The Exploring of Implementing Makaton in Multi – Sensory Storytelling for Children with Physical and Intellectual Disabilities Aged Between 5 and 10

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ABSTRACT

Human communication is significant and distinctive (Yule, 2010). It involves the use of body language, facial expressions and most importantly, oral language. However, due to certain developmental problems, the use of spoken language may be sometimes limited. In those cases, the alternative communication strategies are required to be used with intellectually and physically disabled individuals. In fact, Makaton, a sign – based communication system, is believed to support the communication as well as facilitate language production (Walker, 1981). This study will present a detailed analysis of Makaton, discussing the ways that the system is implemented in Multi – Sensory Storytelling. The research will demonstrate two different modalities and consider whether they can be mutually supportive and provide simple communication. The study is specifically aimed at exploring the connections between Makaton and Multi – Sensory Storytelling, presented by professional caregivers to children with intellectual and physical disabilities. A linguistic analysis of Makaton will be presented as well as the discussion on the interactive style of the storytellers. The research will attempt at evaluating how highly trained a practitioner needs to be in order to deliver Multi – Sensory Stories using Makaton. It is clear that the analyzed data will have an impact on the final conclusions of this paper.

Keywords: Makaton; Multi – Sensory Storytelling; physical disabilities; children; behavior; disorder
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BACKGROUND

Humans constantly interact and communicate with each other, expressing their thoughts, feelings, desires and needs. This communication is a complex process, which enables the transfer of specific information as well as social, educational and emotional development. As Yule (2010) indicates, different strategies of communication (for instance: signals, gestures and language) may be distinguished. In fact, language appears to be used most frequently as it fully conveys rational thought. It is a system of implicit linguistic knowledge, which may be considered as the most distinctive feature of human beings. Yule (2010) demonstrates that language is often expressed verbally in a typical one to one interaction. According to Wharton (2009), spoken language is accompanied by non-verbal behaviors, such as facial expressions, body posture, gestures and eye contact, which also convey the message, indicating the degree of attention as well as the attitude towards the interaction. Besides these, some paralinguistic components of communication should be also distinguished. In fact, they can be classified as non-verbal cues of the voice (for example: the voice quality, accent, stress, pitch, tone and speech style), which provide the information on the emotional state of the speaker, suggest the type of an utterance (question, command or statement) and sometimes alter the meaning of words (Wharton, 2009).

However, in some cases the oral language may be limited. Due to particular developmental problems, which involve processing of concepts, memory, auditory and visual experiences, as well as limitation of the motor systems, individuals with physical and intellectual disabilities may display the inability to communicate by means of spoken language (Downey and Hurtig, 2003). Miller and Yoder (1974) discuss certain factors, which affect the language acquisition of people diagnosed with such disorders as down syndrome, cerebral palsy and autistic spectrum disorder. As they point out, the motivation towards communication, attention control and eye contact are low. Moreover, in those cases the language acquisition is sometimes limited by low expertise in cognitive competence. Thus, the input requires to be adjusted to the needs of a disabled individual (Pennington et al., 2003). Anderson (2006) outlines some challenges in communicating with children who lack speech. As reported, the communication may be brief and specific signals may be only understood by an individual. For instance, a child may not be able to acquire a particular sign from the sign system and therefore will alter it to his/her own needs and abilities. In this case, it will only be understood by people supporting and surrounding the child. Furthermore, some behaviors are said to be spontaneous and random, causing an unclear interlocutor’s assumption of any communicative values. The communication with physically and intellectually disabled children requires the use of alternative strategies. It is important to highlight that early interventions may lead to the development of simple communicative skills as well as more complex language functions (Kiernan, 1982).

ALTERNATIVE COMMUNICATION STRATEGIES

There is growing evidence that the use of alternative communication strategies is crucial with children who are physically and developmentally retarded (Kiernan, 1982; Downey and Hurtig, 2003; Mitha, Whiting and Scammell, 2009; Anderson, 2006). These strategies may be split into two categories: aided (the use of technological devices, for instance: communication
notebooks and boards) as well as unaided (facial expressions, body postures and sign languages). According to Birkett (1984), sign languages, specifically sign-based communication systems, are often used as an approach to successfully communicate. As he reports, mentally and physically disabled children with overall communication difficulties may acquire signs easier than the speech. In some cases, this is caused by a physical inability to produce speech. However, O’Connor and Hermelin (1978) demonstrate that mentally disabled individuals may perform better at visual than auditory vocal coding, which may result from their own preference.

At this point it is significant to clarify the origins of sign languages since the subject of this study, a sign-based communication system – Makaton, emerged from the British Sign Language. According to McNeill (1992), sign languages may be assigned to the last group of gestures from Kendon’s continuum. Kendon (1988) distinguishes five types of gestures (Diagram 1), starting from gesticulation, which is used in conjunction with speech and ending with sign languages. This study will particularly focus on Makaton, which is a subcategory of the last group from the continuum.

### Diagram 1: Kendon’s continuum.

*Gesticulation → Language-like Gestures → Pantomimes → Emblems*

Sign languages are aimed at the communication between hearing-impaired people. They are said to be fully linguistic systems, which can be used independently from speech. They can be segmented and contain lexical items, which may be formed into complex syntax. Moreover, they are also structured in morphological and phonological levels (Goldin-Meadow, 1999). Thus, the movements of hands play a crucial role in the process of communication and cognition. As Goldin-Meadow and Alibali (2013) agree, they convey meaning based on visual imagery, whereas spoken language delivers meaning through codified words organized in a particular grammatical order. Therefore, sign languages, such as BSL or ASL, are parallel to the spoken language.

### SIGN BASED COMMUNICATION SYSTEMS

In order to fully meet the special needs and requirements of individuals with lack of or impaired speech, sign based communication systems (for instance: Makaton, Signalong and Sign Supported English) have been created. It has been proved that sign systems support the development of basic communicative skills and sometimes complex language functions (Grove, 1980). In his study, Kiernan (1983) discusses the ability to learn and spontaneously use signs by severely retarded children. He argues that seventy percent of the participants developed simple speech, consisting of single mouthed words. Therefore, the early introduction of signing for intellectually and physically disabled children may eliminate some of the communication difficulties by providing the support for the auditory channel by means of sign modality.
MAKATON – AIMS AND OBJECTIVES

As Sheehy and Duffy (2009) discuss, Makaton is one of the most influential approaches for children with impaired communication, used to express their desires, needs and choices. According to Walker (1981), Makaton originated from a research project based at Botley’s Park Hospital (Surrey). It may be classified as a simplified version of the British Sign Language and is believed to support language and communication development. The system is a list of simple key words, which are signed according to the order of spoken words. Contrary to sign languages, Makaton, as a sign – based system, does not have syntax, morphology and phonology. In fact, the key words are accompanied by typical grammatical order of the spoken language (Walker, 1987). This study will particularly analyze which aspects of language are enhanced by Makaton (nouns, verbs or adjectives). It may be argued that the stripping of linguistic information is the reason for such sign systems as Makaton to be easier to acquire by disabled individuals. Walker (1981) highlights the main aims of Makaton, which are as following: providing simple communication, encouraging the use of expressive speech and the growth of the understanding of language. After its development, Makaton was widely introduced to schools and organizations working with children and adults with communication difficulties.

ATTITUDES TO MAKATON

Previous studies have analyzed the attitudes towards the system by the professional caregivers. As indicated by Sheehy and Duffy (2009), it is currently highly valued by the practitioners. In the study they compared the attitudes towards Makaton in 1987 and 2005. The findings have clearly presented that the system was viewed to establish the communication, integrate society and give multi – sensory support for the speech. It is also said to facilitate the eye contact and attention control, which have been reported above as the factors affecting the language acquisition (Sheehy and Duffy, 2009).

THE MAKATON VOCABULARY

Makaton consists of 350 signs, structured in nine distinct stages, providing the vocabulary comparable with typical gradual language development. In other words, the complexity of signs increases along with the degree of expertise in the system (Byler, 1985). The Makaton Vocabulary contains a set of concepts used to express vital needs and initiate mutual communication. What is more, as Grove (1980) points out, Makaton signs may represent both concrete (bed, room, go) and abstract concepts (tomorrow, there). The single items can be combined into structured sentences as the level of system increases. Byler (1985) has noticed that in terms of the lexis the early stages of Makaton are similar to the language acquisition of a normally developing child. As he says (1985, p.109), “the developmental evidence encompasses the first words of non – handicapped children acquiring spoken language, words spoken by mothers to their young children, and words occurring with greater frequency in vocabularies of handicapped individuals”.

-6-
The vocabulary is believed to only work as a facilitator for the language, not as a language itself. A significant feature of the use of Makaton Vocabulary is that it can be personalized to the needs of an individual and not all words are signed, but the key concepts (Walker, 1987). This can be observed in the following example, which has been transcribed from the collected data for the purpose of this study:

"[Brrrr, it’s really cold]” [he said]. [He saw] some sparkly [pieces] of [ice].

(1) Both hands going down parallel to the front of the body with the fingers toward up; the movement not classified as Makaton sign.

Example 1

There is no doubt that Makaton benefits communication with disabled children and adults as it enables individuals to express needs, signing the same message with few or many signs, depending on the proficiency of the user (Byler, 1985). In fact, previous studies (Kiernan, 1983; Kohl et al, 1979) have indicated that there is no difference in comprehension in terms of signing all the words in the phrase and only key words. These results are significant for the discussion on the collected data from my research, which will investigate how highly trained a practitioner needs to be in order to make the maximum use of Makaton.

Whilst analyzing the Makaton Vocabulary, it is also crucial to discuss studies (Byler, 1985; Birkett, 1984), which closely elaborated the frequency of the use of Makaton signs in speech. The studies have demonstrated that the early stages of the system contain more object specific words and the signs are organized in categories. For instance, the first stage of the Makaton Vocabulary represents categories to describe family members, house items and activities involving eating and drinking. The vast number of semantically related words (for instance: to drink, drink and cup) are also signed in the same way, which makes the Makaton Vocabulary more approachable to learn. In addition, Byler (1985) points out that a disabled individual may be able to understand more signs than they can manually produce. Indeed, in the study conducted by Mitha et al (2009), the participating disabled children appeared to be more engaged with Makaton when the system was used by professional caregivers independently of the proficiency of the practitioners.

SIMULTANEOUS COMMUNICATION AND EMOBODIED LEARNING

A significant feature of Makaton is its use in conjunction with speech. According to Kiernan (1982), the technique of ‘simultaneous communication’ strengthens the assumptions of the sign based system as a language facilitator, which initiates speech by children with severe deficits. This study will particularly discuss whether signs are simultaneous to the associated words or they are used before / after them. Furthermore, as Kontra et al (2012) illustrate, observing the movement of hands to form particular signs during the speech supports comprehension. In fact, the embodied learning framework is based on the assumption that producing and seeing hand movements combined with aural speech stream
leads to the maximum benefit from the input. Thus, it can be hypothesized that experiencing both the motor movements of the Makaton signs and stories with different senses may strengthen the associations in the brain. Undoubtedly, this is one of the main reasons for combining Makaton and Multi – Sensory Storytelling in this study.

