. By increasing the skills and knowledge of the Deaf practitioners, greater expectations were placed on them by the team which were not always appropriate. As highlighted in Phase 1, Deaf practitioners are sometimes expected to work outside the limits of their skills and knowledge by other practitioners who have little understanding of language development and difficulties or the linguistic and cultural differences between English and BSL. This mirrors the broader picture for the specialist knowledge of people working with d/Deaf children. A reduction in special schools has reduced access to specialist knowledge for TODs, support staff numbers are increasing as TOD numbers decrease, and parents report that support staff do not have the necessary skills and expertise (Archbold, 2015). As Archbold highlights, d/Deaf children need effective, trained support that is based on robust evidence.

BRING CULTURES TOGETHER

The shared working between the Deaf practitioners and SLT provided opportunities for all involved to understand more about the differences between language problems arising from lack of language role models and intrinsic language difficulties. This provided opportunities for discussion about the aims of the work and enabled links to be made to research evidence (Herman et al., 1999; Herman, Rowley, et al., 2014; Rees et al., 2014). As was seen in Phase 1, many Deaf

practitioners want all d/Deaf children to have access to good sign language models and want children to be bilingual or fluent BSL users. They are less likely to consider what a child's current language and communication needs are and how these can be best addressed. This raises two issues related to culture for Deaf practitioners.

Firstly, there is a difference between hearing and Deaf cultures in how language difficulties are perceived. Within the hearing community of SLTs, focus is currently on understanding how diagnostic labels and interventions relate to each other for evidence based practice (Bishop et al., 2016; Lindsay, et al, 2012; McCurtin & Roddam, 2012; Reilly et al., 2014). For Deaf practitioners, the focus is often on adequate access to BSL models and ensuring that children are able to communicate with and join the Deaf community (Ladd & Lane, 2013; Walker, 2013). Alongside this, the medical model of intervention relating to d/Deaf children's language is being strongly challenged by researchers (Humphries et al., 2012; Valente & Boldt, 2015). Deaf practitioners need to understand all aspects of these debates and, if they take on the role of language therapists, will need a clear understanding of the differences between language deprivation, delay and disorder, a topic currently under discussion in the literature (Marshall & Morgan, 2015).

Secondly, consideration is needed of the professional culture required to work as a 'therapist'. Phase 2 highlighted that Deaf practitioners need training and supervision to move from being highly skilled BSL communicators and language role models, to acquire and make use of the skills of a 'therapist'. The professionalisation of the Deaf practitioner's role is dependent on this training and supervision. As can be seen in the SLT literature, a student's past learning and experience may impact on their success with academic and clinical skills (Smith et al., 2013). If bilingual-bicultural training and supervision opportunities are to be provided, the skills of Deaf practitioners, trainers and supervisors need consideration and support. As was highlighted in the dyad review sessions, Deaf practitioners are not always aware of what they may need to learn or change. The high confidence ratings by Deaf practitioner B suggest that he is not aware of his personal learning needs.

Enabling experiential learning

Deaf practitioners reported they enjoyed the opportunity to learn through practice and discussion. Meeting the practitioners where they were in their learning about the language therapy cycle linked to Kolb's adult experiential learning model (Kolb & Lewis, 1986). The SLT researcher needed to recognise where each Deaf

practitioner was in understanding their own skills as well as the language therapy process for the child. By viewing the language issues from the Deaf practitioner's perspective, a shared format for sessions and paperwork for each stage of intervention was developed. The process of building trust and expectations for both the Deaf practitioner and SLT in each dyad was an iterative process. Focus on the child in the dyad and their needs reduced the need for language therapy-related vocabulary, as discussion focused on specific examples of language use. The use of video supported Deaf practitioners' reflections on their own practice rather than just on the child's language skills. Suggested changes by the practitioners, such as an increased focus on 'role play' or simulated learning opportunities rather than on discussion, helped the SLT focus on the preferred learning styles of the Deaf practitioners. This model of learning through real or simulated clinical experience is reported to be effective in other areas of health care (Zigmont et al., 2011).

PRODUCING USEABLE TOOLS

One focus for Phase 2 was to trial and adapt resources that can be used practically, given the challenges of the child caseload. The session planning and reflection sheets worked well, as did the narrative structure sheets and games. The development of these tools provided opportunity for discussion of some issues relating to concepts from theoretical frameworks for language therapy. The issues discussed related to models such as the ecological conceptualisation of intervention (Law and Harris 2006), intervention that is on a metalinguistic (or explicit) to non-metalinguistic (or implicit) continuum (Ebbels 2014) and the use of behaviour change techniques (Michie et al 2015). Each of these models, in different ways, considers what knowledge the practitioner, child or system within which they operate have about the intervention process. Examples from dyad 2 for each of these models are discussed here. For Law and Harris (2006), as for the Deaf practitioner in dyad 2 initially, the key issues to consider were whether intervention was aimed at the child or the child's environment and whether this intervention needed 'high boundaries of professional practice' (P126) or a skilled communicator within the environment who could facilitate language learning. This also relates to the concepts of universal, targeted and specialist intervention discussed in the literature review (Roulstone 2012). After the first two sessions, issues relating to implicit and explicit interventions (Ebbels 2014) arose when the Deaf practitioner explained the tools and strategies he planned to use to the child. His focus was more on the activity, its structure and how it could be completed than on the change he hoped to achieve in the child's language use. For this child, a more implicit,

developmental model of intervention was appropriate but this had not been discussed prior to this with the Deaf practitioner. Within the session, this led to the Deaf practitioner selecting techniques to try and change behaviour that were not always appropriate. On example of this from the first session, where he overcorrected her story telling, was then discussed in a review session and adapted so that he gave more graded tasks. Both overcorrecting and graded tasks are behaviour change techniques identified by Michie et al (2015) as being within the same group or cluster; repetition and substitution. However, the technique selected must meet the needs of the practitioner and child within the context. Although practical examples of different theoretical models of intervention were discussed, explicit discussion of these models was not undertaken and this is discussed further in section 4.5.2 What didn't work well and 4.5.3 Limitations of the study. The implicit discussion of theoretical models of intervention, whilst useful, did not enable the Deaf practitioner to have a clear understanding of the implications of his intervention choices both in terms of his learning and the child's language learning needs. Differences in language learning need were discussed in relation to children with SLI or late access to a first language in the literature review (section 2.2) and are discussed further in section 6.2.1 within reflections on language therapy in BSL.

Whilst issues relating to language blending, mixing and switching were raised in this phase and solutions for individual dyads found, more consideration of these issues is needed. The issue of modality switching and the use of literacy to support language was discussed in Dyad 1. Current research in literacy is providing a better evidence base (Roy et al., 2015). Some transfer of the information from this project was seen to the wider clinical setting as reported by Deaf practitioner B. Additionally, terminology that was used in this phase of the project was adopted by the clinical team beyond the Deaf practitioners and SLT/researcher.

4.5.2 What didn't work well

TIMING

As discussed in the results for the two day training, the Deaf practitioners required time to discuss and understand new information and relate this to their own experience. This style of interaction is reported in the literature about Deaf cultures (Mindess, 2014). As this additional time had not been accounted for in the SLT researchers' training plan, some topics were not covered in the detail that had been anticipated. Some of these, such as giving details about intervention techniques, could be included in intervention planning and review sessions. Others, such as discussing current research, could not be covered.

Individual assessment and intervention sessions proved time consuming, and limited the time available for reflection and discussion. This has been covered in detail in the case studies for each dyad. If the extent of this issue had been anticipated, a more robust plan for time allocation might have been organised with the unit manager, although a request for more time might have led to the withdrawal of consent for Deaf practitioner participation because of its impact on their other clinical work.

These reflections on time management indicated that the frequency and number of data collection tools needed reviewing for use in Phase 3. Following discussion with the co-presenters for the Phase 3 training course (A Deaf BSL linguist, a Deaf practitioner involved in Phase 2 and a specialist SLT/academic), it was agreed that the number of tools which were more challenging and time consuming for Deaf practitioners to complete would be reduced. Although it was recognised that this reduced the data collection and outcome measurement of the training course for Phase 3, it was deemed essential to ensure the tasks required of participants were achievable within a two day course. The table below summarises the adaptations and rationale in more detail.

Table 4-2 Outcome measure use and adaptation from Phase 2 to Phase 3

Outcome measure used	**Phase 2 use**	**Phase 3 planned use**	**Adaptations and rationale**
Language therapy knowledge questionnaire	Before and after involvement in Phase 2	On the first morning of the two day course	Only planned use once in Phase 3 due to identified time constraints, challenges in completion for participants and limits of data collected in Phase 2.
Self-confidence rating	Before and after	Before, end and 1 month after	This measure was not adapted for Phase 3 but information was also collected one month after the course to identify any changes with reflection and practice.
Expectations for learning questionnaire	Before and after	Before, end and 1 month after	This measure was not adapted for Phase 3 but information was collected one month after the course to identify any changes with reflection and practice.
Assessment session and	Each session	Used by participants for their own	Phase 2 indicated that completion of this sheet needed detailed reflection

goal setting sheet		reflections but not collected	which was not possible with the number of participants expected for the two day course. It was therefore not used as a measure in Phase 3
Reflective log and session plan	Each session	Provided for participants to use in planning and reviewing 'role played' sessions as a reflective tool, not to be collected	Phase 2 indicated that the use of this tool developed over the sessions completed. In Phase 3, only half a day was allocated to planning and reviewing sessions so completion of the log and plan was not feasible within the time frame.
Checklist for evaluation of sessions 1 and 6	Completed with Deaf practitioners and SLT researcher	Planned use of video and discussion of 'role played' sessions, with practitioner reflection on their own skills used	

These changes potentially impacted negatively on training evaluation in Phase 3 by reducing the collection relating to learning before and after the course. However, a potential positive impact was ensuring that planned data collection could be completed without compromising the course content. The data collection tools also reflect the early nature of this research, with the limited training and learning objectives set for the course in Phase 3. The learning objectives for Phase 3 were for participants to:

- Know about types of language therapy
- Have vocabulary to discuss language therapy in BSL and English
- Understand the therapy cycle
- Have resources to help this process

It was recognised that participants' reaction to the training was the key issue that would be evaluated with the planned data collection, with acknowledgement that other changes, such as those in learning and behaviour (Kirkpatrick 2006) would be more difficult to evaluate in such a short course with relatively few participants.

Past learning and experience

Knowledge and access to information about language development and language intervention strategies varied between practitioners. This was partly related to differences in previous training and experience. Deaf adults' approach to learning is

affected by their perception of the context, in relation to themselves as learners as well as to the aim of the learning process (Richardson, 2008). Practitioners also differed in access to written English information; some had read up on the topic, others preferred to access information in BSL in the workplace. Very few written English support documents were provided for practitioners during this phase as the SLT researcher had wanted to avoid lengthy documents. However, Deaf practitioner A reported that access to more written information would have supported her learning. This was taken into consideration when planning documentation and information sheets for Phase 3. Even with variation in past learning and access to English resources, the Deaf practitioners reported that their session planning, activity completion skills, and understanding of the therapy cycle had improved. These self-reports must be balanced against the apparent limited change in practitioners' use of intervention techniques. However the limited change could be the result of the limited number of sessions and presentation of the children.

ROLE PLAY

Role play was discussed by several Deaf practitioners in Phase 1. However the SLT researcher had not understood the complexities of this topic until Deaf practitioners in Phase 2 requested 'role play' for their own learning needs, and 'role play' activities for children which related to experiential learning, enactment and embodied action. The two distinct uses of the term 'role play', one relating to an experiential form of learning and the other to a discourse device in BSL, needed further exploration. A better understanding of 'role play' will be needed for practitioners working on language therapy in BSL in the future. This topic will be discussed further in Chapter 6.

MODELS OF COACHING AND SUPERVISION.

Supervision opportunities and skills were an issue as some Deaf practitioners had very limited experience in reflective practice whilst others had completed training which had provided regular opportunities to develop these skills. This meant that Deaf practitioners and the SLT researcher sometimes struggled to meet supervision needs within the time available, both in terms of the length of sessions and the duration of the project.

The value of experiential learning was discussed by all practitioners, and referenced in the literature review (Kolb & Lewis, 1986) however a more detailed model is needed for effective practice based learning (Zigmont et al., 2011). A better

understanding of these adult learning models by the SLT researcher would have been useful for Phase 2.

Additionally, whilst practice based learning is essential, more theoretical learning that underpinned interventions would have been beneficial. As reported earlier in this chapter, a range of theoretical frameworks are available to support language therapy interventions. Whilst these frameworks were discussed implicitly in session evaluations, they were not explored in any depth with Deaf practitioners. The ecological model for conceptualising language intervention (Law and Harris 2006, Swanwick and Salter 2014) fits well with social models of deafness and brings together themes identified in Phase 1 and highlighted by Deaf practitioners within this phase. In terms of coaching and supervision, Deaf practitioners and their supervisors would benefit from a more explicit, shared understanding of behaviour change techniques as identified more broadly across a range of interventions (Michie et al 2015) or more specifically in relation to language ((Bunning, 2004; Farmer & Fleur, 2006; Joffe, 2011; Roulstone et al., 2012; Smith & Sutton-Spence, 2005). This would support both supervisor and supervisee in understanding techniques to use and where change was targeted, with the child or practitioner. Knowledge in these areas would support an understanding of the interventions needed in relation to the child's underpinning language difficulties, their age and other learning needs. In turn these skills would support appropriate decision making and reflection in relation to how implicit or explicit goals for language change needed to be for the child in light of their age and needs (Ebbels 2014). As highlighted within the literature review, children who are late first language learners may have very different needs from those with SLI in BSL. The frameworks mentioned here, along with mediated learning techniques and dynamic assessment techniques (Asad et al., 2013; Mann et al., 2014) would be useful tools in supervision.

4.5.3 Limitations

SETTING

The setting for Phase 2 limits the validity of the results to some extent. Firstly there were only a small number of participants in a single location. Because of difficulties in identifying potential child participants, a substantial amendment was submitted to IRAS in order to widen the age range of potential participants. Whilst this was being processed, young people within the newly proposed age range were admitted to and discharged from the unit, but when approval was finally given, only children in the unit within the original age range were suitable participants. Even with four

identified dyads only three completed the intervention sessions. Secondly, the action research style of this phase and the involvement of the SLT researcher in the activities, as well as the working relationships established prior to the project, is likely to have had an impact on the results. It can be argued that an action research model enables more effective research within a clinical context where the 'reflective practitioner' wants to understand and improve practice (Costello, 2003). Phase 3 provides an opportunity for more evidence: positive - if Deaf practitioners can engage with the process during a training course; negative - if this phase has produced results which cannot be replicated. Finally, the complexity of clinical need in a mental health setting for children made it difficult to focus solely on language issues. Deaf practitioners were also involved in other aspects of the children's care and this influenced their engagement and interaction in the dyads. Clinical need took priority so allocation of rooms was an issue on some occasions, with discussions taking place in shared offices which was not ideal. Sessions and feedback discussions sometimes had to be postponed or cancelled at short notice.

JOB ROLES

The role of the Deaf practitioners as CMHWs meant their primary responsibility was ensuring the care and safety of all children and young people on the unit. Whilst their manager was supportive of their involvement in this project and was sometimes able to allocate specific times for the Deaf practitioners to complete language therapy sessions, this was not always possible due to other clinical priorities. Time allocation and co-ordination between the SLT and Deaf practitioners was complicated by the Deaf practitioners working to nursing shift patterns, including night work, and the SLT working office hours. Reflections on their own practices, in addition to reflection on child's skills, sometimes proved challenging for the Deaf practitioners who, in their role as CMHWs, regularly gave feedback on a child's presentation. They were less often asked to provide feedback their own practice. The co-ordination of research and clinical need was felt as a pressure by Deaf practitioners who wanted to complete the language therapy sessions but did not want to leave other tasks to those colleagues not involved in the project.

Additionally, it is clear that the Deaf practitioners in this study have a role in ensuring environmental support for language and communication development as highlighted by Law and Harris (2006) and Swanwick and Salter (2014). What is less clear is whether they have an on-going role in providing language therapy interventions for which they would need a broader theoretical understanding of language development and intervention frameworks. On-going practice would need

to be related to the needs of children (Ebbels 2014, Joffe 2011) as well as practitioner skills (Michie et al 2015, Roulstone 2012)

LANGUAGE

There were several BSL/English challenges including the SLT researcher's personal skills in using BSL fluently enough to convey all the information needed to the Deaf practitioners. Whilst it was often possible to work with BSL interpreters, their interest in, understanding, and knowledge of the topic sometimes altered nuances of the discussion. Their presence altered the possibility for direct communication between the SLT researcher and Deaf practitioner, meaning discussion without a BSL interpreter was, at times, preferable. In general, the availability of interpreters and the Deaf practitioner's preference dictated whether discussion involved interpreters. Most feedback discussion was done through direct communication. This may be a challenge for SLTs who do not work full time in a BSL environment and indicates a need for specialist SLTs highly fluent in BSL. Language blending and mixing by children added to the complexity of their presentation, although within the dyads described, the focus was on BSL and this issue was not explored fully. Providing information in written English impacted on some practitioners' access to information and feedback. While some Deaf practitioners preferred to work with another member of staff (SLT researcher or interpreter) when recording information in English, their feedback will have been influenced by that person's language skills and their relationship. Retention of information varied for different practitioners depending on whether BSL or written English was used to convey that information.

4.5.4 Information from Phase 2 to answer the research questions

This section provides a brief summary of the key findings from Phase 2 that answer the three research questions stated for this project.

Research question 1 - How do Deaf practitioners currently work with Deaf young people who have language difficulties?

The initial sessions in Phase 2 showed that the Deaf practitioners in the three dyads worked with d/Deaf children with language difficulties in different ways, depending on their own learning and experience. In each dyad, the Deaf practitioner had skills in communicating and engaging with the child and identifying aspects of the child's language difficulties but a limited knowledge of the language therapy intervention cycle, BSL acquisition, and developmental language disorders.

Research question 2 - Can language therapy strategies and resources developed for spoken language be adapted or developed, with Deaf practitioners, to provide language therapy in BSL?

Feedback from the three Deaf practitioners and three parents indicate that adapted strategies and resources were perceived as useful. For the Deaf practitioners, adaptation and use of strategies, tools and resources required co-working with the SLT researcher, which in turn required the allocation of time and suitable opportunities.

Research question 3 - Can implementation of therapy strategies and resources bring observable change to Deaf practitioners' therapeutic skills or their understanding of d/Deaf children's language skills?

Observable or reported change was identified in the therapeutic skills for all three Deaf practitioners. Deaf practitioners' feedback indicates that they became more insightful and reflective about the child's language skills as well as their role and skills in developing them.

4.5.5 Conclusion and progress to next phase

The second phase of this project was designed to explore whether Deaf practitioners and an SLT researcher could work together to provide language therapy in BSL to children identified as having language learning difficulties. Data were gathered from language therapy training and interventions for Deaf practitioner and deaf child dyads. The results are summarised below and linked to Phase 3 of this project. Some barriers were highlighted during this phase. These barriers are described at the end of this section and are considered further in Phase 3.

Language therapy strategies and resources developed for spoken language can be adapted to provide language therapy in BSL with d/Deaf children in an inpatient setting. These strategies and resources are best used by Deaf practitioners and SLTs working together. Tools, strategies and resources were identified that worked well for Deaf practitioners during Phase 2. In Phase 3, these were shared with a larger group of Deaf practitioners and SLTs in order to gain more information about their usefulness.

Deaf practitioners report benefiting from training, intervention and review sessions. Four benefits were seen: extending their own learning, developing new strategies and resources to use with children, working alongside an SLT colleague, and developing the language and interaction skills of the children they work with. The creation of a two day training course for Phase 3 built on these reported benefits,

with Deaf practitioners and SLTs reviewing the training and pack of tools and resources.

Deaf practitioners enjoyed focused language therapy work (therapy cycle, language framework, discussion, respect for their skills and knowledge) and felt working with the SLT added to this process. All three Deaf practitioners reported it would not be appropriate to take on responsibility for this work alone within their current job role and skill set. This issue was explored further within a wider group of practitioners in Phase 3.

IDENTIFIED BARRIERS

During Phase 2, recruitment issues prompted a substantial amendment to the project plan related to the age of children involved. Alongside this, the findings from Phase 2 highlighted the need for Deaf practitioners and SLTs to co-work with children with language learning difficulties in BSL. A second substantial amendment was submitted in order to include SLTs in Phase 3. This is described in more detail in the next chapter. Whilst there are specialist SLTs and Deaf practitioners working in some settings, barriers to working together exist. The barriers highlighted during this phase, and to be considered in Phase 3, include:

1. Lack of shared framework for practice – professionals working with children need a shared framework for understanding and discussing language development and difficulties in BSL
2. Lack of shared language for practice - For the SLTs and Deaf practitioners, working in English and BSL having a shared vocabulary to discuss language development, difficulties and intervention for children supports collaborative work and enables shared understanding. Where there is not shared language for practice, misunderstandings can easily occur.
3. Tools and resources for practice - Working with children who use SSE, BSL and English can make resource modification and activity planning more complicated
4. Roles and training for practice - Service structure and job roles do not always allow allocation of time or suitable training and supervision opportunities

Feedback from SLTs and Deaf practitioners in the final phase of the project gave more insight as to whether these barriers can be addressed.

Chapter 5 Phase 3 – Training for Deaf practitioners and SLTs

5.1 Introduction

This chapter has five sections: aims, context, methods, results, and discussion. Firstly, the aims are restated to include adaptions related to the substantial amendment made to the Phase 3 method. The context for data collection is then outlined through a description of the people and place involved. The chapter then describes the methods in detail, explaining the changes made in the amendment, and results for Phase 3. Finally, a discussion of the results is given, with a summary of issues to be discussed further when considering the findings in Chapter 6.

5.1.1 Aims of Phase 3

The third phase of this project was designed to explore whether a two day training course would support Deaf practitioners and SLTs to work together to provide language therapy in BSL to children identified as having language learning difficulties. The training aimed to answer the following questions.

- How do practitioners attending the training currently work with children with language learning difficulties in BSL?
- Do Deaf practitioners and SLTs find the information and resources from Phase 1 and Phase 2 useful?
- Will the information and the resources provided during the training be used in their practice?
- What further information, resources or practices would practitioners identify as beneficial to their work with this group of children?

These questions relate to the project research questions one and three: how do Deaf practitioners currently work with d/Deaf children who have language learning difficulties and do Deaf practitioners feel use of adapted strategies for language therapy change their understanding or practice. As with other phases of this project, an iterative component was included to seek feedback and suggestions from participants.

Information about BSL development, language assessment and therapy was shared during the course and feedback was sought before, at the end of, and one month after the event. Case examples and discussion opportunities were also included. The researcher worked alongside three co-presenters to provide this training for 17 people.

5.2 Context and ethics

The course took place at City, University of London and was run by the researcher and three others. Two of the co-presenters run a Sign Language Assessment Clinic at City for children who use BSL. Several training courses for users of the BSL Production Test have been held at City University.

Participants all had previous knowledge of the BSL production test. Ten had attended the training course. Five were qualified and confident to complete the assessment independently. The other five had completed the course but had either not yet completed all the registration requirements to undertake assessments themselves or did not feel confident using the assessment. The other seven participants, including the two SLTs, had worked alongside colleagues who used the assessment but had not completed the training.

The three co-presenters all worked with children who have language learning difficulties in BSL: one was an SLT and the lead author of the BSL Receptive Skills and Production tests, the second was a Deaf practitioner and participant in Phase 2, and the third was a sign linguist who participates in BSL language assessments at City University. Two of the co-presenters were Deaf.

This study was ethically reviewed by the National Research Ethics Service (NRES) Research Ethics Committee Number: 14/LO/1045. A substantial amendment was sought and approval given (Amendment 2 submitted 080116 – appendix 1.3) and is described in the Methods section below. Consent for filming of the participants was obtained from all those involved. Information and consent sheets are in Appendix 1.

5.3 Method

Although the original project plan had envisaged that Phase 3 would be an extended version of Phase 2, there were difficulties with recruitment of Deaf practitioners and children in Phase 2, as mentioned in Chapter 4. Because of this, a substantial amendment was made to the ethics application during Phase 2 to allow the recruitment of a wider age group of children. The challenges and findings from Phase 2, alongside changes in NHS funding during the course of this project which led to increased caseloads and reduced funding for travel for Deaf practitioners prompted a change of plan for Phase 3 to reduce the time and travel commitments for Deaf practitioners and remove the need to recruit children. The amendment to the ethics application also allowed the inclusion of SLTs, enabling a link to the findings and identification of barriers in Phase 2. The second substantial

amendment to the project plan was to adapt Phase 3 to be a stand-alone training course. This was approved (Appendix 1). This section describes the method for this training course in four parts: participants, materials, procedure, and analysis model

5.3.1 Participants

Recruitment of 12 participants was planned in the ethics application. In planning the course, consideration was given to the possible non-attendance of participants. In order to allow for this, and considering room size and tutor availability, the researcher and her supervisors agreed that 15 participants would be recruited. An email was sent to Deaf practitioners and SLTs who had attended the BSL Production Test training course inviting them to apply to participate in the training. The email informed participants that they could either attend alone or with a colleague (SLT or Deaf practitioner) who worked alongside them with this client group. Twenty seven people responded and the first 15 were recruited. The additional 12 practitioners who applied to attend the course could not be allocated places. Four of these were SLTs who did not co-work with a Deaf colleague and so were considered ineligible. On the first day of the course the 15 recruited participants all attended and an additional two participants who had not been allocated places also arrived. It was agreed that they could participate as they had travelled to London and arranged accommodation to attend the two day course.

Demographics

Of the 17 participants, two were SLTs, one was a BSL/English interpreter and 14 were Deaf practitioners. The participants reported a range of job roles and titles: in addition to the two SLTs, there were two Deaf instructors, two BSL instructors, one BSL/English interpreter, four Senior Deaf Outreach Workers, one Irish Sign Language Co-ordinator, two BSL teachers, two Family Support Workers, and two ToDs. Thirteen participants were women and four were men. Fourteen of the participants were deaf and three were hearing. Seven participants reported they had a degree or higher degree. Others reported a variety of school and post-school education and qualifications.

Sixteen participants were from England (six were from North East England, two from the North West, four from the South West, two from London, and one each from Central and South East England) and one from the Republic of Ireland.

5.3.2 Procedure

The two day training course was delivered in the eight sessions as described in the next section, with a follow-up email one month after the course was completed.

Language preferences for participants were established within the *Introduction* session on day one and agreement reached on the positioning of the interpreters. The main language of the training course was BSL with BSL/English interpreters providing simultaneous translation from BSL to English for one participant and one co-presenter. One of the co-presenters presented in spoken English, which was simultaneously interpreted into BSL.

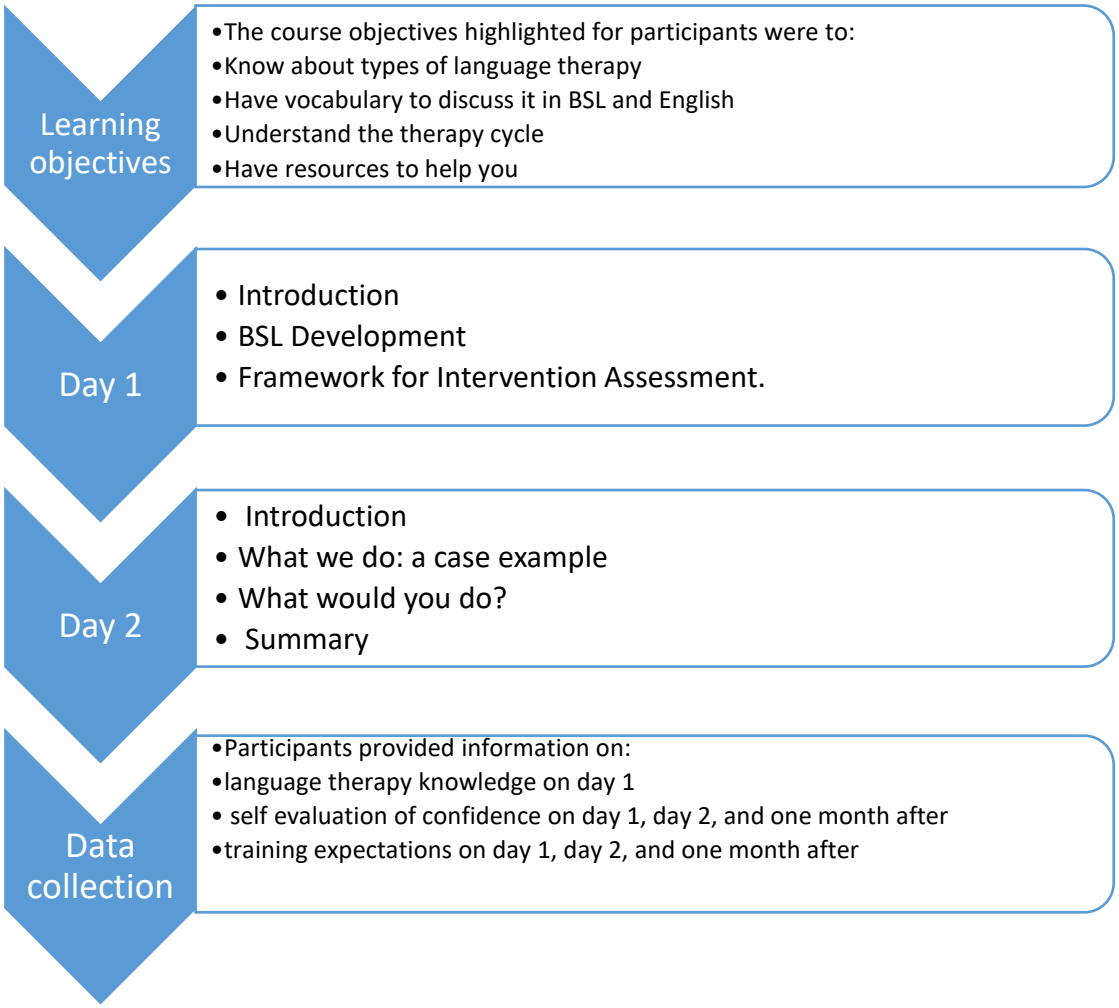
The researcher and co-presenters worked with the two interpreters present to support communication within the room. Participants were encouraged initially to work with colleagues and then with other participants, negotiating language support for each activity.

