A study to determine the effectiveness of an Emotional Literacy intervention with children aged 5-7, who are deaf.

A study submitted in partial fulfilment of the requirements for the degree of Masters of Science/ Master of Arts of the University of Hertfordshire, Hatfield

Simran Nandra

BSc (Hons), P.G.C.E, P.G. Dip

Mary Hare, Newbury Partnered with University of Hertfordshire, Hatfield

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Abbreviations

CYPD	Children and young people who are deaf
CYP	Children and young people
EL	Emotional Literacy
UK	United Kingdom
ROE	Roots of Empathy (social and emotional curriculum/programme)
CI	Cochlear Implants
SEMH	Social, Emotional and Mental Health needs
UAE	United Arab Emirates
EHCP	Educational Health Care Plan
IEP	Individualised Education Plan
ToD	Teacher of the Deaf
QToD	Qualified Teacher of the Deaf
BSL	British Sign Language
MQ	Mandatory Qualifications
UK	United Kingdom
DHH	Deaf or Hard of Hearing
SEND COP	Special educational needs and disability code of Practice
SEND	Special Educational Needs and Disabilities
HA	Hearing aid
6:2	6 years: 2 months
DLD	Developmental language delay
GD	Global development
OT	Occupational Therapy
EHAP	Early Help Assessment and Plan- The process for assessing the needs of a child/young person/family and creating an action plan to address those needs.
Hearing age	Chronological age – effective aiding age = hearing age
YP	Young people

SSE	Sign Supported English
TC	Total communication
EC	Emotions Curriculum
SL	Sign Language
RB	Resource base

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Abstract

The aim of this study is to investigate the effectiveness of an emotional literacy intervention when developing the emotional skills of children who are deaf, aged 5-7. Children and young people who are deaf face various challenges that can significantly affect their social and emotional development. Furthermore, the impact of the Covid-19 crisis on mental health has been substantial. Maintaining good emotional and mental health is crucial, as it greatly influences emotions, thoughts, and behaviours, all of which are essential aspects of life. Previous studies have investigated emotional literacy interventions with hearing children, this highlights the gaps in literature and provide the rationale for conducting this study with children and young people who are deaf.

The research methods consisted of a mixed-methods approach including multiple case studies with action research intent. A pre-intervention assessment took place before an emotional literacy intervention was delivered to seven children, who have hearing levels from mild to profound. The participants attend an infant school with a resource base, which offers specialised support for children and young people who are deaf, while being included in a mainstream setting. The resource base utilises a total communication approach, meaning the child's preferred method of communication is used. Guided observation records were completed to document the progress of the children in each lesson. A post-intervention assessment was conducted to evaluate progress. The results will undoubtedly inspire change in the current practice and highlight the vital importance of integrating emotional literacy into the curriculum to effectively address individual needs.

The findings suggest that children and young people who are deaf have a minimal understanding of emotions. Participants found 'fear' and 'anger' difficult emotions to grasp, however they were skilled in expressing and recognising happiness. All participants could sign/say sad, happy and angry, yet one child was unable to sign/say frightened. The study suggested that the participants improved in expressing their emotions through facial expressions and body language, however they had difficulty recognising and communicating feelings. The main conclusion to be drawn from this research is that an explicit emotional literacy intervention could have a positive impact on how participants express and identify emotions.

Further research is required to examine whether external factors affect children and young people who are deaf and their emotional literacy skills, such as parental involvement and participants' home language. After the intervention took place, it was noted that there were areas of emotional literacy that needed further attention, these included the regulation of emotions and empathy. As a result of the successful outcomes from the emotional literacy intervention, we have made the decision to continue teaching from the Emotions Curriculum.

1. Introduction

‘Rates of probable mental disorders have increased since 2017. In 2020, one in six (16.0%) children aged 5 to 16 years were identified as having a probable mental disorder, increasing from one in nine (10.8%) in 2017’ (NHS, 2022).

This highlights the increase in mental health problems that both deaf and hearing children face (Levine, 2014; Hills, 2016; Wong, et al.,2020). Wright, et al. (2021, p.31) observed the impact of Covid-19 on children and young people who are deaf (CYPD) in the UK and found that ‘60%’ of CYPD ‘experienced declines in their mental health during the first national lockdown in 2020.’ This suggests that ‘the Covid-19 crisis has had a negative impact on the mental wellbeing of both deaf and hearing CYP’ (children and young people) (Wright, et al., 2021, p.32).

A lack of emotional understanding affects mental health and wellbeing (Hills, 2016; Coskun & Oksuz, 2019; Twiner, et al., 2022) of this ‘vulnerable portion of the population’ (Al Majali & Alghazo, 2021, p. 2134). ‘The inability to regulate emotions provides the basis for numerous physical and mental illnesses’ (Dehghan, et al., 2020, p.3). This reflects the Mandatory Qualifications (MQ) standard that ‘emotion identification and regulation are important attributes in avoiding mental health problems for deaf learners’ (DfE, 2023, p.7K7).

It is therefore important to instil a knowledge of emotions so that CYPD have a better quality of life (Camilleri, et al., 2011; Eden, et al., 2017) as mental health and emotional wellbeing is a growing concern. The development of emotions is an important aspect that needs to be addressed in the researcher's resource base (RB). As it is closely linked to the targets of Education, Health, and Care plans (EHCP) and individualised education plans (IEP). It is of interest to know whether an explicit four-week emotional literacy (EL) intervention with seven CYPD can support the development of emotion skills. Data will be gathered before, during, and after the intervention to evaluate the effectiveness of the EL intervention.

The overall aim of this research is to determine the effectiveness of an EL intervention in developing the emotional skills of 5 to 7-year-old children who are Deaf. When exploring this aim it is important to examine the following areas:

1. Can an EL intervention improve the ability of CYPD (aged 5-7) to say/sign emotion words?
2. Can an EL intervention improve the ability of CYPD (aged 5-7) to express and recognise anger, fear, happiness and sadness?
3. Can an EL intervention improve the ability of CYPD (aged 5-7) to communicate their emotions to others?

The field of emotional skills development and CYPD in British studies demands greater attention. This research on teaching EL involving CYPD will be a valuable addition to current academic studies, as most of the previous research has only focused on hearing children. The results of this study can be used to understand which emotion skills children lack and what areas need further attention. It also creates awareness that EL interventions can make a difference and support children's understanding, expression and recognition of emotions.

2. Literature Review

This literature review will assess research, literature, and current understanding of emotional learning in CYP and CYPD. An outline of previously published research conducted with these children will be drawn upon. This section will also identify gaps in research concerning EL and CYPD.

In order to conduct this research, resources such as the online library (University of Hertfordshire), Scopus and Google Scholar were used to obtain relevant information. Specific keywords were used such as: “emotions” + “children deaf”, “emotional literacy” + “deaf”. Further searches were made including the terms “emotional knowledge” + “mental health”, “emotional intelligence” + “deafness”. Research findings were evaluated to determine which were the most pertinent, up-to-date, and appropriate for this study, however there was limited research available linked to this matter.

2.1. What are emotions?

In 1884, William James’, seminal work, posed the question ‘What is an Emotion?’ (James, 1884). Plutchik (1991) contributed further by developing a ‘Wheel of Emotions,’ which classified eight basic emotions: anger, anticipation, joy, trust, fear, surprise, sadness and disgust. This influential research simplified a complex notion of emotions, which supported future research. Keltner & Gross, (1999, p.468) defined emotion as:

‘episodic, relatively short-term, biologically based patterns of perception, experience, physiology, action, and communication that occur in response to specific physical and social challenges and opportunities.’

In the 21st century, Adolphs, et al. (2019, p.R1060) argued that ‘emotions remain essentially contested concepts’ as definitions cannot be agreed on by scientists and psychologists (Plutchik, 1982; Suri & Gross, 2022).

2.2. What is Emotional Literacy?

Bocchino (1999, p.9), explained that EL consisted of ‘skills, strategies, maps and tools that we learn to become emotionally fluent,’ whereby individuals have the ‘ability to understand and manage emotions resourcefully, to communicate effectively’

(Bocchino, 1999, p.5; Melnick, et al., 2017; Schoorl, et al., 2016). Steiner (2003, p.1), added being emotionally literate 'improves personal power and the quality of your life' (Camilleri, et al., 2011; Eden, et al., 2017).

Haddon, et al., (2005, p.6) defined EL as:

'the process of interacting with others in a way that builds understanding of our own and others' emotions, and then using their information to inform our actions.'

Haddon, et al. (2005, p.6) revealed that EL is seen as a 'practice rather than an ability', where emotional skills are 'learnt and developed over time' (Rae, 2012, p.4). Research indicates 'individuals who have well-developed social and emotional competence are more successful in life than individuals who do not,' (Luckner & Movahedazarhouligh, 2019, p.8; Melnick, et al., 2017; Bocchino, 1999; Hills, 2016), highlighting the importance for EL interventions to be present within schools (Luckner & Movahedazarhouligh, 2019; Kliueva & Tsagari, 2018).