MULTI – SENSORY STORYTELLING

Similarly to Makaton, sensory storytelling may scaffold the communication and its understanding. It is said to be stimulating for language as it enhances the imagination and mental mapping (Penne et al, 2011). What is more, Birkett (1984) elaborates that both Makaton signing and Multi – Sensory Storytelling provide sensory stimulation. In fact, sensory stories may be described as interactive activities, which conform with the idea of ‘inclusive literacy’. As Brug et al (2011) explain, literature may be valuable for people with communication difficulties since perception precedes comprehension. Within this framework, the literature should be accessible for everyone, independently on their abilities. Children with physical and intellectual disabilities should also be able to benefit from the literature despite their inability to read or write.

The presentation of the stories combined with sensory items contributes to the experience of meaning without the literal understanding (Brug et al, 2011; Brug et al, 2013). Therefore, those stories are aimed to be adapted to the needs of disabled children. In terms of the storytelling, the sensory experience is emphasized more than the actual story, which enables children to fully benefit from it. For instance, a story about a snail travelling to the beach would provide a combination of texture of sand (the sense of touch) and audio of the sea (the sense of hearing). In addition, the study reported by Young et al (2011) has shown that sensory stories led to the positive engagement and visual attention of the participating children. Along with the communication support, the Multi – Sensory Storytelling may contribute to the cognitive, social and motor development.

The Multi – Sensory Storytelling originated from Fuller’s (1999) Bag Books and then was further developed by PAMIS (2007, quoted in Penne et al, 2012, p.168). According to the initial rules, the stories should be short, limited to approximately fifteen sentences. Each sentence is said to be presented on a separate page along with an attached sensory stimulus, which aids the exploration of specific senses (Penne et al, 2011; Brug et al, 2012).

In terms of the content, the vocabulary is believed to be selected according to the abilities of the listener. Da Fonte et al (2010) suggest that the vocabulary should be functional in order to develop language, speech as well as literacy skills. Moreover, the sensory storytelling has been reported as a promising approach, which still lacks an adequate empirical evidence (Penne et al, 2011).

Despite this, some research has been conducted with regard to the importance of the interactive style of professional caregivers during the sensory storytelling. As noticed by Penne et al (2011), an appropriate interactive style is remarkable for the overall contribution of the Multi – Sensory Storytelling to the comprehension and apprehension of the disabled listener. However, further studies discussing the combination of both sign and speech modalities in terms of the successful communication with intellectually and physically disabled children are necessary.
AIMS OF THE STUDY

As discussed above, this study is aimed at exploring the connections between Makaton and Multi – Sensory Storytelling for children with intellectual and physical disabilities. The research will consider the ways that Makaton is embedded into the sensory storytelling. It will present a linguistic analysis of Makaton in Multi – Sensory Stories, focusing on such aspects as: the choice of signed words, the timing of the signs with respect to the language, simultaneity of signs to the associated words as well as the use of signs over the course of storytelling. In terms of the storytelling, the analysis will include the discussion on the interactive style of the storytellers. In addition, the study will elaborate the use of Makaton by professional caregivers with different degree of expertise in the system. This will enable to consider how highly trained a practitioner needs to be in order to make maximum use of the sign system.

METHODOLOGY

PARTICIPANTS

Three professional caregivers were asked to participate in this study. This generated a feasible amount of data to be handled in the limitations imposed by the dissertation requirements. In order to ensure the anonymity, the names of the participants have been changed and any identifying information has been removed. It should be indicated that each participant provided biographical information, which was collected during an informal interview, held after the recordings had been made. The practitioners were asked about their proficiency in Makaton and experience in storytelling (Table 1). In addition, they were provided with consent forms, which allowed them to withdraw from the project at any time without giving a reason.

Table 1. Selected responses from the informal interviews.

<table>
<thead>
<tr>
<th></th>
<th>DAN</th>
<th>LARA</th>
<th>JENNA</th>
</tr>
</thead>
<tbody>
<tr>
<td>What training did you have before working at the club?</td>
<td>• Autism, Asperger`s (Sensory Considerations, Communication Strategies, SPELL Framework, Autism Awareness), Medication and Moving &amp; Handling;</td>
<td>• the variety of training covering the aspects of Autism, physical and mental disabilities;</td>
<td>• group work with young people;</td>
</tr>
<tr>
<td>What is your degree of expertise in Makaton?</td>
<td>• Makaton training for stages 1 to 6;</td>
<td>• qualified Makaton trainer;</td>
<td></td>
</tr>
</tbody>
</table>
The caregivers are current members of an after school club for children with physical and intellectual disabilities, where the study was based. They support the participating in the club activities children on the one to one ratio. They also represent differing degree of expertise in Makaton and Multi – Sensory Storytelling. In terms of the training, the practitioners had attended the relevant sessions (Table 1) before working at the club. As indicated, not only do they use Makaton at the club, but also in one to one interactions with service users at the Day Centre, where they work.

PROCEDURE
The study was conducted during an after school club for intellectually and physically disabled children, aged between 5 and 10. The club is run once a week and ten children, with varying types of disabilities (autism, Down syndrome, cerebral palsy, visual and hearing impairment as well as epilepsy) attend the sessions. Three of the children are physically disabled and use speech in their communication, whilst the others are non – verbal. The club is organized by the Day Centre, which supports both children and adults with severe disabilities. A Multi – Sensory Story (approximately 10 minutes long) is incorporated into every an hour and half session. The presentation of each story is accompanied by sensory items and Makaton signing, aiming at the sensory stimulation for the children attending the club.

The participants of this study were asked to deliver Makaton Multi – Sensory Stories to the children. The presentation of each story was recorded using the video camera. The recordings took place over the period of six weeks. Both Dan and Lara presented two Multi – Sensory Stories, whilst Jenna delivered one story (Table 2).

<table>
<thead>
<tr>
<th>DAN</th>
<th>LARA</th>
<th>JENNA</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>The Lost Polar Bear</em></td>
<td><em>Harry Potter</em></td>
<td><em>Hansel and Gretel</em></td>
</tr>
</tbody>
</table>

The stories told by Dan and Lara were accompanied by Power Point presentations, which displayed the text as well as pictures of the characters and some animations of the actions described. Jenna presented the story from what she had remembered, sometimes
looking at the paper. It should be indicated that the data collection of Lara’s second story 
(*Little Red Riding Hood*) was damaged due to the technological difficulties and then the story 
was re-recorded at a later date.

Furthermore, at this stage it is significant to draw the distinction between the Multi – 
Sensory Stories, presented at the after school club, and those, which were originally created 
by Fuller (1999) and PAMIS (2007). In fact, the original sensory stories were short and each 
sentence was presented on a separate page, accompanied by the sensory stimuli. According 
to the guidance, the sensory stories should be read multiple times in the same form and wording 
(Penne *et al*., 2012). When it comes to the Multi – Sensory Stories from the collected data, 
they were mainly presented once using Power Point slides, which displayed text, pictures as 
well as animations of certain actions from the story. The sensory stimuli was only present in 
the selected parts of the story. Furthermore, the stories were significantly longer than eight 
sentences. This might have been caused by the adaptation of the storytelling to the needs of 
each child, which was one of the aims of Fuller (1999) and PAMIS (2007). On one hand, the 
stories provided sensory stimulation and Makaton signing for children with lack of speech. 
On the other hand, the content was adapted to the abilities of the three verbal and physically 
disabled children.

During the data collection, the camera was focused on the storyteller and recordings 
only included approximately the first ten minutes of each session. The children participated in 
their regular activities during the session and Makaton Multi – Sensory Storytelling was 
presented with its regular length. None of the children participating in the sessions were 
recorded. Although the data did not directly involve children, the parents were provided with 
information sheets and opt out forms. In addition, the research was conducted according to the 
health and safety policies of the organization.

CODING

Five Multi – Sensory Stories were transcribed using ELAN (Appendix A). Three passes 
have been made through the data in order to fully record speech, language features, gestures 
and Makaton signs. The signs were then classified according to the word categories (nouns, 
verbs, adjectives), which they accompanied during the speech.

In order to draw clear comparisons between the frequency of signs in the analyzed 
stories, the signing rates per word have been calculated in each story. Whilst considering it, 
the number of signs have been divided by the total number of words in each speech. The data 
was subject to quantitative and qualitative analysis, based on an iterative process and 
informed by Conversation Analysis techniques.

RESULTS

PARTICIPANTS

Of the informal interview, Dan has been an active coordinator of an after school club, 
where the study was based, for nine months. Before leading the club, he had undertaken 
professional training (Table 1) in order to gain adequate knowledge about the needs of the 
children attending the club as well as Makaton training for stages 1 to 6. As a coordinator, he 
is in charge of the preparation of each session. This includes Makaton Multi – Sensory Story, 
followed by an activity, which always relates to the presented story. As indicated, not only
does he use Makaton during an after school club, but also whilst working at the Day Centre. He acquired most of the signs during the Makaton training and learnt some from the service users and staff members as well. In addition, having considered Dan’s nine months of coordinating the club, his experience in storytelling may be classified as high.

Lara has been working at the club for two years. Her experience in working with physically and intellectually disabled children is high although she had not delivered Makaton Multi – Sensory Stories to the children attending the club before. The training she had attended may be comparable to Dan’s along with the Makaton training for stages 1 to 6. She also shadowed more experienced staff members in the beginning of her work at the club. She uses Makaton in the interactions with children throughout the whole session. She indicated signing the words she knows very well in order to avoid any mistakes.

Jenna has been the third participant, who agreed to volunteer in the study. As explained in the informal interview, she had volunteered with young people before starting the work in social care. She has been constantly working with disabled children and teenagers for the last six years. In addition, she holds the management position at the organization, where the study was based. As Jenna indicated, she created the after school club and has been actively involved in its development for the last two years. Jenna is a qualified Makaton tutor, who often volunteers to lead sessions at the club. Therefore, both her expertise in Makaton and experience in storytelling may be classified as the highest from all the participants.

QUANTITATIVE ANALYSIS

Overall, the data was generated from five Makaton Multi – Sensory Stories. The recordings time varied between 423 and 990 seconds. Table 3 presents the breakdown of the total timing of each story along with the timing of the overall presentation of sensory items. This includes the times, when the practitioners did not deliver the story, but interrupted it with the sensory items. An example of this can be the presentation of the magic costumes to the children between lines 1 and 2 in Harry Potter (Appendix A2).

Table 3. The timing of Makaton Multi – Sensory Stories (in seconds).