5.3.3 Materials and tools

The materials developed for use in Phase 3 included a two day training course with a participants' pack and data collection tools for use at three time points. Some materials had been used in Phase 2. Others were developed in liaison with the three co-presenters, with each co-presenter supporting the researcher in their area of expertise. The first figure (Figure 5-1) below gives an overview of the learning objectives and what was included on the course and the second (Table 5.1) provides an overview of the pack provided for each participant. The following section then provides more detail about what was included in the course and pack (BSL STAR [**s**trategies, **t**ools **a**nd **r**esources] pack), including a description of the data collection tools.

As can be seen in figure 5.1, the learning objectives relate to key areas identified as helpful by Deaf practitioners in Phase 2, namely understanding what language therapy is and being able to discuss it. The teaching methods and course content from Phase 2 were used in the course for Phase 3, with the amendments suggested by the Deaf practitioners. As was discussed in section 4.5.2, the data collection tools and outcome measures from Phase 2 were adapted for use during Phase 3. Whilst this enabled data collection to occur in a timely manner, it did reduce the effective evaluation of the training in all areas suggested in the Kirkpatrick model (2006): response of participants to training, learning by participants, change in participants' behaviour and the results seen in the workplace following training.

Figure 5-1 Overview of Phase 3 training course



In addition to copies of the presentations outlined for day 1 and 2 above, each participant received a BSL Strategies, tools and resources pack (STaR). An overview of the BSL STaR pack is given in table 5.1. Each item in the pack is described in more detail and cross referenced with its location in the appendices in the section following table 5.1. The table highlights three pieces of information for each item. Firstly it gives the title of each item, it then states where it originated and whether it was adapted and, finally provides suggestions for future development of the item. These suggestions for future development came from participant and presenter feedback in Phases 2 and 3 and are discussed further in Chapter 6 when future research and clinical implications of this study are discussed.

Table 5-1 Overview of BSL STaR pack showing development during project and future potential development

TITLE	**Origination and adaptation**	**Potential future development**
Glossary Appendix 6.1	Developed with DPs ideas from Phases 1 + 2	develop as online resource in BSL
Form, content, use information sheet Appendix 6.2	Content from Bloom and Lahey (1988) amended with DPs in phase 2 to be more accessible, shared in Phase 3	Potential to discuss in BSL on website as training resource
BSL development chart Appendix 6.3	Highlighted as needed in Phases 1 + 2. developed from literature with Deaf linguist	Potential to develop as online resource with example clips
Ideas about intervention Appendix 6.4	Discussed in Phase 2 from research literature on language interventions, modified to include practical ideas at suggestion of DP in phase 2 for Phase 3	Potential for further adaptation to identify techniques suitable for different DPs and children training and language needs
Form content use assessment sheet Appendix 6.8	(Bloom and Lahey 1988)amended with DPs in phase 2 to be more functional in assessment	Potential to use in assessment with a wider group to RESEARCH LINK TO SLI QUESTIONNAIRE
Session plan + reflective log Appendix 5.1	Developed from SLT literature + DP ideas from Phase 1. Amended in Phase 2 with DPs	Potential to use in qualitative research to assess DP language therapy skills
Mediated learning observation sheet Appendix 5.3 and 5.4	Presented in training during Phase 2(Mann et al 2014), adapted by DP1 in Phase 2, shared in Phase 3	Potential use in training and for single case study research for DPs and children
Mediated learning experience sheet Appendix 5.5	From Asad et al 2013	DPs reported as interesting but needs adaptation and more investigation of use with training and supervision
Modifiability scale Appendix 5.6	From Asad et al 2013	DPs reported as interesting but needs adaptation and more investigation of use with training and supervision
Response to mediation sheet Appendix 5.7	From Asad et al 2013	DPs reported as interesting but needs adaptation and more investigation of use with training and supervision
Parent/carer/teacher sheet Appendix 6.9	Developed with DPs in all dyads	Potential to use in training and link to ecological model of intervention (Law and Harris 2006, Swanwick and Salter 2014)

Use of language record sheet Appendix 6.10	Adapted from Tough DATE with DPs prior to this project	Potential to use as activity in training and supervision sessions
Assessment summary sheet Appendix 6.11	Developed for and used in Phase 2. Used within an activity in Phase 3 at the suggestion of the DP co-presenter	Potential for use as a training resource linked to language planning for TODs and SLTs (Swanwick and Salter 2014)
Story board Appendix 6.12	Adapted from Joffe (2011) by DPs in dyad 2 and 3. Presented within training for Phase 3 with case example	Potential for use in training and on website with examples of different interventions for children of different ages with different language needs
Self-reflection tool Appendix 6.13	Developed from Bunning (2004) used as a discussion tool in Phase 2 DP suggested use in training pack for Phase 3	Potential to use in training for self-evaluation and within supervision to identify strategies already in use or to develop. Useful to link with BCTs (Michie at al 2015)
Language activity for parents Appendix 6.5	Developed with DP2 in Phase 2 to facilitate information sharing	Potential for use in training, collection of examples to share on a website and project to get feedback from parents and carers on what's helpful for them
Website list Appendix 6.6	From DP and advisors suggestions in Phases 1 and 2	Useful to share more widely via a website and gather more examples particularly of language development and use of BSL
Sign linguistics in a nutshell Appendix 6.6	Resource available online and included in web reference list	Potential to develop a more detailed resource including terminology for atypical signs with a BSL version

Training course and BSL STAR pack

The two day training course was delivered in eight sessions over two days. The following sections and accompanying tables give an overview of the data collection tools (Table 5-2), information handouts (Table 5-3), and resource handouts (Table 5-4) and the timing of their use. Thereafter, a detailed description of the content of the course and associated participant's pack is given. Copies of the data collection tools are in appendix 2. Information and resource handouts are in Appendix 5 and 6.

Data collection tools

Two questionnaires and a rating scale previously described in Phase 2 were used again. Additionally feedback was sought from participants and co-presenters during and at the end of the course.

Table 5-2 Data collection tools used in Phase 3

Number	Data collection tool title	Description	Time of use
DC1	Language Therapy knowledge questionnaire	Questionnaire about the participants' knowledge of the Language Therapy process, children's language difficulties and skills that were important for the child and practitioner	Session 1
DC2	Participant confidence rating scale	A five point rating scale of confidence in five areas: language assessment, goal setting, activity planning, working with a child in the session and evaluation	Sessions 1+ 8, 1 month post training by email
DC3	Expectations of training questionnaire (two versions – pre and post course)	Questionnaire asking why participants attended the course, its usefulness, what they liked and did not like and for suggestions for additions and changes.	Sessions 1+ 8, 1 month post training by email
DC4	Participant video feedback	Video cameras available to capture additional feedback from participants	Throughout course
DC5	Co-presenter feedback	Live and email feedback sought about what worked well, what did not work well and suggested changes	End of course

Information handouts

Seven information handouts were provided in the BSL STAR pack as, during Phase 2, one participant had highlighted the need for written English materials to support her learning and reflection (section 4.4.1). These sheets were written in accessible English but it was acknowledged that not all Deaf practitioners would find them easy to read, either because of individual participant's knowledge about language therapy or because of English literacy levels.

Table 5-3 Information handouts used in Phase 3

Number	Information handout title	Description	Time of use
IH1	Glossary	Language Therapy terms explained	Session 1
IH2	Form, content, use information sheet	Form, content, use framework explained	Session 2

IH3	BSL development chart	Chart of current research detailing aspects of children's BSL development	Session 2
IH4	Ideas about intervention	Ideas about strategies and techniques from SLT literature with practical ideas of games and activities suggested by DPs in Phases 1 and 2	Session 2
IH5	Parent and child language activity	Example of activity from Phase 2	Session 7
IH6	Website list	Further references and sources of information	Session 5
IH7	Sign linguistics in a nutshell	Basic sign linguistics information	Session 5

Resource handouts

Eleven resource handouts were provided in the BSL STAR pack. Deaf practitioners had given feedback on the sheets they found useful in Phase 2 for their training and intervention sessions. These were then adapted and designed to be used by Deaf practitioners and SLTs in their future work with children.

Table 5-4 Resource handouts used in Phase 3

Number	Resource handout title	Description	Time of use
RH1	Form, content, use assessment sheet	Sheet which could be completed for a child	Session 3
RH2	Session plan and reflective log	Sheet to record session planning and reflection as used in Phase 2	Session 3
RH3	Mediated Learning Observation sheet	Sheet for recording information about children as used in Phase 2	Session 3
RH4	MLE sheet	Sheet for recording information about children as used in Phase 2	Session 3
RH5	Modifiability Scale	Sheet for recording information about children as used in Phase 2	Session 3
RH6	Response to mediation sheet	Sheet for recording information about children as used in Phase 2	Session 3
RH7	Parent/carer/teacher feedback sheet	Sheet for use in collecting information from others involved in the child's language development	Session 4
RH8	Use of language sheet	Record sheet for recording children's use of different language functions	Session 4

RH9	Assessment summary	Sheet for summarising information about children as used in Phase 2	Session 4
RH10	Storyboard	Example of resource used in Phase 2	Session 6
RH11	Self-reflection tool	Sheet to support practitioners in reviewing their work with children	Session 7

Content – Day 1

On the first day of the course, four sessions were provided: *Introduction, BSL Development, framework for Intervention, and Assessment*. Session 1, 'Introduction', gave an overview of the project with learning objectives. Consent forms were completed by all participants for their feedback and any video recordings to be included in the data analysis. Ground rules about confidentiality, respect and communication were discussed. Three pre-course data collection tools were completed: DC1 Language Therapy Knowledge questionnaire, DC2 Participant confidence rating scale, and DC3 Expectations of training questionnaire. These tools had been used in Phase 2. The glossary (IH1), was presented to participants during this session, comprising language therapy terms that had been highlighted as unfamiliar by participants in Phases 1 and 2.

Session 2, *BSL Development*, started with a review of participants' previous learning from their BSL Production Test training or from their work experience. This led onto a description of current research knowledge about children's typical BSL development. The session ended with information and discussion about atypical language development and possible areas of intervention. During this session three handouts were presented to participants: IH2 a *Form, content, use* information sheet which provided an overview of this model for considering a child's language; IH3 *BSL development chart* showing the comparative development of aspects of BSL by children as currently understood from research literature and IH4 *Ideas about intervention* outlining information from the SLT literature on language therapy intervention.

Session 3, *Framework for Intervention*, highlighted areas of good practice that were identified within Phase 2 including consent, team work, supervision with reflection, sharing information, and the skills used in working with children. An outline of the language therapy cycle was then presented. The session ended with a discussion of the skills that practitioners needed to undertake each stage of the cycle: assessments, needs identification with goal setting, intervention and evaluation. Six

handouts were presented to participants within this session: RH1, a *Form, content, use assessment sheet* which could be completed with information about an individual child: RH2, a *Session plan and reflective log* sheet which could be used to plan and reflect on a session of language therapy undertaken with a child; RH3, a mediated learning observation form (adapted from Mann et al., 2014) which could be used to reflect on the child's and practitioner's use of mediated learning within a session; and RH4, 5 and 6: three forms adapted from Asad et al., (2013) - A Mediated Learning Experience (MLE) sheet, a Modifiability Scale, and a Response to Mediation sheet which could be used to assess and reflect on different aspects of the child's engagement and use of the therapeutic sessions.

The final session on Day 1, *Assessment*, provided information about when, why and how language assessment might be completed. Following a discussion of who might be involved in assessment, a summary of feedback from participants in Phase 1 and 2 was given. This feedback from Deaf practitioners led into information sharing by course participants about selecting assessment tools and resources that are appropriate for their own settings and children. Two further handouts were shared with the group: RH7, a *parent/carer/teacher feedback* sheet which could be used by Deaf practitioners and SLTs to gather information from others involved with the child's language learning; and RH8, a *use of language* sheet which could be used to record information about how a child used their language for different functions, linking assessment of language to pragmatic skills. The session ended with participants discussing an Assessment Summary sheet which they were asked to complete for a child they were working with so that this could be used in discussions during Day 2. Participants were also given a blank *Assessment summary* sheet (RH9) which could be used to record assessment results and observations and link the identification of need to goal setting and activity planning.

Content – Day 2

On Day 2 of the course a further four sessions were completed: *Introduction, What we do: a case example, What would you do?,* and *Summary*.

The introduction comprised a review of what was covered in Day 1 and answers to questions that participants had from the first day. It also included a review of the BSL STaR pack and the resource and information sheets it contained. Participants were asked for feedback on the pack and resource ideas that were presented during the course, as well as being asked to share information about any useful resources they had.

In the second session, *What we do: a case example*, a detailed account of one case was given. This included some background information, an assessment review, video examples of intervention sessions and discussion of the Deaf practitioner's learning and evaluation of the process. A *Storyboard handout* (RH10), which had been used in the case example was shared with participants during this session and a description given of how it had been used successfully to support a child to develop awareness of story structure and content.

In the third session, *What would you do?,* a second case example was shared. Participants were asked to work in pairs to give feedback on what they would do, using information and resources from the course and their own experience. They were then asked to relate this to their own work. This was done in pairs or small groups. Participants planned an intervention session using the information they had recorded from Day 1 on their *Assessment Summary* sheets (RH9). Role play (or simulated learning) and discussion opportunities with access to resources, games and toys supported this work on the practitioner's own case examples. Two handouts were shared during this session: RH11, a self-reflection tool which supported Deaf practitioners and SLTs to review and improve their work within a session with a child; and IH5, a sample parent and child language activity which had been used by the researcher and Deaf practitioners in Phase 2. This was the longest session of the course.

The final session, *Summary*, reviewed the learning objectives of the course. Participants were also asked to complete two feedback forms: Participant confidence (DC2) and Expectations of training (DC3). They were offered the opportunity to give written or video feedback using these forms or on other aspects of the course.

Data collection tools

The data collection tools (Table 5-2) were provided in written English. BSL/English interpreters were available to support Deaf practitioners in completing these forms if required. Additionally two video cameras were available during the course for participants to record feedback. Where feedback was given in BSL, a BSL/English interpreter provided translation into English for later transcription by the researcher.

Co-presenter feedback

Co-presenter and video feedback was included to try to capture information given informally or in BSL which would not have been recorded on feedback sheets. The feedback from the three co-presenters was sought in person and via email. This

included feedback from the presenters themselves and any given directly by participants to presenters during the course.

5.3.4 Analysis model

Thematic analysis and descriptive statistics were used in the analysis of data from Phase 3. Descriptive statistics were used to describe results which could be counted, either because data were collected using Likert scales or Yes/No questions.

Deductive thematic analysis was used where the data related to themes from Phase 1 and Phase 2. Inductive thematic analysis was then used to code and sort the remaining data into additional themes. The researcher used colour coding and sorting of data examples to identify themes.

5.4 Results

The results are reported in five parts: language therapy knowledge; participants' confidence; expectations of the training at three time points; four participant case studies; and feedback after the course from co-presenters.

5.4.1 Language therapy knowledge questionnaire

The initial reading of responses to the Language therapy Knowledge questionnaire, which were all given in written English, suggested that deductive analysis using themes from Phase 1 would cover most data examples provide by participants. When this deductive thematic analysis had been completed, further inductive analysis was used for two questions where data had not been included in the initial deductive analysis.

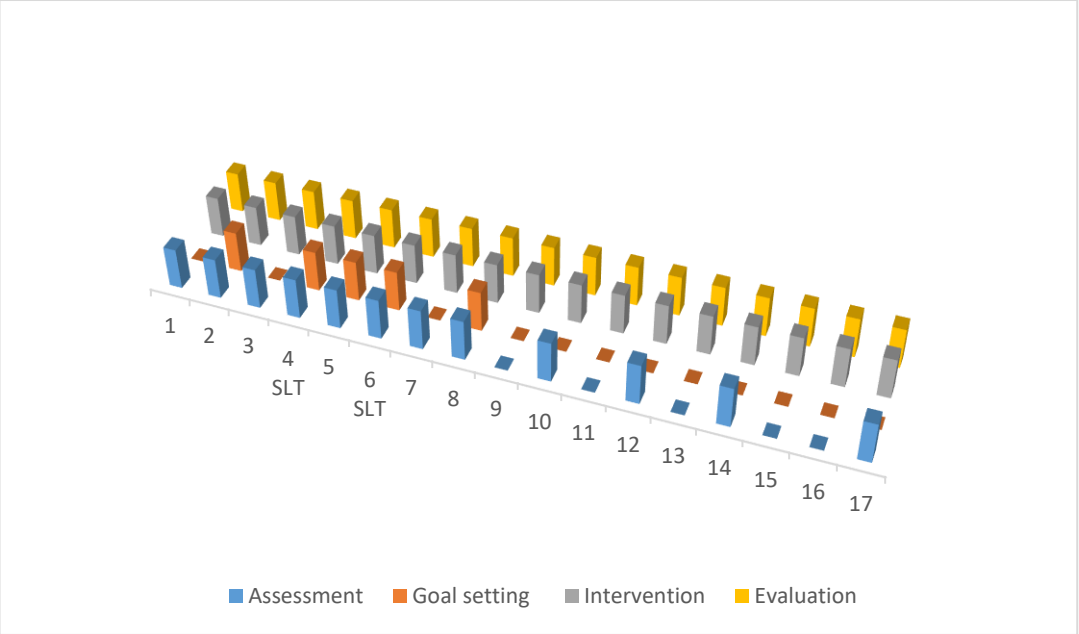
Language therapy knowledge questionnaire – deductive analysis

This questionnaire was completed by participants at the beginning of the first day of the course. Deductive analysis of data from this questionnaire related to the two themes in Phase 1 linked to Bunning's core processes for intervention (see Literature review 2.1), the language therapy cycle and language therapy techniques. These themes encapsulate the core of what practitioners do and the techniques they use in order to do language therapy tasks successfully. The language therapy techniques list used for this analysis was the shorter version suggested in Phase 1 (Discussion 3.5). This linked personal and context maintenance as one item and facilitation and modification as another.

Language therapy cycle

The Language Therapy Cycle has four parts: assessment, goal setting, intervention and evaluation. Five of the 17 participants described use of all four aspects of the cycle in their responses. Seven of the participants described using assessment, intervention and evaluation but did not mention goal setting. The remaining five participants described intervention and evaluation but not assessment or goal setting.

Figure 5-2 Data from the language therapy knowledge questionnaire showing participants use of the therapy cycle



Language therapy techniques

As discussed in Phase 1, the techniques used by Deaf practitioners are similar to those used by SLTs but when Phase 1 analysis was completed, a simplified list appeared to reflect the data accurately. This shorter, five point list was used for analysis of data from the Language Therapy Knowledge questionnaire, and compromised engagement, modification or facilitation, feedback, maintenance of context or self, and transection. All 17 participants referred to modification/facilitation and maintenance of context/self. Engagement was noted by 14 participants and transection (sharing information with others) by nine. Feedback to the child was only noted by one participant.

Language Therapy Knowledge Questionnaire – inductive analysis

Inductive analysis of the data from responses to two questions in the Language Therapy Knowledge questionnaire provided more detailed information about what difficulties the participants felt children had with language and why these difficulties

occurred. This provided an additional layer of information to the inductive theme *Culture of discussion about d/Deaf children's language learning* discussed in Phase 1.

When asked 'What areas of language do you or others consider when working with d/Deaf children in BSL?' the participants responded in ways which could be categorised into the four groups shown below in Table 5-5 . These groups show a continuum from one practitioner who did not give a response, five who are only considering which language to focus on, six who think about BSL but gave limited detail and five who are considering specific aspects of language.

Table 5-5 Areas of language considered by participants in Phase 3

Response category	Number of participants responding	Data examples
No response	1	
Named languages e.g. BSL, English	5	*BSL, SSE, spoken English*
Unspecified aspects of BSL related to delay or assessment	6	*Working with children to develop natural BSL*, *Work towards communication*
Naming of specific language areas e.g. morphology, placement, timeline,	5	*I would highlight any areas of concern or difference like morphology or phonology* *Help child to improve timeline, to understand placement, facial expression, story telling*

When asked to 'Describe some difficulties a child might have with learning language' participants' responses fell into three groups: access to language models, additional learning needs and specific language difficulties. Examples of the responses within each of these groups are given in Table 5-6 below.

Table 5-6 Data examples of children's difficulties with language

Area of language difficulty	Data examples
Access to language models	*'Access to a good first language', 'sign language environment may be limited', 'no language role models', 'no deaf peers'*
Additional learning needs	'*Autism', 'learning difficulties', 'CHARGE', 'cognitive issues such as short term memory issues', 'ADHD', 'executive functioning difficulties'*
Specific language difficulties	*'Language processing', 'language learning impairment', 'given a sign but*

	doesn't understand the meaning', 'language processing disorder'

Around half of the 17 participants (n=9) identified that a child might have difficulties due to either additional learning needs or specific language difficulties. Four participants only reported difficulties relating to access to language role models. Two participants identified access to language role models and additional needs. Of the remaining two participants, one only identified specific language difficulties only and the other access to language models and specific language difficulties.

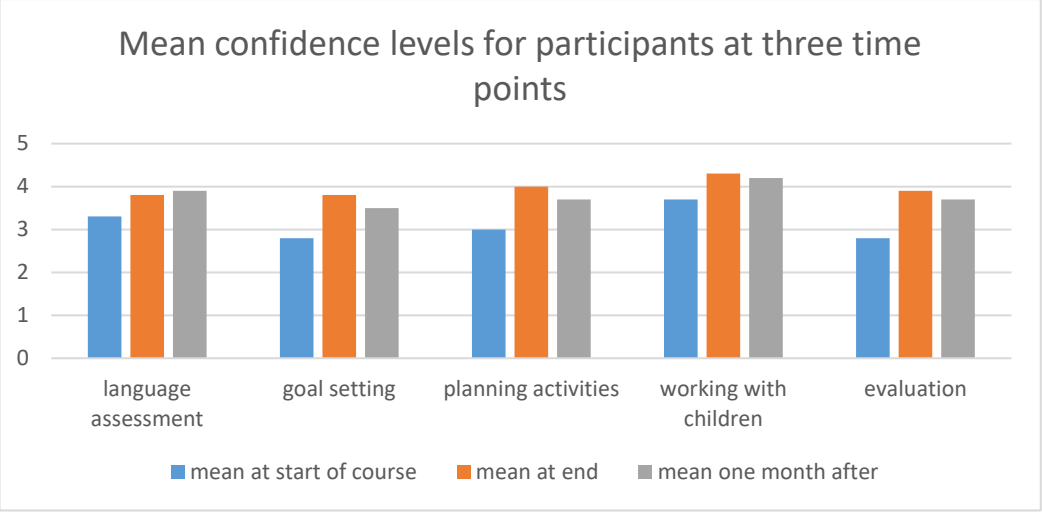
5.4.2 Participants' confidence

Only ten participants responded to the final email requesting feedback. While this reduces the data set, it does represent a 59% response rate. Analysis looked for a relationship between confidence and other demographic markers but no clear relationships were found with any demographic data such as educational level, age or reported training.

Participants felt most confident at the end of the training course. It is interesting to note that, as with Deaf practitioner B in Phase 2, two participants rated their confidence at five for several aspects of Language Therapy at all three time points. Five others rated their confidence at five for some aspects at the end of or one month after the course. Most confidence was shown at the end of the training course by all participants.

When the mean confidence levels for all responding practitioners are considered across the three time points, it is interesting to note the difference in confidence in different areas of language therapy. Figure 5- shows these data which indicate that participants were consistently more confident in working with children than other areas. They were least confident in goal setting and evaluation. Due to the small number of participants, statistical analysis to identify the significance of these differences was not undertaken.

Figure 5-3 Mean confidence levels for ten participants providing data at three time points across five areas of Language Therapy



For this group of participants, the training course provided them with skills and knowledge that increased their confidence in this area of work. With this small and varied sample of participants, these results indicate that participants find training to be useful. These results also suggest that the variability in participant's confidence levels could usefully be explored further: both in terms of variability between participants and variability in different skill areas for language therapy. The individual participant case studies (section 5.4.4) explore these issues further.

5.4.3 Expectations of training

Results from this questionnaire are reported from three time points: start of Day 1, end of Day 2, and one month after the course.

Start of Day 1

On the first morning of the course all 17 participants completed an expectations questionnaire in written English, with BSL/English interpreter support if required. The questionnaire asked three questions: why had participants come to the course, what did participants hope to learn from the course and how would they know if it had been useful.

Participants' responses to why they were attending the course fell into four areas: an identified need by the practitioner, an identified need for the children they work with, networking or sharing, and learning (Table 5-7).

Table 5-7 Expectations for training - reasons for attending – Day 1

Theme	Number of participants mentioning this	Data examples
Practitioner need	7	*Struggling with one-to-one sessions,* *I want to be able to understand more so that I can explain what I see,*

		To spot block's to children's development and how to overcome
Child need	6	*Some of our children have language delay and suspected language disorder,* *We come across children with various language and communication problems,* *It's relevant to the children I work with*
Networking	5	*A great opportunity for me to network with other professionals engaged in developing language skills with deaf children,* *To share our experience and work*
Learning	6	*'I need to be able to analyse the whole language picture,* *Learn new information and research,* *To broaden my skills,* *Keep up to date with any developments on BSL*

The same four themes emerged in response to the questions about what they hoped to learn and how they would know if it had been useful: practitioner need, child need, networking and learning. However the balance in the number of participants mentioning these themes was different between what they hoped to learn and whether they would know it had been useful. Only two participants mentioned 'networking' in relation to what they hoped to learn, whereas seven related 'networking' to whether the course had been useful. Eight participants' hopes for the course related to their needs and learning whilst nine related the child's needs to the usefulness of the course. Unsurprisingly the participants felt learning new information and developing new skills on the course would ideally lead to better networking and outcomes for children after the course.

End of Day 2

On the final afternoon of the course 16 of the 17 participants completed an expectations questionnaire. One participant had to leave early due to transport issues and did not return the questionnaire. Fifteen participants completed the expectations questionnaire in written English, with BSL/English interpreter support if required. One participant gave feedback in BSL with an interpreter providing spoken English translation. All 16 respondents reported that the course had met or more than met their expectations.

Participants were asked what they liked and what they thought had been useful about the course. Responses about what participants had liked fell into five themes: getting new information, sharing information with other participants, changing their own practice, working with others, and the delivery of the training.

Table 5-8 Expectations of training - what participants liked - Day 2

Theme	Number of participants mentioning this	Data examples
Getting new information	16	*'Mediated learning sheet very useful, Resource sheets useful and also information sheets, Learning about pre-language development in BSL, Video clips helped me identify language, Resource sheets (particularly MLE sheet) useful*
Sharing information with other participants at the course	7	*Feedback from colleagues in the group, that was really useful, People's points of view and share information, Share information between professional staff*
Changing their own practice	4	*There are things that I'd never thought about that I can get from others, I'm aware of needing and will request more supervision, Need to reflect myself on how I interact with a child, Help me reflect more about using activities to meet their goals*
Working with others outside the course	4	*Feedback and discussions with colleagues in different roles, I will request to do more joined up work with Deaf practitioners, Good to share how professionals work together, Hearing/deaf people to work together'*
Delivery of the training	4	*I found this training valuable through BSL as my first language, The pace of the training was perfect, Relaxed atmosphere in the room*

Participants were also asked what they didn't like and for suggestions for changes. Six participants fed back on issues that they did not like: three were not happy with the skills of the interpreters, two felt they had attend courses previously where the BSL linguistics content of the course had been covered, and one questioned whether all participants had adequate levels of BSL to attend the course. Fourteen participants offered suggestions for changes. These could be grouped into one dominant theme: training and supervision, and two smaller themes: practical issues and shared working with SLTs. These mirrored the themes highlighted in what people liked: training and supervision linked to getting information, sharing

information at the course and changing practice; working with SLTs linked to working with others outside the course; and delivery of training linked to practical issues. Although the themes in what people liked and didn't like were similar the subthemes showed some differences.

The dominant theme of training and supervision included three subthemes: reflection on practice, report writing, and assessment issues. Participants recognised that supervision and reflection time could help improve their skills in working with children. They also reported that they needed further support to provide 'professional reports' that would improve 'how we give feedback'. Assessment was the third area where participants expressed a need for further help in assessing children with additional needs and using a wider range of BSL assessment tools.

Table 5-9 Expectations of training - suggestions for changes – Day 2

Theme	Number of participants mentioning this	Examples from the data
Training and supervision	9	*I would like more training…how to support children with additional needs,* *Conference or meeting once a year,* *BSL therapy supervision would be great,* *Lead person to be central for supervision with BSL concerns,* *It would be good to see a role play opportunity/…online forum/supervision,* *More BSL assessments to be standardised,* *More examples of therapy and evidence of change*
Practical issues	6	*More examples how to do filming,* *Improve resources,* *I would like more role play,* *Need opportunity to practise new strategies'*
Shared working with SLTs	2	*Need more SLT as it benefit them to work with Deaf practitioner,* *Need to involve more SLTs*

<u>One month after the course</u>

Participants were emailed a final expectations questionnaire one month after the course. It asked whether the participants had used the information from the course and whether they had any additional suggestions or comments. Ten participants responded to this questionnaire.

Seven respondents reported that they had used or discussed the course content and materials in their workplace since attending the two days at City, University of London. The three who had not used the information had different reasons for not doing so: the first had not had time within her role to focus on language intervention, the second had not had a suitable client, and the third had been focusing on assessment and report writing due to the time in the school year.

From suggestions and comments, the same themes arose as in the previous expectations responses. Four respondents highlighted the need for on-going training and supervision; one suggested an eLearning website would be useful; another echoed the concerns expressed by another participant at the end of the course about whether some practitioner's skills in BSL were fluent enough to be assessing children. Practical issues such as time, access to language appropriate resources, staffing and roles were raised by five respondents. Three respondents mentioned co-working between SLTs and Deaf practitioners.