2.3. **The importance of emotions in relation to all children**

Emotions are an integral part of human nature and can impact learning (Camilleri, et al., 2011; Pekrun, 2014; Immordino-Yang, 2015; Tyng, et al., 2017; Jelena & Stanislava, 2018). Moreover, emotions can have a considerable influence on our thoughts, actions, attention, learning, memory, reasoning, and problem-solving as well as affecting our bodies and impacting our relationships (Camilleri, et al., 2011; Tyng, et al., 2017). Miyamoto, et al. (2015), asserts there is a need to develop social-emotional skills so the challenges of the 21st century can be dealt with positively. Similarly, Alwaely, et al. (2021, p.2491) highlighted 'emotion knowledge in children needs to be developed from an early age, as it is connected with later social adaptation'. Therefore, it is imperative to focus on the explicit teaching of emotional skills at an early stage.

2.4. **Explicit teaching**

Ashdown & Bernard's, (2012, p.397) study based in Australia, suggests the explicit teaching of emotions to 100 hearing students, in Grade 1 (ages 6-7) for 10 weeks, had a 'positive effect on social-emotional competence and wellbeing'. Correspondingly, Rees, et al. (2017, p.20) established 'one 45-minute session of explicit training to

perceive [cued speech] resulted in a significant improvement.' Additionally, Burton, et al's. (2021, p.1241) UK study, compared explicit and implicit teaching approaches and found 'knowledge acquired from explicit teaching is likely to enter long-term memory.' A key problem with Rees, et al. (2017) and Burton, et al.'s (2021) studies are they have not focused on CYPD and the explicit teaching of EL, whilst Ashdown & Bernard (2012, p.397) highlighted the beneficial impact of explicit instruction when considering social-emotional learning, although the study was based on hearing chidren.

Gilliver, et al.'s (2016, p.277) study on CYPD, found 'functional hearing can benefit from explicit [phonological awareness] instruction.' According to Miller, et al. (2012, p.206) regardless of 'primary communication mode, chronological age, and language ability' all CYPD 'benefitted from explicit instruction in phonological awareness.' Despite this promising research indicating a positive impact of explicit instruction, others found an indirect approach, when teaching EL, was more beneficial. Craig (2007, p.97) suggested it is not helpful 'to focus explicitly on young people's emotional development.' Whilst Riches, (2013) discovered an implicit teaching approach could provide a basis for effective and impactful language interventions. Caution is due here, as this research focussed on two children aged eight, with language impairments, so findings may not be applicable to the broader population.

2.5. **CYPD and emotional knowledge**

Studies have revealed CYPD have delays and difficulties with emotional language (Rieffe & Terwogt, 2000; Dyck, et al., 2004; Dammeyer, 2010; Wiefferink, et al., 2013; Jones, et al., 2016; Jones, et al., 2021). Conversely, Rieffe's (2012, p.477) study, which focussed on emotional awareness and regulation of four target emotions, suggested 'deaf children have no difficulties in identifying their own basic emotions and the elicitors, or multiple emotions of opposite valence (happy and sad).' However this study involved 26 deaf and hearing children with a mean age of 11 years, thus results cannot be generalised to the wider population. Furthermore, Jones, et al.'s (2016) findings suggest CYPD performed similarly to a hearing control group. This was a UK-based project including 26 deaf (female) participants who attended special units for deaf children. These findings cannot be extrapolated to all CYPD.

Other studies have considered the relationship between language acquisition and emotional knowledge (Francisco, et al., 2003; Ludlow, et al., 2010; Moeller & Tomblin,

2015). Research has suggested that CYPD's use of sign language gives an advantage when identifying emotional expressions (Tsou, et al., 2021; Laya de Gracia, et al., 2021). Bettger, et al.'s (1997) seminal work, with 16 deaf adults in California, who learnt American Sign Language as their first language, found exposure to sign language (SL) meant that this group were better at identifying emotions within facial expressions. Contrary to this, other studies have noted deaf adults and CYPD recorded lower scores compared to hearing peers when identifying emotions through facial expressions (Bachara, et al.,1980; Dyck, et al., 2004; Ludlow, et al., 2010; Waaramaa, et al., 2018). However, the authors did not mention the participants' first language, so it is not possible to make a direct comparison. Ludlow, et al. (2010) explored emotion recognition of 26 deaf participants with different levels of deafness; results reflected that 'signing ability did not appear to have a strong influence on the ability to recognize emotions' (Ludlow, et al., 2010, p.927).

2.6. Emotional literacy support for hearing children

Numerous studies have taken place to explore the effectiveness of EL programmes with hearing children: PATHS (Domitrovich, et al., 2007; Hughes & Cline, 2015); 4Rs (Jones, et al., 2011); Happy Children- Friendship Cards (Bezzina & Camilleri, 2019); Tilly's Life Center "I Am Me" (Lakes, et al., 2019) and Roots of Empathy (ROE) (Schonert-Reichl, et al., 2012; Dahl, et al., 2016; Fransoo, et al., 2017; Lätsch, et al., 2017; Connolly, et al., 2018). There will be a focus on PATHS and ROE since they align closely with the EC.

2.6.1 PATHS curriculum

Domitrovich, et al.'s (2007), Pennsylvania-based study, researched the development of children's social competence by teaching a weekly PATHS curriculum. Lessons were taught through circle time sessions, group games, art projects and books, which 'included lessons on compliments, basic and advanced feelings, a self-control strategy…and problem solving' (Domitrovich, et al., 2007, p.72). After nine months, parents and teachers noticed higher emotional knowledge skills and children were more socially competent compared to peers who did not receive the intervention. However, Domitrovich, et al.'s (2007) research must be interpreted with caution as it was carried out with hearing pupils not living in the UK, therefore results cannot be applied to CYPD. Another criticism of the study is the observational data was collated

by teachers, who provided the support, hence data could be inconclusive. Yet, they argued there was a similar pattern between teacher and parent ratings, giving credibility to their findings. Contrary to this, a study evaluating PATHS in Northern Ireland, concluded 'effects on social-emotional learning were weak and inconsistent' (Ross, et al., 2011, p.61). Similarly, Little, et al.'s (2012) UK study on PATHS involving children aged four to six, showed small improvements in emotional health, but was lost after a two-year follow-up. Nevertheless, Hughes & Cline, (2015., 2011 p.73) support Domitrovich, et al.'s (2007) findings, as they found that children aged three to four years old 'exhibited less problem behaviour, showed better emotional knowledge, better attentional skills, and better prosocial behaviour,' after a year of the intervention. Research highlighted emotion and behavioural interventions such as PATHS, were more effective in poorly funded schools in the US supporting high-risk groups (CPPRG, 2010; Domitrovich, et al., 2007). Therefore, we should consider additional factors such as the demographic of schools, families and surrounding environments that can impact the effectiveness of PATHS.

2.6.2 Roots of Empathy programme

Studies revealed that 'Roots of Empathy', a school-based social-emotional skills and empathy programme, had beneficial impacts on participants regarding social-emotional domains (Schonert-Reichl, et al., 2012; Fransoo, et al., 2017). Lätsch, et al.'s (2017) study, involving 403 students in grades 3 to 6 in Zurich, assert that ROE developed empathy, prosocial behaviour and knowledge in students, which was retained a year after the intervention. Moreover, Lätsch, et al. (2017, p.58) discussed the importance of the wider community, such as 'families, professionals and society as a whole,' who further support the social-emotional development of CYP. The main limitation of this study is out of the 403 pupils, the project started with, only 107 children took part in the one-year follow-up, thus outcomes should be interpreted with caution. Conversely, Connolly, et al. (2018) suggested only small improvements were made in children's prosocial behaviour. The study found no evidence advocating a positive effect on social-emotional skills, when determining the effectiveness of ROE. It is important to consider a high proportion of data was missing from the study, due to the low retention rates of parents who were asked to complete questionnaires.

Much of the research suggests social-emotional interventions have had a positive influence on children and adolescents, whereby the programmes have enhanced

emotional skills (Bezzina & Camilleri, 2019; Lakes, et al., 2019; Durlak, et al., 2011; Domitrovich, et al., 2007; Schonert-Reichl, et al., 2012; Fransoo, et al., 2017; Coskun & Oksuz, 2019). However, the effectiveness of interventions depends on the expertise of staff (Bezzina & Camilleri, 2019), quality of resources, accuracy of planning, amount of time spent on EL (Jelena & Stanislava, 2018; Durlak, et al., 2011; Haddon, et al., 2005) as well as parental and family involvement (Calderon, 2000; Vohr, et al., 2013; Lätsch, et al., 2017).

2.7. Emotional literacy support for CYPD

Previous studies have only focussed on the efficacy of EL, regarding hearing children; limited up-to-date information is known about the effectiveness of EL concerning CYPD (Terry, 2021).

2.7.1 PATHS curriculum

Greenberg & Kusche's, (1998), US-based study, with 57 deaf children, in a total communication (TC) setting, examined the effectiveness of PATHS. Results specified the intervention developed emotion recognition skills and social competence, these skills were maintained after 1 and 2-year post-tests. A limitation of this study is that it took place in the US and is outdated, recent data using PATHS with CYPD would be more relevant.

2.7.2 Funny Faces Program

Dyck & Denver (2003) studied the efficacy of the 'Funny Faces Program,' which was taught in an oral setting to 14 moderate to profoundly deaf children, aged 9-11. Results suggest children made improvements from the pre-test to post-test, yet CYPD with moderate to severe hearing loss had similar abilities to CYP. However, CYPD with profound hearing loss presented significant deficits in their emotional knowledge. It is intriguing to note that the level of hearing loss could potentially impact EL achievement.