<table>
<thead>
<tr>
<th></th>
<th>TOTAL TIMINING</th>
<th>THE TIMING OF SENSORY EXPERIENCES</th>
</tr>
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<tbody>
<tr>
<td>THE LOST POLAR BEAR (DAN)</td>
<td>625</td>
<td>130</td>
</tr>
<tr>
<td>HARRY POTTER (DAN)</td>
<td>990</td>
<td>306</td>
</tr>
<tr>
<td>LITTLE RED RIDING HOOD (LARA)</td>
<td>598</td>
<td>68</td>
</tr>
<tr>
<td>HANSEL &amp; GRETEL (LARA)</td>
<td>423</td>
<td>240</td>
</tr>
<tr>
<td>KING &amp; HIS GREEDY BROTHERS (JENNA)</td>
<td>485</td>
<td>127</td>
</tr>
</tbody>
</table>
In order to discuss the use of signs over the course of storytelling, signing rates per word have been analyzed. Table 4 demonstrates that the signing rate was the highest in *The Lost Polar Bear* (0.36 signs per word) and the lowest in the story presented by Jenna (0.26 signs per word). This leads to the assumption that the high frequency of signing does not necessarily correlate with the degree of expertise in the system. Therefore, it may be hypothesized that by incorporating Makaton in sensory storytelling, the signing should not be too complex whilst interacting with children. In addition, Table 4 reveals that nouns were the most frequently chosen types of words by all the participants, followed by verbs and adjectives. This pattern can be observed in each story. The signing of the other types of words (adverbs, prepositions, pronouns) varied across individual stories and the certain choices will be discussed in further parts of this section.

Table 4. The breakdown of the signed words (N = nouns, V = verbs, ADJ = adjectives, ADV = adverbs, PREP = prepositions, PRON = pronouns) along with the signing rates per word.

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>V</th>
<th>ADJ</th>
<th>ADV</th>
<th>PREP</th>
<th>PRON</th>
<th>YES / NO / PLEASE</th>
<th>TOTAL NUMBER OF SIGNS</th>
<th>SIGNING RATE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>THE LOST POLAR BEAR</strong></td>
<td>46%</td>
<td>34%</td>
<td>2%</td>
<td>0%</td>
<td>4%</td>
<td>7%</td>
<td>7%</td>
<td>201</td>
<td>0.36</td>
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<tr>
<td>(DAN)</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>HARRY POTTER</strong></td>
<td>66%</td>
<td>22%</td>
<td>5%</td>
<td>0.6%</td>
<td>2%</td>
<td>2.4%</td>
<td>2%</td>
<td>152</td>
<td>0.25</td>
</tr>
<tr>
<td>(DAN)</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td><strong>LITTLE RED RIDING HOOD</strong></td>
<td>42%</td>
<td>29%</td>
<td>17%</td>
<td>0.5%</td>
<td>0%</td>
<td>8.5%</td>
<td>3%</td>
<td>170</td>
<td>0.33</td>
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<tr>
<td>(LARA)</td>
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<tr>
<td><strong>HANSEL &amp; GRETEL</strong></td>
<td>51%</td>
<td>34%</td>
<td>12%</td>
<td>0%</td>
<td>0%</td>
<td>1%</td>
<td>2%</td>
<td>77</td>
<td>0.27</td>
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<td>(LARA)</td>
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</tr>
<tr>
<td><strong>KING AND HIS GREEDY BROTHERS</strong></td>
<td>51%</td>
<td>15%</td>
<td>18%</td>
<td>1.5%</td>
<td>1.5%</td>
<td>0%</td>
<td>3%</td>
<td>72</td>
<td>0.20</td>
</tr>
<tr>
<td>(JENNA)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Furthermore, Tables 5-7 present the classification of the signed words to the particular stages in the Makaton Vocabulary by the participants. Having considered the undertaken training in the system by both Dan and Lara, I have decided to combine stages 1 to 6 in the analysis to indicate clearer signing patterns. As noted, in the area of the signs used by Dan and Lara, most of the signed nouns came from the additional vocabulary, available on the Makaton website with the topical lexis and resources. In fact, as Dan stated during an informal interview, a significant number of signs was acquired whilst interacting with the service users and some of those signs were not covered in the Core Vocabulary. The data has also shown that those storytellers used their knowledge of stages 1 to 6 to sign the majority of
verbs (69% and 72% by Dan, and 67% and 79% by Lara). The frequency of signed adjectives was minor and they could be assigned to stages 1 to 6, except for “invisible” from *Harry Potter* and “sick” from *Little Red Riding Hood*. Moreover, the same pattern with the frequency of the signed words is noticeable in the analysis of Jenna’s data (Table 4). However, most of the signed nouns and verbs (73% and 45% respectively) were generated from further stages of Makaton Vocabulary as well as additional vocabulary. This may indicate practitioner’s high expertise in the system. In addition, Jenna has used the highest percentage of adjectives from all the participants (Table 7).

Table 5. The classification of the signed words according to the Core Vocabulary stages – Dan.

<table>
<thead>
<tr>
<th></th>
<th>THE LOST POLAR BEAR</th>
<th>HARRY POTTER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NOUNS</td>
<td>VERBS</td>
</tr>
<tr>
<td>STAGES 1-6</td>
<td>46%</td>
<td>69%</td>
</tr>
<tr>
<td>STAGE 7</td>
<td>8%</td>
<td>0%</td>
</tr>
<tr>
<td>STAGE 8</td>
<td>0%</td>
<td>13%</td>
</tr>
<tr>
<td>ADDITIONAL VOCABULARY</td>
<td>46%</td>
<td>18%</td>
</tr>
<tr>
<td>TOTAL NUMBER</td>
<td>13</td>
<td>16</td>
</tr>
</tbody>
</table>

Table 6. The classification of the signed words according to the Core Vocabulary stages – Lara.

<table>
<thead>
<tr>
<th></th>
<th>LITTLE RED RIDING HOOD</th>
<th>HANSEL &amp; GRETEL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NOUNS</td>
<td>VERBS</td>
</tr>
<tr>
<td>STAGES 1-6</td>
<td>50%</td>
<td>67%</td>
</tr>
<tr>
<td>STAGE 7</td>
<td>5%</td>
<td>0%</td>
</tr>
<tr>
<td>STAGE 8</td>
<td>0</td>
<td>6%</td>
</tr>
<tr>
<td>ADDITIONAL VOCABULARY</td>
<td>45%</td>
<td>27%</td>
</tr>
<tr>
<td>TOTAL NUMBER</td>
<td>22</td>
<td>18</td>
</tr>
</tbody>
</table>
Table 7. The classification of the signed words according to the Core Vocabulary stages – Jenna.

<table>
<thead>
<tr>
<th></th>
<th>KING &amp; HIS GREEDY BROTHERS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NOUNS</td>
</tr>
<tr>
<td>STAGES 1-6</td>
<td>27%</td>
</tr>
<tr>
<td>STAGE 7</td>
<td>9%</td>
</tr>
<tr>
<td>STAGE 8</td>
<td>27%</td>
</tr>
<tr>
<td>ADDITIONAL VOCABULARY</td>
<td>37%</td>
</tr>
<tr>
<td>TOTAL NUMBER</td>
<td>22</td>
</tr>
</tbody>
</table>

SIGNING SEMANTICALLY RELATED WORDS

The analysis has shown that all the participants signed semantically related words in the same way. This can be observed in the sign “ice” in The Lost Polar Bear, which was used to express “polar” (line 2), “snowflakes” (line 9), “snow” (line 20) and “snowy” (line 39). Similarly, in both stories presented by Dan, the sign “look for” was associated with “discover”, “find out” and “find”. When it comes to Lara’s stories, the sign “biscuit” stood for “gingerbread” and “cookies”, and the sign “eat” was used whilst uttering: “to eat you with”, “gobbled her up” and “for lunch”. In the same way Jenna signed “bad” for “naughty”, “mean”, “selfish”, “greedy” and “awful” (lines 3-5). This might strengthen the assumption that Makaton may be classified as a simplified version of British Sign Language, which is easier to acquire by children with impaired communication due to the simple signs facilitating language development (Walker, 1981).

NAMING AND USE OF PRONOUNS

Example 2

2 [Iceberg], h [the baby] [polar] [bear] h [was inside] [his cave] h [with] Frosty h [Frosty], [his dad]. (.).

I BABY ICE BEAR IN HOUSE WITH F DAD

7 He lives with his [familyy]… (. ) with his [Aunt] [Petunia], (. ) [Uncle] [Vernon] and [Cousin] [Dudley].

FAMILY A P U V

C D
The use of names and pronouns whilst signing should also be discussed. In fact, the stories presented by Dan have shown that in terms of the names, the first letter was finger spelt. The same pattern was used to sign words associated with distant family members, which can be seen in the examples below.

In addition, *The Lost Polar Bear* presents a significant number of signed pronouns. It can be assumed that pronouns from Example 3 were used to emphasize the actor and they were usually used before verbs except for those describing what has been said (“say”, “ask”, “shout”).

<table>
<thead>
<tr>
<th>Example 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;[Can I] h [go] h [outside] h [and play]?&quot; [he asked]. (.)</td>
</tr>
<tr>
<td>I</td>
</tr>
</tbody>
</table>

It is also significant to discuss the choice of signed pronouns with the reference to Jenna’s story, specifically lines 1-2. In the first line, the noun “brothers” has been signed and then the sign was not repeated in the next line although the same noun appeared. The negation has been signed instead. This might suggest that signing the same noun one after another is not necessary and other significant words should be emphasized using Makaton.

**SIGNS OF MOTION**

In terms of the sign choice, the use of sign “go” should be analyzed. It is clear that the sign has been used frequently throughout the stories presented by both Dan and Lara. It appears that the storytellers used the sign to express motion, but in a different way. While Dan signed “go” to indicate action or noun of movement (Example 4), Lara used the sign in different contexts, which did not always reflect the semantic meaning of the verb (Example 5). When it comes to Jenna, it is noticeable that her use of the sign “go” was not that frequent and she used the adequate signs to express actions instead (Example 6). This might indicate Jenna’s higher proficiency in the system when compared with Dan and Lara.

<table>
<thead>
<tr>
<th>Example 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>[and ↑sets off]</td>
</tr>
<tr>
<td>GO</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Example 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>[to take a (2.0) basket of]</td>
</tr>
<tr>
<td>GO</td>
</tr>
</tbody>
</table>
SYNONYMS OF SIGNS AND KEY WORDS

As indicated in the literature (Walker, 1981; Sheehy and Duffy, 2009), Makaton should involve key signing. In other words, the speaker should only sign key concepts in the utterance to let the listener comprehend the overall idea by the use of Makaton signs along with the speech. This can be observed in each analyzed story to a certain degree. Having considered Dan`s data, all the signs appeared in a particular context (Example 7). Moreover, the majority of signs were synchronized to the associated words. Indeed, they started and ended with an appropriate word / concept.

Example 7

However, in the area of synchronicity, some deviation has been found in Harry Potter (Example 8). In fact, in line 18, the sign associated with the phrase “find out” was used after it, which was parallel to the expression of “…om the story”. What is more, the non – synchronized sign “make” in line 33 may be explained by the use of word – by – word signing in this particular excerpt.