5.4.4 Four participant case studies

In the final feedback session of the course, participants were offered the opportunity to record information about their experience on the course or in their workplace on working with d/Deaf children with language learning difficulties. Four participants, one SLT, one ToD, and two BSL instructors gave feedback. This feedback, along with other data collected from these participants, will be presented here as case studies as this provides information about individual's perceptions of the benefits and challenges arising from the course. The four written English summaries of feedback are included in appendix 7 as they give examples of each individual's responses which answer the questions:

- How do practitioners attending the training currently work with children with language learning difficulties in BSL?
- Do Deaf practitioners and SLTs find the information and resources from Phase 1 and Phase 2 useful? Will the information and the resources provided during the training be used in their practice?
- What further information, resources or practices would practitioners identify as beneficial to their work with this group of children?

All case study participants are reported as male in order to reduce the identification of specific participants.

Case study 1 - An SLT's perspective

How do practitioners attending the training currently work with children with language learning difficulties in BSL?

> At the start of the course this participant's confidence was very low. He rated his confidence in assessment, goal setting, activity planning and evaluation as one out of five. He rated working with a child as two out of five. This low confidence stemmed from low confidence in BSL use, 'my level of signing, level 2, is this enough?' and low confidence in working with others '(I want to) feel more confident working alongside staff at the resource base and working with children from a BSL family'. His video feedback highlighted the complexity of the language assessment and intervention situations he faced. He was currently working with a child whose hearing parents felt that BSL should be their child's first language. Whilst the SLT felt this was an appropriate aim, none of the professionals working with the family were BSL users. The SLT had no knowledge of BSL development, the mother was learning BSL with the child and no other family members or peers had native BSL skills. Additionally, the mother had taken on a 'teacher' role and was supporting her child to learn language through educational activities e.g. learning colours and numbers. The SLT highlighted that within his SLT degree, no information on BSL had been included.

Do Deaf practitioners and SLTs find the information and resources from Phase 1 and Phase 2 useful? Will the information and the resources provided during the training be used in their practice?

> The SLT reported the course was useful in three ways: learning about BSL, changing his practice and improving his networking and information sharing skills.
>
> He reported that information presented on the course had increased his knowledge about BSL development and the pre-language skills needed to support language learning and use. He reported that having discussions with other participants on the course had clarified his thinking about the case he presented and had suggested ways to change his own practice to focus on functional communication in the home as well as working with the mother to understand her language role and input. He also reported that the structured opportunities to work with Deaf colleagues on the course would give him more confidence to work with Deaf colleagues in his team. He indicated that the

resources from the course had already provided a better basis for goal planning and supporting this work with colleagues and parents.

What further information, resources or practices would practitioners identify as beneficial to their work with this group of children?

The SLT concluded that more SLTs need to be involved in this work and have better access to information about BSL. In order to facilitate this he has organised a study meeting with the researcher and SLTs in his area.

Case study 2 - A Teacher of the Deaf's perspective

How do practitioners attending the training currently work with children with language learning difficulties in BSL?

The teacher described a case he was currently involved with. A four year old boy who was learning BSL as his first language within a hearing family, whose mother was currently on a BSL Level 3 course. The boy's language skills were developing but the teacher felt his expressive language skills were not well enough developed to meet his social and emotional needs. The teacher felt he could identify that there was an issue but did not know what to do about it.

Do Deaf practitioners and SLTs find the information and resources from Phase 1 and Phase 2 useful? Will the information and the resources provided during the training be used in their practice?

The teacher reported that the course had provided him with new information about BSL development and had given him ideas about activities for intervention. He stressed that part of the difficulty was explaining to other professionals why he had concerns about this boy's language. He found the course useful for thinking about 'how to share information between professional staff'.

What further information, resources or practices would practitioners identify as beneficial to their work with this group of children?

Whilst the teacher reported that the course had been useful, he felt there was not enough time to explore all the information and resources in enough detail. He also commented that a wider range of assessment tools is needed for this group of children.

Case study 3 - One BSL instructor's perspective

How do practitioners attending the training currently work with children with language learning difficulties in BSL?

> This practitioner described how he integrated language assessment into everyday teaching, focusing on specific aspects of language within curriculum topics. He reported that the Signature BSL curriculum followed in the school did not meet the child's needs. He reported that it was his aim to provide children with individual time and activities to develop skills but that he was not always able to offer this. He had developed strategies to involve children in their own evaluation through video review. Whilst he had knowledge of BSL linguistics, some aspects of what he described were not accurate, for example he described the difference between [live-fish-swimming] and [dead-fish-floating] as a change in handshape. Whilst the difference between these two signs is linked to a change in orientation of the hand, there are aspects of morphological information which he did not describe.

Do Deaf practitioners and SLTs find the information and resources from Phase 1 and Phase 2 useful? Will the information and the resources provided during the training be used in their practice?

> The practitioner reported that the resources from the course had helped him 'think different[ly]'. He had particularly liked the information about assessment. He had used some of the resource sheets with colleagues since returning from the course.

What further information, resources or practices would practitioners identify as beneficial to their work with this group of children?

> The instructor concluded that it would be useful to have on-going training in this area. In particular, he wanted more information about working with d/Deaf children who have additional needs. He felt that more co-working and supervision would help his practice which in turn would improve outcomes for children. He also identified that his current role does not have protected time for this work. Following the course, the Deaf practitioner had worked with the SLTs, Deaf practitioners and managers in their setting to organise a study day for the researcher to provide a learning and supervision opportunity for the whole team.

Case study 4 – A second BSL instructor's perspective

How do practitioners attending the training currently work with children with language learning difficulties in BSL?

> This practitioner described his work with a boy with CHARGE syndrome who has a diagnosis of ASD. His description of the case included information about assessment, intervention activities and environmental adaptation. He reported that the sessions worked on vocabulary development, picture-sign matching, eye contact, time and sequencing and that the aim was 'not very big'. In evaluating the sessions, the team identified that the expected progress had not been made and suggested that reducing the level of information, slowing the pace or adapting the language more might have helped. The description of the case showed an awareness of aspects of therapeutic language work but lacked a clear therapeutic aim and procedure. The practitioner reported that children in the school followed the Signature BSL Curriculum and used the NDCS Family Sign curriculum but that these tools did not match the needs of this child.

Do Deaf practitioners and SLTs find the information and resources from Phase 1 and Phase 2 useful? Will the information and the resources provided during the training be used in their practice?

> This practitioner reported that the 'training was valuable through BSL as my first language'. He reported that it was useful to 'have similar experience as others, to share our experience and frustrations'. He felt the training would 'help me to reflect more about activities to meet their goals'.

What further information, resources or practices would practitioners identify as beneficial to their work with this group of children?

> This practitioner suggested more time should be allocated to the course and more information about children with additional needs included. He noted that it would be useful to have a website of information and resources from the course so that 'we can go back and reflect again what we learned and how it benefits us'.

5.4.5 Feedback from course co-presenters

Feedback from the three course co-presenters was sought and this can be summarised into three areas: language use, course content, course presentation.

Language use

During the course the researcher presented in BSL with interpreters providing English simultaneous translation. Feedback from one co-presenter highlighted that the researcher's BSL skills were not sufficiently fluent and this had led to some misunderstandings. The course presenters had been briefed beforehand to support each other with language so this was managed within the context but, from this co-presenters perspective, this would have been managed better if all presentations were led by a native BSL user. Feedback from a second co-presenter suggested that when the hearing researcher presented in BSL, this engaged the Deaf participants more and indicated a level of respect. The third co-presenter acknowledged language misunderstandings but felt that the course provided a good working model of hearing and Deaf professionals working together to share information and overcome language differences. These different perspectives on language use highlight both an opportunity and challenge for bringing the work of SLTs and Deaf practitioners together.

Course content

Co-presenters' feedback indicated that they felt the course content was appropriate for the audience overall. All co-presenters were involved in preparation of the course content and acknowledged that the content was limited due to the time available for the course. More time was needed to explore the topics presented and other related topics in more detail. Co-presenters suggested including more information on language disorder and planning of therapy aims. They also suggested further developments for the BSL STaR pack as outlined in Table 5-1 both in terms of content and how the pack was explained to participants.

Course presentation

Because of the bilingual presentation of the course, hearing and Deaf participants needed different cues from key points of information in presentations in order to relate them to the handouts and information sheets provided in the participant packs. Co-presenters suggested that the format for doing this could have been explained more clearly at the start of the course to enable better access for all. Whilst simulated learning or 'role play' opportunities were offered during the course, these were not taken up by the course participants, although of interest, feedback from participants indicated they would have liked more of this. Co-presenters suggested that they could have modelled this in order to give a clearer lead and more confidence to participants.

5.5 Discussion

This section provides a discussion of this phase in four parts: what worked well, what did not work well, limitations of the study, and conclusions.

In discussing what worked well, four key areas are considered: aspects of knowledge and learning, changing practice, understanding children, and sharing information. Several topics arose during Phase 3 which will be considered in the section on what didn't work well. These were managed during the project, but further consideration needs to be given to four areas: time allocation, language use and interpretation, role play, and aspects of knowledge and learning.

Limitations relating to practical issues, participant groups, data collection and analysis will be addressed in 'Limitations of the study' which is followed by a summary of answers to the research questions from Phase 3. Finally, the Conclusion section will help set the scene for progression to the conclusion of this study.

5.5.1 What worked well

Aspects of knowledge and learning

The course participants indicated that the course content addressed some of their learning needs. Participants engaged with the information and resource pack (See Table 5-1) with over a third of all participants reporting that they had used some aspects of the course in their work within one month of completing the course. Participants reported that the course met their expectations and that they would value more training. These results indicate a positive reaction to the course from participants as outlined in the Kirkpatrick four step model of training evaluation (2006), as well as some minor self-reported behaviour change. Individual participants (section 5.4.3.) mentioned using tools and strategies that would relate well to other SLT interventions, if further training were planned, these could include SmiLE therapy (Schamroth & Lawlor, 2015), which uses video feedback work with children during interventions which one participant described doing in his work.

Including SLTs and a variety of Deaf practitioners on the course provoked a positive response from participants. They felt that they could learn from each other and that the structured activities supported their interaction and promoted sharing of ideas and perspectives. These positive aspects of co-working echo the work of hearing practitioners in SLT where interventions are shared between different professionals (Wright, 1998). Regular opportunities to share reflections on practice would provide another avenue for training for Deaf practitioners which has been identified

as a need within NDCAMHS (Wright et al., 2012). However, the wider picture in employment outside health and education for Deaf co-workers can also show a lack of training and progression opportunities for the Deaf person, whilst bringing benefits to the employing organisation (Friedner, 2013; Kelly, Quagliata, DeMartino, & Perotti, 2016). Chapter 6 identifies some possible ways to bring learning from this project to a wider group of Deaf practitioners in their workplaces.

Changing practice

At the start of the course, many practitioners identified some aspect of their own knowledge or skill that they wanted to improve. Their aim in developing their own skills was to improve their ability to support children's language development. This change was described both in terms of face-to-face work with children and the practitioner's ability to share information with others in the child's professional and family network. Feedback at the end of the project indicated that the course had started to meet this identified need for practice change. Several practitioners identified that appropriate supervision was needed to continue this process. As identified in Phases 2 and 3, some Deaf practitioners with limited training felt confident in their work whilst others, and the SLTs in Phase 3, felt further support was needed to ensure integration of knowledge into co-working practice.

Understanding children

Participants noted that the information about BSL development and mediated learning as presented in the BSL STaR pack (Table 5-1) was useful in helping them understand the children they worked with. Whilst participants were generally more confident in two areas, *assessment* and *working with children in sessions*, before and after the course, their confidence in another two areas, *goal setting* and *activity planning*, increased after the course. This indicates that they felt more confident in identifying what the child's needs were following assessment and in planning activities to address those needs. The importance of goal setting and evaluation of outcomes has been highlighted in the SLT literature (Roulstone, et al., 2012a) and links to the value of relating goals to what parents and children desire for language outcomes. Practitioners indicated that further training would support them in understanding children better, especially if more assessment tools were available.

Whilst several practitioners indicated that standardised assessments would be beneficial, others indicated that the MLE sheets would be very useful. Practitioners felt that, given the variability of d/Deaf children's backgrounds and abilities, assessing a child against that child's own learning potential and change in skills may be more beneficial. Research projects have highlighted the need to identify

variables for individual children that can inform language intervention (Mann, Roy, & Marshall, 2013); the content of the training course was reported, by practitioners, to help them with this process.

Sharing information

Providing opportunities for participants to share information was regarded as a benefit of the course by many participants. Including SLTs and Deaf practitioners from different backgrounds provided opportunities for exploring issues for different children and different settings from diverse perspectives. Several practitioners commented during the course that SLTs and Deaf practitioners did not often get to work together. Integrated working between different groups for the benefit of d/Deaf children's language has been remarked on in several research papers (Herman et al., 2014b; Marshall & Morgan, 2015; Mason et al., 2010). Professionals need to have a shared understanding of each other's perspective, especially if different cultural or medical models underpin their previous experience (Herman & Morgan, 2011).

Phase 3 findings support those from Phases 1 and 2 in highlighting areas of need in information, training and supervision for practitioners working with children to develop BSL. The training course showed that resources developed during Phase 2 and developed for Phase 3 (See Table 5-1) are of interest to a wider group of practitioners who support the idea of dissemination of this work.

5.5.2 What did not work well

Time allocation

Course participants and presenters all commented that the course would ideally have been longer to cover the content in sufficient detail and allow for more experiential and shared learning opportunities. Whilst the course content was covered more effectively than in Phase 2, participants reported feeling rushed in the more practical activities and would have valued more opportunities for questions discussion and consideration of the BSL STaR pack (See Table 5-1).

Language use and interpretation

Participants and co-presenters raised issues regarding participants and presenters BSL skills. Whilst, in an ideal world, all participants would have fluent BSL skills the course was designed to support co-working in two groups which are often segregated due to language issues. Some participants reflected on their own language skills during the course. This self-reflection and support to work within

one's own competence is part of the professionalisation of the work in language therapy in BSL.

Three participants commented negatively in their feedback forms on the quality of the interpretation during the course. Others commented informally during the course on the quality of the interpretation. There may be several reasons for this. Firstly, the interpreters were offering simultaneous translation for two English speaking, hearing people. Often BSL/English interpreters attend meetings to provide BSL interpretation for Deaf people where the language of the meeting is English. This difference in direction of interpreting may have led to changes in interpreter focus which were viewed as unhelpful by Deaf participants. The model of interpretation used and the subsequent role of the interpreter will impact on their work and its perception by others (Mindess, 2014; Richardson 2008) Secondly, the researcher presented in BSL which is not her first language. This would have made interpretation more challenging for the interpreters. Finally, given the geographical spread of participants it is possible that regional variation in sign caused difficulties for some participants.

As was highlighted in the methods section of this chapter, written information in English was provided in all the information and resource sheets. One Deaf participant fedback that they could not access the language or information and suggested that the information be simplified to improve access. As was highlighted in the methods section, this had been anticipated. Participants were informed during the first session on Day 2 that some handouts might contain English or information that would not be useful to all participants. Further consideration would be needed on this issue if the course were to run again with development of the BSL STaR pack (Table 5-1) in terms of content, written presentation and discussion within the course.

Role play or simulated learning

As suggested by Deaf practitioners in Phase 2, more opportunities for role playing intervention sessions were offered within the training course. However these opportunities were not taken up fully, even though Deaf practitioners fedback that they would have liked more of this. There are several possible reasons for this difficulty. Firstly, the room size and larger than expected participant numbers did not leave much room to move furniture and allocate space to these activities. Secondly, the activities could have been specifically structured to ensure rather than suggest the use of role play or simulated learning' opportunities. Finally, a theoretical outline

of role pay and how it can be used for practitioners and children's learning would have helped presenters and practitioners to understand what was expected of them. It may also have helped participants understand how different aspects of role play may be used to support the development of children's language skills, both with the children themselves and by adults who communicate with them.

Aspects of knowledge and learning.

As has been described in the section on what worked well, some aspects of knowledge and learning were positive. However, the confidence ratings for some practitioners give cause for further consideration. Some participants appeared very confident and others appeared very unconfident. This, coupled with the variability in SLT and Deaf practitioner knowledge and skills, indicates that further support in using the resources aimed at self- reflection and evaluation would have been a beneficial aspect to this course. Whilst this was acknowledged by the presenters in preparation for the course, time could not be allocated to these activities within the two days. This issues relates to the need for supervision identified within this phase and Phase 2.

As was highlighted in the previous chapter (section 4.5.2) and in Table 4.2, the data collection tools were restricted for Phase 3 in light of feedback from Phase 2. Even with these limitations on the collection of data, only half the participants responded one month after the course. The data collection methods and response rates weaken this study and severely limited the data that were collected for evaluating the course. This is discussed further in the next section (Limitations of the study – data collection and analysis).

5.5.3 Limitations of the study

Practical issues

As indicated above, several practical issues limit the findings of this study. Room size and participant numbers impacted on feedback and participation in activities. The use of written English for data collection, even with BSL/English interpreter availability, constrained some participant's feedback. The training was delivered over two days which provided limited opportunity for learning. Qualified teachers and therapists would attend continuing professional development courses over a longer period to update or learn new skills, even with their background in theory and practice.

Participant group

The group of participants was small and showed a large variability in background, knowledge, skills and confidence. While this variability will have implications for the transferability and replicability of the study findings, it probably reflects the diversity of the workforce. It also highlights some of the complicated issues that need to be addressed when working with this group of practitioners, the children they work with and their families.

Data collection and analysis

Researcher involvement in the course and feedback process inevitably introduces bias to many aspects of the Phase 3 findings. However, as an early piece of research into providing language therapy in a signed language, it provides some useful information from which to design more robust studies. In addition to the issues of researcher involvement in data collection, for this phase of the study the researcher was the only coder of the data. Examples of the data have been provided to provide some transparency for this process.

Evaluation of the training was restricted by data collection methods which led to limitations in what analysis could be completed on the participant feedback. In order to fully evaluate this training, following a recognised model such as Kirkpatrick's four steps model (2006) information would ideally have been collected in relation to the participants' reactions to the course, their learning from the course, any changes in their behaviour which occurred as a result of the training and whether these showed an impact in the workplace. The evaluation that was completed only related to participants' reaction and self-reports of behaviour change which is a severe limitation. Improvements would include more before and after measures, such as repeating the language therapy knowledge questionnaire both at the end of the course and one month after. Appraisal by less reflective methods, for example tests of learning, would also be more valid measures but would take careful planning for this group of potentially bilingual participants especially on such a short course. This method of evaluation may be more appropriate on a longer course. Evaluation of behaviour change and the result of this in the work place would ideally include more observation of participant practice and input from participants' peers and managers. The use of video to record, assess and reflect on the use of skills would be helpful. This method is used to evaluate learning for this participant group in training relating to the BSL Production Test (Herman et al., 2004). Peers and managers feedback through questionnaires would also gather data on the transfer and use of skills to the work place.

5.5.4 Conclusion from Phase 3

A two day training course on Language Therapy in BSL for Deaf practitioners, SLTs and a BSL interpreter was completed. The course contained and built on information and resources from Phase 1 and Phase 2 of this study. Feedback from participants and presenters was used to explore the usefulness of the course and areas for improvement.

The course met the expectations of the participants. The information, tools and resources which had been adapted or developed in Phases 1 and 2 were viewed as useful by participants. Over a third of the participants had used aspects of the course in their work one month after the course. Participants were keen to share information from the course, some requesting follow-up in their workplaces and others suggesting on-line access to resources. Further dissemination of the course materials would benefit SLTs, Deaf practitioners and d/Deaf children.

Aspects of the course organisation were identified for improvement. Activities and timing improvements would increase participation and opportunities for learning. Establishment of a team of co-presenters and interpreters for the course should overcome some of the limitations of this study. Further data collection and analysis to improve the evaluation of the training would also have strengthened the study.

Practitioners indicated that further training and supervision is needed to ensure they are able to further develop their own practice, enhance interventions and outcomes for children, and improve information sharing with families and other professionals.

Chapter 6 Summary, limitations and future directions

6.1 Summary of research principles

This study was undertaken in response to a clinical need identified within NDCAMHS. A review of the literature indicated that the provision of language therapy interventions in signed languages was currently of interest to the research and academic community but had not been explored in any depth (Herman et al., 2014a; Mann et al., 2014; Quinto-Pozos, 2014). This study examined the work of Deaf practitioners in terms of current practice and possible changes. It was undertaken in three phases using questionnaires and focus groups, intervention sessions and a training course. Qualitative data from each phase was analysed using deductive and inductive thematic analysis. During the process of the study, changes to the research plan were made. It became apparent that SLTs needed to be included more centrally than had been envisaged at the outset. In Phase 2, the Deaf practitioners gave positive feedback about co-working and reported that they felt it was not appropriate to work independently on language therapy with their current skills, knowledge and job roles. This resulted in increased co-working for each subsequent dyad in Phase 2. Because of the positive feedback from Deaf practitioners during Phase 2, SLTs were included in the training course for the third phase of the project.

Before the commencement of this study, the literature had indicated that d/Deaf children could have language learning difficulties in BSL (Mason et al., 2010). While some BSL assessments were available (Herman et al., 2004, 1999; Woolfe et al., 2010), there was very limited literature on intervention or practitioner skills (Marshall & Morgan, 2015; Quinto-Pozos et al., 2011). Information was lacking from Deaf practitioners working in BSL about what they did when working with this client group or their perceived learning or support needs in working with these children. Information from SLT research provided information about spoken language interventions but not signed language interventions. This study aimed to start to fill these information gaps.

6.2 Summary of findings

The study was structured in three phases in order to achieve five research aims. The findings from all phases are summarised below in relation to these research aims.

Research aim 1 - To describe how Deaf practitioners currently work with Deaf young people who have language difficulties in BSL.

Findings from all three phases have helped identify the current practice of Deaf practitioners. In Phases 1 and 2, analysis of data from different data collection methods provided evidence of the same themes. This triangulation strengthens the relevance of the findings for different Deaf practitioners. Whilst Deaf practitioners use similar skills and strategies to SLTs, findings from all three phases indicate that Deaf practitioners working with this group of children have little training, few resources or tools, and limited supervision to help them undertake this work successfully.

Deaf practitioners enjoyed focused language therapy work and reported that working with the SLT enhanced this process. In Phases 2 and 3, some Deaf practitioners reported it would not be appropriate to take on responsibility for this work alone within their current job roles and skill set.

These findings echo the findings from Phase 1, highlighting the need for training opportunities as well as increasing access to information for this group of practitioners. Extending the knowledge base and developing co-working opportunities for Deaf practitioners working with children who have language difficulties in BSL would support changes in their practice. Additionally, when reflecting on roles and responsibilities, Phase 2 data highlighted the benefits of supervision and 'on the job' training for this group of practitioners. This finding fits well with a model of experiential learning for adults (Zigmont et al., 2011) and relates to the expectations of Deaf adults for their own learning and their learning context (Richardson, 2008). Additionally, it fits with current practice for SLT assistants and TAs who are able to access training on a variety of topics related to language and communication difficulties. In addition to in-service training for SLTAs and TAs, specialist training organisations such as Elkan (http://www.elklan.co.uk/) provide courses designed for a range of practitioners but do not to date provide training related to BSL. Preliminary discussions are currently underway in Europe to consider the possibility of establishing a Europe wide training for Deaf practitioners.

Research aim 2 - To identify whether language therapy strategies and resources used for spoken language by SLTs are similar to those used by Deaf practitioners

In Phase 1, it was identified that Deaf practitioners used similar strategies and intervention techniques to those used by SLTs. However, all three phases identified

that the resources and tools for use with children learning BSL are much more limited than those available for children learning English. Resources and tools can be adapted (See Table 5-1); however, the lack of accessible information about BSL development, limited knowledge about language mixing and blending and limited training opportunities for Deaf practitioners make this task a real challenge.

Research aim 3 - To explore whether language therapy strategies and resources developed for spoken language can be adapted or developed with Deaf practitioners, to provide language therapy in BSL.

Deaf practitioners reported that using a structured approach to the language therapy intervention cycle and language therapy sessions helped them plan and review their work more effectively. In Phases 2 and 3, participants found the mediated learning experience information particularly useful as it helped them link language and behaviours with a child's ability to complete activities. In all three phases, practitioners expressed concern about the lack of accessible information on both the development of BSL (atypical and typical) and the impact of language mixing or blending between English and BSL. Participants and co-presenters in Phase 3 suggested the use of social media or a website to share information on these topics using video materials.

Research aim 4 - To use these therapy strategies and resources with Deaf practitioners, seeking feedback on their usefulness both in supporting practitioners to develop their own therapeutic skills and in supporting d/Deaf children's language skills.

Practitioner feedback from Phases 2 and 3 indicated that the strategies and resources gathered during this study, including the BSL STaR pack (Table 5-1), were useful for practitioners in their practice. In Phase 2, practitioners reported that they believed their interventions helped d/Deaf children develop their language skills. However in Phases 2 and 3, Deaf practitioners and SLTs also identified that more training, supervision and co-working opportunities were needed to embed their learning into practice. The Deaf practitioners also reported that their job roles were not always conducive to inclusion of language intervention work. Where job descriptions do not specifically include detail of the Deaf practitioner's role in language therapy intervention, it is not always possible to allocate time to this work.

Research aim 5 - To compile any useful information and resources to share with Deaf practitioners undertaking work with children who have language learning difficulties in BSL.

In Phase 3, a practitioner training course and pack was produced. Practitioner feedback on this indicated it was useful and follow-up requests by participants have led to the pack (See Table 5-1) and parts of the course being delivered in their workplaces. A Deaf practitioner and SLT who attended the course together, arranged for the researcher to attend a study day with the rest of their BSL and language therapy teams to share more information from the course and think about how to integrate the ideas into their work. The other SLT participant on the course arranged a training session with the researcher for 10 of her SLT colleagues. They are now considering how they can take this work forward as a team.

6.2.1 What else does this study tell us?

In addition to providing information related to the study aims, other topics arose which had not been anticipated within the study plan. Firstly, four topics which relate to language therapy in BSL are discussed: SLI or non-SLI; a BSL curriculum that's fit for purpose; role play; co-working and supervision. Secondly topics identified in relation to the research process will be discussed.

Reflections on language therapy in BSL

SLI or non-SLI

Although the focus of this study was the work of Deaf practitioners, the intervention phase was effective in helping to define the specific language issues for the two d/Deaf children involved. For the child involved in dyads 1 and 2, intervention in BSL demonstrated that she had the capacity to learn language that was accessible. When given a language rich environment that met her specific learning needs related to emotional and behavioural challenges and targeted support for developing her BSL skills, her language flourished and her parents recognised how her language difficulties in English impacted on her presentation. For the child involved in dyad 3, the activities supported his progression but demonstrated difficulties specific to language and other closely related cognitive skills. He continued to have difficulty with consistent use of sign phonology, however, parent and teacher awareness of this changed the communication dynamic. His problems with sequencing in language and other areas continued but adults were more able to scaffold the skills once these difficulties were identified. Differential diagnosis of each child's difficulties with language was achieved as a result of the language therapy delivered. These insights into each child's difficulties helped in planning language activities along with intervention and information sharing in other clinical areas. This preliminary evidence is important for considering the impact language

therapy in BSL may have on our understanding of individual children's difficulties. Better understanding can support further intervention planning and education adaptations to meet individual children's specific needs.

There is a current discussion in the SLT literature about the benefits of language intervention for children diagnosed with SLI and those with language difficulties not diagnosed as SLI. One aspect of this discussion highlights the challenges of exclusion criteria for children who are identified as having language learning difficulties but do not meet criteria for SLI (Reilly et al., 2014). Children who are learning BSL may face a number of challenges. They may have fluctuating hearing loss, be developing bilinguals, have additional learning difficulties, or have limited exposure to language models, leading to language deprivation. It is possible that they may face more than one of these challenges. There is an argument that any deaf child whose language is not age appropriate should have specific language intervention until the cause of their delay is identified and intervention strategies can be based on this diagnosis. As can be seen from earlier discussion, this argument is hampered by our incomplete knowledge of what age appropriate BSL looks like and the lack of practitioners qualified to provide intervention. Additionally it is hindered by the teaching and assessment tools currently available for children learning BSL. Whilst recent research has focused on the development of sign language assessment tools, it is time to switch the focus to intervention. This study has been a first step towards developing the skills of the work force and the tools, resources and information available to them.

A BSL curriculum that's fit for purpose

A topic raised by practitioners working alongside education colleagues, most strongly in Phase 3, was the curriculum for BSL tuition for children. The participants in this study reported that the NDCS Family Sign Curriculum and Signature curricula do not meet child or practitioner needs. They indicated that focus on a curriculum that followed a developmental model would be helpful. In addition to the Signature BSL courses which provide a curriculum designed for adult second language learners, a child focused, developmental plan for supporting children's language is needed. Whilst the focus of the NDCS curriculum is helpful in supporting family members around a child to learn appropriate sign, it does not address an individual child's specific language development needs. The Early Support Materials go some way to addressing this need, but only for the very youngest age groups and in a highly limited way.

Additionally it was noted by participants in Phases 2 and 3 that services are not always able to ensure their practitioners are trained to deliver interventions to give children early vocabulary, grammar or narrative language skills. Some practitioners reported working with children using methods designed for adults which they knew were inappropriate but did not know how to adapt. Others reported their 'gut feeling' guided their work. As a result, practitioners develop, express, and use ideas about interventions which may be unhelpful, without sufficient theoretical knowledge. One important example of this is role play.

Role play – what is it?

Role play and its use in training for Deaf practitioners and within interventions for children who use BSL was mentioned in all three phases by Deaf practitioners. It became apparent that there were several different meanings of role play being referred to which were not clearly defined within people's comments. Examples of these have been highlighted within each phase of this project. In some places role play was used to describe activities with children related to embodied action where children were encouraged to map gestures, signs and actions onto activities they had experienced as part of an intervention to develop vocabulary or narrative skills. At other times, the term was used to refer to a child being encouraged to adapt their language and other skills to represent another person or referent's perspective. Using these skills in their language to represent or discuss the other person's thoughts or feelings relate to the child's skills in the use of grammar in sign language (Cormier, Smith, & Zwets, 2013; Quinto-Pozos & Parrill, 2015) as well as their belief-emotion understanding (Kavanaugh, 2012). The grammatical aspects of these skills were also referred to as 'role shift' by participants. Both 'role play' and 'role shift' have BSL signs that were widely used and understood within the group of participants and were sometimes used interchangeably. Additionally 'role play' was also used to describe 'simulated learning' within the training sessions with Deaf practitioners (Zigmont et al., 2011). As participants in this study presented embodied action and simulated learning activities as useful intervention strategies within language therapy in BSL' it would be useful to develop Deaf practitioner and SLT knowledge about these terms, their similarities and differences.