2.7.3 Social Skills Training

A study by Naeini, et al. (2013) was conducted in Iran, involving 69 deaf female students aged 11-21. The students attended special secondary schools, although it

was not stipulated whether this school was for children with deafness or additional needs. The intervention focussed on three main areas: ‘1) knowing and respecting self, 2) making friendship, and 3) recognizing one’s emotions and ways to manage negative ones, especially the ‘anger’’ (Naeini, et al., 2013, p.2). Results suggested social skills training improved emotional wellbeing and promoted social-emotional competence. A key problem with this argument is it only focussed on older female students in Tehran, thus generalisations cannot be imposed on males or CYPD in the UK.

2.7.4 Social Stories

Social stories have been used to support the development of emotional skills (Richels, et al., 2013; Raver, et al., 2013; Raver, et al., 2014; Luckner & Movahedazarhouligh, 2019). A study teaching emotional words in an auditory-verbal preschool in the US found small group instruction using social stories and targeting emotional words was a successful strategy to develop EL (Richels, et al., 2013). The study's main limitation is that the project was based on 3 pupils; a larger-scale study would have been more insightful. It would be interesting to note whether the children had any other additional needs. Raver, et al. (2013) explored the efficacy of reading a social story before a five-minute play session with two, four-year-old children with cochlear implants (CI), from an oral preschool. This study suggests social stories may be beneficial for CYPD, however, results need to be interpreted with caution as a small number of participants were involved and they only focussed on oral CYPD (Luckner & Movahedazarhouligh, 2019).

2.8. **Emotions and mental health**

Research shows there is a significant concern about the rising number of young people with mental health problems (Hills, 2016; Wong, et al., 2020). ‘Since 2015 there has been an increase in the proportion of children and young people with EHCPs with a primary need of…SEMH’ (HM-Government, 2022, p.18). Additionally, the occurrence of mental health problems among deaf people has become considerably high in comparison to the wider population (Levine, 2014, p.459). Wright, et al. (2021, p.26), stated ‘nearly 60% of participants reported that their mental health was worse during …(lockdown).’ This UK-based study, explored the impact of the Covid-19

pandemic on CYPDs' mental health, this consisted of an online survey to which 135 CYPD responded. Data suggests mental health was poorer during lockdown and CYPD reported feelings of isolation and loneliness (Wright, et al., 2021). Al Majali & Alghazo's, (2021) study, based in the United Arab Emirates (UAE), addressed depression and anxiety levels of CYPD during lockdown. They established 'deaf people were susceptible to the psychological impact of the Covid-19 pandemic' (Al Majali & Alghazo, 2021, p.2141). However, this study was based on adults in UAE, therefore findings cannot be generalised to the UK's population of CYPD. Section 31 of the Equality Act (2010) affirms the importance to make reasonable adjustments to support disadvantaged pupils, thus the teaching of EL to a population that has greater mental health difficulties is a proactive adjustment.

2.9. **The gap in literature/ justification of research**

Emotions affect education, quality of life and success in the future (Ashori & Jalil-Abkenar, 2020). This literature review has highlighted the importance of teaching EL to CYP and CYPD. When searching for applicable literature and research via Scopus using terms such as 'emotional literacy' 'children' and 'deaf' only 15 documents were found. Much of this research was irrelevant to the topic, and studies related to CYPD mainly concentrated on the progress of academic skills, rather than emotional wellbeing. Some research directly linked to EL interventions were found. However, these studies were not current and must be approached with some caution due to sample sizes and research designs (Greenberg & Kusche, 1998; Raver, et al., 2013; Raver, et al., 2014; Richels, et al., 2013). In comparison, present studies exploring a range of EL interventions have taken place, involving hearing children (Domitrovich, et al., 2007; Durlak, et al., 2011; Taylor, et al., 2017; Jones, et al., 2011; Bezzina & Camilleri, 2019; Lakes, et al., 2019; Schonert-Reichl, et al., 2012; Fransoo, et al., 2017), illustrating gaps in literature and justification for this study.

3. Methodology

3.1. Introduction

A mixed-methods approach, including a multiple case study with action research intent, was implemented to explore this research aim alongside three questions:

Research aim: How effective is an EL intervention when developing the emotional skills of children who are Deaf aged 5-7?

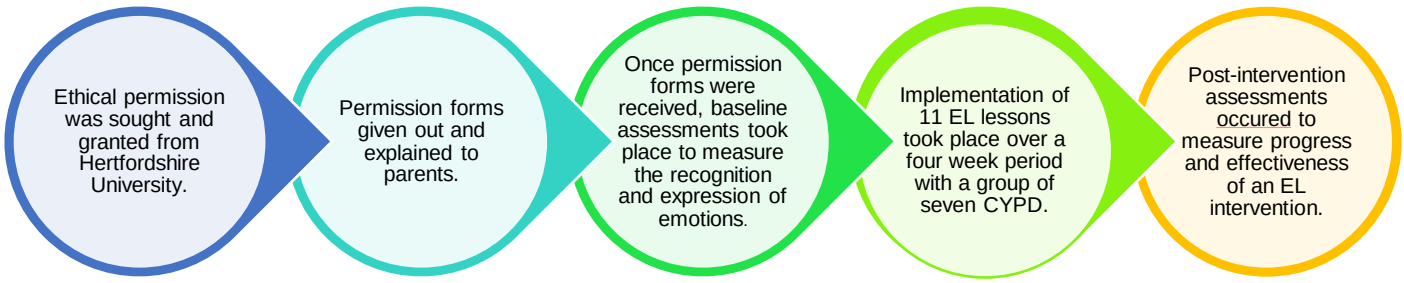
1) Can an EL intervention improve the ability of CYPD (aged 5-7) to say/sign emotion words?
2) Can an EL intervention improve the ability of CYPD (aged 5-7) to express and recognise anger, fear, happiness and sadness?
3) Can an EL intervention improve the ability of CYPD (aged 5-7) to communicate their emotions to others?

A summary will be given, outlining the pros and cons of methodologies. The purpose of this is to explain the reasoning behind the chosen method for collecting and analysing data in the current project.

3.2. Process of the study

Figure 1, shows the process of this study. Areas will be explored further within the methodology section.

Figure 1- Process of the study.



3.3. **Ethics**

Throughout the study, measures have been implemented to ensure ethical considerations were met. This enabled children to take part in the EL intervention and ensured their data was accessible. Ethics approval (Appendix I) and ethics protocol number- SHE/PGT/UH/05729 were granted by the University of Hertfordshire's Ethics Committee, following BERA's (2018) ethical guidelines for educational research. Further approval was sought from the Head of the Centre for the Deaf, who confirmed the job role activity of the study.

Children's background information, assessment data and examples of work were accessed and stored in compliance with GDPR. Data was stored safely on a password-protected school computer and the researcher's OneDrive. Data will be deleted after the exam board, no later than 31st December 2023.

Data has been anonymised by assigning each participant with a letter that is not connected to their name. Children's work and personal data will be put in a protected drawer, where the key is kept in a locked cupboard. The researcher and Head of Centre, are the only members of staff that use this key. The cupboard is within a room that is also locked.

Participant information sheets and consent forms were provided for parents at a meeting held at the school. The researcher explained the project and interpreters were available, to 'enable participation in…decisions' (DfE & DoH, 2015, p.19). Parents decided whether their children should take part, as the participants were minors. A risk assessment regarding Covid-19 was explained, to ensure risks were identified and evaluated, as the intervention was face-to-face. Lastly, harms, hazards and risks were clarified. Parents who could not attend the meeting received information over the telephone.

3.4. **Design approach**

Employing a mixed-methods approach, including a multiple case study with action research intent, was most suited to the project. Denscombe (2021, p.193) suggests a mixed-methods approach can 'increase the accuracy of findings' by 'providing a fuller and more complete picture,' which is why more than one approach was used. Similarly, Cohen, et al. (2017) claims this approach can also deliver a more

comprehensive understanding of the subject. Ivankova & Wingo (2018, p.980) equally advocate that combining methods 'increases the chances of producing credible and valid conclusions about intervention outcomes.'

I chose to focus on a small-scale multiple case study as it allows an in-depth, (Denscombe, 2021; Cohen, et al., 2017) 'robust theory because the propositions are more deeply grounded,' (Eisenhardt & Graebner, 2007, p.27). Each child would be classed as a case, this 'enables the researcher to explore differences within and between cases' (Baxter & Jack, 2008, p.548) by looking at characteristics and how this could affect the results obtained. Gustafsson, (2017, p.8) highlights there are 'several different opinions if a single case study or a multiple case study is the best choice' as 'the careful study of a single case…leads researchers to see new theoretical relationships' (Dyer & Wilkins, 1991, p.614). As my study involved one group of children, and their progress was going to be compared with one another, I dismissed using an experimental design approach. Even though insightful comparisons could have been made between the 'treatment group and a control group' (Donley & Grauerholz, 2012, p.18). It was determined there was 'no reason to limit testing to one experimental group' (Hammond, et al., 2021, p.81). This could disadvantage the sample with restricted access to the intervention. Also, this method could 'lead to bias through experimenter expectancy' (Nicholas, 2006, p.102).