Example 8

Non – synchronized signs are significantly noticeable in Lara`s stories. The signs are long, usually starting before the actual words / concepts in both stories, which can be observed in Example 9. In many cases (lines 1,5,8,11,12,13 and 40 of Little Red Riding Hood as well as 3 and 7 of Hansel & Gretel) the signs were used after the words / concepts. The reason for this may be the fast pace of the presentation and the use of too many signs in one utterance, which does not fully correlate with the idea of key signing.
Of the analysis, the key signing and synchronicity of signs can be fully observed in Jenna’s story (Example 10). If more words required to be signed at the same time, then the pace would be slower (line 11).

POTENTIAL UNFAMILIAR SIGNS

Another significant pattern may be noticed by the examination of potential unfamiliar for the storytellers signs. This has been assumed by the detailed analysis of the distinct language features, which only occurred in those specific situations. For instance, in The Lost Polar Bear, the signing of each polar animal was preceded by uttering the word itself or repeating the previous word / concept. This was followed by the pause. The style of introducing the polar animals may suggest that the storyteller was not familiar with those signs since they come from the additional vocabulary. The unfamiliar for the storyteller signs can be also observed in Harry Potter (Example 11). The unknown signs have often been replaced with sensory items (line 42).
In addition, having considered *Hansel & Gretel*, the signing of the word “bird” was preceded by uttering the noun itself and then pause (line 9). What is more, two sign mistakes have been found in the assessment process of Lara’s data (Example 12).

**Example 12**

**DAN:** ”[Brrrr, it’s really cold]” *h* [he said]. (. ) [He saw] some sparkly *pieces* of *ice*. (. )

*COLD* SAY SEE (1) *ICE*

(1) Both hands going down parallel to the front of the body with the fingers toward up; the movement not classified as Makaton sign.

**LARA:** Although *h* [the old woman] seemed *nice*, (2.0) she [was in fact a WITCH], (2.0)

(2) GOOD WITCH

(2) Both hands with fingers parallel to each other in O – shape, moving up and down in front of the chest. Not classified as Makaton sign.

Finally, a distinctive feature of Jenna’s signing is the lack of gestures, which cannot be classified as Makaton signs. In fact, both Dan and Lara sometimes used gestures to visualize their speech. It may be hypothesized that those gestures were only used due to the lack of knowledge of specific signs (Example 13).

**Example 13**

16 “*[↑Who] (.) [is eating] [my ↑house]?*” (. ) [said the] [old] [lady]. (2.0)

**WHAT** EAT **HOUSE** SAY OLD **WOMAN**

21 They soon *[discovered this] *h* when the ↑witch [put] them in a *[↑cage]. (. )

**LOOK FOR** WITH **ROOM**

**SENSORY ITEMS**

Since the study concerns the ways that Makaton is embedded in Multi – Sensory Storytelling, the use of sensory items should also be debated as an inevitable part of Multi – Sensory Storytelling. In fact, each storyteller demonstrated a distinct pattern of presenting sensory items to the children. In his stories, Dan had uttered a sentence and signed key words using Makaton before a particular sensory item was introduced. Then, he repeated the same phrase without signing and provided children with sensory items (lines 6-8 of *The Lost Polar Bear* and lines 37-39 of *Harry Potter*). On the other hand, Lara introduced sensory items at the same time as the story was delivered with no repetition. When it comes to Jenna, it appears that she emphasized Makaton signing more than the sensory part of her story. This can be assumed since the sensory part has only been introduced at the end of the story.
(yoghurt feeding with long spoons), but this certainly improved the interactive style of the presentation.

**INTERACTIVE STYLE**

Furthermore, the interactive style of the presentation should be indicated. Given Dan’s stories, it may be observed by the facial expressions (for instance the face mimic imitating sadness whilst signing “no”) and pitch of the voice (phrases uttered faster to indicate the action – line 9 of *The Lost Polar Bear*, silence associated with sleeping – line 4 or raised voice to imitate shouting – “ICEBERG!” from line 11). Dan also directly talked to the listeners, asking them questions and engaging in the action from the story (“So what do all have to do now?”; “So now you’re all invited to be students of Hogwarts!”). He praised them for correct answers (“That’s the sound of a seal! Well done!”). In fact, the interactive style is more pronounced in *Harry Potter* than *The Lost Polar Bear*.

In terms of Lara’s interactive style, direct interactions with children over the course of storytelling are not frequent. The storyteller did not interact at all whilst presenting *Little Red Riding Hood*. Only one direct question can be found in the second story (“So how are they gonna find their way home?”). This may be explained by the low experience in storytelling of the participant. Furthermore, the paralinguistic language features are noticeable, which may build up the interactive style of the presentation. For instance, faster uttered phrases (“raced swiftly” and “gobbled her up”) may indicate the action and the facial expressions (frightened face in line 17 of *Hansel & Gretel*) might support the presentation of emotions, accompanying Makaton signing.

On the other hand, Jenna’s interactive style has been certainly developed by the sensory part of the story. Indeed, at the end of it the participating children were supported to help each other feeding themselves with a yoghurt. In addition to this, the storyteller used higher pitch of the voice (“EXCITED” and “IDEA”) to emphasize the significant moments in the story, facial expressions (face mimic to imitate fear in line 10) to present emotions as well as faster uttered words (“woke the brothers up”) to indicate the action of movement. The shapes of particular objects have also been visualized (“big table” in line 11). Also, the storyteller was constantly interacting with children, asking them questions and engaging in the action (Example 14).

```
10 (to the group) °How did they feel?° (. ) ↑Frightened]! [Good] [girl]! (3.0)
      SCARED                       GOOD     GIRL

24 (to the child) L, h can I borrow you a moment? h Can you hold the spoon at the end? Can you try eat with it? (4.0)

34 How can you get to eat by only holding the spoon at the end? (2.0) °Can [you help each other°]? (3.0)
      HELP
```

*Example 14*
DISCUSSION

The aim of this study was to explore the connections between Makaton and Multi – Sensory Storytelling for children with physical and intellectual disabilities, delivered by professional caregivers. The analysis has confirmed that Makaton and Multi – Sensory Storytelling are mutually supportive, providing simple communication as well as sensory stimulation to the children.

Although the participants of this study were current members of the same after school club, their experience in both Makaton signing and sensory storytelling was not equal. This was clear from the initial informal interviews and then confirmed during the data analysis. In fact, Dan and Lara have undertaken Makaton training for stages 1 to 6 and therefore the majority of the signs used in their presentations came from those stages. However, a significant number of signs was also generated from additional vocabulary. Thus, it may be hypothesized that the participants acquired additional signs from the interactions with the service users they support as well as in the process of self – development. In addition, Jenna, as a qualified Makaton tutor, used the lexis, which could be divided across all the developmental stages of the Makaton Core Vocabulary.

The degree of expertise in the system could also be observed by the consideration of potential unfamiliar signs. The similar pattern of longer pauses or self – corrections whilst signing words, which were not included in stages 1 to 6, could be noticed in data collected from Dan and Lara. Furthermore, another significant aspect indicating the degree of expertise was the use of gestures, which could not be classified as Makaton signs. Those gestures only occurred in the presentations of Dan and Lara. Furthermore, the high proficiency of Jenna’s signing may be noticed by the analysis of the signs of motion. Indeed, while Dan and Lara signed “go” to refer to actions and nouns of movement, sometimes also not specifically reflecting the semantic meaning of the verb (Example 5), Jenna always used the adequate signs to express actions.

Another aspect of discussion raised in this study was the key signing and synchronicity. In fact, the key signing was more or less noticeable in each story. When it comes to Dan and Jenna, the signs seemed to be set in a certain context and the majority of them were synchronized to the associated words / concepts. In contrast, the analysis of Lara’s data displayed a distinctive pattern of non – synchronized signs, which often started before the actual words / concepts. In line with previous findings (Sheehy and Duffy, 2009; Kiernan, 1983; Kohl et al, 1979), not all the words were signed by the participants, which contributed to the assumption of the system being easier to acquire by physically and intellectually disabled children when compared with sign languages. Moreover, the previous research showed that no difference in comprehension can be observed in terms of signing all the words in the phrase and only key words. However, the analyzed patterns regarding the synchronicity of signing may not be seen in a typical speech accompanied by Makaton signing. The participants of this study were fully aware of the recordings and it may be assumed that their signs had been practiced before the assessment process.

In the area of the types of words, which were signed by the participants, it is clear that nouns were the most frequently chosen in each case. This may suggest the importance of naming specific items / objects by the use of speech and Makaton signing. As may be expected by the previous indication of Byler’s (1985) assumption, semantically related words were signed in the same way, making the sign system more approachable to acquire.
What is more, the participants also demonstrated a differing experience in sensory storytelling. This could be observed by the consideration of the use of sensory items, which was clear and structured in the stories presented by Dan and Jenna. Having discussed the lack of experience in storytelling of Lara, it can be debated that the sensory items were not implied according to the general guidelines given by Fuller (1999) and PAMIS (2007). The low degree of experience could also be seen by the overall fast pace of the presentations of Little Red Riding Hood and Hansel & Gretel.

Multi – Sensory Storytelling was also closely related to the interactive style, which is believed to be significant for its structure. As discovered, the interactive style could correlate with the speaker’s experience in sensory storytelling. Indeed, this may be noticed by the paralinguistic features presented by both Dan and Jenna as well as direct interactions with the children (asking them questions and engaging in the action from the stories). It may be hypothesized that the more interactive style is presented by the storyteller, the more comprehension and apprehension comes from the participating children.

In overall, Makaton and Multi – Sensory Storytelling can be mutually supportive, encouraging the use of expressive speech and initiating simple communication. In terms of the analyzed proficiency in Makaton, it is clear that stages 1 to 6 provide sufficient lexis to enable practitioners simple communication with disabled individuals. In addition, as the signing rates per word showed (Table 4), the high frequency of signing does not necessarily correlate with the degree of expertise in the communication system and an appropriate balance between signed words should be found. Whilst discussing the ways that Makaton is embedded in Multi – Sensory Storytelling, it is also significant to consider the overall presentation of each story, including such aspects as paralinguistic language features as well as interactive style.

The analysis of the collected data has brought an implication that the high frequency of signing during the sensory storytelling does not reflect the degree of expertise in the system and signing only key words would be more beneficial for the listeners. This is since the listeners would be able to easier comprehend what the speakers intend to communicate. In order to fully deliver Makaton Multi – Sensory Storytelling, an appropriate experience in both signing and sensory storytelling is required. Finally, it is significant to engage the participating children in the story as disabled individuals should also be able to benefit from the literature despite their inability to read or write (Brug et al, 2013). This has certainly been noticed in the analyzed stories, where sensory experiences as well as direct interactions with children were emphasized more than the actual stories.