In the literature on play, there is a developing understanding of the adult's role and the importance of culture (Kavanaugh, 2012; van Oers, 2013); an adult's role in play differs between cultures as do styles and topics of play. This is relevant when considering how hearing and Deaf practitioners seek to develop language using role play, embodied action and simulated learning. For children and practitioners

focusing on developing early language skills, using objects and experience can support a child's language learning using embodied action scaffolding. For example, a child and adult might engage in water play, with the adult modelling pouring and other actions through gesture, then encouraging the child to describe an action they have just completed, using gesture and scaffolding towards language. For others, grammatical development may be supported by using language to describe and then integrate different people's perspectives. For an older or more linguistically able group, children may be supported to develop an understanding of Deaf identity and culture through simulation of interactions with Deaf and hearing people. Although role play in all its forms may be a very powerful tool when considering language intervention (Joffe 2011, https://www.gallaudet.edu/clerc-center/info-to-go/literacy/literacy-it-all-connects/reading-to-students.html), the research evidence for iconicity supporting links between experience and language (Thompson et al., 2012) and the role of social pretend play in the relationship between language, theory of mind and social behaviour (Kavanaugh, 2012) needs to be understood by both SLTs and Deaf practitioners undertaking this work.

Supervision and co-working models

Whilst access to training and supervision was highlighted as an issue most clearly in Phases 2 and 3, models of supervision, coaching and co-working were not explored extensively in this study. However, in Phase 2 the Deaf practitioners and SLT researcher reported benefits from regular co-working, reflection sessions commenting that this increased a shared understanding of the child's needs and intervention planning. Additionally, Phase 3 provided the opportunity for practitioners from a range of backgrounds to meet with other practitioners and specialists in the same field and both the practitioners and specialists reported benefits from this information sharing opportunity. Developing networks and meeting opportunities for people working with children with language learning difficulties in BSL are important to support the dissemination of information. The study findings highlight that there are challenges to provide supervision and coaching to embed best practice into everyday interventions when the structures for co-working are so limited. These challenges include the limited training and co-working opportunities that currently exist for Deaf practitioners and SLTs, the limited information and resource pool for this work and the educational and working opportunities in this field for Deaf practitioners.

Reflections on the research process

Sharing a language for the research project

As highlighted in each phase of this study, the language of data collection and analysis was an important issue in this project. Ensuring the effectiveness of co-working opportunities for Deaf practitioners and SLTs relies on their skills in direct communication with each other about the children with whom they work. The dissemination of the project findings, tools and resources needs on-going consideration. Where Deaf practitioners are truly bilingual there are opportunities for information sharing with reports in English and English based dissemination methods. For SLTs who are confident in BSL, on-line resources would provide more knowledge about BSL development.

For many Deaf practitioners, like some in this study, who work on a daily basis with children and who identify themselves as preferring to use BSL, access to information and co-working opportunities needs to be addressed more creatively. Finding appropriate methods and forums by which to share information with Deaf practitioners and Deaf parents is fundamental to increasing awareness of language learning difficulties in BSL and ensuring children access appropriate support. Similar access issues need to be considered for SLTs who do not have adequate BSL skills. This study has focused on shared working between SLTs and Deaf practitioners e.g. co-working in therapy, co-presenting in training, shared publication of magazine articles (Hoskin, 2016), exemplifying how things should work in everyday practice for Deaf practitioners and SLTs. Best practice guidelines for SLT and Deaf practitioner co-working are a logical next development from these research findings, highlighting the ways professionals with different backgrounds can work effectively together to benefit the children in their care.

The personal impact of the research project

Throughout data collection in each phase, the personal impact of the research process on Deaf practitioners was noted by the SLT researcher. This study provided an opportunity for Deaf practitioners to discuss a topic that many of them felt passionate about. One practitioner commented that she wished her mother could attend a course that included information about BSL development and the importance of language access for children as she felt her mother still did not understand the practitioner's communication choices and preferences '*This course would be good for my mum to understand talking and signing. She doesn't understand signing'*. Another practitioner had a very different childhood experience. Growing up outside the UK with limited access to technology in a family of hearing

and deaf relatives where sign language was used by everyone, he struggled to understand the education and health systems as well as family reactions he encountered in the UK. These examples highlight the different personal experiences that Deaf practitioners bring to their work and how their diverse backgrounds impact on their response to a family. The Deaf practitioners and their employers need to be aware of how their past experience can impact on their practice and influence expectations of children and families. Opportunities to learn about, discuss and reflect on personal experience and its impact in the workplace are needed to ensure Deaf practitioners are supported as well as possible to address the needs of the families they work with. This is currently highlighted in the literature in relation to changes in employment of Deaf people (Kelly et al., 2016) where changes in technology, legislation and education are cited as leading to different expectations of academic and work status by Deaf people. As Deaf practitioners take on a wider range of roles beyond those historically available to them, different support, training and supervision is needed that is accessible and culturally appropriate for this group of workers.

6.3 Limitations of the study

Limitations of this study are discussed here under five headings: language use, sample size and nature, ecological validity, outcome measures and coding, and context and setting.

Language use

As has been highlighted in all three phases of this study, the use of English and BSL had implications for the data collection and analysis. Interpreting and translating data samples into another language for analysis required skill and the involvement of professionally qualified BSL/English interpreters. Some interpreters who worked on aspects of the study were familiar with the topic, others less so. This familiarity may have impacted on the interpretation or translation provide by interpreters in different contexts.

The researcher working with participants who did not share the same first language has also had an impacted on data collection. Throughout each phase the SLT researcher reflected on her BSL skills and her ability to interact effectively with study participants. Consideration of the interpretation issues highlighted above and the benefits of direct communication between researcher and participant had to be weighed against familiarity with the topic and the language competence of the researcher.

Deaf practitioner choices to complete some data collection tools in their second or non-preferred language had an impact on the data collected. Although BSL/English interpreters were available during much of the data collection, the issues explored in Phase 2 and above about working with interpreters, relationships and direct communication will have impacted on all three phases to some extent. Participants discussed BSL and English mixing in all phases. The study design and inclusion of BSL/English interpreters as well as Deaf trainers in the Phase 3 course was an attempt to minimise the impact of language mixing but it is an issue with the nature of work in this area.

Access to the information contained in this thesis is limited to practitioners who have good access to written English. Whilst tables and figures have been included to increase accessibility, the Deaf practitioner audience will need alternative methods of dissemination which are summarised in the conclusion of this chapter. The figures and tables used within the thesis will provide a useful resource for presentations, articles and papers produced to extend access to this study's findings.

Sample size and nature

A major limitation of this study is the number of participants in each phase. As an initial project in this area of research, the questionnaires and focus groups included adequate numbers of participants but from a limited number of work environments. In Phase 2, the number of participants was extremely limited. This occurred not only because of practical health and clinical issues which reduced the number of dyads from four to three but also because of the availability of participants within the clinical environment where the study was undertaken. In light of these factors, Phase 3 was adapted to include a wider range of practitioners and included a group of participants that was larger than initially planned. This developmental nature of the work led to feedback from a broader group which can be incorporated into future projects resulting from this study. Possible future developments to build on the findings from Phase 3 are described in sections 6.4 and 6.5. This study represents the very early stages of clinical and research work with SLTs and Deaf practitioners working with children with language learning difficulties in BSL.

Differences in the groups of participants have been highlighted at each phase of the research. From the demographics for each phase, it can be seen that there are differences between individuals in terms of age, education, job role, location, and experience. Throughout the project, the differences between the researcher,

trainers and individual practitioners in work experience as well as language competence and preference have been highlighted because of the impact they may have for data collection, information sharing and training. All these issues of heterogeneity within the participant group can limit the usefulness of findings. However they can also be seen as adding weight to the findings given the qualitative and exploratory nature of the study.

Ecological validity

Although agreement between the findings for each phase suggests that the results can be generalised to other situations, there are reasons why the findings should be interpreted with caution. One is the SLT researcher involvement. Firstly involvement as a researcher and colleague for many participants may have impacted on the data they provided. Additionally, had the researcher been a Deaf practitioner, different themes might have emerged; this needs consideration as the work is taken forward. The exploratory nature of this study has highlighted areas that merit further research. A case study design across a number of SLTs and Deaf practitioners would counterbalance the 'action research' approach reported here. Further research by Deaf practitioners and SLTs on their own clinical work would also add to the body of knowledge on language therapy in BSL.

Another issue to consider is the three phase structure of the study. Whilst this enabled an iterative process from the first to the third phase, this may have impacted on avenues explored and influenced data collection, researcher behaviour and findings. Tools and resources that were not identified as useful in Phase 2 were not included in Phase 3. On the other hand, adaptations to resources suggested by Deaf practitioners were used as the project progressed. Whilst this may have limited the tools used, it made the most of Deaf practitioner participation and feedback.

Outcome measures, tools and resources

Advice and support for this study was sought from different experts from a range of countries and backgrounds in relation to the development of the questions for questionnaires and focus groups as well as tools and resources which may be useful within the project. As this is a relatively new area of research, there were limitations on the number of people available with the skills and knowledge to provide input. One example of local professionals providing support for this project was in the development of questionnaires and outcome measurement tools. These were trialled in Phase 1 with three Deaf practitioners who were not eligible to be study participants. Although this was a useful process and the practitioners were

able to offer guidance for subsequent changes to tools, the pool of available advisors was limited. International experts were able to give advice via email and face to face discussion. All these sources influenced the development of tools and resources.

A major limitation in outcome measurement was the limited evaluation of the training course within Phase 3. As was highlighted in the discussion in Chapter 5, although the evaluation did provide useful data about the practitioners' reaction to the course, other aspects of training evaluation were very limited. As Kirkpatrick (2006) highlights, effective evaluation needs to provide information about how the training impacts on participant's learning, how it supports changes in their behaviour and what impact this learning and behaviour change have within their work environment.

Intensity and duration of the study

Time allocation and job roles were discussed by Deaf practitioners in Phases 2 and 3. The limited time available for data collection and discussion during this study was a concern raised in both phases. Deaf practitioners indicated that they would have welcomed more time to explore and discuss issues. It is impossible to know how much this would have altered the findings. In Phase 2, the selection of sessions with the children were dictated in part by a variety of clinical considerations: the child's presentation, availability of staff and shift patterns. The Deaf practitioners in Phase 2 commented on the challenges this presented for them, both in completing the research and fulfilling their role in the clinical team.

The intensity and duration of the project also limited the theoretical explanations and learning that were shared with Deaf practitioners. In Phase 2, whilst individual skills and strategies were discussed, they were not adequately linked to frameworks of strategies for intervention such as behaviour change techniques (Michie et al 2010) or frameworks for language therapy (Bloom and Lahey 1988, Ebbels 2014, Joffe 2011, Law and Harris, 2006). The focus on one child by one practitioner made the project possible within the clinical context. However, it limited the opportunity to explore whether Deaf practitioners developed transferable skills or learning they were able to apply to other children who had different language and learning needs. The identification of different needs and goals would require Deaf practitioners to demonstrate deeper theoretical knowledge. These skills would also support the identification of required interventions which may be presented in a more or less metalinguistic or ecological manner. Within Phase 3, additional theoretical and

written information was presented in order to mitigate these limitations in Phase 2. This addition was limited by the lack of robust evaluation of the training course. The developmental nature of this study enabled learning from one phase to be used to adapt subsequent phases (See Figure 4-1 Flow chart for Phase 2 showing intended and actual sequence, Table 5-1 Overview of BSL STaR pack showing development during project and future potential development, and Table 6-1Video resources developed and used during the project with suggestions for further development), However, the limited depth and detail of learning and evaluation of training in each phase represents a severe limitation.

Context and setting

Due to the availability of specialist Deaf practitioners, their willingness, ability and time to share information about their work, most of the participants in this study worked for NDCAMHS. In Phase 2, all the interventions were completed within an inpatient unit. This limitation of context and settings could reduce the validity of findings to other settings. However, when the number of participants is considered in relation to the number of Deaf practitioners and SLTs working with d/Deaf children (see figures in literature review - Consortium for Research in Deaf Education, 2014), the participant sample in this study probably reflects a significant proportion. This concern was addressed by the inclusion of a more varied group of practitioners in the Phase 3 training course but remains a consideration for future studies.

6.4 Implications for clinical practice

The findings of the present study highlight an urgent need for supervision and training for Deaf practitioners delivering language therapy in BSL. Whilst the number of SLTs involved as participants was limited, their feedback and that of Deaf practitioners indicates that SLTs would benefit from inclusion in shared training.

Supervision

Employers have a duty of care to ensure their employees are working within their competency and supervision is an effective way to monitor this. The duty of care not only relates to the Deaf practitioner as an employee but also to the deaf child and their family as service users. Whilst general supervision may give practitioners the opportunity to raise concerns or highlight training needs, specific supervision on providing language intervention is needed if learning and development is going to take place and practitioners are able to develop skills without negative experiences

(Zigmont et al., 2011). Supervision on intervention requires supervisors who know about language development, language difficulties and language intervention.

Deaf practitioners commented on their personal experiences of language learning either their own or those of family members. Some reported very positive experiences where all family members learned and valued signed languages regardless of their own hearing status. For others, there were more challenges with families not always understanding communication and language options and choices. There are implications for how practitioners reflect on their own experiences and the impact on the families they work with. These also need to be addressed within a supervision structure.

A supervision structure should identify who can give and who needs to receive supervision, as well as the skills each group need for this to succeed. Guidelines for the frequency and structure of supervision meetings could be developed from some of the methods and findings within this project. The aims of supervision and its links to job descriptions and practice, training need identification and work opportunities should be clear for Deaf practitioners and managers. There is an opportunity for developing a wider peer support or special interest group for this work. Some Deaf practitioners are already members of SALTIBAD but their involvement in the group could be strengthened with better funding for attendance and interpreting services.

Improved supervision practices will help identify training needs of Deaf practitioners and SLTs, however, this is only useful if training is available to meet these needs. Specific training programmes such as those described in this research should be available to meet the language and learning needs of Deaf practitioners and SLTs who work with this client group. Tools and resources that are accessible in BSL and English would enable practitioners to work across disciplines to provide effective co-working interventions for children and adults.

Training

The training in Phases 2 and 3 highlighted topics that were useful to participants within this study. Further work on the training pack could develop an effective course for Deaf practitioners and SLTs. As highlighted in Phases 2 and 3, Deaf practitioners, with the SLT researcher, developed video resources that were used in training others. The table below summarises these and indicates how they could be developed further. Additionally, these and other BSL resources used in the project could be amended and used to improve information sharing, co-working and the development of professional relationships.

Table 6-1Video resources developed and used during the project with suggestions for further development

Resource title	Used	Creation and adaptation	Development potential
Questionnaire in BSL	Phase 1 for data collection	Deaf mediator of focus groups, Deaf colleagues including Deaf practitioners, BSL/English interpreters	Online 'chat' to gather and share ideas for working with children
Typical development clips	Phase 2 in training Phase 3 in training	Deaf parents and parents from Deaf families DP clips	Wider range would be beneficial for training with online accessibility supporting learning for SLTs and DPs Atypical clips would also be useful but ethical consent to show these is challenging
Assessment clips (both children)	Phase 2, dyads for reflection Phase 3 in training	Created by DPs during sessions with children, edited for use in Phase 3.	More examples could be edited from the data collected for use in training
Therapy session clips	Phase 2, within dyads for reflection Phase 3 in training	Created by DPs during sessions with children, edited for use in Phase 3.	More examples could be edited from the data collected for use in training both in groups and within individual co-work or mentoring sessions
Glossary of linguistic terms in BSL	Not during this project	Identified as a need in Phase 2, produced in written English for Phase 3	A useful online resource if developed in BSL for DPs and SLTs
Glossary of therapeutic strategies in BSL	Produced during Phase 2 by DP 3	Created on the suggestion of a DP but in need of further development and expansion before use in training	A useful online resource if developed in BSL Useful for inclusion in future training courses
Clips of strategies in use	Used in dyad reflective practice in Phase 2	Created by DPs during sessions with children, but require editing for further use	Edited versions could be used to show several examples of each strategy or resources in use
Atypical development clips		Data but no clips gathered in phase 2. Data discussed and DPs in phase 2 identified that atypical clips would be helpful. Phase 3 participants wanted to know more about atypical development and children with additional needs.	A DP involved in all three phases has created clips with the SLT researcher to demonstrate an adult model of errors made by one child. These can be used for discussion in future training

These practitioners, as well as families and teachers of d/Deaf children, would also be supported by the development of a website to give wider access to the information and findings produced by this study. Topics that need to be highlighted in any training or website include language development and disorder, assessment techniques and tools, intervention planning and delivery, and skills in sharing information with children and their networks (Swanwick & Salter, 2014). As indicated by some participants, it is not always possible to develop skills in all these areas within certain job roles; specialist assessment and intervention centres, as suggested in the literature (Marshall & Morgan, 2015), may be needed. This model occurs for hearing children with speech, language and communication needs (SLCN), where onward referral to specialist centres supports local working. Clear care pathways support the co-working of professional for these children and enable onward referral to specialist centres. If Deaf practitioners and SLTs are able to develop co-working, through the development of care pathways, specialist clinics for further assessment will be needed. One such centre, the Sign Language and Reading Clinic, at City, University of London exists where Deaf and hearing colleagues provide integrated assessment of language. However, this does not meet the need for locally delivered interventions.

Additionally, as with services for hearing children, SLTs and Deaf practitioners will require different training and skills to work with different groups of children. As was highlighted in the literature review and Phases 2 and 3, different interventions may be appropriate for children who have specific difficulties in BSL than for those children who are developing a late first language but do not have specific language difficulties. In language therapy in spoken languages, interventions are also differentiated for specific needs. For example, there are evidence based interventions for children with motor difficulties that impact on expressive language skills and interventions for children with autism. Whilst it could be anticipated that interventions for autism may be similar in spoken and signed languages, the interventions for motor difficulties may look very different. Further clinical practice will provide evidence to identify interventions that can be adapted and which need to be developed. As this information becomes available, it will need to be integrated into care pathways and training to ensure SLTs and Deaf practitioners are able to delivery effective interventions. As this training and interventions evolve, consideration needs to be given to the development of professional qualifications and a career pathway of Deaf ‘Language Therapists’. As co-working, interventions

and care pathways are developed, the clinical outcome for children can be further evaluated.

Further dissemination of the study findings and training pack is needed to ensure that d/Deaf children with language learning difficulties in either the spoken or signed modalities are able to access interventions that best suit their needs and context. Publication and presentation of findings from this study may support this process, if targeted at the right audiences. Participants in knowledge exchange activities will need to include not only Deaf practitioners and SLTs but also families, service managers and commissioners. In addition to health providers, education and social services need access to information both in the state and non-state sectors. Additionally SLTs and Deaf practitioners working with adults may benefit from understanding the issues this study has raised as language therapy for adults who use BSL has also been identified as an area of need (Marshall, Atkinson, Thacker, & Woll, 2003). This dissemination of information would enable more discussion of good co-working, co-professional information sharing and resource allocation. The development of guidelines for use in education, health and charity organisations would ensure availability of information for families and best practice for people with language learning difficulties in BSL.

Within NDCAMHS, where a clinical need was the trigger the project, there may be a role for a national consultant SLT to initiate the development of supervision and training. Additionally, this role could facilitate co-working with local SLTs, establishment of co-working guidelines, disseminate information within the SLT profession, and stimulate further research and development of language therapy in BSL.

Furthermore, as highlighted throughout the three phases of this project there is the need for the co-development of a glossary related to language therapy in BSL for SLTs and Deaf practitioners (see chapter 4.4.1). The development of a website would enable such information to be disseminated more widely and could also support sharing of a range of tools developed within or suggested from this project. Accessible information, resources and tools will help build the knowledge base of Deaf practitioners and support shared discussion with SLTs, parents and other stakeholders.

As the role of Deaf practitioners in working with children with language learning difficulties becomes more widely understood, there may be a need to review job roles and access to education and professional qualifications such as SLT. As the

SLT profession considers different routes to qualification such as apprenticeships, the possibility of Deaf practitioners being involved in such developments arises. For Deaf practitioners currently working in these roles this research has shown that supervision and 'on the job' training are vitally needed.

6.5 Implications for future research

Further research is needed in relation to training for Deaf practitioners. Additionally, more research is needed in relation to children's different needs in relation to BSL language development and interventions.

Training programme research

As was highlighted in section 6.3, one significant limitation of this study was the evaluation of the training provided. Future research studies are needed to evaluate training programmes which support Deaf practitioners in developing and using therapeutic strategies.

Such studies could include evaluation of learning from training in relation to language development, disorder and intervention. As mentioned in relation to research aim 1 in the initial summary within this Chapter, there is a Europe wide plan to deliver online and distance learning opportunities to Deaf practitioners. A module about language development, disorder and intervention in sign could be developed from the resources used in this study. Deaf practitioners learning could then be evaluated through knowledge testing as part of the course assessment. Ideally, an objective before and after measure of their knowledge in this area would be completed. As modules in a number of areas are planned, it would be useful for Deaf practitioners not completing the module relating to language to complete the assessment too, in order to provide a control group. If enough practitioners participated, statistical analysis of learning for the group completing the module and the control group could be completed to compare the experimental group's knowledge before and after training as well as their learning compared to the controls.

A study design to evaluate behaviour change could be planned to run alongside this training module. Following identification of practitioners participating in the online module, systematic appraisal of their work with children before and after their involvement in training would be completed. Through the use of observation checklists and questionnaires, Deaf practitioners' use of therapeutic strategies and behaviour change techniques could be evaluated before, after and three months

post training. Data collection at three time points would provide a more robust evaluation of the behaviour change that had taken place. Ideally, the Deaf practitioner would complete self-appraisals, with additional appraisals completed by the practitioner's manager, supervisor and peers. Although this level of data collection may not be possible in many clinical settings, it would provide good evaluation of behaviour change following training.

Finally, evaluation of the longer term impact of this training within the work place would be recommended. In order to complete this, teams involved in the project would need to identify at the outset the results they were hoping to see. These may include the improved identification of children with language learning difficulties in BSL, positive qualitative feedback in service evaluation from families or young people or improvements on specific outcome measures e.g HONOSCA or set targets linked to language. This evaluation would be longer term and more challenging to complete due to multiple complicating factors as Kirkpatrick (2006) indicates.

Whilst the example above shows how one training project previously mentioned within this thesis could be evaluated, it would also be possible to evaluate the outcome of training more effectively when the improved Phase 3 course is presented. This could be done by improving the use of before, after and three month post training self-evaluation by SLT and Deaf practitioner participants. Ideally, this would include a number of objective measures which could be used for evaluation. For the evaluation of learning, the knowledge questionnaires could be used. For evaluation of behaviour change before, after and three month post training video clips of work with children could be used alongside self, peer or supervisor appraisal. The use of video clips would also enable independent observation and recording of behaviours and strategies used.

Alongside the improved evaluation of training, more research is needed to look at children's needs and language learning.

Studies to support different groups of children

This study has highlighted the need for further research on language development in BSL. Whilst it is important to understand the development of BSL in an environment where it is used consistently, as in the majority of language acquisition research which is based on the native signers minority. It is also important to consider language learning in other contexts, e.g. as late first language learning, where more than one signed or spoken language is being accessed and where

adult and peer language models may be limited. In these cases, it may be useful for practitioners to consider the sequence of typical language development rather than rely on age norms as the heterogeneity of this group of children and their language learning contexts makes language learning unusually complex for so many. Indeed, the strategies used in mediated learning as highlighted in Phases 2 and 3, may be more useful for some children in particular contexts than standardised assessment results as they can indicate how best to intervene with a child, rather than merely providing an age equivalent or standard score which offers limited guidance for intervention (Mann et al., 2014, 2013).

As more information becomes available on language development in different groups, this would be supported by single case studies to evaluate intervention effectiveness ((Rvachew & Matthews, 2017) and help to identify techniques that can appropriately be used depending on a child's needs (Mann et al 2014, Michie et al 2015).

The use of role play techniques in language therapy in BSL could usefully be explored further. There is evidence in the literature for language interventions using role play constructed action (Marshall & Morgan, 2015) and linking this with experiential learning (Perniss & Vigliocco, 2014). Language therapy training courses that provide experiential learning opportunities or simulated clinical learning could be used to support co-working, through Deaf friendly joint training with SLTs. This work could focus on developing knowledge with co-working strategies and skills for the health or education settings. For this to be possible, managers would need to understand the benefits of the work and guidelines for best practice would be needed.

This study has focused on a small group of practitioners and further studies are needed to explore the impact of this work with children in more detail. Whilst the usefulness of this project in identifying individual need has been discussed in Phase 2, more detailed focus on the changes seen in children's language during intervention would be helpful. It would also be beneficial to look at work with d/Deaf children who do not have mental health needs. Such studies would need to include a wider group of Deaf practitioners and SLTs working in different settings. A case study based research project collecting data across a range of settings may be most appropriate. This could focus on identifying individual children's specific difficulties with language as well as identifying intervention strategies that are helpful to them, thereby contributing to a much needed evidence base in this area.

6.6 Conclusion

In conclusion, this study has explored Deaf practitioners' report that they do work with children who have language learning difficulties in BSL and how intuition and personal experience of deafness underpins their skills, rather than training. Many use some of the same intervention techniques that are used by SLTs, however, the study identified that Deaf practitioners need to learn more about specific techniques so that they are more aware of what they are doing, when and why. Although practitioners were aware of some techniques, they did not always have a framework within which to use them. Throughout the study Deaf practitioners demonstrated that they consider some aspects of intervention that are part of SLT training such as the language therapy cycle and techniques of intervention. They also consider some aspects of intervention that relate specifically to d/Deaf children and language learning that do not apply to SLT more broadly in the same way, even in spoken language bilingualism. These include language mixing, language models and accessibility of language. Overall, the Deaf practitioners who took part in this research worked in varied ways, depending on their own skills, knowledge and past experience.

Language therapy strategies and resources can be adapted for use with children who use BSL, but this cannot happen unless Deaf practitioners and SLTs have access to training and supervision that enables them to do this. Further research on language development in BSL in different groups of d/Deaf children is also needed to support this work. Language therapy interventions can only be completed by Deaf practitioners and SLTs if they have allocated time and it is relevant to and specified in their job role. Co-working between Deaf practitioners and SLTs has emerged as a key factor for this work to be effective.

The preliminary training course developed and delivered in this research has highlighted areas of need. Going forward accessible information, tools and resources, training, and supervision, as well as guidelines for best practice should be developed to ensure Deaf practitioners and d/Deaf children are enabled to succeed where language learning difficulties in BSL are identified. If these needs are not met, d/Deaf children will continue to lack access to language therapy comparable to that available for peers who use spoken English and Deaf practitioners will continue to be under trained, under supported and undervalued.

In order to move forward from the findings of this study, focus is needed on three areas of action.

Refinement and development of:

- The BSL STaR pack – to ensure handouts and resources are accessible and updated as new research is published
- The language therapy in BSL course – to enable its delivery to other Deaf practitioners and SLTs with improvements to activities and evaluation
- A team of Deaf practitioners, SLTs and interpreters who have the skills and knowledge to take this work forward

Dissemination to:

- Deaf practitioners of the study findings, training and BSL STaR pack. Training courses, conference presentations and workshops are needed to facilitate this
- SLTs of the study findings. Magazine and journal articles are needed to develop interest in this work with access to training courses in the future.
- Academics and managers in order to influence future research and policy

Influencing of:

- Managers and policy makers through alignment and sharing of the study findings with their current priorities for service change and development

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Appendices

Appendix 1 Ethics, Information sheets and consent forms

This appendix contains;

1.1 NRES approval letter (6/6/14)

1.2 NRES substantial amendment 1 approval letter (28/7/15)

1.3 NRES substantial amendment 2 approval letter (25/2/16)

1.4 Email to potential questionnaire participants for information and consent (Phase 1)

1.5 Email circulated to potential focus group participants (Phase 1)

1.6 Focus group information (Phase 1)

1.7 Focus group consent (Phase 1)

1.8 Child and Young Person Information Sheet (Phase 2)

1.9 Child and Young Person Consent Sheet (Phase 2)

1.10 Parent/carer Information Sheet (Phase 2)

1.11 Parent/carer consent sheet (Phase 2)

1.12 Deaf practitioner information sheet (Phase 2)

1.13 Deaf practitioner consent sheet (Phase 2)

1.14 Deaf practitioner and SLT information sheet (Phase 3)

1.15 Deaf practitioner and SLT consent sheet (Phase 3)

1.1 NRES approval letter (6/6/14)

NHS
Health Research Authority

National Research Ethics Service

NRES Committee London - Bloomsbury
HRA NRES Centre Manchester
Barlow House 3rd Floor
4 Minshull Street
Manchester
M1 3DZ

Telephone: 0161 625 7815
Fax: 0161 625 7299

06 June 2014

Professor Bencie Woll
Director, Deafness Cognition and Language Research Centre UCL
UCL
DCAL
49 Gordon Square
London
WC1H 0PD

Dear Professor Woll

Study title:	**Language Therapy in British Sign Language - a pilot study to explore the use of therapeutic strategies and resources by Deaf adults working with young people who have language difficulties in BSL.**
REC reference:	**14/LO/1045**
IRAS project ID:	**133326**

The Proportionate Review Sub-committee of the NRES Committee London - Bloomsbury reviewed the above application on 05 June 2014.

We plan to publish your research summary wording for the above study on the NRES website, together with your contact details, unless you expressly withhold permission to do so. Publication will be no earlier than three months from the date of this favourable opinion letter. Should you wish to provide a substitute contact point, require further information, or wish to make a request to postpone publication, please contact the REC Manager Dr Ashley Totenhofer, nrescommittee.london-bloomsbury@nhs.net.

Ethical opinion

On behalf of the Committee, the sub-committee gave a favourable ethical opinion of the above research on the basis described in the application form, protocol and supporting documentation, **subject to the conditions specified below**.