Ethnography was considered for the analysis of how the participants viewed the intervention, to 'understand from within' (Thomas, 2017, p.164) and the 'cultural interpretation [and] aspects of people's actions' (Willig & Rogers, 2017, p.39). However, a more fundamental aim of the project was to improve practice within a RB, so this research method was not used. Information gathered from the multiple case studies was used to improve current practices in a RB, which relates to action research. Lewin (1946, p.35) a founder of action research, explains this design frame is 'research leading to social action.' Highlighting, action research is 'transformative' (Atkins & Wallace, 2012, p.133). Practice is improved by reflective processes (Bondia & Gracia, 2022, p.853), continually revising and developing the study 'in cycles, gathering data as you go, to make a positive change' (Atkins & Wallace, 2012, p.131). The research undertaken within this study will incorporate Lewin's (1946, p.38) 'spiral of steps.' This approach also poses some disadvantages as the involvement of the researcher can 'limit the scope and scale of research' (Denscombe, 2021, p.177). The

researcher is familiar with the group of children and the setting, therefore creating difficulty when being ‘entirely detached and impartial’ (Denscombe, 2021, p.177).

3.5. **Participants**

The study involved seven children with bilateral hearing loss, who have hearing levels from mild to profound. Consent was given for all pupils from the RB to take part in the study and no children were excluded. They were recruited through a purposive sampling technique as this matched the ‘aims and objectives of the research’ (Campbell, et al., 2020, p. 653). The participants attend a mainstream infant school with a RB for CYPD, which uses a TC approach. Children receive specialised teaching delivered by a Qualified Teacher of the Deaf (QToD) in the RB and they also integrate with their mainstream class (Table 1). The acoustically treated RB is where the EL intervention took place. To ensure anonymity, participants shall be referred to as individual letters throughout the project e.g. Child A= A.

Table 1- Participant Information

Participant	**Gender**	**School year**	**Hearing loss**	**Mode of communication**	**Current amplification**	**Chronological age** (Year: Month)	**Age when effectively aided**	**Hearing age** (Year: Month)	**The primary language used at home**	**Additional needs**	**Current academic level**
A	F	1	Profound	Early oral / British Sign Language (BSL)	CI	6:2	3:0	3:2	Punjabi	EHAP	English- BWT+ Maths- BWT Reading- BWT
B	M	1	Moderate to severe	Oral	HA	5:6	0:4	5:2	Urdu	Glasses	English- WT Maths- WT Reading- BWT
C	F	2	Profound	Oral	CI	7:2	2:1	5:1	Arabic		English- WT+ Maths- WT+ Reading- WT
D	M	2	Profound	Early oral / BSL	CI	6:9	4:1	2:8	English	-Glasses - DLD - OT	English- WT Maths- WT Reading- BWT+
E	F	2	R- Mild L -Moderate	Oral	HA	6:9	Birth	6:9	English	-Glasses -GD -OT	English-BWT Maths-BWT Reading- BWT
F	M	2	Moderate - severe	Oral with some BSL	CI	7:2	3:9	3:5	Punjabi	Moderate difficulty with working memory	English- WT Maths- WT Reading- WT
G	F	2	Moderate to severe	Early Oral	HA	7:1	3:0	4:1	Romanian		English- BWT+ Maths- WT Reading- BWT

Table 2- Abbreviation for current academic level- see Appendix A-4 for more detail

Abbreviation	
BWT	Below working towards
BWT+	Below working towards plus
WT	Working towards
WT+	Working towards plus
EXP	Expected

Abbreviation	
6:2	6 years: 2 months
DLD	Developmental language delay
GD	Global development
OT	Occupational Therapy
EHAP	Early Help Assessment and Plan- The process for assessing the needs of a child/young person/family and creating an action plan to address those needs.
Hearing age	Chronological age – effective aiding age = hearing age
HA	Hearing aid
CI	Cochlear Implant

3.6. **EL Intervention**

This Emotions Curriculum (EC) was designed by Shanée Buxton and Christine Hussmann - both QToDs with extensive experience working with CYPD. The curriculum was designed for CYPD with delays in understanding other peoples' perspectives (Theory of Mind), delays in consequential thinking and limited emotional understanding and regulation (Buxton & Hussmann, 2007). The objectives and plans were used, but some were adapted to suit the needs of the participants.

The participants took part in module one, which included 11 EL lessons over a four-week period taught by the researcher. Each lesson lasted for an hour and there were two or three lessons per week. This module was designed to develop the recognition and expression of anger, fear, happiness and sadness. The teaching process followed Lewin's (1946, p.38) 'spiral of steps,' which is linked to current practice for SEND children 'Assess, Plan, Do, Review' (DfE & DoH, 2015, p.6.44) cycle. Where 'actions are revisited, refined and revised with a growing understanding of the pupil's needs' (DfE & DoH, 2015, p.6.44).

Activities were evidenced in an EL intervention book (Appendix A-7) and pictures were taken of children to document progress throughout the lessons. The EL intervention consisted of:

- Sorting feelings into the correct category- including facial expression and body language (Appendix A-9)
- Drawing different emotions using a range of media (Appendix A-10)
- Taking part in role-play to display different emotions- using masks, facial expressions and body language (Appendix A-11)
- Looking at visuals of different emotions- facial expressions and body language separately (Appendix A-12)
- Circle time tasks, where children would talk about emotions and what made them feel sad/happy/frightened/ angry
- Labelling facial expressions and body language (Appendix A-13)
- Explaining why a face or body language is showing a certain emotion
- Creating masks that show different emotions using a range of media- chalk, oil pastels, watercolours (Appendix A-14)

- Drawing faces/ a body to represent an emotion (Appendix A-15)

3.7. Data collection

In this project, the researcher collected primary data through assessments conducted before and after the intervention, as well as through guided observation records. This qualitative information, ‘used to understand people's beliefs, experiences, attitudes, behaviour, and interactions’ (Bijayini, et al., 2013, p.192) has also been quantified and displayed in tables and charts.

3.7.1 Assessment

3.7.1.1 Adaptations of assessment

Despite the EC being designed for CYPD, adaptations were made to suit the participants involved in the study. Visuals from ‘Communicate in Print’ (Widget, 2023) were used to create a user-friendly assessment, these images are familiar to the children involved. For both pre- and post-intervention assessments, all participants used a talking mat (Appendix A-5). This ‘interactive communication resource’ (McNeilly, et al., 2020) supports people when sharing their views, thoughts and ideas (Darvell & Bradshaw, 2022; Bunning, et al., 2016; Murphy & Cameron, 2008). The use of symbols and visuals ‘reduce[s] memory demands’ (Murphy & Cameron, 2008, p.239) and ‘shifts the balance of power towards the participant’ (Murphy & Cameron, 2008, p.239) as they can follow the task and respond appropriately with structured support. Participants were encouraged to look at visuals and move cards to different coloured faces to show their understanding and confidence with the objective (Appendix A-2).

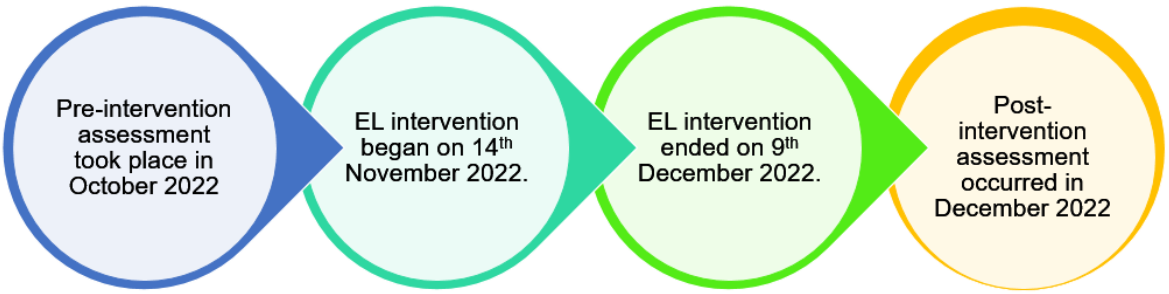
3.7.1.2 Pre- and post-intervention assessments

At the start of the project, participants took part in a baseline assessment to gauge understanding of EL. After the four-week intervention period, the same test was conducted to assess the effectiveness of the intervention. The assessment included objectives that would be taught within the first module of the EC. The researcher used the child’s preferred method of communication and visual support. 1:1 (child: researcher) assessments took place in a small acoustically treated room. Insider knowledge allowed the researcher to support the participants without leading them. It

was important to avoid any biases, nonetheless, some children required more assistance in contrast to others.

Figure 2, shows the process of assessment and intervention that took place.

Figure 2- Process of assessments and intervention



3.7.2 Assessment Method

3.7.2.1 Pre-intervention assessment and post-intervention assessment procedure

Talking mat key:

☺ I'm confident	😐 I'm nearly there	☹ I'm not sure
Statements were placed here if achieved.	The statement would be placed here if the participants had some understanding of it.	If the child did not understand the statement, it would be placed here.

Statements and method for use of talking mat:

Appendix B-1 I can sign/say "angry". I can sign/say "frightened". I can sign/say "happy". I can sign/say "sad".	Statements were shown to participants and read out/ signed. Prompting was needed in some cases, "Can you say or sign_____, look at the picture to help you." Children were required to sign/say the emotion words. Support was provided when placing the statements under the appropriate face.