CONCLUSION

This paper has presented a detailed discussion of both sign and speech modalities, indicating the ways that Makaton is implemented in Multi – Sensory Storytelling. The analysis of the literature and collected data has shown that both Makaton and sensory storytelling are significant for the development of children with physical and intellectual disabilities since they encourage the use of expressive speech and provide sensory stimulation. The study specifically focused on the delivery of sensory stories and the use of Makaton signing by the professional caregivers. It discussed such aspects as the degree of expertise in the system, interactive style of the storytellers, frequency of signing as well as the
use of signs over the course of storytelling. This enabled to bring some implications for the practice, which have been discussed in the previous section. The study has also raised the importance of using different strategies to develop simple communication with disabled individuals. I believe that further research would analyze the use of Makaton in everyday speech, both by practitioners and children with physical and intellectual disabilities. This would certainly enable to compare the synchronicity of signs in the presentation of sensory stories and everyday speech. In addition, the further studies could also focus on the delivery of Makaton Multi – Sensory Stories to the children by their parents and reflect any common patterns with the stories presented by professional caregivers. The distinction between Makaton and other alternative communication strategies could also be drawn, which would bring a critical analysis of the effectiveness of the use of particular strategies. In overall, the study has brought some significant implications, which have been previously discussed. It also confirmed the initial hypothesis that Makaton and Multi – Sensory Storytelling may be mutually supportive.

ACKNOWLEDGEMENT

I would like to thank my dissertation supervisor, Dr. Hannah Sowden, who has been providing me with an incredibly helpful feedback throughout the whole process of conducting my own research. I would also like to thank my English Language & Communication tutors for the knowledge and skills I have gained for the last three years of studying at Kingston University. In addition, I would like to express my gratitude to the organization, where the study was based, for giving me the opportunity of collecting the data.

I dedicate this dissertation to my parents to thank for the upbringing and education I have been provided with as well as the closest friends here, Aneta, Agnieszka, Bartek and Magda, for the constant support and motivation to finalize the project.

References


(Received 03 March 2016; accepted 02 April 2016)
APPENDICES

A. TRANSCRIPTIONS.

1. THE LOST POLAR BEAR

DAN

1. The wind howled across the ice], (. .) blowing [flakes of snow through the air]. (4.0)

ICE     SNOW

2. [Iceberg], h [the baby] [polar] [bear] h [was inside] [his cave] h [with] Frosty h [Frosty], [his dad]. (. .)

I     BABY    ICE    BEAR    IN    HOUSE    WITH    F    DAD

3. “[Can I] h [go] h [outside] h [and play]?” [he asked]. (. .)

I     GO     OUTSIDE    PLAY    ASK

4. “[NO] h [you can’t]” [said] [Frosty] “[and went] [back to sleep]”. (4.0)

NO     YOU     NO     SAY     F     GO     SLEEP

5. [Iceberg] “[went] [outside] [to see]”. (. .)

I     GO     OUTSIDE     SEE

6. “[Brrrr, it’s really cold]” h [he said]. (. .) [He saw] some sparkly [pieces] of [ice]. (. .)

COLD     SAY     SEE     (1)     ICE

(face mimic imitating coldness)

(1) Both hands going down parallel to the front of the body with the fingers toward up; the movement not classified as Makaton sign.

7. He saw some sparkly pieces of ice...

(1:15)
(the storyteller gives children artificial flakes of snow)

(2:36)

8  [He saw] h [he saw] some sparkly [pieces of ice]. (.)

SEE SEE ICE

9  “[Wo:w] [that’s beautiful]” (.)[he said] [and he >ran off] in[to the snowflakes<]. (3.0)

(2) BEAUTIFUL SAY GO ICE

(2) Both hands parallel to the chest; open palms with the fingers toward up; the movement not classified as Makaton sign.

10  [His dad] [woke up] (.)[and] [he couldn’t] [see him] anywhere. [He ↑got up] [and went] [to find him]. (.)

DAD WAKE UP NO SEE STAND UP GO LOOK FOR

11  [Frosty] [walked along] [calling], “[ICEBERG], [ICEBERG], [WHERE ARE] [YOU]?” (3.0)

F WALK SHOUT I SHOUT WHERE YOU

12  [Frosty] [walked thr][ough the snow] h [and, after a while] (.)[he saw] (.)[a penguin]. (.)

F WALK ICE AFTER SEE PENGUIN

13  [He saw a penguin. >Do we all know the penguin sign?>< He saw a penguin]. (3.0)

PENGUIN

14  [Frosty] [said], h “[Have you] [seen] [my] [baby] [polar] [bear]?” (.)

F SAY YOU SEE MY BABY ICE BEAR

15  [The penguin] [said], “[No]” (.)

PENGUIN SAY NO

(the face mimic imitating sadness)
Then [the penguin] [said], (.).

F

PENGUIN SAY I HELP ME HELP YOU LOOK FOR

[Frosty] said, “[Yes] [please]”. (.)

F YES PLEASE

So, (.).

penguin went to help Frosty look for his polar bear.

(the storyteller points at the screen – picture of a penguin)

[Frosty] [and the penguin] [walked on]. (.)

F PENGUIN WALK

The wind was blowing [and the snow kept falling]. (2.0)

SNOW

[After a while], (.).

they saw (.).

AFTER SEE SEAL

Ouu Ouu!

(the sound given in the background by a staff member)

That`s the sound of a seal! [Well done]! (2.0)

GOOD

They saw (.).

SEE SEAL

>Frosty] [said]<, “[Have you] [seen] [my] [baby] [polar] [bear]?” (.)

F SAY YOU SEE MY BABY ICE BEAR
[The seal said], “[No]”

27 Then [the seal] [said], h “[Would you] like me to [help you] [look for him]?” (.)

28 [Frosty] said, “[Yes] [please]”

29 [Frosty] h [and the penguin] h [and the seal] [walked on]. (.)

30 The wind was blowing [and the snow kept falling]. (2.0)

31 [After a while], h [they saw] a reindeer: (.). [They saw a reindeer]!

32 [Frosty] said, “[Have you:] [seen] my [baby] [polar] [bear]?” (.)

33 [The reindeer] [said], “[No]” (.)

34 Then the reindeer said, “[Can I] [help you] [look for him]?”
35 [Frosty] [said], “[Yes] [please]” (4.0)
   F   SAY   YES   PLEASE

36 [Frosty] h [and the penguin], h [the seal] h [and the reindeer] [walked on]. (.)
   F   PENGUIN   SEAL   REINDEER   WALK

37 The wind was blowing [and the snow kept falling].
   SNOW

38 And the snow kept falling... The wind was blowing... The snow kept falling...

(7:00)
(the storyteller takes a bag with artificial snow and presents it to the children)
(7:50)

39 [After a while], (.)[they saw] (2.0) [a snowy] [owl]. (.)
   AFTER   SEE   ICE   OWL

40 [Frosty] [said], “[Have you] seen [a baby] [polar] [bear]?” (.)
   F   SAY   YOU   BABY   ICE   BEAR

41 [The owl said], “[No]”.
   OWL   NO
   ▼ (the face mimic imitating sadness)

42 Then [the owl] [said], (.) “[Do you] [want] [me]to [help you] [look for him]?” (.)
   OWL   SAY   YOU   WANT   ME   HELP YOU   LOOK FOR
[Frosty said], “[Yes] [please]” (.).

Out [at the sea], (. a [wha:whale] [was swimming around]. (.)

He [wanted] to (. [help] h [look for] [Iceberg], [so he >set off<].

He [<set off>] to [look for] [Iceberg].

[After a while], (. he [saw] Iceberg, (. he saw Iceberg, clinging on to a piece of ice.

[He saw] h [Iceberg] h [clinging on to] [a piece of ice]. (2.0)

[He was very frightened, (. he was very frightened] (2.0) [and was shouting], “[HELP], [HELP]” (3.0)

[The whale] [pushed Iceberg back] h to where [his da:d] was [wait:waiting for him]. (.)

(4) Both hands with open palms symmetrically moving out of the chest.
51 The whale pushed him back where his dad was waiting for him. (4.0)
   (the storyteller goes to the cushion and imitates the movement of the whale pushing the piece of ice)

52 [Frosty] [said], “[I’m so glad] [I found you]”. (3.0)
   F        SAY         HAPPY           LOOK FOR

53 And all the animals: [reindeer], [owl], [penguin] [and the seal] [said], “[HOORAY]!”

   REINDEER OWL PENGUIN SEAL SAY (4)
   (4) Both arms with open palms moving from the center of the body toward up on the sides.
   (10:25)

2. HARRY POTTER

1 [Our story: is going to be] (. ) about [a wizard], (. ) called [Harry] [Potter], (. ) who had some [magic powers]!

   STORY WIZARD H P MAGIC
   (0:20)
   (the storyteller gives children items from magic costumes to try on and wear during the storytelling)
   (3:38)

2 So, h this h is [a story about] [Harry] [Potter], h

   STORY H P
   (the storyteller points at the picture of Harry Potter)

3 a [young] [boy] h who [discover:s] h that “he is a wizard”. (3.0)

   SMALL BOY LOOK FOR WIZARD

4 [Harry] [Potter] is [11], (. ) He’s [11] years old! (. )

   H P 11 11

-32-
How old are you? (2.0) Z is 7, L is 6... h How old is K? h T is 6 h I think and (2.0) G is 10! h

(the storyteller points at the group of children)

So he’s only a [year] younger than Harry Potter! (2.0)

He lives with his [familyy]... (. with his [Aunt] [Petunia], (. [Uncle] [Vernon] and [Cousin] [Dudley].

FAMILY A P U V C D

He lives with his [familyy] (. because [his Mum] and [his Dad] [passed awa:y]. (.)

FAMILY MUM DAD PASS AWAY

And [his family] (. [doesn’t] [like] [Harry] [Potter]. (3.0)

FAMILY NO LIKE H P

[Harry] has [to sleep] [under] [the stairs] (. e[ry night]. (4.0)

H SLEEP UNDER DOWNSTAIRS NIGHT

[One day], (. [a letter] [arrives] for [Harry], h [but] Uncle [Vernon] h [puts it in the bin]. (3.0)

LETTER COME H BUT V THROW AWAY (move toward the floor)

A letter arrives for Harry, h but his uncle >puts it in the bin<. (6.0)

(the storyteller presents an envelope to the children and displays it being thrown on the floor)

[Mo::re letters] [arrive], h [but] h the uncle [Vernon] h st[ill won’t] let h [Harry] [read them].

MORE COME BUT V NO H READ (06:10)
And more letters arrive... (2.0) Look! >There are some letters for you as well<!

(07:25)

>What`s in your letter<? (3.0) WOOW! So now you`re all invited to be students of [Hogwart]. (.)

(07:47)

[the magic] [school]! (.). >You`ve got an invitation<!