Conditions of the favourable opinion

The favourable opinion is subject to the following conditions being met prior to the start of the study.

Additional Condition Specified by the REC:

1. Please include a copy of the Project Plan Table with the Participant Information Sheet when these are given to potential participants.

You should notify the REC in writing once all conditions have been met (except for site approvals from host organisations) and provide copies of any revised documentation with updated version numbers. The REC will acknowledge receipt and provide a final list of the approved documentation for the study, which can be made available to host organisations to facilitate their permission for the study. Failure to provide the final versions to the REC may cause delay in obtaining permissions.

Management permission or approval must be obtained from each host organisation prior to the start of the study at the site concerned.

Management permission ("R&D approval") should be sought from all NHS organisations involved in the study in accordance with NHS research governance arrangements.

Guidance on applying for NHS permission for research is available in the Integrated Research Application System or at http://www.rdforum.nhs.uk.

Where a NHS organisation's role in the study is limited to identifying and referring potential participants to research sites ("participant identification centre"), guidance should be sought from the R&D office on the information it requires to give permission for this activity.

For non-NHS sites, site management permission should be obtained in accordance with the procedures of the relevant host organisation.

Sponsors are not required to notify the Committee of approvals from host organisations.

Registration of Clinical Trials

All clinical trials (defined as the first four categories on the IRAS filter page) must be registered on a publically accessible database within 6 weeks of recruitment of the first participant (for medical device studies, within the timeline determined by the current registration and publication trees).

There is no requirement to separately notify the REC but you should do so at the earliest opportunity e.g. when submitting an amendment. We will audit the registration details as part of the annual progress reporting process.

To ensure transparency in research, we strongly recommend that all research is registered but for non-clinical trials this is not currently mandatory.

If a sponsor wishes to contest the need for registration they should contact Catherine Blewett (catherineblewett@nhs.net), the HRA does not, however, expect exceptions to be made. Guidance on where to register is provided within IRAS.

It is the responsibility of the sponsor to ensure that all the conditions are complied with before the start of the study or its initiation at a particular site (as applicable).

1.2 NRES substantial amendment 1 approval letter (28/7/15)

NHS
Health Research Authority

National Research Ethics Service

NRES Committee London - Bloomsbury
HRA NRES Centre Manchester
Barlow House 3rd Floor
4 Minshull Street
Manchester
M1 3DZ

Tel: 0161 625 7849

28 July 2015

Prof Bencie Woll
Director, Deafness Cognition and Language Research Centre UCL
UCL
DCAL
49 Gordon Square, London
WC1H 0PD

Dear Prof Woll

Study title:	**Language Therapy in British Sign Language - a pilot study to explore the use of therapeutic strategies and resources by Deaf adults working with young people who have language difficulties in BSL.**
REC reference:	**14/LO/1045**
Amendment number:	**Amendment 1**
Amendment date:	**27 March 2015**
IRAS project ID:	**133326**

- **In order to extend participant numbers and enable deaf practitioners to work with a wider group of young people, the age range for young people will increase from 8-15yrs to 8-17yrs.**

The above amendment was reviewed at the meeting of the Sub-Committee held on 23 July 2015 by the Sub-Committee in correspondence.

Ethical opinion

The members of the Committee taking part in the review gave a favourable ethical opinion of the amendment on the basis described in the notice of amendment form and supporting documentation.

There were no ethical issues raised.

1.3 NRES substantial amendment 2 approval letter (25/2/16)

NHS
Health Research Authority

London - Bloomsbury Research Ethics Committee
HRA RES Centre Manchester
Barlow House 3rd Floor
4 Minshull Street
Manchester
M1 3DZ

Tel: 0207 104 8009

25 February 2016

Prof Bencie Woll
Director, Deafness Cognition and Language Research Centre UCL
UCL
DCAL
49 Gordon Square, London
WC1H 0PD

Dear Prof Woll

Study title:	**Language Therapy in British Sign Language - a pilot study to explore the use of therapeutic strategies and resources by Deaf adults working with young people who have language difficulties in BSL.**
REC reference:	**14/LO/1045**
Amendment number:	**Amendment 2 080116**
Amendment date:	**18 January 2016**
IRAS project ID:	**133326**

- **Amendment proposes to change the way Phase 3 of the study is conducted. Enabling a wider group of staff to give feedback on the study findings.**

The above amendment was reviewed at the meeting of the Sub-Committee held on 29 January 2016 by the Sub-Committee in correspondence.

Ethical opinion

The members of the Committee taking part in the review gave a favourable ethical opinion of the amendment on the basis described in the notice of amendment form and supporting documentation.

There were no ethical issues raised.

Approved documents

The documents reviewed and approved at the meeting were:

Document	*Version*	*Date*
Notice of Substantial Amendment (non-CTIMP)	Amendment 2 080116	18 January 2016
Participant information sheet (PIS)	4	08 January 2016
Research protocol or project proposal	3	08 January 2016

Membership of the Committee

The members of the Committee who took part in the review are listed on the attached sheet.

R&D approval

All investigators and research collaborators in the NHS should notify the R&D office for the relevant NHS care organisation of this amendment and check whether it affects R&D approval of the research.

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

We are pleased to welcome researchers and R & D staff at our NRES committee members' training days – see details at http://www.hra.nhs.uk/hra-training/

14/LO/1045:	**Please quote this number on all correspondence**

Yours sincerely

[redacted]

Signed on behalf
of the Alternate Vice-Chair
Professor Faith Gibson

E-mail: nrescommittee.london-bloomsbury@nhs.net

Enclosures: *List of names and professions of members who took part in the review*

Copy to: *Ms Enitan Eboda, South West London & St George's Mental Health NHS Trust*

Ms Suzanne Emerton, R&D

1.4 Email to potential questionnaire participants for information and consent (Phase 1)

Subject – Language Therapy in BSL – a pilot project (Student Research Project UCL 13/0476)

Student researcher: Joanna Hoskin Chief Investigator: Professor Bencie Woll

My name is Joanna Hoskin, I am a Language Therapist for National Deaf CAMHS.

I am doing a research project to find out more about how we work with children and young people who have difficulties learning and using sign language.

I am asking Deaf practitioners to answer questions about what they do to help young people learn to use sign language. The questions are in BSL and written English. You can type or sign your answers.

I will use your answers to understand what tools, resources and strategies Deaf practitioners use now. This information will be used to develop training and resources with a small group of Deaf practitioners. We hope the training and resources can then be used by more people.

Information from your answers will be edited and used in the training. We will use it for discussion and for examples. All personal information will be confidential and we won't use names of people or places in any of our information. However information will be disclosed to the relevant people if something is raised which may indicate harm to someone.

When you complete the questionnaire you are giving consent for us to use the information you give.

Your answers will be transcribed and stored securely following University College, London procedures.

Here's the link to the questionnaire;

http://qapublic.eyegaze.tv/questionnaire/id/2013-07-23-192842-5WZPE0

If you have any questions, please contact me at joanna.hoskin@nhs.net.

This project is supervised by Bencie Woll (b.woll@ucl.ac.uk) and Ros Herman (r.c.herman@city.ac.uk) The study has been reviewed and approved by an NHS Research Ethics Committee (Bloomsbury).

If you have any concerns or complaints about this project which cannot be resolved through the above contacts, please contact Rosemary Varley, Head of Department, Division of Psychology and Language Sciences, UCL, Chandler House, 2 Wakefield Street, London WC1N 1PF Tel: 020 7679 4234 email: rosemary.varley@ucl.ac.uk who is independent of this project.

1.5 Email circulated to potential focus group participants (Phase 1)

Subject - 'Language therapy in BSL' – a pilot project (UCL student project 13/0476)

Dear Colleague,

Language Therapy in BSL – a pilot project

Chief investigator - Bencie Woll Student Researcher – Joanna Hoskin

We are holding focus groups to discuss more detail of what Deaf practitioners do to support children and young people who have difficulty developing BSL. This follows up on the information gathered from an online questionnaire.

We are running three groups;

1. London date/time/location etc (to be completed when booked)
2. York date/time/location etc
3. Other date/time/location etc

Each group will last about two hours and be led by Rachael Hayes, Deaf Service Consultant, Northern Arm, NDCAMHS. Information from the groups will be used to develop training and resources for working with deaf children to develop BSL. It may also be used for publication. If you attend the group, you are giving consent for us to use the information you give in this way. We will not use names of people or places so information you give will not be identifiable.

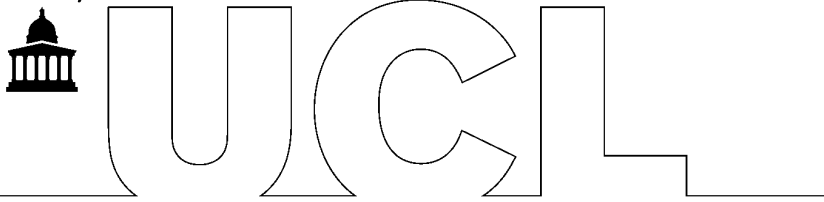
Each group will be videoed for transcription by BSL interpreters. Information from this research will be stored securely by UCL for 20years.

If you have any questions or would like to take part in a group, please contact Joanna Hoskin by email Joanna.hoskin@nhs.net or phone 020 3513 6925

This project is supervised by Professor Bencie Woll, Deafness and Cognition and Language Centre, UCL WC1H0PD Tel:020 76798670 email: B.woll@ucl.ac.uk The study has been reviewed and approved by an NHS Research Ethics Committee (Bloomsbury).

If you have any concerns or complaints about this project which cannot be resolved through the above contacts, please contact Rosemary Varley, Head of Department, Division of Psychology and Language Sciences, UCL, Chandler House, 2 Wakefield Street, London WC1N 1PF Tel: 020 7679 4234 email: rosemary.varley@ucl.ac.uk who is independent of this project.

1.6 Focus group information (Phase 1)



DEPARTMENT OF LANGUAGE AND COMMUNICATION
DIVISION OF PSYCHOLOGY AND LANGUAGE SCIENCES

NHS TRUST NAME

Language Therapy in British Sign Language – a pilot study (student project)

Chief Investigator: Bencie Woll Student Researcher: Joanna Hoskin

Information sheet for the focus group.

What is the project about?

This project will help us to develop language therapy for deaf children in BSL so that we can help them develop better language skills. You may benefit from taking part by having the opportunity to discuss language assessment and intervention. There is a risk that the project could take time out of your work schedule to attend the focus group.

What will participants have to do?

We are holding focus groups to discuss more detail of what Deaf practitioners do to support children and young people who have difficulty developing BSL. This follows up on the information gathered from an online questionnaire. Participants will discuss this information and some additional topics with Deaf colleagues.

We are running three groups. Each group will last about two hours and be led by Rachael Hayes, Deaf Service Consultant, Northern Arm, NDCAMHS;

1. Leeds 13th January on the afternoon of the Deaf Forum
2. London 23rd January on the afternoon of the Language Working Group
3. Corner House 20th Feb 1-3pm

You can attend the group nearest your place of work. Your participation in the project is funded as part of your work by NDCAMHS. You will need to get the consent of your manager to participate in this project.

Information from the groups will be used to develop training and resources for working with deaf children to develop BSL. It may also be used for publication. We will not use names of people or places so information you give will not be identifiable. However information will be disclosed to the relevant people if something is raised which may indicate harm to someone.

Each group will be videoed for transcription by BSL interpreters. Information from this research will be stored securely by UCL for up to 20years.

Consent

If you agree to take part in this project, please complete the attached consent form and return it to Joanna Hoskin, Hightrees, Building 16, Springfield University Hospital SW17 7DJ.

Questions?

If you have any questions or would like to take part in a group, please contact Joanna Hoskin by email Joanna.hoskin@nhs.net or phone 020 3513 6925

This project is supervised and has been reviewed by Professor Bencie Woll, Deafness and Cognition and Language Centre, UCL WC1H0PD Tel:020 76798670 email: B.woll@ucl.ac.uk

The study has been reviewed and approved by an NHS Research Ethics Committee (Bloomsbury)

If you have any concerns or complaints about this project which cannot be resolved through the above contacts, please contact Rosemary Varley, Head of Department, Division of Psychology and Language Sciences, UCL, Chandler House, 2 Wakefield Street, London WC1N 1PF Tel: 020 7679 4234 email: rosemary.varley@ucl.ac.uk who is independent of this project.

What if there is a problem?

If you wish to complain, or have any concerns about any aspect of the way you have been approached or treated by members of staff you may have experienced due to your participation in the research, National Health Service or UCL complaints mechanisms are available to you. Please ask your line manager if you would like more information on this.

In the unlikely event that you are harmed by taking part in this study, compensation may be available.

If you suspect that the harm is the result of the Sponsor's (University College London) or the NDCAMHS's negligence then you may be able to claim compensation. After discussing with your line manager, please make the claim in writing to Bencie Woll who is the Chief Investigator for the research and is based at Deafness and Cognition and Language Centre, UCL WC1H0PD. The Chief Investigator will then pass the claim to the Sponsor's Insurers, via the Sponsor's office. You may have to bear the costs of the legal action initially, and you should consult a lawyer about this

1.7 Focus group consent (Phase 1)

DEPARTMENT OF LANGUAGE AND COMMUNICATION
DIVISION OF PSYCHOLOGY AND LANGUAGE SCIENCES

NHS TRUST NAME

Centre Number:

Study Number: 13/0476

Participant Identification Number for this trial:

CONSENT FORM

Title of Project: **Language Therapy in BSL – a pilot study** (Student Research Project)

Name of Researcher: **Joanna Hoskin** Name of Chief Investigator: **Professor Bencie Woll**

Please initial all boxes

1. I confirm that I have read and understand the information sheet dated 21.03.14 (version 1) for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☐
2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my work or legal rights being affected. If I withdraw from the study any data collected will be withdrawn from the study. ☐
3. I understand that relevant sections of video recordings, notes and data collected during the study, may be looked at by individuals from NDCAMHS and UCL, from regulatory authorities or from the NHS Trust, where it is relevant to my taking part in this research. I give permission for these individuals to have access to these records. ☐
4. I understand that information will be disclosed to relevant people if something is raised which may indicate harm to someone. ☐
5. I agree to take part in the above study and understand video will be used to review focus groups make reliability checks and for interpretation for data analysis by BSL interpreters ☐
6. I have consent from my manager to participate in this study. ☐

Name of Participant	Date	Signature

Name of Person taking consent	Date	Signature

1.8 Child and Young Person Information Sheet (Phase 2)

DEPARTMENT OF LANGUAGE AND COMMUNICATION
DIVISION OF PSYCHOLOGY AND LANGUAGE SCIENCES

NAME OF NHS TRUST

Child and Young Person Information Sheet

Title of Project: **Language Therapy in British Sign Language – A pilot project (Student Study)**

Name of Student Researcher: **Joanna Hoskin** Name of Chief Investigator: **Prof. Bencie Woll**

INFORMATION SHEET OUTLINE To be completed with information (names and photos) relevant to each child

Language Therapy in British Sign Language

We want you to meet with NAME OF CLINICIAN and Joanna Hoskin


(INSERT RELEVANT PHOTO)


You will play games and practise signing.





This will help us learn more about helping you to use BSL.

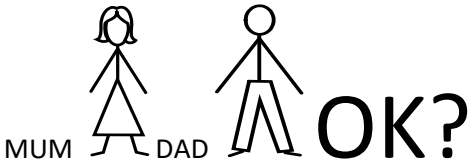
You might learn some new signing.  You might have to come to extra sessions 

Please tell us if you don't want to come to the sessions any more.

We will video you and [photo NDCAMHS Deaf practitioner NAME].

Joanna Hoskin and (INSERT NAME) will look at the videos to plan more activities.   (INSERT RELEVANT PHOTO)

We will ask your mum or dad if this is OK. We will ask them who can watch your videos.



We will tell your Care Co-ordinator if you tell us about someone getting hurt.

? Do you have questions? Or if you have any worries, please ask.

NDCAMHS care co-ordinator NAME + PHOTO

Deaf practitioner NAME  (INSERT RELEVANT PHOTO)

(job titleFSW/CMHW/SODW)

Thank you

Joanna Hoskin

1.9 Child and Young Person Consent Sheet (Phase 2)

DEPARTMENT OF LANGUAGE AND COMMUNICATION
DIVISION OF PSYCHOLOGY AND LANGUAGE SCIENCES

NHS TRUST NAME

Consent Sheet

Title of Project: **Language Therapy in British Sign Language – A pilot project (Student Study)**

Name of Student Researcher: **Joanna Hoskin** Name of Chief Investigator: **Prof. Bencie Woll**

If you want to be involved, please tick the boxes…

I agree to meet NAME/PHOTO OF CLINICIAN and Joanna Hoskin ☐

insert clinician photo  + 

I agree to videoed sessions with NAME OF CLINICIAN ☐

   photo of clinician

I agree NAME/PHOTO and Joanna Hoskin can watch the videos of me. ☐

 +  

I will tell NAME if I want to stop these activities. I can still come to other sessions. ☐

insert clinician photo

Name_____ Date_____

Signed _____

Name of person taking consent_____ Date_____

Signed _____

1.10 Parent/carer Information Sheet (Phase 2)

DEPARTMENT OF LANGUAGE AND COMMUNICATION
DIVISION OF PSYCHOLOGY AND LANGUAGE SCIENCES

NAME OF NHS TRUST

Language Therapy in British Sign Language – a pilot project (Student Research Project 13/0476)

Student researcher: Joanna Hoskin **Chief Investigator:** Professor Bencie Woll

My name is Joanna Hoskin and I work as a Language Therapist in the National Deaf Child and Adolescent Mental Health Service based in London.

Your child, NAME, has been invited to take part in this project as you and the NDCAMHS team working with you have identified that they need support to develop their language skills in British Sign Language (BSL).

What's the project about?

This project will help us to develop language therapy for deaf children in BSL so that we can help them develop better language skills. You and your child may benefit by learning more about their difficulties with language and how to help them. Your child may also develop some new language skills in BSL. Disadvantages of taking part may include the need to attend more sessions with NDCAMHS**.**

What will my child do?

I will meet with your child and their Deaf NDCAMHS practitioner to complete language assessment activities.

Your child will also meet their Deaf NDCAMHS practitioner for six sessions to work on language activities. Each of these sessions will be about one hour long. The sessions will be videoed and reviewed by the Deaf practitioner and me to plan more ways to help your child develop their language. The sessions will be held in NDCAMHS offices or where you usually meet for sessions. We will agree this and the frequency of sessions with you.

At the end of their participation, I will provide a summary of what we did with your child. You can choose whether this is a meeting, written report or both. Your child's participation in this project is funded as part of the work of NDCAMHS.

What happens to the information collected?

Information about your child will remain confidential. However information will be disclosed to the relevant people if something is raised which may indicate harm to someone.

With your consent, we will use video of your child to train other people to develop children's BSL skills. Your child's name and other identifying information will not be used.

You do not have to agree to your child taking part and you will be able to continue working with the NDCAMHS team as usual. You can decide to stop participating at any time and any information collected will be withdrawn from the study.

When this research project is written up and in any publications, all information will be anonymised: we won't use any names of people or places that would identify your child. Writing about this project will help other people work with children who have language difficulties.

Consent

If you agree to your child taking part in this project, please complete the attached consent form and return it to (INSERT NAME OF NDCAMHS CLINICIAN)

Questions?

If you have any questions, please contact Joanna Hoskin by phone 020 3513 6925, email Joanna.hoskin@nhs.net or through your NDCAMHS care co-ordinator NAME

This project is supervised and has been reviewed by Professor Bencie Woll, Deafness and Cognition and Language Centre, UCL WC1H0PD Tel:020 76798670 email: B.woll@ucl.ac.uk **The study has been reviewed and approved by an NHS Research Ethics Committee (Bloomsbury)**

If you have any concerns or complaints about this project which cannot be resolved through the above contacts, please contact Rosemary Varley, Head of Department, Division of Psychology and Language Sciences, UCL, Chandler House, 2 Wakefield Street, London WC1N 1PF Tel: 020 7679 4234 email: rosemary.varley@ucl.ac.uk who is independent of this project.

What if there is a problem?

If you wish to complain, or have any concerns about any aspect of the way you have been approached or treated by members of staff you may have experienced due to your participation in the research, National Health Service or UCL complaints mechanisms are available to you. Please ask your NDCAMHS Care Co-ordinator if you would like more information on this.

In the unlikely event that you are harmed by taking part in this study, compensation may be available.

If you suspect that the harm is the result of the Sponsor's (University College London) or the NDCAMHS's negligence then you may be able to claim compensation. After discussing with your NDCAMHS Care Co-ordinator, please make the claim in writing to the Bencie Woll who is the Chief Investigator for the research and is based at DCAL, UCL, 49 Gordon Square, London. The Chief Investigator will then pass the claim to the Sponsor's Insurers, via the Sponsor's office. You may have to bear the costs of the legal action initially, and you should consult a lawyer about this.

1.11 Parent/carer consent sheet (Phase 2)

DEPARTMENT OF LANGUAGE AND COMMUNICATION
DIVISION OF PSYCHOLOGY AND LANGUAGE SCIENCES

NHS TRUST NAME

Centre Number:

Study Number: Student Project number 13/0476

Patient Identification Number for this trial:

CONSENT FORM

Title of Project: **Language Therapy in British Sign Language – A pilot project (Student Study)**

Name of Student Researcher: **Joanna Hoskin** Name of Chief Investigator: **Prof. Bencie Woll**

Please initial all boxes

1. I confirm that I have read and understand the information sheet dated 21.03.14 (version 6) for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☐
2. I understand that my child's participation is voluntary and that we are free to withdraw at any time without giving any reason, without my child's medical care or legal rights being affected. If your child withdraws from the study, any data collected will be withdrawn from the study. ☐
3. I understand that relevant sections of my child's medical notes and data collected during the study, may be looked at by individuals from regulatory authorities or from the NHS Trust, where it is relevant to my child taking part in this research. I give permission for these individuals to have access to my child's records. ☐
4. I understand that information will be disclosed to relevant people if something is raised which may indicate harm to someone. ☐
5. I agree to my child taking part in the above study. ☐
6. I agree that my child can be videoed to; ☐

a. Record and review sessions with the Deaf practitioner and researcher to plan activities for my child ☐

b. Allow interpretation and reliability checks by BSL interpreters and another Speech and Language Therapist ☐

c. Provide examples for training in BSL language therapy. These videos may be watched by professionals who work with Deaf children. Children's names will never be used in examples.

d. Video data collected during the study, may be looked at by individuals from NDCAMHS and UCL, from regulatory authorities or from the NHS Trust where it is relevant to my child taking part in this research. I give perm for these individuals to have access to my child's recordings. ☐

Name of Parent/guardian	Date	Signature
Name of Participant	Date	Signature
Name of Person taking consent.	Date	Signature

1.12 Deaf practitioner information sheet (Phase 2)

DEPARTMENT OF LANGUAGE AND COMMUNICATION
DIVISION OF PSYCHOLOGY AND LANGUAGE SCIENCES

NAME OF NHS TRUST – Deaf practitioner information sheet

Language Therapy in British Sign Language – a pilot project (Student Study)

Student researcher: Joanna Hoskin **Chief Investigator:** Professor Bencie Woll

My name is Joanna Hoskin and I work as a Language Therapist in the National Deaf Child and Adolescent Mental Health Service based in London.

What is the project about?

You have been invited to take part in this project as you and the NDCAMHS team you work with have identified a child on your caseload who needs support to develop their language skills in British Sign Language (BSL).

This project will help us to develop language therapy for deaf children in BSL so that we can help them develop better language skills. You may benefit from taking part by learning new skills. There is a risk that the project could give you additional work.

What will participants have to do?

You will attend three days of training which will include;

- questionnaires and video clips to find out what you already know about Language Therapy in BSL
- information about language development and difficulties
- information about activities and resources for developing BSL.

After the training, we will meet with the child to complete some language assessment activities.

The child will then meet with you for six sessions to work on language activities. Each of these sessions will be about one hour long. The sessions will be videoed and reviewed by you and me together to plan more ways to help the child develop their language. The sessions will be held in NDCAMHS offices or where you usually meet for sessions. We will agree this and the frequency of sessions with the family.

At the end of their participation, I will provide a summary of what we did with the child. The family can choose whether this is a meeting, written report or both. You can be involved with this if you would like to.

You will then be asked to participate in developing the resources and strategies into a training pack for other practitioners and co-presenting at training sessions in the next phase of the project. You do not have to participate. Your participation in the project is funded as part of your work by NDCAMHS.

If you have any questions about the project, please contact Joanna Hoskin by phone 020 3513 6925 or email Joanna.hoskin@nhs.net

Consent

You will need to get the consent of your manager to participate in this project.

Information about you and the child will remain confidential. However information will be disclosed to the relevant people if something is raised which may indicate harm to someone. With your consent, we will use video of you to train other people to develop children's BSL skills. Your name and other identifying information will not be used.

You do not have to agree to take part and you will be able to continue working with the NDCAMHS team as usual. You can decide to stop participating at any time and any information gathered will be withdrawn from the study.

When this research project is written up and in any publication, all information will be anonymised. This means that we won't use any names of people or places that would identify you.

If you agree to take part in this project, please complete the attached consent form and return it to Joanna Hoskin, Hightrees, Building 16, Springfield University Hospital SW17 7DJ.

Questions?

If you have any questions, please contact Joanna Hoskin by phone 020 3513 6925 or email Joanna.hoskin@nhs.net

This project is supervised and has been reviewed by Professor Bencie Woll, Deafness and Cognition and Language Centre, UCL WC1H0PD Tel: 020 76798670 email: B.woll@ucl.ac.uk The study has been reviewed and approved by an NHS Research Ethics Committee (Bloomsbury)

If you have any concerns or complaints about this project which cannot be resolved through the above contacts, please contact Rosemary Varley, Head of Department, Division of Psychology and Language Sciences, UCL, Chandler House, 2 Wakefield Street, London WC1N 1PF Tel: 020 7679 4234 email: rosemary.varley@ucl.ac.uk who is independent of this project.

What if there is a problem?

If you wish to complain, or have any concerns about any aspect of the way you have been approached or treated by members of staff you may have experienced due to your participation in the research, National Health Service or UCL complaints mechanisms are available to you. Please ask your line manager if you would like more information on this. In the unlikely event that you are harmed by taking part in this study, compensation may be available.

If you suspect that the harm is the result of the Sponsor's (University College London) or the NDCAMHS's negligence then you may be able to claim compensation. After discussing with your line manager, please make the claim in writing to Bencie Woll who is the Chief Investigator for the research and is based at Deafness and Cognition and Language Centre, UCL WC1H0PD. The Chief Investigator will then pass the claim to the Sponsor's Insurers, via the Sponsor's office. You may have to bear the costs of the legal action initially, and you should consult a lawyer about this.

1.13 Deaf practitioner consent sheet (Phase 2)

DEPARTMENT OF LANGUAGE AND COMMUNICATION

DIVISION OF PSYCHOLOGY AND LANGUAGE SCIENCES

NHS TRUST NAME

Centre Number:

Study Number: 13/0476

Participant Identification Number for this trial:

CONSENT FORM

Title of Project: **Language Therapy in BSL – a pilot study** (Student Research Project)

Name of Researcher: **Joanna Hoskin** Name of Chief Investigator: **Professor Bencie Woll**

Please initial all boxes

1. I confirm that I have read and understand the information sheet dated 21.03.14 (version v5) for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☐
2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my work or legal rights being affected. If I withdraw from the study any data collected will be withdrawn from the study. ☐
3. I understand that relevant sections of video recordings, notes and data collected during the study, may be looked at by individuals from NDCAMHS and UCL, from regulatory authorities or from the NHS Trust, where it is relevant to my taking part in this research. I give permission for these individuals to have access to these records. ☐
4. I understand that information will be disclosed to relevant people if something is raised which may indicate harm to someone. ☐
5. I agree to take part in the above study and understand video will be used to; ☐
    a. review sessions with the clinician and researcher to plan activities and develop therapy strategies ☐
    b. make reliability checks and for interpretation for data analysis by BSL interpreters and another Speech and Language Therapist

c. Provide examples for training in language therapy for BSL to other professionals working with deaf children

6. I have consent from my manager to participate in this study.

Name of Participant	Date	Signature

Name of Person taking consent.	Date	Signature

1.14 Deaf practitioner and SLT information sheet (Phase 3)

DEPARTMENT OF LANGUAGE AND COMMUNICATION
DIVISION OF PSYCHOLOGY AND LANGUAGE SCIENCES

NHS TRUST NAME

Language Therapy in British Sign Language – a pilot study (Student Research Project UCL 13/0476)

Student Researcher: Joanna Hoskin **Chief Investigator: Professor Bencie Woll**

My name is Joanna Hoskin and I work as a Language Therapist in the National Deaf Child and Adolescent Mental Health Service based in London.

What is this project about?

You have been invited to take part in this project as you have attended the British Sign Language (BSL) Production Skills Test training course and have shown interest in participating in this training course.

This project will help us to develop language therapy for deaf children in BSL so that we can help them develop better language skills. You may benefit from taking part by learning new skills. There is a risk that the project could give you additional work during the training days.

What will participants do?

You will attend two days of training which will include;

- questionnaires and video clips to find out what you already know and your background,
- information about language development and difficulties
- information about activities and resources for developing BSL.
- Opportunities to plan, role play and review sessions (with video)

After this training, you will be asked for feedback on the content, presentation and usefulness of the two days.

Consent

Information about you will remain confidential. With your consent, we will use video of you to train other people to develop children's BSL skills. Your name and other identifying information will not be used. However information will be disclosed to the relevant people if something is raised which may indicate harm to someone**.**

When this research project is written up and in any publications, all information will be anonymised: we won't use any names of people or places that would identify you.

If you agree to take part in this project, please complete the attached consent form and return it to Joanna Hoskin, Hightrees, Building 16, Springfield University Hospital SW17 7DJ.

If you have any questions, please contact Joanna Hoskin by phone 020 3513 6925 or email Joanna.hoskin@nhs.net

This project is supervised and has been reviewed by Professor Bencie Woll, Deafness and Cognition and Language Centre, UCL WC1H0PD Tel:020 76798670 email: B.woll@ucl.ac.uk The study has been reviewed and approved by an NHS Research Ethics Committee (Bloomsbury)

If you have any concerns or complaints about this project which cannot be resolved through the above contacts, please contact Rosemary Varley, Head of Department, Division of Psychology and Language Sciences, UCL, Chandler House, 2 Wakefield Street, London WC1N 1PF Tel: 020 7679 4234 email: rosemary.varley@ucl.ac.uk who is independent of this project.