Appendix B-2 I can express anger – facial expression. I can express fear - facial expression. I can express happiness - facial expression. I can express sadness - facial expression.	Participants noticed that visuals were used, which helped them understand that they needed to show a facial expression. The researcher pointed to their face and prompted them further by saying/signing 'show me, show me on your face.' They were expected to use facial expressions to express a particular emotion.
Appendix B-3 I can express anger - body language. I can express fear - body language. I can express happiness - body language. I can express sadness - body language.	The researcher read out/signed the statements and reiterated that their body needed to show a certain emotion. The researcher encouraged children to stand up and pointed at their bodies to ensure they knew to use their bodies to represent emotion.
Appendix B-4 I can tell other people "I feel angry". I can tell people "I feel frightened". I can tell people "I feel happy". I can tell people "I feel sad".	The participants disclosed whether they had told anyone how they felt, or how they would communicate their feelings and to who. Depending on their answer, the researcher would support the child when placing the statement under the suitable sector regarding their confidence.
Appendix B-5 I can recognise when other people feel angry. I can recognise when other people feel frightened. I can recognise when other people feel happy. I can recognise when other people feel sad.	(Appendix A-3) Pictures were shown to the participants, the researcher would say "How do they feel? What emotion are they showing?" The participant would have to identify happy, sad, frightened and angry faces/ body language. The researcher would annotate a copy of the poster whilst the child made comments about what could be seen.
	Pictures were taken at the end of both pre- and post-intervention assessments; this information was then put into a table so that participants' understanding of the statements could be identified easily.

3.7.2.2 Guided Observation Records

Throughout the EL lessons, guided observations were conducted to assess the participants progress and understanding of the objectives. The researcher observed each participant and recorded notes, quotes and anecdotes from their interactions, immediately after each lesson. Assessing children in this manner provides a clear picture of their progress over time. Guided observation records were organised into tables for recognition and expression of emotions, the layout allowed the researcher to assess and organise data clearly (Appendix A-8).

3.8. **Data analysis**

The statements used within the assessments were quantified and converted into a percentage to analyse the progress of individuals (Appendix A-5). The data was presented in a table and the percentage-point increase and decrease between pre- and post-intervention was calculated (Appendix A-6.) This shows the extent of progress made by each child, which helps in evaluating the effectiveness of the EL intervention.

Guided observation records allowed analysis of key themes. Quotes and details of what children said or significant behaviours (Thomas, 2017) were important factors later included within the discussion section and used for the Assess, Plan, Do, Review cycle (DfE & DoH, 2015). Data was analysed manually, using Microsoft Word and Excel, however, these programs are 'not specifically designed to analyse qualitative data' (Tracy, 2019). Utilising software like NVivo can be highly advantageous for effectively collaborating and organising large amounts of data. However, Dollah, et al.'s (2017) research discovered that Nvivo 'requires a lot of time to understand and to learn,' due to time constraints of the project, data was interpreted manually.

3.9. **Reflexivity**

As a QToD, working within the RB that the project took place in, 'insider knowledge' (Denscombe, 2021, p. 173) has many positive connotations, such as 'ease of access' and 'the opportunity to make positive change in one's setting' (Atkins & Wallace, 2012, p. 48). However, this also poses problems such as 'loss of objectivity and bias,' (Saidin & Yaacob, 2016, p.849) when gathering and analysing data.

It is important to be aware of the influence the researcher may have on participants (Hammond, et al., 2021). When completing the project, I acquired a 'self-conscious awareness' (Cohen, et al., 2017, p.453), whilst 'offering alternative perspectives' (Denscombe, 2021, p.173) to gain new perceptions and understanding of what supports CYPD.

3.10. **Conclusion**

A mixed-methods design approach was employed to measure the effectiveness of an EL intervention for CYPD aged 5-7. This study adopts an action research design, whilst exploring a small-scale multiple case study, with the intent to improve practice within a setting. Bondia & Gracia (2022, p.858) report these are 'two complementary approaches' that 'help us to have a better understanding of the educational improvement that we, as teacher-researchers, want to obtain.'

4. Results

This study aims to explore the effectiveness of an EL intervention and its impact on CYPD, aged 5-7. Results have been obtained from pre- and post-intervention assessments, guided observation records, pictures and evidence within EL intervention books that the participants added to every lesson.

Each participant will be referred as individual letters throughout the results section e.g. Child A= A.

This research aim was investigated, alongside three questions:
Research aim: How effective is an EL intervention when developing the emotional skills of children who are Deaf aged 5-7?

1) Can an EL intervention improve the ability of CYPD (aged 5-7) to say/sign emotion words?
2) Can an EL intervention improve the ability of CYPD (aged 5-7) to express and recognise anger, fear, happiness and sadness?
3) Can an EL intervention improve the ability of CYPD (aged 5-7) to communicate their emotions to others?

4.1. Summary of overall results

Following a four-week block of EL lessons, the participants in the group showed an improvement in their overall EL skills and their confidence had developed. Participants achieved higher scores in comparison to their pre-intervention assessment (Table 3). Data was compiled by comparing how many statements were placed under the 'I'm confident' column before and after the intervention took place. The percentage-point increase in confidence ranged from 20-50, with an average increase of 38-percentage-points.

Table 3- Results from the pre-intervention assessment, post-intervention assessment and the percentage-point increases and decreases found.

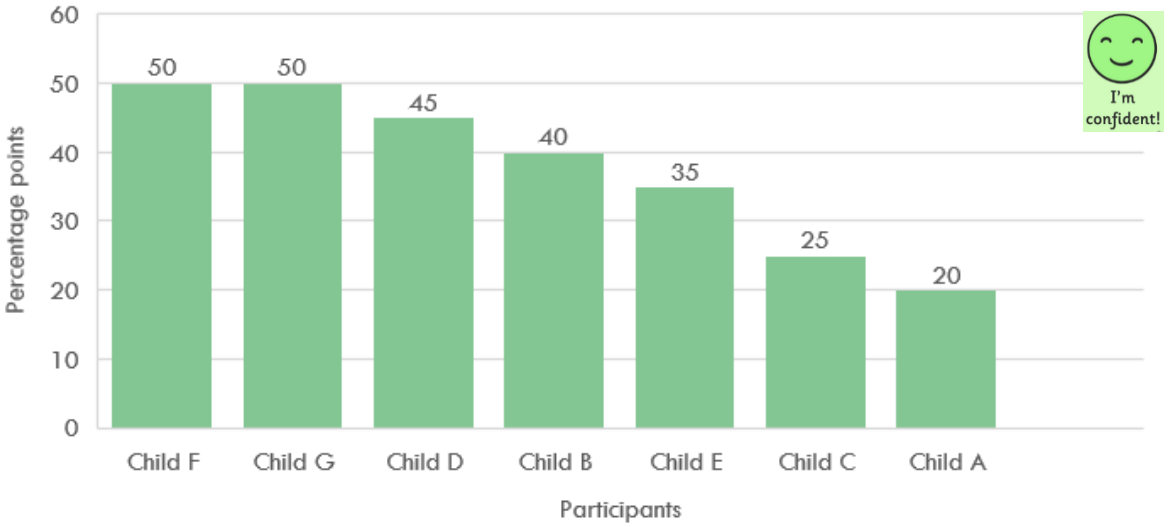
	Pre-intervention assessment %			Post-intervention assessment %			Percentage-point increase	Percentage-point decrease
	☺	😐	☹	☺	😐	☹	☺	☹
Child A	15	10	75	35	20	45	20	30
Child B	25	30	45	65	25	10	40	35
Child C	50	35	15	75	20	5	25	5
Child D	15	15	70	60	30	10	45	60
Child E	10	35	55	45	35	20	35	35
Child F	35	25	40	85	15	0	50	40
Child G	25	45	30	75	20	5	50	25