MAGIC SCHOOL

So [what] do [we all] have [to do now]? (2.0)

WHAT WE DO

Let`s find out from the story] h what <[we`re] gonna do>! (3.0)

LOOK FOR WE

Since [Harry] [cannot] [read his] [letter], (.). a stranger (.). [a strange:]r named [Hagrid],

H NO READ LETTER MAN H

[arrives] [to deliver] a [special mess]age (2.0) a [special message]. h

COME BRING THE BEST THE BEST

[Harry] [finds out] about his [magic powe:rs] h and is invited to be a student (.). to be a [student]

H LOOK FOR MAGIC STUDENT
22 of the [School] [of ↑Magic].

SCHOOL MAGIC

23 So, Harry got the same letter as you did! (3.0)

(3) The right hand: the open palm moves back towards the front of the body and closes into the fist.

24 [Hagrid] [takes] [Harry] h on his [magic] [motorbike]... (2.0)

H (3) H MAGIC MOTORBIKE

(3) The right hand: the open palm moves back towards the front of the body and closes into the fist.

25 ...to [Diagon] [Alley] to buy his [school] (.). [to buy] [his school items]. h

D A SCHOOL BUY SCHOOL

26 So now we’re all going to Diagon Alley to buy our school ITEMS! (.)

(4) Right hand visualizing the number (2) with two fingers.

27 Harry [buys] an (.). [owl], (.). a [magic] [wand] (.). and a [cauldron]. (6.0)

BUY OWL MAGIC BRUSH BIG POT

28 Then, h he is [taken] to the [train station] [and ↑sets off] for [the School] [of ↑Magic]. (.)

(3) TRAIN GO SCHOOL MAGIC

(3) The right hand: the open palm moves back towards the front of the body and closes into the fist.

29 [On the train], (.). he [makes] [friends with] [two] other [students], (.). [Hermione] and [Ron]. (4.0)

TRAIN MAKE FRIEND (4) STUDENT H R

Screen displaying picture of Hermione and Ron)}

(4) Right hand visualizing the number (2) with two fingers.
30 After a long journey, they all finally arrive at the Hogwarts School. (5.0)

31 Harry meets Dumbledore, the head teacher of his new school. (4.0)

32 He wears the sorting hat during the classes. (6.0)

(5) Both arms holding the sides of the head; two fists with index fingers toward up; gesture cannot be classified as Makaton sign.

33 Harry and his friends learn to make potions… (3.0)

34 And they all learn the magic spells. (4.0)

35 He learns to ride a broom, he learns how to fly on the broom. (4.0)

36 And riding a broom becomes his favorite activity! (2.0)

37 At Christmas Harry gets an invisibility cloak. (13:48)
Harry "gets" an invisibility cloak!
(the storyteller puts the cloak on and then supports the children to try it on)
(14:30)

And, (.) he also finds a "mysterious" mirror, (.) the mirror of Erised, (.).

LOOK FOR MIRROR E

in [one] of [the school] attics. (3.0)

(2) SCHOOL ROOM UPSTAIRS

(2) Right hand visualizing the number (1) using the index finger.

[One night], (.) [Harry], [Ron] and [Hermione] discover a special stone at Hogwarts. (3.0)

THE BEST H

(the storyteller presents a colorful stone to the children)

And (.) a [really bad] man, called [Evil] Lord Voldemort [wants] to [steal] the stone. (2.0)

BAD MAN E L V WANT GET

He wants to steal the stone and >take it away<. (2.0)

(the storyteller repeats the sentence, again presenting the stone to the children)

[Harry], [Ron] and Hermione (.). have to save stone. (2.0) They sneak past [fluffy dogs], (2.0)

shoulders to create a mysterious walk)
And they find the key. (12.0)

The key takes them to the big room, where they have to play chess in order to get to the final stage of the journey. (4.0)

Harry wins the battle with Lord Voldemort. (8) Both arms with open palms moving from the center of the body toward up on the sides.

and finds the stone in the mirror. (2.0)

He saves it from Voldemort. (16:30)
3. HANSEL AND GRETEL

LARA

(0:05)

(the storyteller provides children with the costumes of the characters)

(1:30)

1 [Once upon a time] h [there lived] [a woodcutter] h [with his wife] and [two] [children]. (.)

2 [The woodcutter] was [very poor inde]ed, h

3 [and the children], (. ) who we[re called] [Hansel] h [and] Gretel [ ], (. )

4 had [often not enough] [bread] [to eat]. (2.0)

5 The [stepmother] h decided to [take them] [into the ↑forest] (. )

6 and [LEAVE THEM THERE]... (5.0)

7 It [was dark] when [they woke], h [but] [Gretel] [was happy] (2.0)
that [she had left] h [breadcrumbs] on the path (.) to [find] the w[ay ho:me]...

(2:10)
*(the storyteller gives the breadcrumbs to the children)*

(3:24)

9  [But] the birds (.) [the birds] >[had eaten up]< ↑every single CRUMB! (2.0)

BUT  BIRD  EAT

10  [and there was none] [↑left (.) to show] them the way [ho:me]. (3.0)

NO  GO  HOME

11  So how are they gonna find their way home? (2.0)

11  [They continued to wa:lk] h and [found] [a house] in the <mid[dle of the forest]>... (3.0)

WALK  LOOK FOR  HOUSE  FOREST

12  It was the [most wonderful] [cottage] h they had [ever see:n].

THE BEST  HOUSE  SEE

13  It was built entirely of [gingerbread] (.) and ornamented with [cookies]. (2.0)

BISCUIT  BISCUIT

14  [The windo:ws] were made of transparent [candy] (2.0) and [the steps] [of ↑toffee].

OPEN THE WINDOW  SWEET  UPSTAIRS  SWEET

(4:25)
*(the storyteller presents different candies to children)*

(5:48)
15 But [someone was watching ↑them]... (3.0)

LOOK

16 “[↑Who .] [is eating] [my ↑house]?” (. ) [said the] [old] [lady]. (2.0)

WHAT EAT HOUSE SAY OLD WOMAN

17 [Hansel] [and Gretel] [ ] [were sca:red], (2.0)

H AND G SCARED

(the face mimic, imitating the fear with hands shaking)

18 [but] [the old] [la:dy] h [invited them in] to [have ↑dinner with her]. (. )

BUT OLD WOMAN COME EAT

19 Although h [the old woman] seemed [nice], (2.0) she [was in fact a WI:TCH], (2.0)

(2) GOOD WITCH

(2) Both hands with fingers parallel to each other in O – shape, moving up and down in front of the chest. Not classified as Makaton sign.

20 [who wanted] [to fatten] the [children up] h so >she [could eat them]<! (5.0)

WANT BIG CHILDREN EAT

21 They soon [discovered this] h when the ↑witch [put] them in a [↑cage]. (. )

LOOK FOR WITH ROOM

22 They needed [to find a way to escape]... (2.0)

GO

23 They came up with a plan (. ) to [trick the witch] and [put her in the ↑oven]. (3.0)

WITCH PUT IN THE OVEN
24 It [↑WORKED] (2.0) and at last [they were <free to go] [home]>. (3.0)

THE BEST GO HOME

25 They [found their] [home] h and [were happy] [to see] [their ↑family].

] LOOK FOR HOME HAPPY SEE FAMILY (7:03)

4. LITTLE RED RIDING HOOD

LARA

1 [Once upon a time], h there lived a young girl [ ], h [called] [Little] [Red] [Riding] [Hood]. (3.0)

STORY GIRL NAME LITTLE RED RIDE HOOD

( the storyteller presents a doll of Little Red Riding Hood and gives a red hood to the children)

2 She [lived] [in a cottage] h on [the edge of the forest] with [her mother]. (.)

LIVE HOUSE FOREST MUM

3 [One day] [her mum] [asked her] h [to take a (2.0) basket of] groceries to [her Grandma], h

DAY MUM ASK GO G + MUM

( the storyteller presents a wicker basket)

4 who lived [in a cottage] on the other side [of the forest]. (3.0)

HOUSE FOREST

( the storyteller points at the other side)

5 [Little] [Red] [Riding Hood's] [mother] [told her] h to keep [to the main path] h

LITTLE RED RIDE HOOD MUM TELL ROAD
[and to hurry] as [her Grandma] [wasn’t feeling very well]. (3.0) 

HURRY G + MUM SICK

Suddenly, h [from out of the trees], appeared a wolf [dressed in fine clothes]. (.)

FOREST WOLF (1)

(the storyteller presents a mascot of w wolf)

(1) Right hand: thumb and index finger used to tap the chest. Not classified as Makaton sign.

No one had ever [told] [Little] [Red Riding Hood] h about wolves [ ], h

NO TELL LITTLE RED RIDE HOOD WOLF

so she [was not] a bit afraid when [he said] h “[Hello]”. (3.0)

NO SCARED SAY HELLO

(the face mimic, imitating the fear with hands shaking)

“[Hello],” [she replied]. h “[I’m] [sorry] but [I’m not allowed] to stop]. h

HELLO SAY I SORRY NO STOP

My mother said (. I must take [these groceries] quickly to my grandmother) h

MUM SAY GO G + MUM

because Grandma [isn’t] [very well].”

G + MUM NO SICK

Then [I] know [ ] exactly what your grandmother [ ] would [love],” h said [ ] “the wolf”. (3.0)

I KNOW G + MUM LOVE SAY WOLF

“All grandmas [love] bluebells]. (. They’re just over there) [among the trees].”

G + MUM LOVE FLOWER THERE FOREST
(4:07)

*(the storyteller walks around the group and gives flowers to children to smell)*

(5:12)

15 [The wolf] watched [Little] [Red Riding Hood] pick the [bluebells].

WOLF LOOK LITTLE RED RIDE HOOD FLOWER

16 Then, [licking his lips], he raced [swiftly] through the deep dark forest to [Grandma’s] cottage.

LIPS QUICKLY G + MUM HOUSE

17 [When] [Little] [Red] [Riding] [Hood] arrived at [her Grandma’s] house, she found [the door ajar].

WHEN LITTLE RED RIDE HOOD G+ MUM HOUSE LOOK FOR WINDOW

18 As [she peered into] the unlit room, she could just see the shape of her granny in bed.

LOOK SEE

19 She [*crept closer*].

COME

20 [Her grandma] [really ↑didn’t] [look her] usual self.

G + MUM NO LOOK

21 “[Oh ↑Grandma:], h [what] [big] [ears] [you have].”

G + MUM WHAT BIG EAR YOU

22 “All [the better to hear you] with, my dear.”

LISTEN
23  “[↑Grandma:], (.) [what] [big] [↑eyes:] [you have]”, [said] [Little] [Red] [Riding] [Hood]. (.)

G + MUM          WHAT         BIG    EYE               YOU           SAY   LITTLE   RED   RIDE  HOOD

24  “All the better [to see: you with my dear].” (3.0)

SEE

25  “And GRANDMA:, h [what] [big] [teeth] [↑you have].” (.)