What if there is a problem?

If you wish to complain, or have any concerns about any aspect of the way you have been approached or treated by members of staff you may have experienced due to your participation in the research, National Health Service or UCL complaints mechanisms are available to you. Please ask your line manager if you would like more information on this.

In the unlikely event that you are harmed by taking part in this study, compensation may be available.

If you suspect that the harm is the result of the Sponsor's (University College London) or the NDCAMHS's negligence then you may be able to claim compensation. After discussing with your line manager, please make the claim in writing to Bencie Woll who is the Chief Investigator for the research and is based at Deafness and Cognition and Language Centre, UCL WC1H0PD The Chief Investigator will then pass the claim to the Sponsor's Insurers, via the Sponsor's office. You may have to bear the costs of the legal action initially, and you should consult a lawyer about this.

1.15 Deaf practitioner and SLT consent sheet (Phase 3)

DEPARTMENT OF LANGUAGE AND COMMUNICATION

DIVISION OF PSYCHOLOGY AND LANGUAGE SCIENCES

NAME OF NHS TRUST

Centre Number: 1

Study Number: 13/0476

Participant Identification Number for this trial:

CONSENT FORM

Title of Project: **Language Therapy in BSL – a pilot study** (Student Research Project)

Name of Researcher: **Joanna Hoskin** Name of Chief Investigator: **Professor Bencie Woll**

Please initial all boxes

1. I confirm that I have read and understand the information sheet dated 08.12.15 (version 4) for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☐
2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my work or legal rights being affected. If I withdraw from the study any data collected will be withdrawn from the study. ☐
3. I understand that relevant sections of video recordings, notes and data collected during the study, may be looked at by individuals from NDCAMHS and UCL, from regulatory authorities or from the NHS Trust, where it is relevant to my taking part in this research. I give permission for these individuals to have access to these records. ☐ ☐
4. I understand that information will be disclosed to relevant people if something is raised which may indicate harm to someone.
5. I agree to take part in the above study and understand video will be used to; ☐
    a. review sessions with the clinician and researcher to plan activities and develop therapy strategies ☐
    b. make reliability checks and for interpretation for data analysis by BSL interpreters and another Speech and Language Therapist ☐
    c. Provide examples for training in language therapy for BSL to other professionals working with deaf children

6. I have consent from my manager to participate in this study. ☐

Name of Participant	Date	Signature
Name of Person taking consent.	Date	Signature

Appendix 2 Data collection tools - questionnaires, focus group questions and rating scales

This appendix contains:

2.1 Phase 1 questionnaire in English

Phase 1 questionnaire in English. Also available on line in BSL translation

Language Therapy in British Sign Language.

This questionnaire will collect information about how Deaf adults work with children who have language difficulties in BSL. There are four sections. The first asks about you. The second asks about working with children with specific difficulties with BSL. The third section asks you to give any other ideas or information on this topic. The last section asks about your background and training.

Section 1 – Who are you?

I'm collecting information about the people who answer these questions so that I can compare whether the situation is the same across the county. Please tell me about yourself.

a. Male/female
b. Age group 16-25 26-35 36-45 46-55 56+
c. Area in which you work e.g. London, South West England

d. Describe your language preference and use Only BSL, prefer BSL and use some spoken English, bilingual in spoken English and BSL, prefer spoken English and use some BSL

Section 2 – what do you do in your work with children?

I am interested in how people work with children and young people who have difficulties learning BSL. Imagine all the children I will ask you about have people at home and in school who use BSL. Imagine you and your team have identified that a child has difficulties in BSL. The team ask you to work with the child to develop their BSL. Please tell me what you do, what you think is important, what you think about and how you would start work with each child. What age range of children do you work with?

How do you assess a child's BSL skills?

Child 1 is eight years old and has difficulty learning and using new signs. Her sign vocabulary is very small. Please tell me what you would do.

Child 2 is eleven years old. Parents and teachers tell you he does not understand everyday instructions in school or at home. His understanding of BSL is very limited. Please tell me what you would do.

Child 3 is fourteen years old. He cannot tell a clear story. When he tells you a story, it is difficult to understand or follow. Please tell me what you would do.

Section 3 – extra ideas?

Section 3 - Please tell me about any other strategies and games you use to help children develop BSL. Tell me about any work you have done to help a child develop their BSL.

Section 4 – your background

For the last section, please tell me a bit more about yourself. This will help me know about the background of people working with children who have difficulties in BSL. It will also tell me what training is available.

Do you have educational qualifications? Do you have GCSEs, A levels, degree, other – What are they?

Do you have a formal qualification in BSL? Yes or No

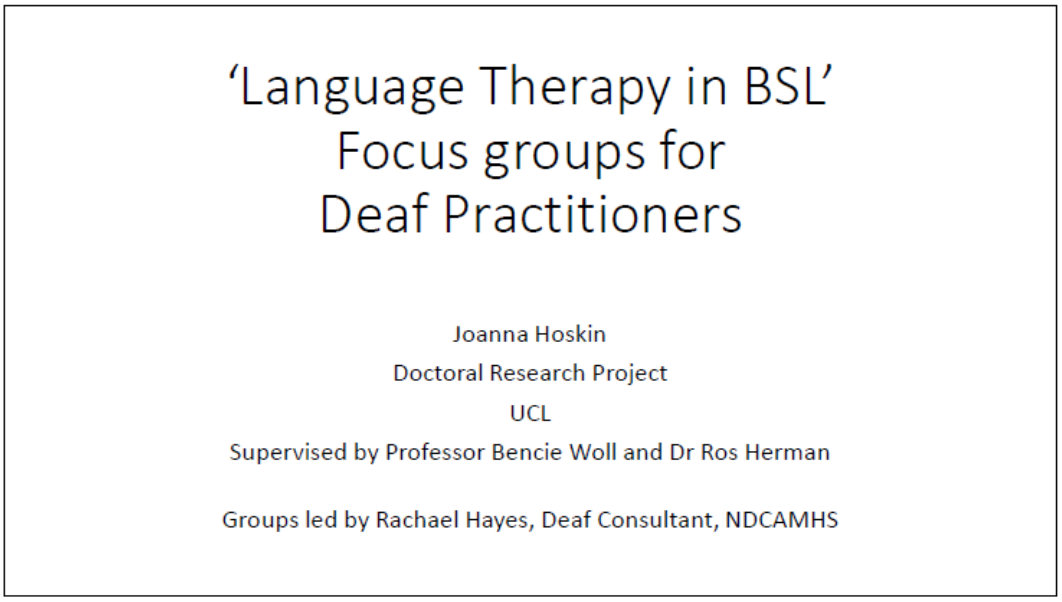
If yes, what is your qualification in BSL?

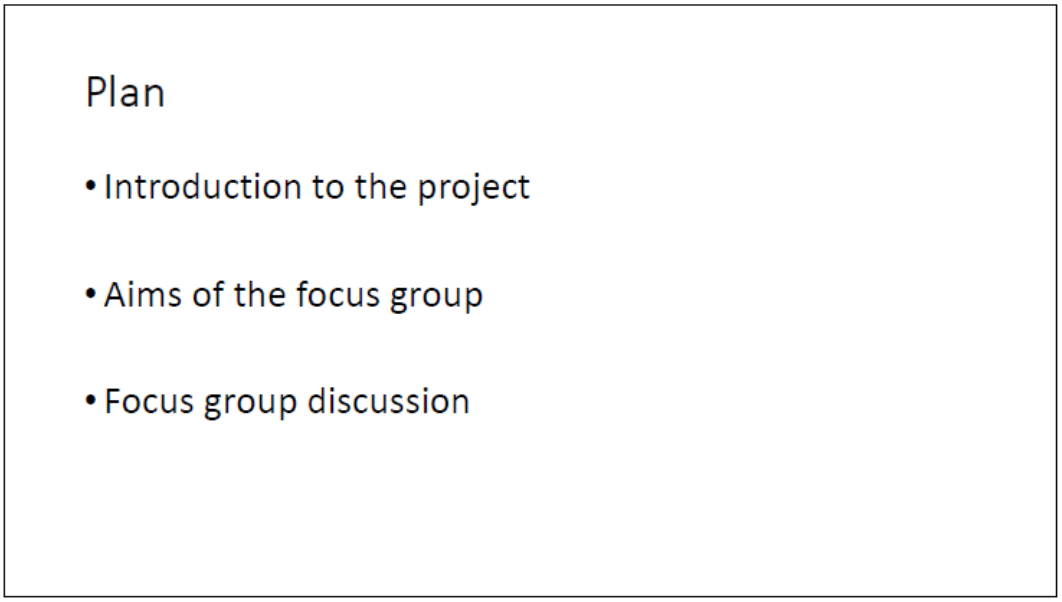
Have you done any additional training or been on courses for working with language difficulties in BSL? Yes or no.

If yes, please tell me about these – title, where, when.

Thank you for answering all these questions. If you would like feedback about this project emailed to you, please give an email address.

2.2 Focus group PowerPoint with questions





Aims of the project

This study aims to investigate three questions;

- How do Deaf practitioners currently work with Deaf young people who have language difficulties?
- Can language therapy strategies and resources developed for spoken language be adapted or developed, with Deaf colleagues, to provide language therapy in BSL?
- Can implementation of therapy strategies and resources bring observable change to Deaf practitioners' therapeutic skills or Deaf children's language skills? (Deaf practitioners will judge this)

How?

Title		Activity	Analysis
Phase 1	Questionnaire (n=15)	Online Eyegaze questionnaire in BSL or English	Deductive and inductive thematic analysis (using evidence from spoken language therapy)
	Focus Groups (n=4x4)	Explore in depth the questionnaire and responses to it	
Phase 2 (n=3/4)	Meet	Pre-training DVD for Deaf Practitioner and structured language activities	
	Train	Three day training including; Reflection on pre-training DVD and current knowledge Expectations for learning/confidence Background to language therapy Introduction to therapy skills Interventions for vocabulary skills Interventions for narrative skills	
	Intervene	Six recorded language therapy sessions completed by Deaf practitioner reviewed with SLT researcher. Deaf practitioner completes reflective log during this process	DVDs (criteria check, language/strategy counts) Reflective log (inductive thematic analysis) Discussion session information (6) (thematic analysis)
	Review	Review meeting including; Reflection on pre-training DVD and current knowledge Expectations for learning review Comparison of last session DVD and pre-training DVD	Pre-training DVD -compare pre and post training Deaf practitioner reflections with descriptive statistics Pre-training and last DVD -compare reflections (DP), language and skill use (SLT) with descriptive statistics Compare pre and post expectations of training Compare pre and post knowledge

Current Plan – to be reviewed after phase 2

Phase 3 (n=10)	Meet	Pre-training DVD for Deaf Practitioner and structured language activities	
	Train	Three day training including; Reflection on pre-training DVD and current knowledge Expectations for learning/confidence Background to language therapy Introduction to therapy skills Interventions for vocabulary skills Interventions for narrative skills	
	Intervene	At least one recorded language therapy sessions completed by Deaf practitioner reviewed with SLT researcher. Deaf practitioner completes reflective log during this process	DVDs (criteria check, language/strategy counts,) Reflective log (inductive thematic analysis) Discussion session information (1) (thematic analysis)
	Review	Review meeting including; Reflection on pre-training DVD and current knowledge Expectations for learning review Comparison of last session DVD and pre-training DVD	Pre-training DVD -compare pre and post training Deaf practitioner reflections with descriptive statistics Pre-training and last DVD -compare reflections (DP), language and skill use (SLT) with descriptive statistics Compare pre/post expectations of training and knowledge

Deaf Practitioners for phase 2 and 3 must;

- Have their manager's permission to participate
- Be working with a child or young person who has;
  - Language difficulties identified in their care plan (not ASD)
  - Parental consent to participate (or potential to get this)
  - Given consent to participate (or potential to get this)
- Be able to work with the child or young person for eight sessions
- Be interested! Let me know if you are.

Aims of the focus groups

To build on information from the questionnaire and find out;

- Who is doing this work and where (demographics)
- What **you** are doing and what **you** think about in this work
- About your experience. It is valuable. Please tell us what you know and do. Also what you don't know and want to know more about.

REMEMBER;

- We are looking at current knowledge – this is a new research area
- We know Deaf practitioners are doing lots of work and need to find out what's needed next

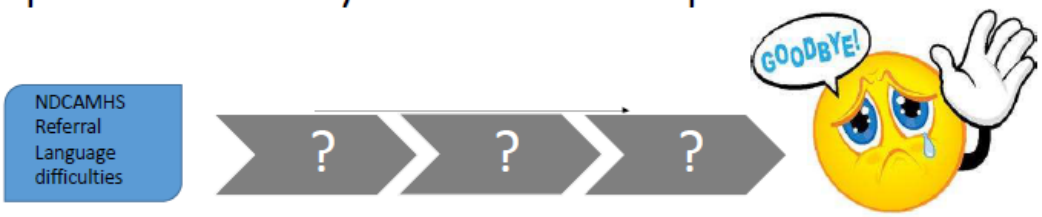
Case scenarios - these children work with adults who use BSL in school and at home

- **Child 1** is eight years old and has difficulty learning and using new signs. Her sign vocabulary is very small.
- **Child 2** is eleven years old. Parents and teachers tell you he does not understand everyday instructions in school or at home. His understanding of BSL is very limited.
- **Child 3** is fourteen years old. He cannot tell a clear story. When he tells you a story, it is difficult to understand or follow.

Please think about these scenarios and your own work in the discussion of the next eight questions.

Question 1

When a child has language difficulties, what process would you follow to help them?



Question 2

In the case scenarios, the children have difficulty understanding and expressing themselves. They have difficulty with vocabulary, phrases and stories.

In your experience, which areas of language do people work on with children who have language difficulties? We work on…….

Question 3

How do you assess the different areas of language?

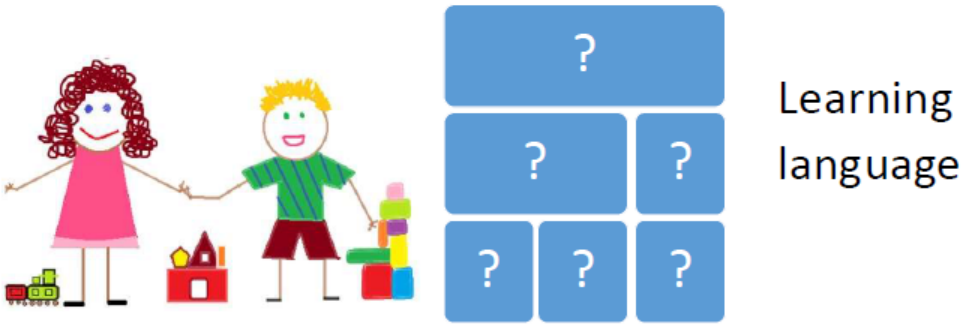
Assess or check or measure

Language Skills

HOW?

Question 4

Describe some difficulties a child might have with learning language?



Question 5

Which of **your** skills do you think about when working on a child's language skills?

YOU -

Question 6

Which of **the child's** skills do you think about when working on a child's language skills?

CHILD -

Question 7

What do you do to make a session run well?

Question 8

How do you evaluate your work with children's language?

Thank you!

Information from the questionnaire and focus groups will be summarised by March 2015 and circulated to people who have asked for feedback.

2.3 Language therapy knowledge questionnaire (DC1)

DEPARTMENT OF LANGUAGE AND COMMUNICATION
DIVISION OF PSYCHOLOGY AND LANGUAGE SCIENCES

Language Therapy in British Sign Language – a pilot project (Student Study)

Student researcher: Joanna Hoskin **Chief Investigator:** Professor Bencie Woll

Thinking about BSL – Training for Deaf practitioners - What do you know about language therapy?

(UNDER DEVELOPMENT. To be reviewed by Deaf practitioners as part of the project and may include information gathered during phase 1, from questionnaire and focus group feedback)

Which areas of language do people work on with children?

What process would you follow when working to develop a child's language?

Describe some difficulties a child might have with learning language.

Which of **your** skills do you think about when working with a child's language skills?

Which of **the child's** skills do you think about when working with a child's language skills?

How can you make a session run well?

How do you evaluate your work?

2.4 Confidence rating scale ((DC2)

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Language Therapy in British Sign Language – a pilot study (student project)
Chief investigator: Bencie Woll Student Researcher: Joanna Hoskin

Pre-/Post involvement questionnaire for Deaf Practitioners (in development – to be reviewed with Deaf practitioners during phase 2)

This questionnaire asks about your confidence in working with young people with language difficulties. Please circle a number (1= not very confident, 5=very confident)

When you work with young people with language difficulties, how confident are you about your:

Knowledge of language assessment				
1	2	3	4	5
Ability to set appropriate goals for therapy				
1	2	3	4	5
Skills in planning activities				
1	2	3	4	5
Ability to work with a child in a session				
1	2	3	4	5
Skills in assessing whether you have helped				
1	2	3	4	5

Please add any other comments related to your confidence and skills in working with children and young people with language difficulties and their families. Give work examples that show where you have, or want to improve, your confidence and skills. Write your comments on the back of this sheet or make a BSL video recording.Thank you

2.5 Expectations of training questionnaire (DC3

)

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Language Therapy in BSL-student project

Chief investigator – Bencie Woll, Student researcher – Joanna Hoskin

Expectations from training (Under development – to be reviewed with Deaf practitioners in phase 2)

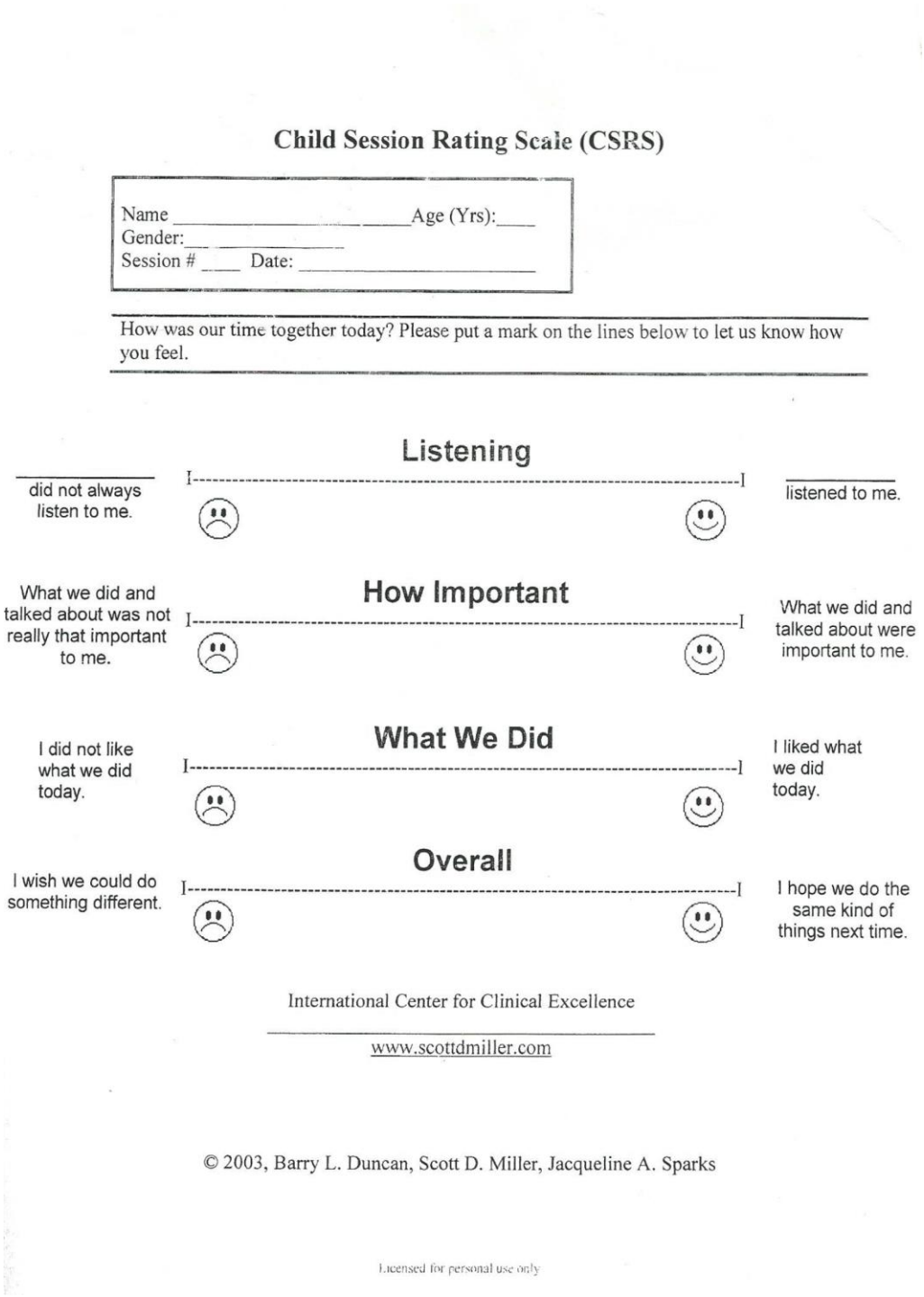
(NB This form will be completed at the start of phase 2 and reviewed at the end of phase 2.
Adaptions will be made in discussion with Deaf practitioner participants in phase 2 for phase 3)

Why did you volunteer to take part in this project?

What do you hope this project will give you? (Did this project meet your hopes and expectations?)

How will you know if the project has been useful? (How has this project been useful?)

2.6 Child rating scale (Phase 2)



Child Session Rating Scale (CSRS)

Name _____ Age (Yrs):____
Gender:_____
Session # ____ Date: _____

How was our time together today? Please put a mark on the lines below to let us know how you feel.

Listening

did not always listen to me. — listened to me.

How Important

What we did and talked about was not really that important to me. — What we did and talked about were important to me.

What We Did

I did not like what we did today. — I liked what we did today.

Overall

I wish we could do something different. — I hope we do the same kind of things next time.

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2.7 Parent questionnaire (Phase 2)

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DIVISION OF PSYCHOLOGY AND LANGUAGE SCIENCES

Language Therapy in British Sign Language – a pilot study (student project)

Chief investigator: Bencie Woll Student Researcher: Joanna Hoskin

Pre-/Post involvement questionnaire for Parents/carers (in development – to be reviewed with Deaf practitioners during phase 2)

Please tell us about your child's language difficulties.

How do you help your child with their language?

What do you hope to gain by taking part in this project? (What have you gained from taking part in this project?)

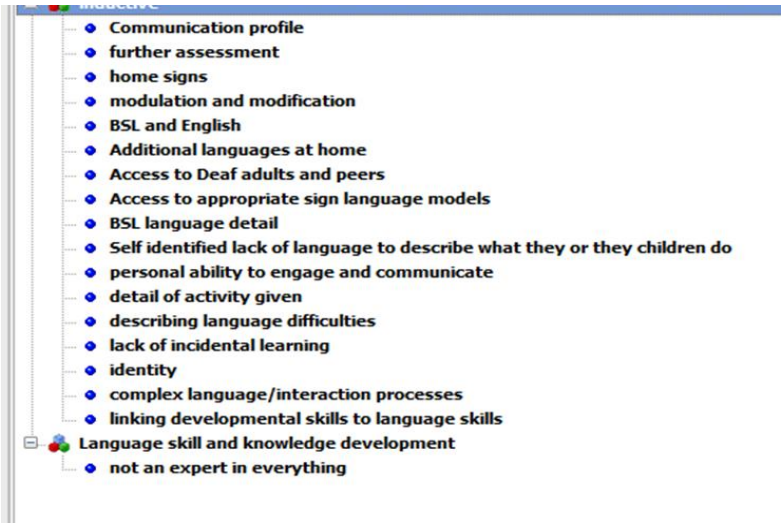
Appendix 3 Coding information

This appendix contains:

3.1 Inductive coding categories generated during initial reading of transcripts by the researcher

3.2 SLT information pack used to discuss coding with the SLT coder for reliability checks

3.1 Inductive coding categories generated during initial reading of transcripts by the researcher



3.2 SLT information pack used to discuss coding with the SLT coder for reliability checks

The SLT information pack, which was discussed face to face, included coding outline information, the deductive framework (a coding for comparison to SLT in spoken language) and a note sheet on linguistic terms for language therapy in the BSL project

Coding outline information

Two parts to coding –

Deductive – is what Deaf practitioners tell us they do that's similar in any way to SLT for hearing children?

Inductive – what other themes emerge from what Deaf practitioners tell us?

There are two sheets for the coding categories. One gives a definition of each coding category (analytical framework), the other puts the coding categories into themes or 'memos' and will be used in writing up this phase of the project (Bunning and Roulstone).

Data

13 questionnaires were completed (some partially), three focus groups were completed.

For reliability, coding is needed for the questionnaires and one focus group.

Linguistic terms

There is a sheet detailing some basic BSL linguistic terms.

Inductive coding and the reliability checks

From what I have read, once I've established the coding categories, you code and we discuss to see whether my analysis can be shown to derive from the data. The analytical framework document will be populated with evidence from the data that supports or challenges the coding categories/themes.

My questions about coding for reliability with inductive coding

Inductive coding depends on the coders' epistemological stance – can we be expected to agree?

What do 'agreement' and 'reliability' look like in qualitative analysis?

How much does the reliability coder need the generated coding categories? The bottom up/top down process of coding and themes may make 'inductive coding categories generated before refinement' useful.

Any comments, questions and observations gratefully received!

a. The inductive coding categories generated before refinement (see appendix 3)
b. Analytical framework - coding category descriptions (Table 3-2 Deductive coding categories for Phase 1 analysis)
c. Bunning and Roulstone categories, coding categories and data

Deductive framework - Coding for comparison to SLT in spoken language

BUNNING

Memo: Cycle of intervention

Definition
The four part cycle of intervention for language therapy

Coding categories

1. assessment
2. diagnosis, need identification and/or goal setting,
3. therapy,
4. evaluation

Summary of data

Deviant cases

Points for further consideration

Memo: Intervention techniques

Definition
Techniques used in language therapy intervention including:

- Engagement techniques – used to support the client or others in the therapeutic process
- Modification techniques – used to adapt the practitioner's own use of communication in response to the clients, ensuring their competencies can be identified and a balanced interaction achieved
- Facilitation techniques – used to provide timely support
- Feedback techniques – used to promote therapeutic change
- Personal maintenance techniques – used to recognise and support an individual's needs and behaviours
- Context maintenance techniques – used to ensure that the client can engage with the environment and any materials in a positive way
- Transection techniques – used to share information in a timely way with others about the client's language and communication skills including therapeutic input and change.

Coding categories

1. Engagement techniques,
2. Modification techniques,
3. Facilitation techniques,
4. Feedback techniques,
5. Personal maintenance techniques,
6. Context maintenance techniques,
7. Transection techniques

Summary of data

Deviant cases

Points for further consideration

Memo: Intervention format

Definition
How intervention is delivered

Coding categories

1. 1:1 with a client,
2. With peers in a group,
3. With another adult to develop communication opportunities and partnerships,
4. Environmental change – supporting others in the environment to make changes,
5. Advocacy – supporting the young person to make their own changes in their environment

Summary of data

Deviant cases

Points for further consideration

ROULSTONE

Memo: Types of intervention

Definition
Whether intervention should be accessed by all children, those with specific language learning needs e.g. bilingual, deprived background or those with specific, identified language difficulties.

Coding categories

1. Universal
2. targeted
3. specialist

Summary of data

Deviant cases

Points for further consideration

Memo: Categories of intervention

Definition

What resources or style of intervention practitioners use

Coding categories

1. Programmes,
2. intervention activities,
3. principles or approaches,
4. service developed programmes,
5. resources,

6. training,
7. models or theories of intervention,
8. targets of intervention

Summary of data

Deviant cases

Points for further consideration

Metalinguistic language

Definition
The language (or lack) that practitioners use or identify that describes language or language difficulties in BSL.

Coding categories
1. linguistic terms
2. English and BSL mixing
3. Foreign language learning
4. Communication Profile

Deaf cultural perspective on deaf children's language learning

Definition
How practitioners discuss deaf children's language learning from a cultural, historic or social model of language learning.