Key

☺	😐	☹
I'm confident	I'm nearly there	I'm not sure

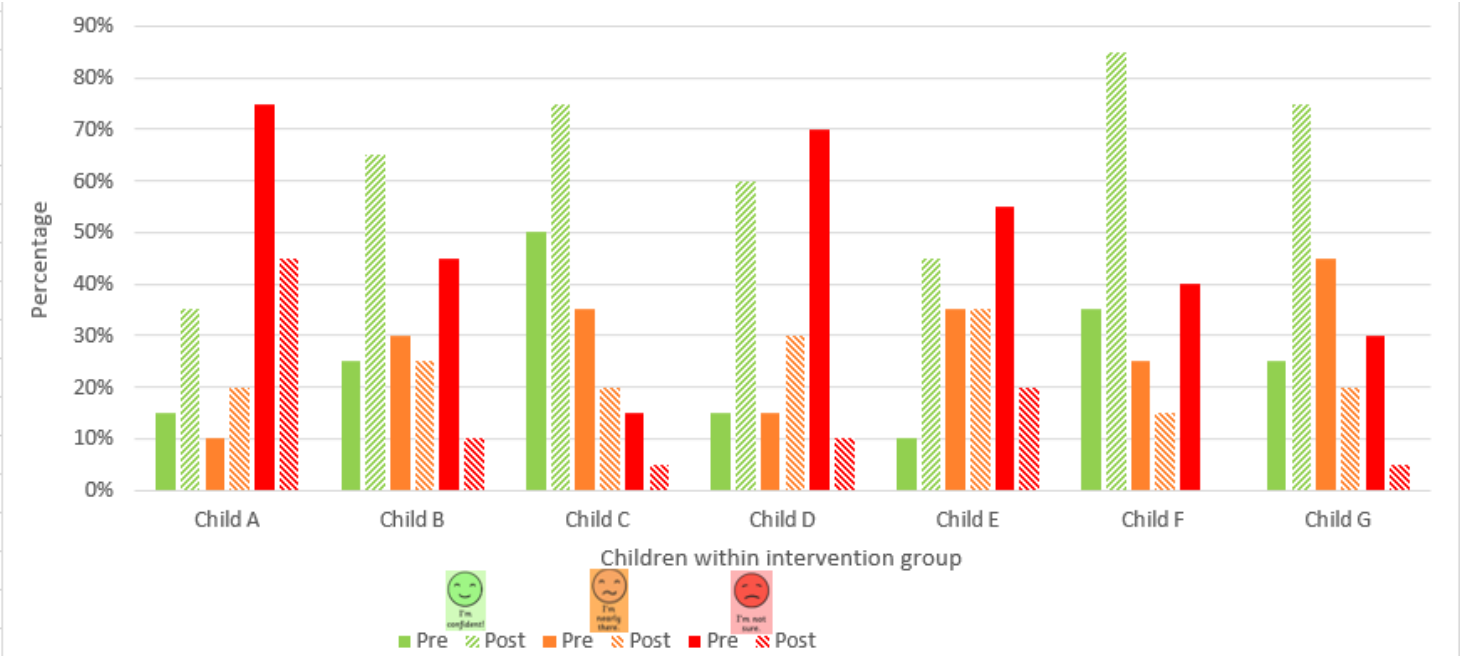
The percentage-point increase and decrease indicates progress (Table 3). The percentage-point increase is based upon the statements that were placed within the 'I'm confident' section, the difference between pre- and post-intervention assessments were calculated and the higher the value, the more progress the child made. The percentage-point decrease is based on the objectives placed in the red section. In this case, fewer statements were placed here after the four-week intervention period, showing that children had made progress. The percentage-point increase or decrease has not been calculated for the amber section, as the red and green sections show more noticeable progression.

Figure 3- The percentage-point increase of achieved statements in order of descending value.



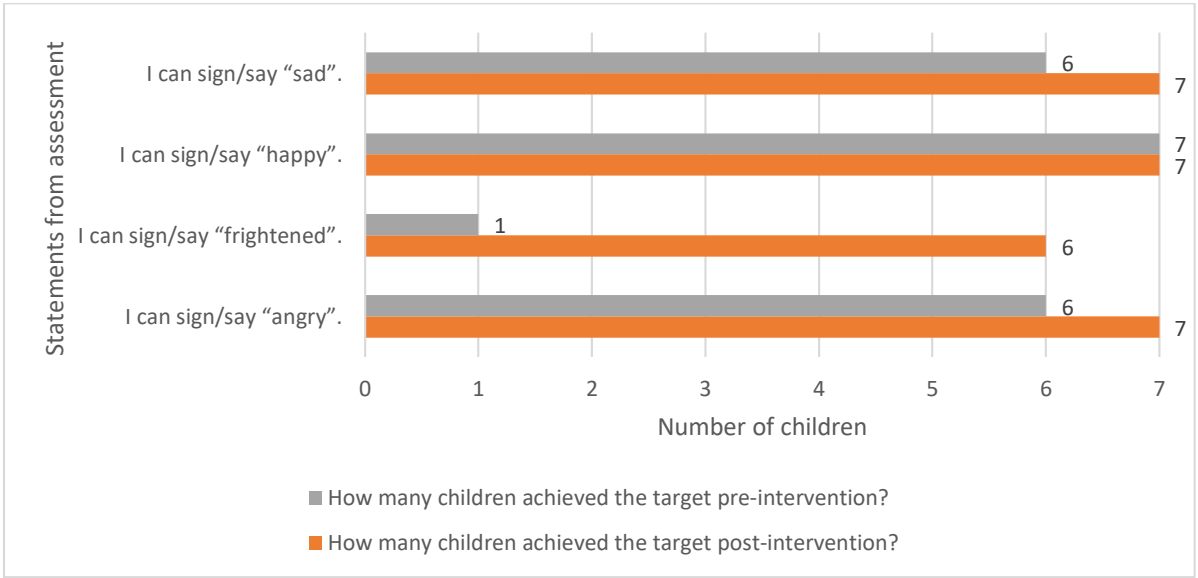
The term ‘achieved’, implies that children presented confidence and an understanding of the objective, which could then be placed underneath the ‘I’m confident’ sector of the talking mat. Out of all the children, F and G made the most progress. Their confidence grew significantly, as indicated by a 50-percentage-point increase in the number of statements they achieved (Figure 3). A, C and E made the least progress, with a smaller difference between their pre- and post- achievements. Conversely, C achieved 75% of the statements by the end of the intervention (Table 3). Although the increase in percentage-point was small, progress has been achieved. C had strong prior knowledge and was already confident with 50% of the objectives before the intervention was implemented. A and E have made the least progress (Figure 4). By the end of the EL intervention, many statements remained in the red section, indicating their lack of understanding of certain emotional skills. After reviewing the post-intervention assessments, it was discovered that A had uncertainties with 45% of the statements, while E lacked confidence with 20% of them (Table 3).

Figure 4- Pre- and post-intervention assessment results comparison



4.2. **Targets achieved pre- and post-assessment**

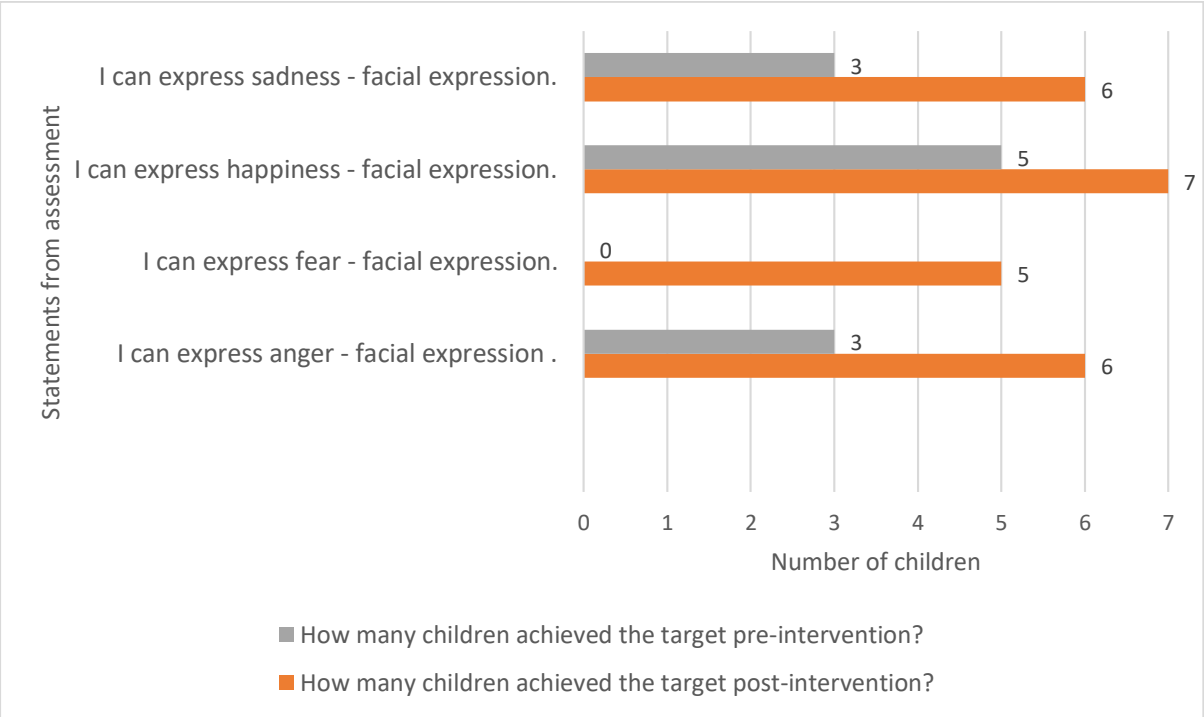
Figure 5- A clustered bar chart showing how many children could sign/say emotions during the pre and post-intervention assessment



Prior to the implementation of the intervention process, children exuded confidence in saying/signing most of the target emotion words. The post-intervention assessment results show that all children could sign/say sad, happy, and angry, however, out of a total of seven children one child lacked confidence when signing/saying frightened. Conclusively, the most progress has been made when signing/saying frightened, in