WHAT BIG   TOOTH     YOU

26  “All [the better] [to EAT you with]!” (.) cried the wolf [   ], h and he [↑>gobbled her up<] in one big gulp! (3.0)

YOU                 EAT                                                       WOLF              EAT

27  Just then, h a (3.0)[woodcutter] [was on his way home] [for lunch]. (.)

WOOD + CUT                GO                             EAT
(the storyteller presents twigs to the children)

28  He [hea:rd all the com]motion and (.) wondered if the [old] [lady] who lived [there] was ↑all right. (2.0)

LISTEN                                                                  OLD   WOMAN              HOME

29  >Ru[shing in to see what was] happening, h

GO

30  the [woodcutter fou]nd< the [big], [bad] [wolf] with a [full tummy]. (2.0)

WOOD + CUT                BIG    BAD   WOLF                TUMMY

31  With [one blow of his axe], he [<killed it stone dead>]. (4.0)

AXE                                                                         PASS AWAY
32 Then [he snipped open] the [wolf], and out popped a [very frightened] [Little Red] [Riding] [Hood]. (2.0)

CUT WOLF

SCARED LITTLE RIDE HOOD

(Hands shaking)

33 “[↑Where’s my] [   ] [↑Grandma]?” [she asked]. (3.0)

WHERE MY G + MUM ASK

34 They [heard] [a knocking sound] coming from the wardrobe. (.)

LISTEN KNOCK

35 It [WAS GRANDMA:]! (3.0)

G + MUM

36 “[He] [tied me up] [when he] [heard you] [coming], my dear”, [Grandma], (.)

HE TIE UP LISTEN YOU G + MUM

37 as [she hugged] [Little] [Red] [Riding] [Hood]. (4.0)

HUG LITTLE RED RIDE HOOD

38 From [that day on], [Little] [Red] [Riding] [Hood] [↑never stopped] [to pick bluebells] [in the woods] (.)

DAY LITTLE RED RIDE HOOD STOP FLOWER FOREST

39 as [she hurried to] [Grandma’s], (.)

GO G + MUM

40 and [she never] [saw] another wolf [   ] again. (3.0)

NO SEE WOLF
And they [all:] lived [happily] ever after.

ALL HAPPY

(9:58)

5. KING AND HIS GREEDY BROTHERS

JENNA

1 [A long time ago], there was a [king], (.) who [had two] [brothers]. (3.0)

PAST KING 2 BROTHERS

2 And the bro[the:rs were ↑not] [good]. (.)

NO GOOD

3 [The brothe:rs] [were very very naughty. h

BROTHER BAD

4 They were mean, they were selfish, and they were greedy]. (3.0)

BAD

5 And they were [the king’s] [BIG] [problem]. (3.0)

KING BIG MATTER

6 [One day], (. ) [the king decided] to [do something h abo]ut [his two] [awful] [brothers]. (3.0)

DAY KING DO 2 BAD BROTHER

7 [In the middle of the night], (2.0) [the royal guards] [↑woke the brothers up<] (2.0)

NIGHT GUARD WAKE UP
and [marched them] downstairs (.) to a [*small] [dark] [room*]. (3.0)

MARCH SMALL DARK ROOM

[The brothers] [were very... (.)

BROTHER SCARED (face mimic imitating the fear)

[to the group] "How did they feel?" (.) ↑Frightened]! [Good] [girl]! (3.0)

SCARED GOOD GIRL (face mimic imitating the fear) (the storyteller praises for the right answer)

BUT in the [*small] [dark] [room*] was a [↑big TABLE]. (2.0)

SMALL DARK ROOM TABLE (the wide movement of the arms indicates the massive shape of the table)

And [on] [the table] h [was "lots and lots and lots of [food"].

ON TABLE LOTS OF FOOD

There we[re cakes], h [and chocolate], h [and roast chicken], h

CAKE CHOCOLATE CHICKEN

[and potatoes], h [and sausages], h [and chips], h [and delicious sandwiches], h

POTATOE SAUSAGE CHIPS SANDWICH

[and fried cheese], h [and yoghurt], h [and bread]. (2.0)

CHEESE YOGHURT BREAD

[The brothers] [looked] [at the delicious] [food] h and felt [>very happy<]. (.)

BROTHER LOOK THE BEST FOOD HAPPY
17  But then [the king] [said]: (. ) “There are [two rules]... (. )

   KING    SAY

18  [One rule is] [you must] [use] [my] [spoons]. (. )

   1       SPOON

19  [And the second rule is] [you must] [hold the “very end”] [of the spoons]” (. )

   2       HOLD   SPOON

20  [The brothers were] [very] [EXCITED] [and] [really looking forward to] [eating all the food]<]

   BROTHER   THE BEST   EAT

21  [because they were so greedy]. (. )

   GREEDY

22  And [then,] [the king] [got] [the spoons]. (. )

   KING

   (the storyteller presents long spoons to the children)

23  O Ou! (2.0) And said they had to hold them at the ↑end. (. )

   (the storyteller holds the long spoons)

24  (to the child) L, [can] I [borrow] you a moment? [can you hold] the spoon at the end? Can you try eat with it? (4.0)

   (the storyteller gives one spoon to the child)

25  Ou, (. ) what’s happening? [can you get] it in your mouth? [h
26 No:::! (3.0)
   (the storyteller shakes the head)

27 So::, (.) for [three] long [days], h the brothers tried to get the spoon into their mouths. (2.0)
   3 DAY
   (the storyteller imitates the action)

28 And [they couldn`t do it]. (.)
   NO

29 And [they shouted], h [and they cried], h
   SHOUT CRY

30 [and they got hungry], h [and tired]. (3.0)
   HUNGRY TIRED

31 On [the third] [day], they ha[d a ↑good IDEA]. (.)
   3 DAY GOOD

32 Can anybody [think] what a [good idea might] have been? (4.0)
   THINK GOOD
   (the storyteller points at the group)

33 (to the children) L and V, h you hold the spoon only at the end? (.)
   (the storyteller gives the spoons to two carers, who supports children to hold them)
34 How can you get to eat by only holding the spoon at the end? (2.0) “Can [you help each other”]?

(3.0)

HELP

35 YES! (5:58)

(the children are supported to help each other feeding themselves with a yoghurt, using two long spoons)

(9:05)

TRANSCRIPTION KEY

h – A pause which includes an intake of breath.
(.) – A very short pause.
(2.0) – A pause with an indicated length.
HELP – Loudly spoken words.
° and he went back to sleep° - Quietly spoken words.
↑got up– Raised pitch.
>he set off< - Faster spoken words.
[reindeer] – timing of the sign.
REINDEER – name of the Makaton sign.
[pushed him back] – gesture, which cannot be classified as the Makaton sign.
B. RESEARCH PROPOSAL.

Research Title: The Exploring of Implementing Makaton in Multi – Sensory Storytelling by Professional Caregivers for Children with Physical and Intellectual Disabilities aged between 5 and 10.

Research plan and protocols

This project aims at exploring the connections between Makaton, a sign based communication system, and Multi – Sensory Storytelling for children with profound intellectual and physical disabilities. In many cases, children with profound disabilities have communication and language difficulties. In order to establish effective communication, alternative aids need to be used and one of those is Makaton. It is considered to be one of the most persuasive and influential pedagogical approaches for children with severe disabilities (Sheehy and Duffy, 2009). Previous studies have specifically analysed the frequency of the use of Makaton signs in speech (Byler, 1985) and Makaton is highly valued by caregivers (Sheehy and Duffy, 2009). In terms of Multi – Sensory Storytelling, which emphasises sensory experiences and social interaction, previous studies have indicated that storytelling supports language and communication development (Brug et al, 2011; Penne et al, 2012). In my research, I am going to focus on the way that Makaton is embedded into the Multi – Sensory Storytelling. I wish to discuss how these communicative strategies are used in practice by professional caregivers. I aim to elaborate whether Makaton and Multi – Sensory Storytelling might be mutually supportive.

The study will be conducted during an after school club for intellectually and physically disabled children aged between 4 and 6, based in Kingston. A story (approximately 10 minutes long) is incorporated into every an hour and half session. I have decided to collect data from three different storytellers, which will generate a feasible amount of data to be handled in the time frame and limitations imposed by the dissertation requirements. The storytellers, with varying degrees of expertise in Makaton, will be video recorded across six sessions. Different expertise in the knowledge of Makaton signs may support the discussion whether the level of Makaton might affect its communicative function. All participants will be current staff members at the club. The researcher will analyse the presentation of two stories by each participant. The camera will be focused on the storyteller and recordings will only include approximately the first ten minutes of the session. Consent will be obtained from each participating storyteller, who will be asked to send the consent form back within two weeks after it has been received. Although the data will not directly involve children, parents will be provided with information sheets. If parents do not wish their children to be present during the recording of storyteller, those children will be supported in a separate sensory room by staff members. This will be delivered through an opt – out system as discussed and agreed with the Chief Executive Officer of the organization.

The data will be subject to a qualitative analysis, based on an iterative process and informed by Conversation Analysis techniques. It will be collected using the video camera, resulting in six recorded Multi – Sensory Stories narrated by three different storytellers. A personal SD card will be used and files will be stored on a password protected computer. The data will be then deleted from the SD card and a copy will be made on a DVD. This will be given to Chief Executive Officer of the organization (if agreed by participants). The video recordings of Multi – Sensory Stories will be accessed by the researcher, project supervisor in
the presence of researcher as well as Chief Executive Officer (with the prior consent from participants). In addition, the biographical information about participants’ proficiency in Makaton and experience in storytelling will be collected during an informal interview, held after the recording has been made. The researcher will record it using a dictaphone and then store on a password protected computer. The biographical data will be only used as additional information supporting the analysis of video recordings. Therefore, the informal interviews will not be copied on a DVD and will be only accessed by the researcher. The collected data will be used for a dissertation project and will not be disseminated more widely. All data will be disposed after a year unless requested by the Chief Executive Officer of the organization to keep video recordings as educational source for staff training. This will be included in the consent forms for the participants.

In terms of relevant experience, the researcher is a third year student of English Language and Communication and part – time support worker. I professionally support children with profound intellectual and physical disabilities and actively participate in the after school club, where the study will be set. I have passed the Makaton Training for stages 1-6 as well as Sensory Considerations Training, organised by National Autistic Society. Furthermore, the study will be supervised by Dr Hannah Sowden, a clinical linguist who has conducted research and published in the areas of Autism Spectrum Disorder and Specific Language Impairment. She has previously supervised both UG and MA dissertations in the areas of language acquisition, co-speech gesture, aphasia and Autism Spectrum Disorders, all of which were successfully concluded.

ETHICAL CONSIDERATION

Participation in the study is voluntary. If the participants decide to take part in the project, they will be given information sheet to keep as well as consent form to sign within two weeks after it has been received. The participants will be able to withdraw at any time without giving a reason. During the transcription process anonymity will be ensured through the use of pseudonyms and removal of any identifying information. The video recordings will be only given to the Chief Executive Officer of the organization if the participants sign the consent for it. Furthermore, the participants will be able to obtain a copy of the results of the research if requested. There are no direct benefits to the participants in taking part in this study. In addition, none of the children will be recorded, but members of staff. The children will participate in their regular activities during the session and Makaton Multi – Sensory Storytelling will be presented with its regular length. If any child becomes distressed during an assessment process, the data collection will be cease. Research will be conducted according to the health and safety policies of the organisation and the researcher has full DBS check. In addition, there might be a potential conflict of interest for the researcher. I actively participate in the after school club, where the study will be based and get paid for it. Therefore, this is related to the financial involvement in organization directly connected to the project. However, the conflict of interest will be minimalized by attending the club whilst off duty in order to collect objective data with no destructions.