Coding categories
1. Deaf or sign language models
2. Knowledge, resources or skills in language difficulties in sign

Notes shared from discussion of Linguistic terms for Language Therapy in BSL project

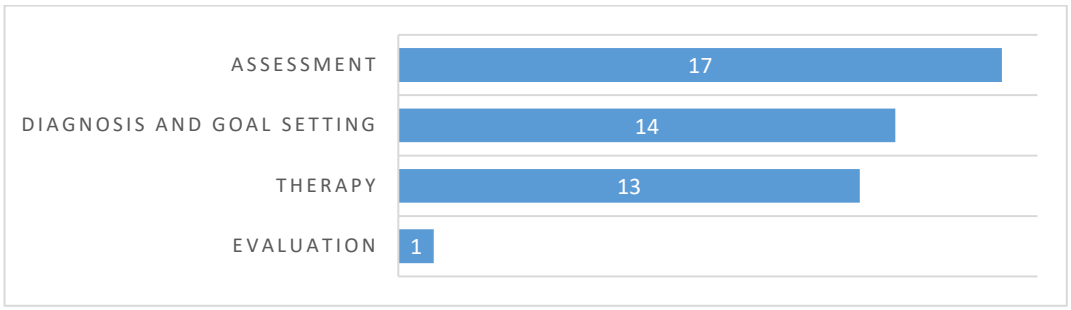
Form	The structure or 'grammar' of a language including phonology, morphology and syntax.
Meaning	The meaning conveyed by language including vocabulary, ability to convey concepts (time, aspect, size, manner
Use	The interactive use of language to share with a communication partner, pragmatic skills, language functions
Phoneme	Smallest unit that changes the meaning of a single sign – location, movement, orientation, NMF, handshape
Location (of sign on body)	Where a sign is made on the body
Handshape (within a sign)	Which shape the hand is in for a sign
Movement (within a sign)	The direction and speed of movement within a sign
Orientation (of a handshape within a sign)	Which way the hand is orientated to the body during a sign
NMF	Non-manual features including facial movement, facial expression, body movement
Morpheme	The smallest unit of meaning with a word or sign
Space - Topographic use	Using sign space to map onto the real world
Space - Non-topographic use	Using sign space to represent information in space that isn't represented by space in the real world.
Verbs – plain, directional, spatial	Action labels
noun	Naming labels
Communication partner	A person in a communication exchange
Lip-pattern	Shape of the lips that can relate to a BSL specific morpheme or a spoken English phoneme
Classifier	A handshape used to represent an item previously named (similar to a pronoun)
Lexicon – core, borrowed, productive (vocabulary)	The word or sign labels a person can understand or use
Iconicity	Visually motivated, when a sign looks like the thing is represents
Productive skills	Expressive language
Receptive skills	Understanding of language
Back channelling	Echoing of signs and movements to indicated engagement, clarification and/or understanding

Appendix 4 Thematic analysis – Numerical data for identified themes

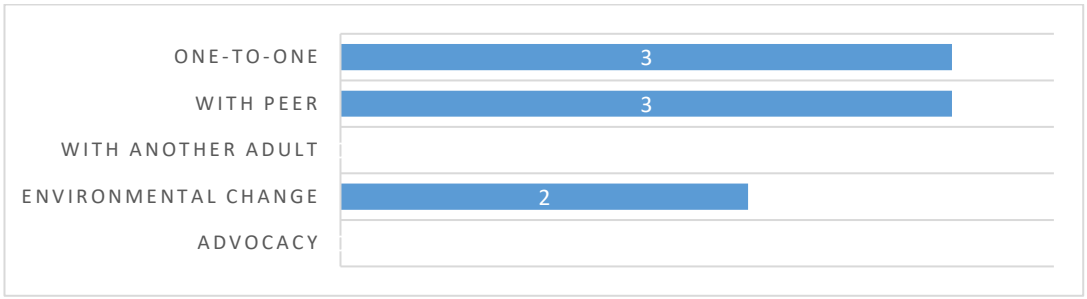
This section contains:

4.1 Themes emerging from questionnaire data

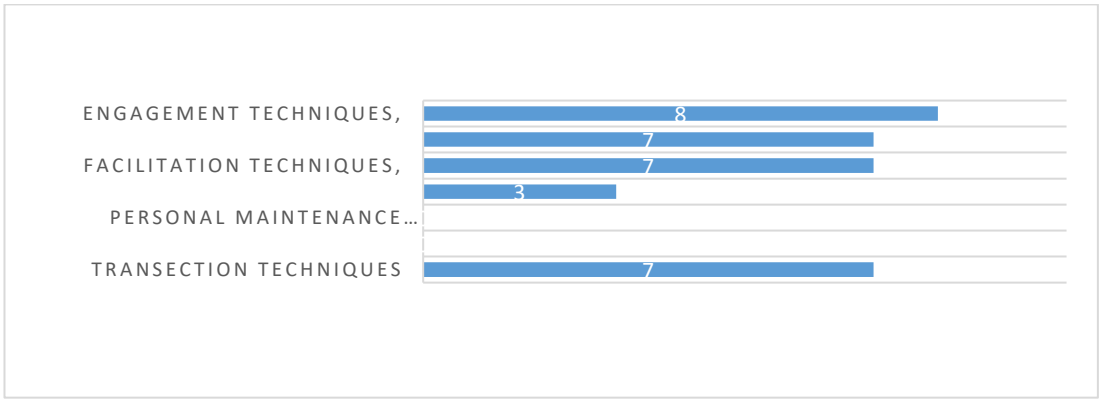
4.1.1 Intervention cycle - coding from questionnaires



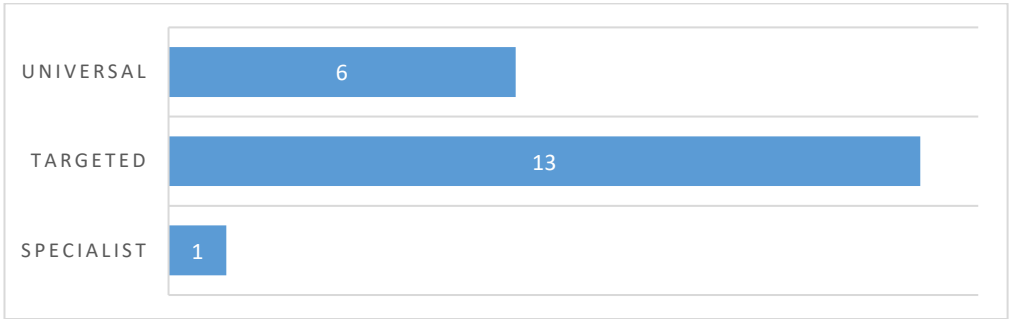
4.1.2 Format of intervention - coding from questionnaires



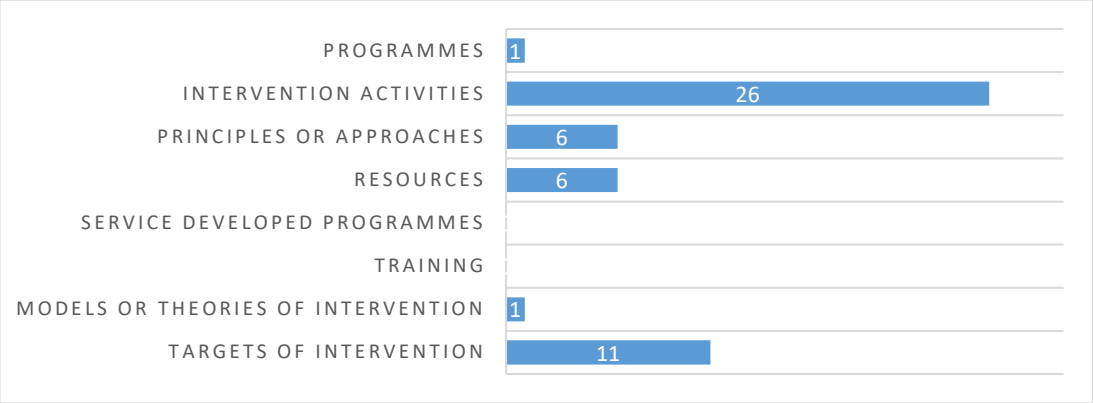
4.1.3 Intervention techniques - coding from questionnaire



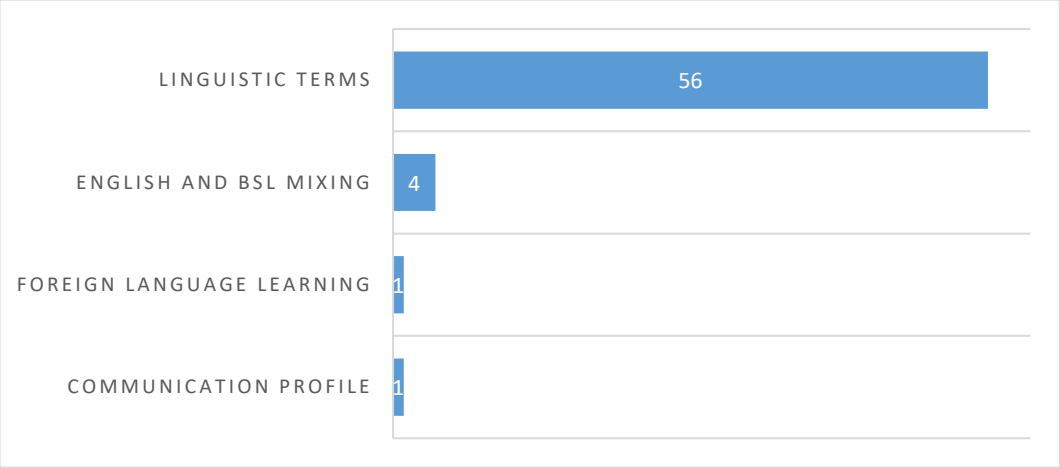
4.1.4 Types of intervention- coding from questionnaire



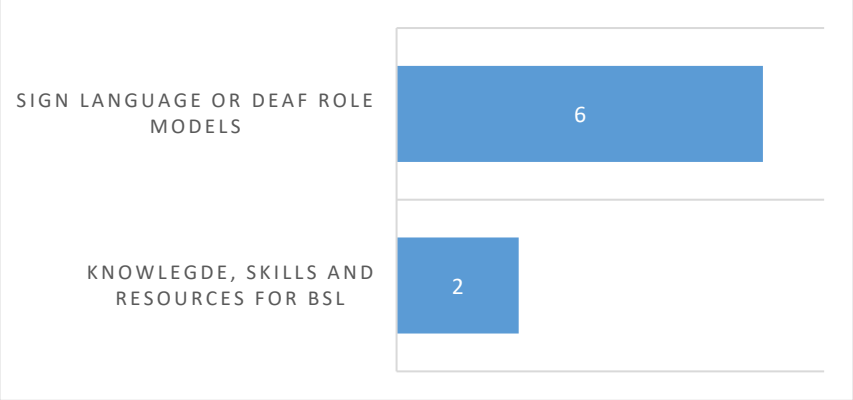
4.1.5 Categories of intervention - coding from questionnaire



4.1.6 Metalinguistics - coding from questionnaire



4.1.7 Deaf cultural perspective of discussion about deaf children's language learning



4.2 Themes emerging from focus group data

FG1= focus group 1, FG2=focus group 2, FG3 = focus group 3

4.2.1 Intervention cycle - focus group data

Coding category	Number of participants commenting	Count of comments for coding categories

Assessment	FG 1 - 4 of 4 FG 2 - 2 of 2 FG 3 - 3 of 4	FG1= 16 FG2= 16 FG3= 16
Goal setting	FG 1 - 4 of 4 FG 2 - 2 of 2 FG 3 - 3 of 4	FG1 =8 FG2 =6 FG3= 13
Therapy	FG 1 - 2 of 4 FG 2 - 2 of 2 FG 3 - 3 of 4	FG1= 2 FG2= 5 FG3= 7
Evaluation	FG 1 - 3 of 4 FG 2 - 2 of 2 FG 3 - 3 of 4	FG1= 7 FG2= 5 FG3= 9

4.2.2 Intervention techniques – focus group data

Coding category	Number of participants commenting	Count
Engagement techniques	FG 1 - 4 of 4 FG 2 - 2 of 2 FG 3 - 2 of 4	FG1=11 FG2= 4 FG3= 4
Modification techniques	FG 1 - 4 of 4 FG 2 - 2 of 2 FG 3 - 4 of 4	FG1=15 FG2 =8 FG3=11
Facilitation techniques	FG 1 - 3 of 4 FG 2 - 2 of 2 FG 3 - 3 of 4	FG1 =9 FG2= 6 FG3=11
Feedback techniques	FG 1 - 2 of 4 FG 2 - 1 of 2 FG 3 - 2 of 4	FG1 =2 FG2= 3 FG3= 3
Personal maintenance techniques	FG 1 - 3 of 4 FG 2 - 2 of 2 FG 3 - 3 of 4	FG1= 7 FG2= 5 FG3 =6
Context maintenance techniques	FG 1 - 3 of 4 FG 2 - 0 of 2 FG 3 - 2 of 4	FG1 =8 FG2 =0 FG3= 3
Transection techniques	FG 1 - 2 of 4 FG 2 - 2 of 2 FG 3 - 2 of 4	FG1= 4 FG2= 6 FG3= 2

4.2.3 Intervention format – focus group data

Coding category	Number of participants commenting	Count
One-to-one	FG 1 - 1 of 4 FG 2 - 2 of 2 FG 3 - 1 of 4	FG1= 3 FG2= 2 FG3= 2
With peer	FG 1 - 0 of 4 FG 2 - 0 of 2 FG 3 - 1 of 4	FG1 =0 FG2= 0 FG3 =1
With another adult	FG 1 - 1 of 4 FG 2 - 2 of 2 FG 3 - 1 of 4	FG1= 1 FG2= 2 FG3 =1
Environmental change	FG 1 - 0 of 4 FG 2 - 1 of 2 FG 3 - 0 of 4	FG1= 0 FG2= 1 FG3= 0
Advocacy		None

4.2.4 Types of intervention - focus group data

Coding category	Number of participants commenting	count
Universal	FG 1 - 1 of 4 FG 2 - 1 of 2 FG 3 - 2 of 4	FG1= 2 FG2= 1 FG3= 2
Targeted	FG 1 - 1 of 4 FG 2 - 1 of 2 FG 3 - 1 of 4	FG1= 1 FG2= 1 FG3= 1
Specialist		none

4.2.5 Categories of intervention - focus group data

Coding category	Number of participants commenting	Count
Programmes		No examples
Intervention activities	FG 1 - 3 of 4 FG 2 - 2 of 2 FG 3 - 4 of 4	FG1= 7 FG2= 6 FG3 =8
Principles or approaches	FG 1 - 2 of 4 FG 2 - 2 of 2 FG 3 - 2 of 4	FG1= 2 FG2= 2 FG3= 2
Service developed programmes		None
Resources	FG 1 - 2 of 4 FG 2 - 0 of 2 FG 3 - 1 of 4	FG1= 3 FG2= 0 FG3= 2
Training	FG 1 - 1 of 4 FG 2 - 1 of 2 FG 3 - 1 of 4	FG1= 1 FG2= 1 FG3 =1
Models or theories of intervention	FG 1 - 2 of 4 FG 2 - 0 of 2 FG 3 - 0 of 4	FG1= 2 FG2= 0 FG3= 0
Targets of intervention		None

4.2.6 Metalinguistics - focus group data

Coding category	Number of participants commenting	Count
Linguistic terms	FG 1 - 4 of 4 FG 2 - 2 of 2 FG 3 - 4 of 4	FG1= 25 FG2= 10 FG3= 17
English and BSL mixing	FG 1 - 4 of 4 FG 2 - 2 of 2 FG 3 - 3 of 4	FG1= 18 FG2= 4 FG3 =11
Foreign language learning	FG 1 - 3 of 4 FG 2 - 2 of 2 FG 3 - 3 of 4	FG1= 4 FG2= 4 FG3= 6
Communication profile	FG 1 - 3 of 4 FG 2 - 1 of 2 FG 3 - 1 of 4	FG1= 6 FG2 =2 FG3= 1

4.2.7 Deaf cultural perspective of discussion about d/Deaf children's language learning - focus group data

Coding category	Number of participants commenting	count
Deaf or sign language role models (or lack of them)	FG 1 - 4 of 4 FG 2 - 2 of 2 FG 3 - 4 of 4	FG1= 32 FG2= 15 FG3= 15
Knowledge, resources or skills in dealing with language difficulties in sign (or lack)	FG 1 - 4 of 4 FG 2 - 2 of 2 FG 3 - 4 of 4	FG1= 15 FG2= 12 FG3 =10

Appendix 5 Tools for use in language therapy in BSL given in Phases 2 and 3

This appendix contains the following resources from Phase 2 and resource handouts (RH) from Phase 3:

5.1 Session plan and reflective log (final version from phase 3 – RH2)

5.2 Checklist for evaluation of therapy sessions (Phase 2)

5.3 Initial Mediated Learning Sheet,

5.4 Final Mediated Learning Sheet RH3,

5.5 Mediated Learning Experience Rating Scale RH4,

5.6 Modifiability Scale RH5,

5.7 Response to mediation scale RH6

5.1 Session plan and reflective log (final version from phase 3 – RH2)

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Plan for session
Completed by_____ Date planned_____

Long term aim	
Session Aims	1.
	2.
	3.
Activity plan for the session (What games and activities? What sequence?)	
Session plan	Resources (equipment and games for each aim/activity) Strategies (your ways of working)

Review of session	Put notes here within 24hrs of the session
Thinking of the whole session, what went well (1-3 things)	
Changes or things to think about more (1-3 things)	
What I would like to do; - In the next session - For my learning	

Discussed with SLT/supervisor _____ or self-reflection date _____
Record notes from discussion/reflection below

5.2 Checklist for evaluation of therapy sessions (Phase 2)

DEPARTMENT OF LANGUAGE AND COMMUNICATION
DIVISION OF PSYCHOLOGY AND LANGUAGE SCIENCES

Language Therapy in BSL – (student project) **Checklist for evaluation of therapy sessions.**

Chief investigator – Bencie Woll Student Researcher – Joanna Hoskin

Item	Example	Use	Comment
Engagement with child	Building rapport Engaging child		
Modification of own language	Language level of vocabulary Phrase length Clear explanation of activity Repetition Rate Location/space use Active 'listening' Use of augmentative methods (symbols, plans)		

Facilitation of child's language use and understanding	Context Encouraging contribution by non-linguistic behaviours Appropriate questions (closed, forced alternative, open) Modelling Recast Pacing		
Giving feedback to the child and getting feedback	Checking meaning (repair) Feedback comments on task Feedback comments on session Checking learning		
Managing the room	Organising before session Awareness of issues in the room Acknowledgement of issues Adapting during a session (reducing distractions, lighting)		
Managing the equipment	Organising therapy equipment before session Awareness of changes needed Adaptations during a session Camera use		
Personal maintenance	Emotional Physical Behavioural		

Bunning (2004), Farmer and Griffiths (2006), Roulstone, Wren, Bakopoulou, Goodlad and Lindsay (2012), Joffe (2011)

5.3 Initial Mediated Learning Sheet,

Mediated Learning Observation form (Peña & Villarreal, 2000)

Internal social-emotional (1-5)					
Anxiety	Calm(1)	Fidgety(2)	Uncomfortable(3)	Distressed(4)	Distraught(5)
Motivation	Enthusiastic(1)	Curious(2)	Ambivalent(3)	Guarded(4)	Avoidant(5)
Tolerance to Frustration	Persistent(1)	Contrite(2)	Tentative(3)	Frustrated(4)	Rejecting(5)
Cognitive arousal (1-5)					
Task orientation	Completely understands(1)	Mostly understands(2)	Understands some(3)	Rudimentary understanding(4)	Doesn't understand (5)
Metacognition	Aware of all errors(1)	Aware of most errors(2)	Aware of some errors (3)	Unaware of most errors(4)	Unaware of any errors(4)
Non-verbal self-reward	Positive(1) about task	Positive(2) about task difficulty	Ambivalent(3)	Negative(4) about task difficulty	Negative(5) about task
Cognitive elaboration (1-5)					
Problem Solving	Systematic(1) & efficient	Organized(2) but inefficient	Sketchy plan(3)	Disorganized(4)	No plan(5)
Verbal mediation	Elaborates(1) clearly	Talks through(2) problem	Talks occasionally(3)	1-2 word(4) utterances	No verbal(5) mediation
Flexibility	Multiple(1) strategies ready	Preferred(2) strategies but can change	Occasional(3) use of more than one strategy	Recognizes(4) limitations but cannot see alternatives	Persists(5) with one strategy
External social-emotional (1-5)					
Response to feedback	Very (1) positive	Positive but hesitant(2)	No (3) response	Negative, (4) disheartened	Very(5) negative
Attention	Attentive and Focused(1)	Focused but distractible(2)	Distractible but can refocus(3)	Distracted(4) difficult to refocus	Distracted(5) and off task
Compliance	Cooperative(1)	Insecure(2)	Hesitant(3)	Uncooperative(4)	Refusing(5)

(A higher score indicates an increased need for mediator support)

Mann, W., Peña, E. D., & Morgan, G. (2014). Exploring the use of dynamic language assessment with deaf children, who use American Sign Language: Two case studies. Journal of Communication Disorders. http://doi.org/10.1016/j.jcomdis.2014.05.002

5.4 Final Mediated Learning Sheet RH3,

Mediated learning sheet 1603002

Four sections – the child's internal emotional state, engagement with the task, thoughts about the tasks and relationship with the mediator. There are three questions in each section. Rate from 1(a child who is ready to learn) -5 (a child who is challenging to work with)

How's the child's internal social-emotional state?

How comfortable are they?

Calm	Fidgety	Uncomfortable	Distressed	Distraught
(1)	(2)	(3)	(4)	(5)

How motivated are they?

Enthusiastic	Curious	Ambivalent	Guarded	Avoidant
1	2	3	4	5

How tolerant of frustration are they?

Persistent	Cautious	Tentative	Frustrated	Rejecting
1	2	3	4	5

How does the child engage with the task? Cognitive arousal (1-5)

Does the child understand the task?

Completely understands	Mostly understands	Understands some aspects	Rudimentary understanding	Doesn't understand
1	2	3	4	5

Does the child understand their success or errors?

? X

Aware of all errors	Aware of most errors	Aware of some errors	Unaware of most errors	Unaware of any errors
1	2	3	4	5

Does the child feel challenged by the task?

+ or –

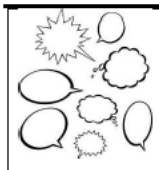
Positive about task	Positive about task difficulty	Ambivalent	Negative about task difficulty	Negative about task
1	2	3	4	5

How does the child think about the task? Cognitive elaboration

How does the child use problem solving strategies?

	Systematic& efficient	Organized but inefficient	Sketchy plan	Disorganized	No plan
	1	2	3	4	5

How does the child discuss the problem?

	Elaborates clearly	Talks or signs through problem	Talks or signs occasionally	1-2 word or sign utterances	No language used for mediation
	1	2	3	4	5

Does the child show flexibility in tasks?

	Multiple strategies ready	Preferred strategies but can change	Occasional use of more than one strategy	Recognizes limitations but cannot see alternatives	Persists with one strategy
	1	2	3	4	5

How's the child's relationship and interaction? External social-emotional (1-5)

How does the child respond to mediator feedback?

	Very positive	Positive but hesitant	No response	Negative, disheartened	Very negative
	1	2	3	4	5

How does the child attend to the mediator and task?

	Attentive and Focused	Focused but distractible	Distractible but can refocus	Distracted difficult to refocus	Distracted and off task
	1	2	3	4	5

How compliant is the child?

	Cooperative	Insecure	Hesitant	Uncooperative	Refusing
	1	2	3	4	5

Mediated Learning Observation form (Peña & Villarreal, 2000) Reprinted with permission in Mann et al 2015 (in press)

Adapted with permission from Mann and Pena for BSL STAR for Language Therapy

5.5 Mediated Learning Experience Rating Scale RH4,

Mediated Learning Experience Rating Scale

Source. Based on Lidz (1991)

Child: Mediator: Task:

Rater: Date: Location:

1. Intentionality: a conscious attempt by the mediator to influence the behaviour of the child.

0 = no evidence
1 = inconsistently present; loses involvement 2 = consistently in evidence
3 = in evidence, with statement or encouragement of a principle to induce self-regulation in the child; this principle would apply to the child's ability to maintain attention and inhibit impulsivity.

2. Meaning: moving the content from neutral to a position of value and importance; this may be done by affective emphasis or stating that the object is important and should be noticed.

0 = not in evidence
1 = calling up labels or concepts already within the child's repertory; saying that it is important and should be noticed (e.g. 'look at this'), but without elaboration.
2 = adding animation or affect to make the activity come alive and provoke interest
3 = elaboration that expands the information about the activity or objects; this elaboration addresses information that is perceptible to the child within the situation.

3. Transcendence: promotion of cognitive bridges between the task or activity and related but not accurately present experiences of the child; these may refer to the past or may be anticipate the future.

0 = not in evidence
1 = simple, non-elaborated reference to past or future experience
2 = elaborated reference
3 = elaborated reference includes hypothetical, inferential, or cause and effect thinking.

4. Competence (Task regulation): manipulation of the task to facilitate mastery by the child.

0 = not in evidence
1 = simple directions for passive manipulation of the task (e.g. holding it, moving pieces toward the child; building a model without elaborated direction)
2 = elaborated directions; nonverbal organization into a kind of conceptual grouping.
3 = induction/statement/ encouragement of strategic thinking and a planful attitude (e.g. 'Where shall we start?', 'What should we do first?') or statement of a principle that the child can use to solve similar problems.

Asad, a. N., Hand, L., Fairgray, L., & Purdy, S. C. (2013). The use of dynamic assessment to evaluate narrative language learning in children with hearing loss: Three case studies. Child Language Teaching and Therapy, 29(3), 319–342. doi:10.1177/0265659012467994

5.6 Modifiability Scale RH5

Modifiability Scale

Source. Gutiérrez-Clellen et al. (1998), adapted from Lidz (1991) and Peña (1993)

Ability to transfer

Rate how the child applies the learned strategies to a new task. For example, the child defines stimulus words, gives more than one synonym for a new word, or categorized words by part of speech during the process of producing synonyms for a new word.

Scoring criteria:
5. Independent and spontaneous use of newly learned strategies in a novel task.
4. Use of newly learned strategies in a novel task with minimal prompting
3. Use of newly learned strategies in a novel task less than 50% of the time with prompting.
2. Minimal use of newly learned strategies in a novel task less than 50% of the time with prompting.
1. Inability to carry-over newly learned strategies even with prompting and modelling.

Responsiveness to mediation
1 = not at all; 2 = low; 3 = moderate; 4 = high

Rate the child's overall responsiveness to mediation during the MLE.

Examiner effort and intensity

1 = high; 2= moderate; 3= low; 4 = minimal

Rate the amount and intensity of effort required to induce change during mediation.

Asad, a. N., Hand, L., Fairgray, L., & Purdy, S. C. (2013). The use of dynamic assessment to evaluate narrative language learning in children with hearing loss: Three case studies. Child Language Teaching and Therapy, 29(3), 319–342. doi:10.1177/0265659012467994

5.7 Response to mediation scale RH6

Response to Mediation Scale Source. Adapted from Lidz (2003)

Child's name: Date: Age: Rater: Task/Activity: Location:

A. Self-regulation of attention:
1. Unable to maintain attention to task
2. Fleeting attention to task even with input from adult
3. Maintains with significant input from adult
4. Maintains with occasional input from adult
5. Maintains with no input from adult * Does not apply

B. Interactivity with the mediator
1. Does not engage in turn-taking communication
2. Minimal engagement in turn-taking communications
3. Moderate engagement in turn-taking communications
4. Comfortable, frequent engagement in turn-taking communications
5. Initiate and responds appropriately and expansively in several chains of conversational interactions * Does not apply

C. Responsiveness to initiations of mediator
1. Resistive to mediator's initiatives
2. Passive noncompliant
3. Passive, minimally responsive
4. Consistently responsive
5. Enthusiastic and responsive * Does not apply

D. Response to challenge
1. Refuses, cries, or tantrums in response to challenge
2. Begins, but quickly gives up
3. Persists, but with significant encouragement from adult.
4. Persist and completes task, with minimal adult encouragement
5. Energized by challenge; enjoys the challenge * Does not apply

E. Use of adult as a resource when child needs help
1. Does not refer to adult
2. Nonverbally, passively signals need for help
3. Nonverbally actively seeks help
4. Verbally asks for help
5. Actively seeks help and seems to appreciate help provided * Does not apply

F. Interest in activity materials
1. Shows dislike of materials
2. Neutral reaction to materials
3. Minimal interest in materials
4. Fluctuating interest in materials
5. Consistently strong interest in materials * Does not apply

Asad, a. N., Hand, L., Fairgray, L., & Purdy, S. C. (2013). The use of dynamic assessment to evaluate narrative language learning in children with hearing loss: Three case studies. Child Language Teaching and Therapy, 29(3), 319–342. doi:10.1177/0265659012467994

Appendix 6 Handouts (BSL STaR pack)

This appendix contains all the information handouts (IH) and some resource handouts (RH) given to course participants in the BSL STaR pack during Phase 3 training which is described in Chapter 5. They are:

6.1 Glossary (IH1)

6.2 Form, content, use information sheet (IH2)

6.3 BSL development handout (IH3)

6.4 Ideas about intervention to support language or communication skills (IH4)

6.5 Practical ideas for games and resources

6.6 Language activity for parents (example) (IH5)

6.7 Website list (including website for IH7) (IH6)

6.8 Form, content, use assessment profile (RH1)

6.9 Parent/teacher sheet (RH7)

6.10 Use of language recording sheet (RH8)

6.11 Assessment sheet (RH9)

6.12 Storyboard (RH 10)

6.13 Self-reflection sheet (RH11)

6.1 Glossary (IH1)

Glossary

Here are some terms (words or signs) we use with a brief definition. These are words and definitions that helped in phase 1 and 2 of this project. They helped us discuss how we work with deaf children to support their language. More detailed explanations are available in research and literature.

Deaf practitioner - a Deaf adult whose job includes working with deaf children with language difficulties.

Intervention - action towards a goal to help development of language and communication.

Therapy - planned games or activities to develop language and communication skills

Strategies – different ways of working that adults use e.g. modelling, waiting

Tools – toys, games and equipment we use with children.

Resources – assessments, checklists and frameworks we use. Sometimes we use our resources as tools e.g. storyboard.

Evaluation – thinking about what went well and what needs to change during and after intervention.

Language difficulty – children can have difficulties because 1.the environment does not give them opportunities to learn and use language 2. They are delayed in learning language and may be delayed in other areas 3. They have specific difficulties with language

Language disorder – for hearing children learning spoken English, language disorder is diagnosed when language development does not follow a typical pattern or is more than two years behind what is expected. Different people have different views on when language disorder should be diagnosed. More research is needed language disorder for deaf children.

Mediated Learning Experience (MLE)

Standardised tests – a test that gives a child a score to compare them to other children. These tests have rules about how they must be done.

Dynamic assessment – uses tests, strategies and resources to find out what helps a child learn language. It helps us understand if a child can learn

language easily. (Dynamic assessment looks at change, static assessment gives a score).

Session - time booked to get information, work with a child (or other people) or complete another activity to help a child's language development.

Self-reflection - looking at what you have done, by yourself or with others. Thinking about what worked well for you and what you can or want to change.

Supervision - meeting with someone to discuss and reflect on your work and plan changes. People may meet with their manager, peers or someone with more or different experience.

Please write down and tell us about other terms that are not clear. This will help us develop resources and training.

6.2 Form, content, use information sheet (IH2)

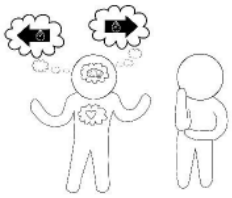
Thinking about language

We use language to understand others and express ourselves. It helps us understand the world, develop and organise o thinking and establish and maintain relationships. We also use other non-language skills to do this (gesture, understanding situational cues, facial expression and body language). Using language skills means we can understand a express more complex information and ideas.