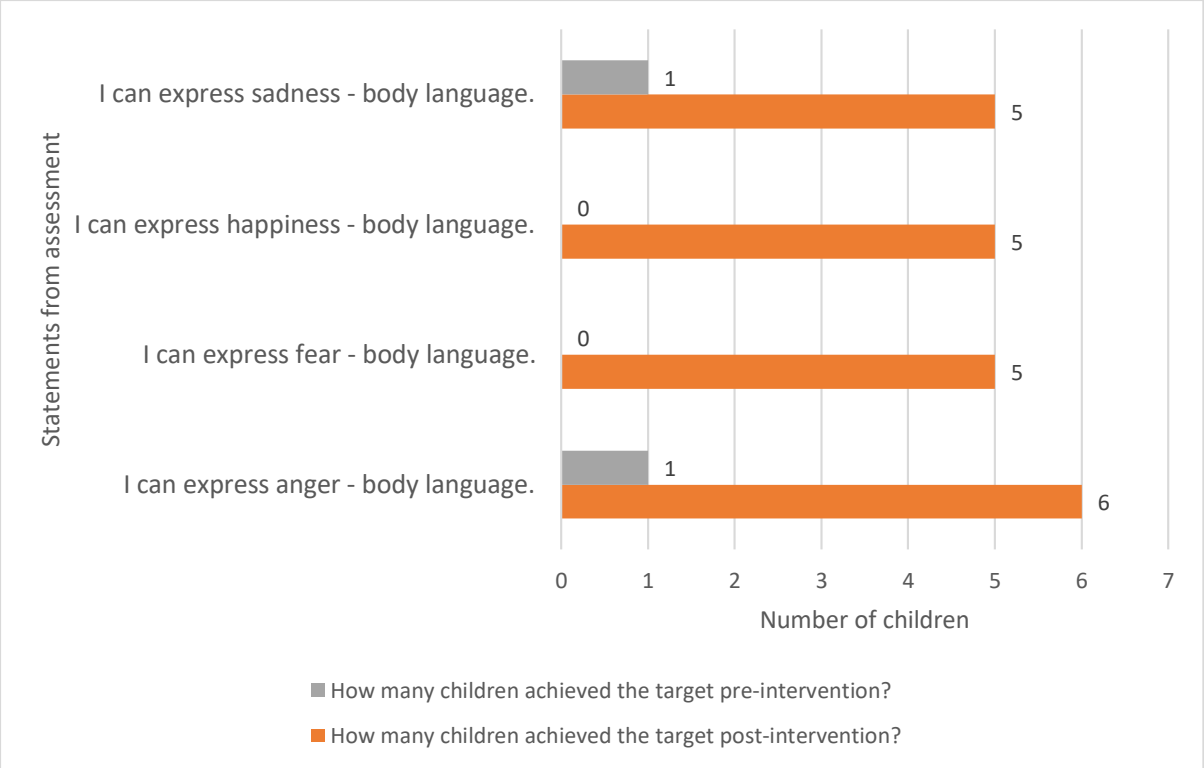
the beginning only one child was able to do this, after EL lessons occurred, five more children accomplished this skill.

Figure 6- A clustered bar chart to show how many children could use facial expressions to show emotions during the pre- and post-intervention assessment



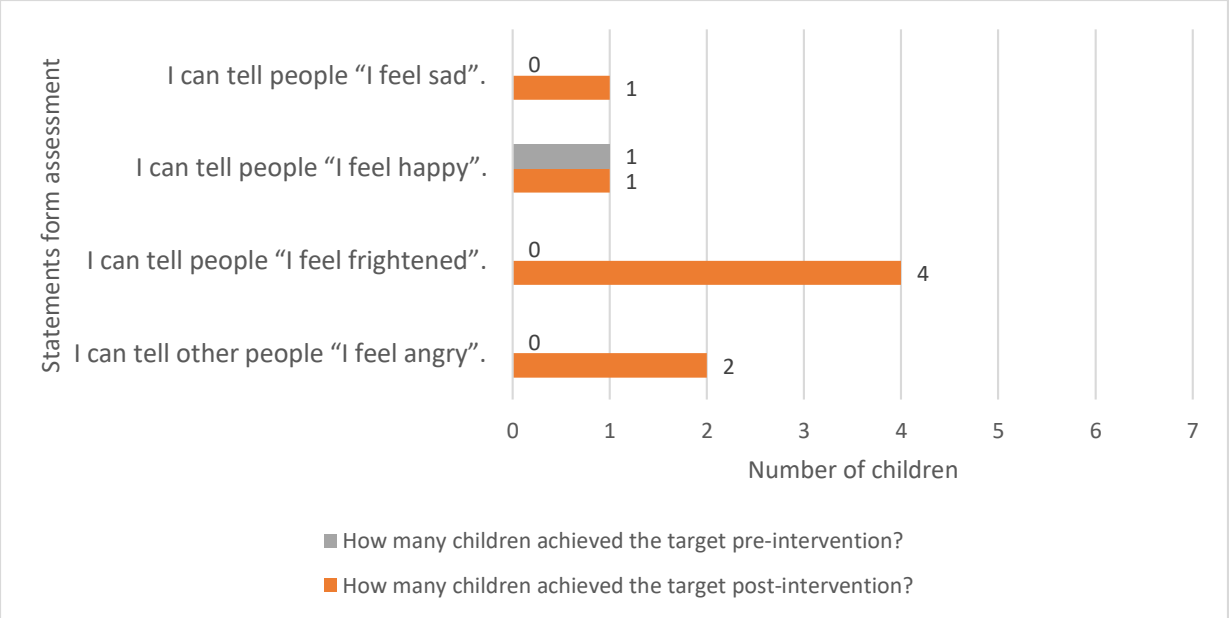
The results indicate all children could confidently express happiness through facial expressions by the end of the intervention (Figure 6). A comparison of the pre- and post-results, through expressing fear, reveals that the most progress was made here. The participants could not express fear at the start, however after taking part in the EL intervention, five children could confidently express fear.

Figure 7- A clustered bar chart to show how many children could use body language to express emotions during the pre- and post-intervention assessment



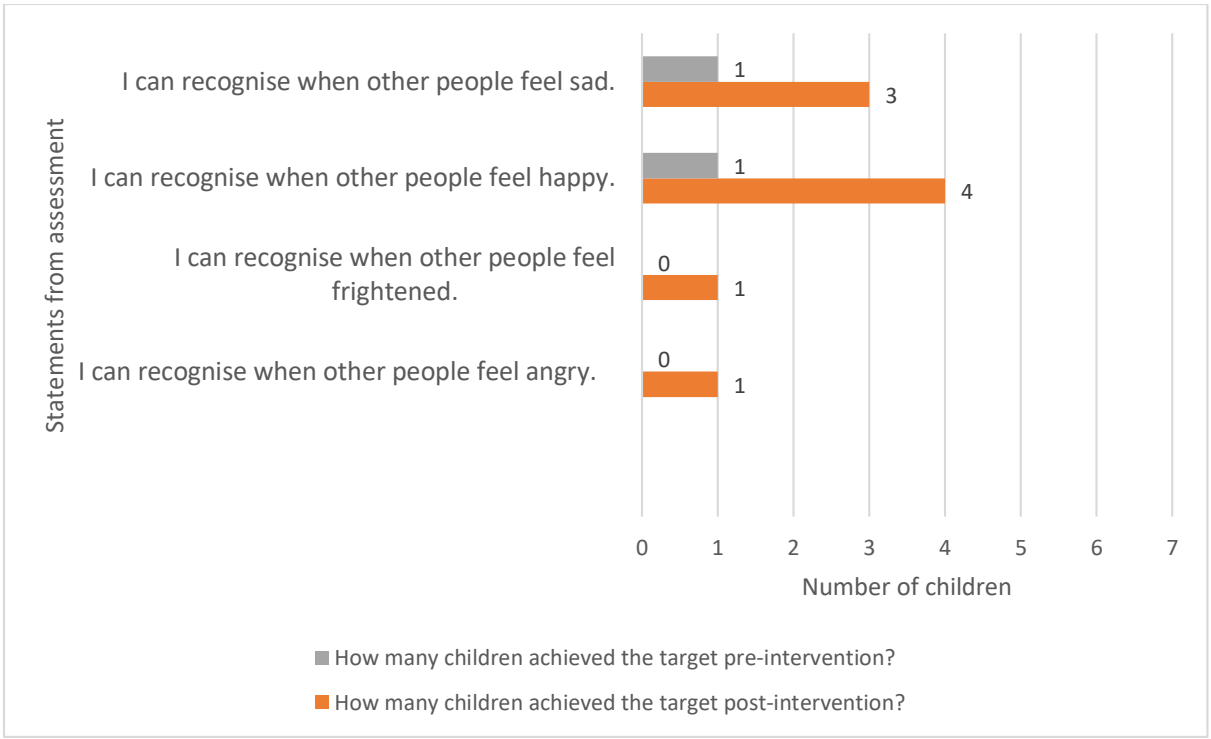
The baseline assessments show that children could not express happiness and fear through body language and out of seven children, one child was able to express sadness and anger. In the assessment conducted after the intervention, five children could express sadness, happiness and fear. Out of seven children, six expressed anger, this demonstrates significant progress.

Figure 8- A clustered bar chart to show how many children could tell someone how they felt during the pre- and post-intervention assessment



An area where children lacked confidence was being able to communicate feelings. According to the post-intervention, four children could tell someone they felt frightened, but fewer children could tell someone they felt happy, angry or sad.

Figure 9- A clustered bar chart to show how many children could recognise emotions during the pre- and post-intervention assessment



As we examine the statements that participants achieved, it is evident that one child could recognise fear and anger. Whereas, three children identified sadness and four participants recognised happiness after the intervention took place.

Recognising emotions and communicating feelings are the areas that presented most challenges, which was evident within the intervention and EL books. Specifically, fear was a difficult emotion to express and recognise: only one child could recognise fear; four participants could tell people that they were frightened; five children could express fear using body language and facial expressions; and six children could confidently sign/say fear. When comparing the pre- and post-intervention assessments, progress has been made with this emotion, however, it is an area for further development.