The researcher does not expect any financial benefits from conducting this research. The study is part of dissertation project for an undergraduate degree in English Language and
Communication. The research will not involve any payments and expenses. This study will form the basis for a dissertation project: there are no plans to publish from this data.

**RISK / BENEFIT ANALYSIS**

There are no direct benefits for the participants of the study. The risks will be eliminated by anonymity (use of pseudonyms and removal of any identifying information) and participants will receive information sheets and consent forms. Moreover, the children will not be involved in the study and the regular structure of the session will not be affected by the research. There is no risk for illegal activities or protection issues to be uncovered during the course of the research. The study results will not be misused for purposes that are illegal or harmful. This project is not funded, it is not expected that it will incur any costs, nor will participants receive compensation.
C. A LETTER TO THE CHIEF EXECUTIVE OFFICER OF THE ORGANIZATION.

10/12/2014

Dear **Chief Executive Officer

**Research Project:** The Effectiveness of Implementing Makaton in Multi – Sensory Storytelling.

I am currently planning a study in the use of Makaton within Multi – Sensory Storytelling and was wondering if your organization would be willing to participate. The study is part of my dissertation project for undergraduate degree in English Language and Communication.

The full details of the study can be found in the attached information sheet. I am looking to work with 3 staff members, who take part in an after school club (Flyers), organised by your Day Centre. I would like to focus on the use of Makaton with connection to Multi – Sensory Storytelling in order to discuss the possible language and communication development using both sign and speech modalities at the same time.

With your permission, data would be collected during 6 sessions of the after school club. Each participant would be video recorded presenting two Makaton Multi – Sensory Stories. The recording would be only made during the presentation of the story and none of the children attending the club would be involved in the research. Parents would be provided with the information sheets. If a parent does not wish the child to be present during the video recording of the storyteller, then the child would be supported in a separate sensory room by staff members.

On completion of the study, I would send a report to your organization with the findings of the study and the organization will be fully acknowledged for participating in all outputs resulting from the study. The collected data may be kept by your organization as educational tool for training purposes if required and agreed by the participants. The researcher has had his DBS checked and is currently applying for the approval from Faculty Research Ethics Committee from Kingston University.

If you have any question or would like to discuss the project in more detail, please contact me via email (k1206379@kingston.ac.uk) or telephone (07983874050). The study is supervised by Dr. Hannah Sowden, Lecturer in Linguistics at Kingston University, who can be contacted using the following email address: H.Sowden@kingston.ac.uk or telephone 0208 4172325.

I look forward to hearing from you

Mateusz Bednarski
D. A LETTER TO THE PARENTS OF CHILDREN ATTENDING THE CLUB.

15/12/2014

Dear Parent

**Research Project: The Effectiveness of Implementing Makaton in Multi – Sensory Storytelling.**

In partnership with researchers at Kingston University, EnhanceAble has agreed to take part in a study exploring the connections between Makaton and Multi – Sensory Storytelling for children with profound intellectual and multiple disabilities. The study is part of my dissertation project for an undergraduate degree in English Language and Communication. This study will focus on the use of Makaton within Multi – Sensory Storytelling by professional caregivers.

**What is the main aim of the study?**

The main question of the research is whether the connection of sign and speech modalities can be successful from the linguistic point of view. In this project I would like to investigate those connections focusing on the after school club (Flyers), which is attended by your child.

**What part of the session will be recorded?**

I will come and join the first part of the session, which will involve Makaton Multi – Sensory Storytelling. The storytelling will be recorded using the video camera and then collected data will be analysed.

**How many sessions will be recorded?**

The recordings will be made during 6 sessions of the club.

**Who will be recorded?**

The video camera will only record the storyteller. If you do not wish your child to be present during the recording of storyteller, your child will be supported in the separate sensory room by staff members.

**What happens if my child becomes distressed during the recordings of storytellers?**

If any child becomes distressed during the assessment process, the data collection will be immediately stopped. This has been agreed with the Chief Executive Officer of the organization.

If you have any questions regarding the study, please do not hesitate to contact me via email (k1206379@kingston.ac.uk) or telephone (07983874050). The study is supervised by Dr Hannah Sowden, Lecturer in Linguistics at Kingston University, who can be contacted via email (H.Sowden@kingston.ac.uk).

Yours sincerely

Mateusz Bednarski

I understand that Mateusz Bednarski will be conducting the above study at my child’s after school club (Flyers). The staff members will be video recorded during the Multi – Sensory Storytelling.

I do not wish my son / daughter to be present during the video recordings of the storytellers. I would like my child to be supported in a separate sensory room by staff members within the recording time.

Date ................................ Signature of Parent/Guardian ..............................................

Please return this form to Mateusz Bednarski (k1206379@kingston.ac.uk) within two weeks after the form has been received if you do not wish your son or daughter to be present during the video recordings.
E. PARTICIPANT CONSENT FORM

INFORMATION SHEET

Research Project: The Effectiveness of Implementing Makaton in Multi – Sensory Storytelling.

In partnership with researchers at Kingston University, EnhanceAble has agreed to take part in a study exploring the connections between Makaton and Multi – Sensory Storytelling for children with profound intellectual and multiple disabilities. The study forms part of my dissertation project for an undergraduate degree in English Language and Communication. I would like to invite you to be part of this research. Before you decide, it is important that you understand the main aims and objectives of the project.

What am I trying to find out?
This project is aimed at discovering the ways that Makaton is embedded in Multi – Sensory Storytelling. Previous research has shown that both signs and speech stimulate language and communication development of children with profound intellectual and physical disabilities. This study will focus on the use of Makaton within Multi – Sensory Storytelling by professional caregivers. The main question of the research is whether the connection of sign and speech modalities can be successful from the linguistic point of view. In this project I would like to investigate those connections focusing on the after school club (Flyers), which is run by your organisation.

Why have I been chosen?
I wish to recruit professional caregivers with varying expertise in the knowledge of Makaton. You have been chosen due to your active participation in the after school club (Flyers) and the ability to use Makaton signs within Multi – Sensory Storytelling. Your organisation has kindly agreed to take part in this study.

Do I have to participate?
Participation is voluntary. If you decide to take part in the project, you will be given this information sheet to keep as well as consent form to sign. You can withdraw at any time without giving a reason.

What will happen if I participate?
A researcher will come and join the first part of the session, which will involve Makaton Multi – Sensory Storytelling. The storytelling will be recorded using the video camera and then collected data will be analysed. The video camera will only record the storyteller and the recording will take place during the Makaton Multi – Sensory Storytelling. The researcher will record the presentation of two Multi – Sensory Stories by each participant.

What will happen if some of the parents do not wish their child to be present during the recording?
Although the data collection will not involve children with intellectual and physical disabilities, parents will be provided with information sheets. If parents do not wish their children to be present during the recording of storyteller, those children will be supported in
the separate sensory room by staff members. If any child becomes distressed during the assessment process, the data collection will be immediately stopped. This has been agreed with the Chief Executive Officer.

What happens to the results of the study?
Data for each participant will be stored confidentially in the password protected laptop. The collected data will be stored for a year after the project has been completed. The Chief Executive Officer of your organization may request to keep data as educational source for the training purposes. You will have the opportunity to refuse the permission for the tapes to be used in this way if you wish. The anonymity will be ensured by substitution names with pseudonyms. The video recordings will be only accessed by researcher, project supervisor (in the presence of researcher) and Chief Executive Officer of EnhanceAble (if agreed by you). The recorded data will not be submitted with the dissertation project, but their transcriptions.

What are the possible disadvantages and risks of taking part?
There will be no discomforts or risks to you in taking part in this research. Although the data will be collected using a video camera, the anonymity will be maintained. You will not be identified in any report or publication. In addition, you can obtain a copy of the results of the research if requested.

What are the possible benefits of taking part?
There are no direct benefits to you in taking part in this study.

Who is conducting this research?
The project is organised by Mateusz Bednarski from Kingston University. This study is part of my dissertation project for undergraduate degree in English Language and Communication. The research is supervised by Dr. Hannah Sowden, Lecturer in Linguistics. This study has received approval from Faculty Research Ethics Committee from Kingston University. The researcher has been DBS checked.

What should I do next?
If you are happy to participate, please fill in the attached consent form and send it back within two weeks to Mateusz Bednarski by post (34 Dale Court, York Road, Kingston, KT26JQ) or email (k1206379@kingston.ac.uk).
If you have any questions regarding the study, please do not hesitate to contact me on the address above. If you have any queries to the project supervisor, please contact Dr. Hannah Sowden using the following address: H.Sowden@kingston.ac.uk
WRITTEN CONSENT TO PARTICIPATE IN A RESEARCH STUDY

Statement by Participant

• I confirm that I have read and understood the letter of invitation for this study. I have been informed of the purpose of taking part in this study.
Title of study: The Effectiveness of Implementing Makaton in Multi – Sensory Storytelling.

• I understand what my involvement will entail and any questions have been answered to my satisfaction.

• I understand that my participation is entirely voluntary, and that I can withdraw at any time without prejudice.

• I understand that all information obtained will be confidential.

• I agree that research data gathered for the study may be published provided that I cannot be identified as a subject.

• I agree that research data may be used by the Chief Executive Officer of EnhanceAble as educational tool for the training purposes. YES / NO

• Contact information has been provided should I wish to seek further information from the investigator at any time for purposes of clarification.

Name of Participant ………………………………………………………………………………………………

Date …………………………… Signature of Participant……………………………

Statement by Researcher

• I have explained this project and the implications of participation in it to this participant without bias and I believe that the consent is informed and that he/she understands the implications of participation.

Name of Researcher ………………………………………………………………………………………………

Date …………………………… Signature of Researcher ……………………………
F. INFORMAL INTERVIEW QUESTIONS

Research Project: The Effectiveness of Implementing Makaton in Multi – Sensory Storytelling.

1. What is your experience in working with children with profound physical and intellectual disabilities?
2. How long have you been working at Flyers?
3. Had you had any particular training before participating in this after school club? What kind of training had it been?
4. How often do you use Makaton?
5. Do you only use Makaton at Flyers?
6. How would you rate your expertise in the knowledge of Makaton signs?
7. How do you implement Makaton in Multi – Sensory Storytelling?
8. Do you rehearse your signs before each storytelling?
9. What are the benefits of using Makaton within Multi – Sensory Storytelling?
10. What do you think about using Makaton as a language tool to support the communication development basing on your observations of children who attend Flyers?
11. What are the advantages of using both signs and speech at the same time?