Think about the difference between communicating with someone in a foreign country

And

Using a shared language to share complex plans, thoughts or feelings



It is sometimes useful to think about the language skills a young person has. How much language can they understand? How much language can they use to express themselves? How skilled are they as a language user?

To help us think about language, we need a framework.

One simple framework considers three aspects of language;

Content – the meaning or information the young person can understand or express. The technical word for this is semantics.

Form - what the young person's language looks or sounds like, either at the single word/sign level or as they put these units together. The technical words for this include grammar, morphology, phonology and syntax.

Use - how the young person uses language to interact with others. The technical word for this is pragmatics.

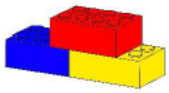
Young people who have language learning difficulties can have problems with understanding others and expressing themselves – **receptive** and **productive** language skills. They may have difficulties in one or more aspect of language – content, form or use.

Watching how a young person understands others and expresses themselves can help us know how to help them.
We need to;
Assess their language skills
Set goals of intervention
Plan and deliver intervention from our assessment and goals and
Evaluate our intervention and the young person's progress

The table below shows how these aspects of language develop as a child gets older. Different areas of language skill develop at different ages.

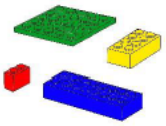
Content - meaning or information (semantics)

Vocabulary related to here and now Concrete use Restricted use-limited experience
Extended vocabulary Generalisation of vocabulary from one context to another
Abstract concepts Rapid growth in vocabulary



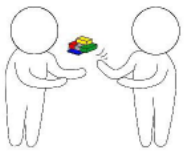
Form - what does it look or sound like (grammar, morphology, phonology, syntax etc)

Building words/ signs Immature productions Developing an awareness of phonology	Putting or understanding words/signs together Phrases and sentences start Initial awareness of grammatical rules
Phonological development nearly complete	Length and complexity of structures increases
Ability to discuss parts of words/signs	Advanced understanding and use of adult forms



Use - how is it used with others (pragmatics)

Communicative intent with restricted language skills Turn taking established
Adapts to language in different settings for different uses Increased range of functions of language
Developing conversational skills Development of understanding and discussing other's perspective More understanding and use of 'playing' with language – jokes, story telling



This framework can be used to think about assessing a young person's language skills. This information can then be used to set goals, plan intervention activities and, finally, reused to see if anything has changed with the young person's language use.

It is important to think about which changes in language will impact on a child's life and which changes they can or want to make.

6.3 BSL development handout (IH3)

	Response to therapy or play situation	Play	Interaction and pragmatic skills	Vocabulary or lexicon	verbs	narrative	Phonology (with articulation)
Early skills 0-2	Developing attention Developing shared attention Developing turn taking	Non-symbolic Pre-symbolic Auto-symbolic Decentred Combinational Planned Contoured (5+ related actions) Playing alone	Express wants and needs Requests by using quizzical face Copies signs seen used by others Negative facial expression used to mean 'no' Combines facial expression and gesture (close hand + quizzical face – give it to me)	1yr first signs inc overgeneralisation 1:6 first verbs, linguistic pointing to people 2yr possessives you, me Classifier use starts Combines 'no' headshake with sign Linking some signs/words to make sentences 2:6 1st, 2nd, 3rd person Some 'whole word' finger spelling 500 sign vocab	1:06yrs first verbs 2yrs agreement verb use starts Verb/noun distinction starts 2:6yrs agreement verbs start being correct	Able to tell simple past events	Motor skills - <u>Handshape development</u> 1.Whole hand, thumb, index finger 2. Thumb and index finger 3. • little, index and thumb • Little • Index and middle • Middle • Thumb, index middle • Thumb, little 4. complex • 9mths copying sign related gross motor gestures • 2yrs phonological reductions (handshape, movement, location, orientation, non-manual features)

Nursery Skills 3-4	Taking turns Attention skills developing – focus on person or activity and shared attention	Multi (2 different related contoured) stories within play Parallel play Shared paly Joint play	Uses language first; -to ask about things -during play -ask for help Then to; - Gives reasons -Negotiate -Playing with others -directing others -telling others about things	Understanding; quantity – one/many Size – big/small Location – dog-in-box Uses question signs Combines points + sign you car Uses negation Understands plurals (number, classifier repetition) Contrastive classifier use (long,/thin, animal/human) Uses plurals (number, classifier repetition)	3yrs inflection of spatial verbs for movement or manner signalled sequentially 3yrs verb agreement for objects	Role shift with eye gaze Character introduced but unclear (role shift/classifier)	Phonological reductions reduce, errors linked to complexity
Infant skills	Understanding simple game rules Able to lead a familiar game Have friends who share values and rules and attend same school/live nearby	Shared stories within play	Need higher level pragmatic skills		Start of co-ord use of movement and manner in spatial verbs Referent location more consistent	1.Cohesion increases Perspective shift – direct quote One character tracked 2. Use of narrative role Role shift used inconsistently over extended discourse Two characters tracked but sequentially (space overlap)	
Junior skills	Able to lead games Makes up games Negotiates on rules Tell friends about themselves, have	Friendship(7-8) Reward-cost stage Common activities, living nearby, similar expectations Normative stage shared values, rules and sanctions (9/10)			Spatial verb use with classifiers mastered	Classifier referent more established Non-manual markers of role shift more established Character referencing more accurate	

	shared interests, share information	Empathic stage understanding, self disclosure, shared interests (11-12)				Features of role shift more consistent over extended discourse	
Techniques and tools	MLE sheets Observation Enactment processes			Mann and Marshall (2012) Mapping form to meaning Network building categorical including e.g. superordinate (fruits) and schematic (items linked to bath) Graded Meaning recognition – 1 sign, find the picture Form recognition – one picture, find the sign Form recall - naming Meaning recall – what does this mean?	Herman 2014 SLI - particular difficulties with; Person agreement Spatial verb morphology Use of metacognitive verbs to enhance narratives	Herman 2 levels of structure 1. Local structure - sentence/event Tense, pronouns, connectives 2. Global structure Plot Rathmann et al (2007) Make implicit skills explicit (link to MLE)	

6.4 Ideas about intervention to support language or communication skills (IH4)

IH4 - Ideas about intervention to support language or communication skills

This handout provides a summary of useful terms and suggestions for language intervention. Most are from Speech and Language Therapy, some are from phase 1 and 2 of this project.

Definition

An intervention – an action, technique, activity or procedure (or combination) that reflects a shared aim to improve or prevent a negative outcome related to a child's speech, language and communication skills. This can include the modification of barriers or facilitators to change and the modification of an environment to facilitate communication development (Roulstone, Wren, Bakopoulou, & Lindsay, 2012)

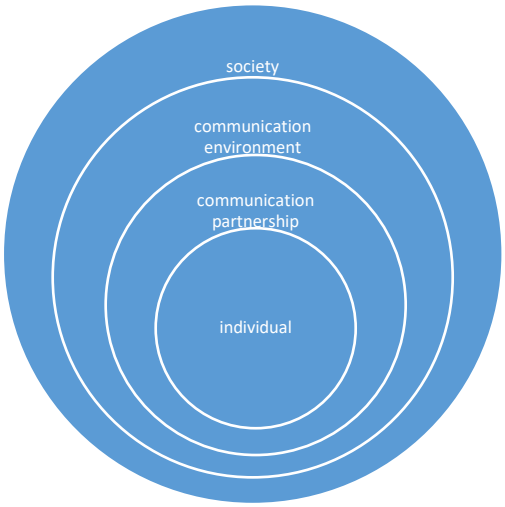
In summary - action towards a goal to benefit the development of language and communication

How you might work

Karen Bunning provided a description of frameworks and processes to help SLT students (2004)

1. Frameworks for intervention - Thinking about the system and context
    a. Cycle of intervention
    b. Cultural diversity
    c. Identity and psychological state
    d. Construction of intervention
    e. Enactment of intervention
2. Processes of intervention – Thinking about your work and skills
    a. Therapeutic interaction with the individual
    b. Enhancing the communication partnership
    c. Restructuring the social environment
    d. A place in society through advocacy
    e. Integrated intervention
3. Glossary of enactment processes – Thinking about what you do in a session

Engagement	Modification	Facilitation	Feedback	Personal maintenance	Context maintenance	Transection
Attention call	Adapting communication	Encouraging contribution	Checking contribution	Emotional acknowledgement /support	Equipment organisation	Soliciting information
Inclusion call	Ascribing meaning	Modelling	Differential feedback	Physical/sensory acknowledgement /support	Setting organisation	Giving information/advice
	Checking interpretation - check I understand	Production call	Evaluative feedback	Behavioural acknowledgement /support		Providing instructions
	Checking understanding – check you understand	Assisting contribution	Summative feedback			Framing/negotiating
			Acknowledging contribution			Explaining rationalising
						Recording



Intervention journeys can be mapped on the centre of influence – what are you working on and who are you working with. This is also covered in the ecological approach to language planning supported by the BSL consortium (Bunning, 2004; Swanwick & Salter, 2014).

Outcomes or areas of language and communication SLTs target (Roulstone, 2012)

Communication	**Language**	**Speech***	**Fluency****	**Social/educational**
Attention and listening	Understanding	Intelligibility	Increased participation	Independence
Communication skills	Expression	Phonological awareness	Awareness of fluency	Access to the curriculum
Social skills	Vocabulary	Consistency	Reduced severity of stutter	Self monitoring
Inference/ reasoning	Narrative	Sound system	Decreased stuttering	Enjoyment of communication
Provision of a means of communication	Word finding	Oromotor skills		Improved behaviours
				Greater inclusion
				Opportunities to communicate
				Improved relationships
				Confidence

*motor and phonological skills in speech are similar to the motor and phonological skills in sign

**stuttering occurs in sign languages but appears to be less frequent

Strategies you might use

Research gives us lots of ideas about how to encourage children to understand and use language. Here are some ideas from four projects. From our work, strategies that work in English can also work in BSL. Some may need adaptation e.g. 'listen attentively' needs to be 'watch attentively'.

Conversational principles for facilitating child talk (Farmer & Fleur, 2006)

1. Create a context for conversation
2. Comment on the child's play and activity
3. Talk with, not at the child
4. Be patient
5. Don't overload conversation
6. Be personal
7. Don't cross-examine, ask open, genuine questions
8. Avoid correcting
9. Listen attentively to the child
10. Extend the child's utterances and reflect back what the child has said
11. Offer your own speculations and reasons
12. Ask questions that offer a chance to answer
13. Contribute information when asked to do so
14. Provide a model of high quality spoken language

SLTs' use of principles/approaches (Roulstone, 2012)

1. Modelling
2. Creating a language rich environment
3. Repetition
4. Visual approaches to support language
5. Providing feedback
6. Forced alternatives
7. Waiting for response
8. Commenting
9. Reducing distractions
10. Reducing questions
11. Differentiating the curriculum
12. Extending
13. Using key words
14. Visual timetables
15. Signing
16. Use of symbols
17. Chunking
18. Total communication
19. Increasing awareness of errors
20. Parent child interaction (PCI)
21. Using objects of references
22. Use of alternative and augmentative communication
23. Task management boards Workstations
24. Other principle or strategy used in intervention
25. Use of British Sign Language

How Deaf adults support children's attention to language in nursery. (S. Smith & Sutton-Spence, 2005)

1. Use bigger signs
2. Sign on the child's body
3. Wait for the child to look at them
4. Do things to grab the child's attention i.e. play games
5. Displace their signing so the child can look at it easily
6. Get down to child's level
7. Sign slower and repeat signs

Narrative intervention Programme (V. Joffe, 2011) General strategies that can be used to enhance student performance and storytelling

1. Attention
2. Listening
3. Repetition
4. Vary the context of what is being learned
5. Summarising
6. Monitor your own language and communication
7. Model appropriate language behaviour
8. Expansion
9. Recasting
10. Cueing
11. Providing a range of different examples
12. Reinforce positive behaviour
13. Recap and revise
14. Use a multisensory approach
15. Exaggerate prosodic features
16. Facial expression and body language
17. Use role play
18. Encourage self-monitoring and evaluation
19. Ensure new concepts are understood
20. Playing the fool and using verbal absurdity
21. Using negative examples (correcting errors)
22. Ask focused questions
23. The use of forced alternatives
24. Build on the students experiences
25. Make the sessions as functional and real as possible
26. Upgrade and downgrade tasks
27. Emphasise independent learning

Practical ideas for games and resources

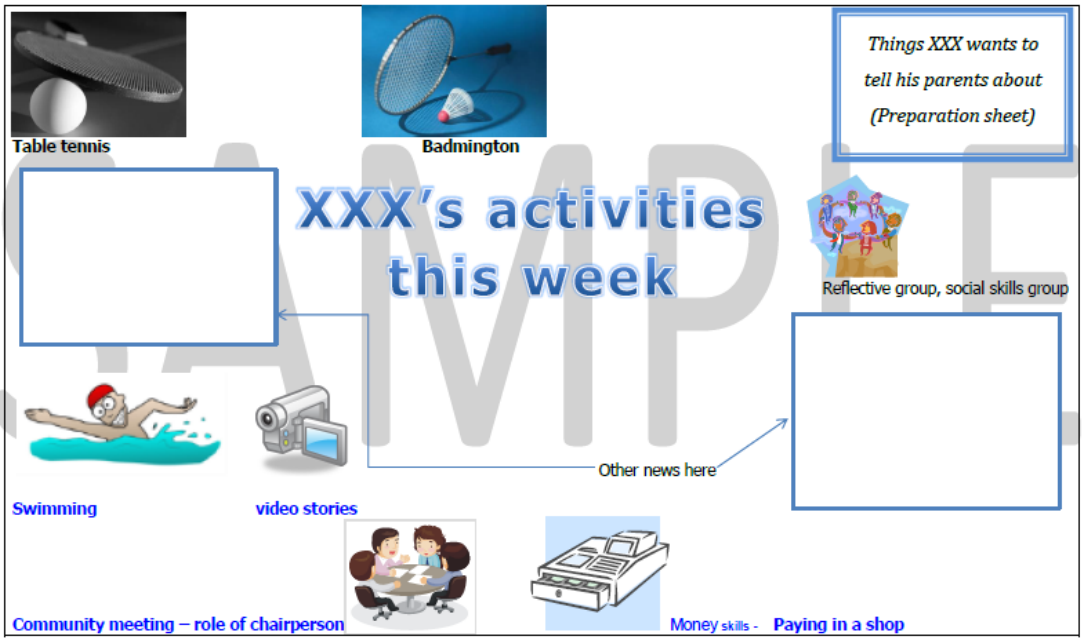
Here are some ideas from the papers cited above and our work with Deaf practitioners in phase 1 and phase 2

Programmes	Activities	Principles and approaches
Colourful semantics	Auditory and visual memory games	Visual approaches to support language
Social stories	Barrier games	Modelling language
Language for thinking	Phonological awareness	Reducing distractions
Socially speaking	Narrative therapy	Waiting for a response
Becky Shanks narrative packs	Auditory discrimination	Differentiating the curriculum
PECS	Story recall from DVD or pictures	Reducing questions
Talkabout	Picture description	Forced alternatives
Social use of language	Card games –pairs, snap, bingo	Using key words/signs
Living language	Doll play	Visual timetables
Comic strip conversations	Lego	Providing feedback
Narrative Intervention programme	Role play – about a picture, picture sequence or event	Explaining past events
Smile therapy	Telling stories from a picture book	Recast – repeat and expand
Black Sheep Press resources	Chinese whispers	Visual timetables
NDCS family sign curriculum	Boxed games available in shops	Video review (self or others)
	Craft and art	Using photos
	Whiteboard for shared drawing	Using sign graphics
	Cooking	

Deaf practitioners and Speech and Language Therapists working together will produce more ideas for activities and approaches. They will also be able to work together to adapt programmes appropriately.

6.5 Language activity for parents (example) (IH5)

IH5 - Language activity for parents (example)



Feedback from this week.
XXX would like to tell his parents about what he has done in Corner House.
Corner House staff would like to help XXX, his mum and his dad sign together.

Please sit together for 10 minutes to share XXX's news using BSL.
XXX might be nervous because he has to tell everyone his news.
Mum and Dad might be nervous because they have to sign with their voices off.
Remember;

- If you don't know a sign, get everyone to help you
- If you don't understand, ask the person to repeat or explain
- Enjoy communicating together!

After the session, think about what you liked and what was difficult for you.
Write some notes here.

Thank you, NAME OF PERSON PLANNING ACTIVITY

Additional notes
These sessions are held in a social area in the unit. The session is unsupervised but observed by staff in order to support feedback and follow-up interventions.
Initial sessions focused on everyday information which carried little emotional content. As the weeks progressed, more challenging or emotionally charged information was included if requested by the young person.
Additional sessions were booked with the therapist and parents to discuss feedback they gave and the purpose of the sessions.

6.6 Website list (including website for IH7) (IH6)

IH6 – website list (including website for IH7)

List of useful websites

www.natsip.org.uk – log on to this site to access Language Planning: in Deaf Education - a teacher toolkit for practitioners and other useful documents

www.ucl.ac.uk/dcal/ - information about research linked to BSL

http://dcal.azurewebsites.net - to visit the Deafness, Cognition And Language Centre's Test Portal (DCAL)

http://www.blacksheeppress.co.uk/ - resources and tools for language therapy work in English. Some can be adapted for use in BSL.

www.speechmark.net – resources for therapy and education. Some can be adapted for use in BSL.

http://www.thecommunicationtrust.org.uk/whatworks - The Communication Trust website for a database of evidenced interventions to support speech, language and communication. Most evidence is for spoken English.

www.city.ac.uk/health/research/centre-for-language-communication-sciences-research/gesture-deafness-and-sign-language/reading-and-dyslexia-in-deaf-children - information about a project based at City University

www.deafsupport.org.uk – for useful sign linguistics in a nutshell document

6.7 Form, content, use assessment profile (RH1)

RH1 - Form, content, use assessment profile

Thinking about language

We use language to understand others and express ourselves. We also use other skills to do this (gesture, situational cues, facial expression and body language).

It is sometimes useful to think about the language skills a young person has.

Content (meaning or information)

Semantics

Vocabulary related to here and now
Concrete use
Restricted use-limited experience

Extended vocabulary
Generalisation of vocabulary from one context to another

Abstract concepts
Rapid growth in vocabulary

Form (what does it look or sound like)

Phonology

(building blocks of words/ signs)
Immature productions
Developing an awareness of phonology

Phonological development nearly complete

Ability to discuss parts of words/signs

Syntax

Phrases and sentences start
Initial awareness of grammatical rules

Length and complexity of structures increases

Advanced understanding and use of adult forms

Use (how is it used with others)

Pragmatics

Communicative intent with restricted language skills
Turn taking established

Adapts to language in different settings for different uses
Increased range of functions of language

Developing conversational skills
Development of understanding and discussing other's perspective
More understanding of 'playing' with language – jokes, story telling

What language skills does this child need to develop?

6.8 Parent/teacher sheet (RH7)

RH7 - Parent/teacher sheet

Language Therapy in British Sign Language

We are collecting information about _____ and their language in BSL

Please tell us about their language skills and difficulties.

How do you help them with their language?

How do you think Language Therapy in BSL will help (or did help) this child?

6.9 Use of language recording sheet (RH8)

RH8 - Use of language recording sheet

Use of language – how does the child use their language to interact with others?

√√ = often uses confidently √ = sometimes uses x = doesn't use Name: Date:

A. Self-maintaining 1. Referring to their own needs 2. Simple social chat with peer or adult 3. Making own needs known to others 4. Asking for help to complete a task 5. Criticising and taking part in simple disputes		**B. Directing** 1. Monitoring and directing their own actions 2. Directing the actions of others 3. Collaborating with others in a task requiring language use 4. Following instructions (through language)		**C. Reporting** 1. Relating recent experiences to an adult 2. Describing a picture or a film 3. Extracting central meaning from a story or incident 4. Referring to a sequence of events 5. Making comparisons	
D. Reasoning 1. Justifying self and own behaviour 2. Explaining a process 3. Describing problems and solutions 4. Reflecting and drawing conclusions		**E. Predicting** 1. Events 2. Details of events 3. Sequences of events 4. Alternative choices of action 5. Consequences		**F. Imaginary** 1. Based on real life 2. Based on fantasy 3. Developing a story from pictures or when given the beginning 4. Developing an original story 5. Showing awareness of different character perspectives	

Comments:

Completed by:

Language Therapy in BSL April 2016 Use of language (Based on use of language by bilingual children from Joan Tough)

6.10 Assessment sheet (RH9)

RH9 - Assessment sheet

Assessment summary – your child

- What assessment have you already done?

- What do you know about their language?

- What area of language would you like to target?

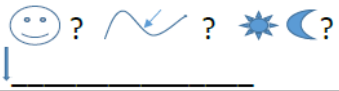
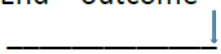
- Can you help them change their language? How?

- What strategies, activities or resources could you use?

Name _____ Date _____

6.11 Storyboard (RH 10)

RH 10 - Storyboard

Beginning – setting, start Who? Where? When? 	Middle – what happened? Action-reaction, Event-response 	End – outcome – Result 

6.12 Self-reflection sheet (RH11)

RH11 – self-reflection sheet

Self-reflection sheet

Watch a video of yourself. Which skills do you use? Which skills would it be good to use? Make notes below

Feedback from Deaf practitioner in phases 1 and 2 suggested thinking about:

Engage – share information about deafness, give a session plan including a game, follow the child's interest, follow the child's pace, wait for five seconds,

Modify – repeat, simplify, use visual aids to support, tell the child what you think they mean

Facilitate – lots of gut feeling and intuitive feelings here

Feedback – at end of sessions tell the child what went well, looking for implicit feedback from the child and making this explicit (you liked or didn't like this)

Manage self – reflection and supervision, manage frustrations

Manage room – number of people, toys used, windows/privacy, preparing the room and other people, getting ready

Ask and tell others – feedback to team members, school, parents. Action plans, recommendations, report, meeting.

Engage with the child

Get their attention	
Encourage their inclusion	

Modify your language

Adapting communication	
Ascribing meaning to the child's communication	
Checking your interpretation	
Checking their understanding	

Facilitate the child's language

Encouraging contribution	
Modelling	
Production call	
Assisting contribution	

Give feedback on the child's skills to the child

Checking contribution	
Differential feedback	
Evaluative feedback	
Summative feedback	
Acknowledging contribution	

Manage self and child

Emotional acknowledgement or support	
Physical/sensory acknowledgement or support	
Behavioural acknowledgement or support	

Manage the room

Equipment organisation	
Setting organisation	

Getting and giving information, working with others

Soliciting information	
Giving information/advice	
Providing instructions	
Framing/negotiating	
Explaining rationalising	
Recording (notes or film)	

Appendix 7 Deaf Practitioner information

This appendix contains;

7.1 Changes in therapeutic strategies used by Deaf practitioners in Phase 2 from observation of session 1 and session 6 videos

7.2 Feedback from four practitioners in Phase 3

7.1 Changes in therapeutic strategies used by Deaf practitioners in Phase 2 from observation of session 1 and session 6 videos

Strategy		**DP1**sess1	Sess6	**DP2**sess1	Sess6	**DP3**sess1	Sess6
Engagement with child	Building rapport	Y	Y	Y	Y	-	Y
	Engaging child	y	Y	Y	Y	-	y
Modification of own language	Language level of vocabulary	-	Y	-	Y	Y	Y
	Phrase length	-	Y	-	Y	Y	Y
	Clear explanation of activity	-	Y	Y	-	Y	Y
	Repetition	Y	Y	Y	Y	-	Y
	Rate	Y	Y	-	Y	Y	Y
	Location/space use	Y	Y	-	Y	Y	Y
	Active 'listening'	Y	Y	-	Y	Y	Y
	Use of augmentative methods (symbols, plans)	-	Y	-	y	y	y
Facilitation of child's language use and understanding	Context	Y	Y	-	-	-	Y
	Encouraging contribution by non-linguistic behaviours	Y	Y	-	Y	Y	Y
	Appropriate questions (closed, forced alternative, open)	Y	Y	-	-	-	Y
	Modelling	Y	Y	-	Y	Y	Y
	Recast	-	Y	-	Y	-	Y
	Pacing	y	Y	-	Y	y	y
Giving feedback to the child and getting feedback	Checking meaning (repair)	Y	Y	-	Y	-	-
	Feedback comments on task	Y	-	y	Y	Y	Y
	Feedback comments on session	-	Y	-	-	Y	Y
	Checking learning	-	-	-	-	y	y
Managing the room	Organising before session	Y	Y	-	Y	Y	Y
	Awareness of issues in the room	Y	Y	-	Y	Y	y
	Acknowledgement of issues	-	Y	-	-	-	Y
	Adapting during a session (reducing distractions, lighting)	-	-	-	Y	-	y
Managing the equipment	Organising therapy equipment before session	Y	Y	Y	Y	Y	Y
	Awareness of changes needed	-	Y	-	Y	-	Y
	Adaptations during a session	-	-	-	-	-	-
	Camera use	Y	Y	Y	y	y	y
Personal maintenance	Emotional	-	Y	-	-	Y	Y
	Physical	-	-	Y	Y	-	Y
	Behavioural	-	-	-	y	y	y

7.2 Feedback from four practitioners in Phase 3

Transcriptions from participant feedback

Participant 5

I do sessions with a 5yr old boy, pre-level 1 BSL, has fingers missing, working on handshapes. So I'm supporting him with his handshapes so he gains confidence, is motivated and engaged. We play games, sometimes he finds it a bit difficult, working out when his finger's missing what to do – miss the letter? But ensuring he's not embarrassed. Also I've been working with him with other children encouraging them to look at each other, copying each other, using each other as models, supporting each other so he's confident and they are controlling the session and I take a back seat. So the children are leading the session and gaining confidence and making progress in that way. Also in my teaching we have a topic for a term that is taken from and feeds into an educational topic e.g. fish, that they live in the sea, talk about rubbish that goes into the sea and what happens to the fish, so very simple. We think about the handshapes [living fish/dead fish]so that means a fish alive and a fish dead [examples in BSL] so this is alive, very simple, they become more confident in their signing and I'll video them in the first week's production and then we'll put that away and then in 6 weeks later we'll film again on the same topic and they'll watch both and they notice 'oh look, I've got more signs' and so the child can see their progress and they gain in confidence and that works very well.

Participant 6

I'm working with a child who's 3 yrs. old, he's deaf and both parents are hearing, mum's actively part of the deaf community wants him to use BSL as his first language and she does want him to do a bit of listening work which I've been doing with him but they're quite a lot of behavioural issues the only access he has to BSL is through mum he doesn't have access to signing peers or many other people who are using BSL. Some of his peers, we have a preschool group of deaf children, but they are wearing hearing aids or using implants and using spoken English. So there are a lot of behavioural issues and I was discussing how I could support mum with that. And we discussed going back to pre - language and thinking more about turn taking and playing games and participation as a foundation for developing his language. But alos mum has adopted very much a 'teacher' role with him, so she's teaching him things like numbers and colours and she'll say he can count up to 10 and we'll say that's great but he can't tell us how he feels or why he's done something or what's happening or what he wants so it's not really that functional. So in the discussion I got some good advice about actually talking to mum about being a mum and not being a teacher. And also I was having difficulty because everybody that's supporting this family were all using spoken English and not BSL, there are no BSL professionals involved or Deaf professionals involved and I don't understand BSL language development so I'm going to try and look at the resource, the table about the development of BSL and also look at pre language skills because obviously that's different to what I was taught in my speech and language therapy degree and also discuss that with mum because English is her first language, not BSL, so she's learnt English through English language development and I think she's trying the same approach so we could talk more about visual attention and making sure he's really attending to what she's signing and that it's more functional and that they get to play and have fun with him instead of teaching him numbers and colours so I though some of the resources that we saw yesterday were useful.

Participant 10

Two years ago there was a boy born diagnosed deaf no nerves so he can't be implanted, in my area there are 2-3 children who can't have an implant and the mother decided to learn sign language, which was fantastic. The mother was progressing well, she'd done level 1 and 2 and now she's doing level 3. The boy is now four, his receptive skills are very good when you sign to him he understands but his eye contact is very poor, so trying to get his attention, trying to get him to look at you he will just run off. So we've found it very difficult so we've used the McCarthur CDI and he seems to have a wide range of vocabulary there, a normal range of receptive skills but the expressive skills may be limited so we thought about what we'd do, not just me, I'm part of a team, we used normal things, visual, pictures around the place with the tables and chairs there, making it normal for him, with pictures up but he's not engaging, he's ignoring everything, we want him to broaden his range of emotional language because that's limited, his expressive language is not very good so we're working on that. At the moment we're focusing on developing his receptive skills which are important but his expressive skills are very limited for a four year old. So we are deciding if we should really do a push or wait for his language to develop so we're deciding between these two options, carrying on with play, role play, memory games and encouragement for his language and vocabulary and communication.

Participant 11

There's an assessment at the moment of one boy, he has CHARGE syndrome and he has autism so he is obsessed with the clock so he sits in one place and keeps looking and going to the clock. He's always focused on the time. He is a deaf child but it's important he's assessed correctly, how do I adapt the assessment? So I think about the lock and how I can link them to life skills, then link them to everyday so we work in the kitchen, in our school we have a kitchen we use, so I stuck pictures on all the objects there so when he goes in I can teach him this is a cupboard and he sees the picture, or this is a drawer. There's not loads, maybe about eight, not too much, that'd overwhelm him. Then I'd ask him 'where's the drawer?' And he goes there and the aim was to try and see what the problem was with eye contact for say 20 seconds while we went to the drawer and cupboard and try and extend his eye contact so he's not producing much but understanding my sign. Improving his receptive skills and him pointing, that was enough. So the aim wasn't very big. So trying to take small steps. We've also linked the clock with food using a book, time for breakfast say 8.30, lunch around 12.30 and dinner is at 5. And we're allowing the boy to use gesture if they don't know or forget the sign they can still use gesture and learn language. So when we review what's worked well and what hasn't maybe we gave too much information, maybe we tried to go too fast, maybe we didn't adapt our language enough, maybe it's about getting down to the same level as the child, physically for eye contact