4.3. **Hearing age**

When considering the advancements achieved, there is no clear relationship between hearing age and progress made. For example, F has a large difference between their chronological age and hearing age yet made significant progress. In contrast, A, who has a similar hearing age made considerably less progress than F. In addition, E made less progress than other participants, though, her chronological age and hearing age are equal, as she was aided soon after her Newborn Hearing Screening test. The data shows there is no clear correlation between hearing age and the impact of the intervention with this small cohort of children.

Table 4-Hearing age and assessment data

	Chronological age	Hearing age	Difference between chronological age and hearing age	Pre-intervention assessment %	Post-intervention assessment %	Percentage-point increase
				☺	☺	☺
Child A	6:2	3:2	36 months	15	35	20
Child B	5:6	5:2	4 months	25	65	40
Child C	7:2	5:1	25 months	50	75	25
Child D	6:9	4:11	22 months	15	60	45
Child E	6:9	6:9	0 months	10	45	35
Child F	7:2	3:11	39 months	35	85	50
Child G	7:1	4:1	36 months	25	75	50

4.4. **Participants progress**

4.4.1 Child A

4.4.1.1 Pre-intervention assessment

A could sign and vocalise emotions such as anger, happiness and sadness (Appendix B-1), but did not recognise the word or image of 'fear'. A TC approach was used to sign/read the statements out loud, sometimes more than once. The researcher pointed to the child's face and body as cues to support the child. When the child heard the word 'face' or saw a picture of a 'face', she continuously signed/said 'face' and missed other information from the statement (Appendix B-2). A copied the signs the researcher was using when answering questions. Assistance was required when moving statements under the correct faces, as A misunderstood this concept. A had poor attention and eye contact. When looking at an assortment of facial expressions such as happy and sad, choices had to be given to A, 'happy or sad? Which?' A would then answer, sometimes incorrectly.

4.4.1.2 During EL intervention lessons and guided observation record

During EL lessons A needed 1:1 support, due to a lack of understanding and poor attention skills. The researcher modelled facial expressions and showed a range of visuals to A. Mirrors were used to assist A in copying the facial movements, particularly when conveying anger or fear. Difficulties with these emotions also arose during sorting activities; Appendix B-7, shows that A was unable to sort pictures. When sorting pictures between happy and sad independently, only one picture was misplaced, suggesting A had a better understanding of happiness and sadness (Appendix B-8). A began using BSL and vocalising more, evidenced in the increased use of target emotion words during lessons. Notes were taken within the guided observation records, where A said, ''brother's name' angry, Mummy angry' 'Papa happy' 'Mum happy' but could not explain further when questioned. A could say/sign, 'I feel happy Mummy birthday' when all children were expressing they felt happy. A would copy what the researcher or other children were doing during the lessons. A did not show much emotion on her face or through body language and would usually sign the emotion words; modelling and rehearsing took place to support her further.

4.4.1.3 Post-intervention assessment

TC, BSL, and cues were used to support this child, for example pointing to body parts and asking, 'What will you do with your hands if you feel happy?'. A needed prompts

and reassurance throughout the assessment. Questioning was used to help develop answers such as, 'Can you show me with your body, the emotion- sad/happy/fear/anger?' A could not express emotions through the use of body language. She used some movements to display anger but this knowledge was not secure. When asked to identify emotions, A could circle some facial expressions that represented anger but would confuse this with sadness, happiness and fear. Instructions needed to be repeated so that A stayed on task. When asked 'Why do you think this girl is happy?' A responded 'happy (sign),' she could not elaborate.

4.4.1.4 Results

Figure 12 shows the results from the baseline and post intervention assessment; the colour codes indicate the child's confidence in this skill.

Figure 10- Child A- Colour-coded results from the pre- and post-intervention assessment

BASELINE- Child A

MODULE 1	I can sign/say "angry".	I can express anger - facial expression .	I can express anger - body language.	I can tell other people "I feel angry".	I can recognise when other people feel angry.
	I can sign/say "frightened".	I can express fear - facial expression.	I can express fear - body language.	I can tell people "I feel frightened".	I can recognise when other people feel frightened.
	I can sign/say "happy".	I can express happiness - facial expression.	I can express happiness - body language.	I can tell people "I feel happy".	I can recognise when other people feel happy.
	I can sign/say "sad".	I can express sadness - facial expression.	I can express sadness - body language.	I can tell people "I feel sad".	I can recognise when other people feel sad.

POST INTERVENTION

MODULE 1	I can sign/say "angry".	I can express anger - facial expression .	I can express anger - body language.	I can tell other people "I feel angry".	I can recognise when other people feel angry.
	I can sign/say "frightened".	I can express fear - facial expression.	I can express fear - body language.	I can tell people "I feel frightened".	I can recognise when other people feel frightened.
	I can sign/say "happy".	I can express happiness - facial expression.	I can express happiness - body language.	I can tell people "I feel happy".	I can recognise when other people feel happy.
	I can sign/say "sad".	I can express sadness - facial expression.	I can express sadness - body language.	I can tell people "I feel sad".	I can recognise when other people feel sad.

Figure 11- Child A's pre- and post-intervention assessment results

	Pre-intervention assessment %			Post-intervention assessment %			Percentage point increase	Percentage point decrease
	☺	😐	☹	☺	😐	☹	☺	☹
Child A	15	10	75	35	20	45	20	30

A was confident with 15% of the statements (Figure 13) during the pre-intervention assessment, however, post-intervention, A had a secure knowledge of 35% of the statements. A achieved a 20-percentage-point increase, this suggests progress has been achieved after four weeks. Consequently, there was a 30-percentage-point decrease, in the 'I'm not sure' area, suggesting that A was confident or 'nearly there' with more of the objectives. There are two areas that need improvement: understanding fear and expressing emotions through body language (Figure 12). Lastly, A could not explain or express her feelings to others, thus no progress was made in this area.

4.4.2 Child B

4.4.2.1 Pre-intervention assessment

B answered questions orally during the assessment, however when asked to show emotions using body language, he would often sign the word. When discussing Appendix B-4, he could explain who he talks to when he is happy e.g., saying 'Mummy, I say Mummy I'm happy,' when asked 'Who do you talk to about your feelings?' he also added 'I don't tell anyone I am sad.' Furthermore, B went on to explain that he tells his brother, 'I'm angry' his brother responds with 'no, I don't care.' When reading the statements out, they were often rephrased and repeated so that B had a better understanding of how to answer or what to show.

4.4.2.2 During EL intervention lessons and guided observation record

When observing B, he could explain and recognise emotions around him, he elucidated 'Mummy angry, she said no more big toys' and 'Mum saw a mouse she sad' during a discussion session. B could use his body to show different emotions (Appendix B-9). He also suggested which colours should be used when painting

emotion masks – red for angry, yellow for happy, and blue for sad. B could independently sort emotions into the correct categories when looking at facial expressions and body language (Appendix B-10). He could label emotions and draw people who were happy and sad successfully, sometimes there was confusion between fear and anger (Appendix B-11). When starting a task, B would often look at what everyone else was doing before starting and then he would understand what to do.

4.4.2.3 Post-intervention assessment

Questioning and prompts were used such as 'What could you do with your body to show happiness?' 'What could you do with your arms?' 'Will your hands be up or down?' B recalled information learned during the intervention. When B was asked 'Why do you think this person is happy?' B justified his answer by explaining, 'because the boy is jumping (Appendix B-6).'

4.4.2.4 Results

Figure 12- Child B- Colour-coded results from the pre- and post-intervention assessment

BASELINE- Child B

MODULE 1	I can sign/say "angry".	I can express anger - facial expression .	I can express anger - body language.	I can tell other people "I feel angry".	I can recognise when other people feel angry.
	I can sign/say "frightened".	I can express fear - facial expression.	I can express fear - body language.	I can tell people "I feel frightened".	I can recognise when other people feel frightened.
	I can sign/say "happy".	I can express happiness - facial expression.	I can express happiness - body language.	I can tell people "I feel happy".	I can recognise when other people feel happy.
	I can sign/say "sad".	I can express sadness - facial expression.	I can express sadness - body language.	I can tell people "I feel sad".	I can recognise when other people feel sad.

POST INTERVENTION

MODULE 1	I can sign/say "angry".	I can express anger - facial expression .	I can express anger - body language.	I can tell other people "I feel angry".	I can recognise when other people feel angry.
	I can sign/say "frightened".	I can express fear - facial expression.	I can express fear - body language.	I can tell people "I feel frightened".	I can recognise when other people feel frightened.
	I can sign/say "happy".	I can express happiness - facial expression.	I can express happiness - body language.	I can tell people "I feel happy".	I can recognise when other people feel happy.
	I can sign/say "sad".	I can express sadness - facial expression.	I can express sadness - body language.	I can tell people "I feel sad".	I can recognise when other people feel sad.

Figure 13- Child B's pre- and post-intervention assessment results

	Pre-assessment %			Post-assessment %			Percentage point increase	Percentage point decrease
	☺	😐	☹	☺	😐	☹	☺	☹
Child B	25	30	45	65	25	10	40	35

There is a positive gain in the recognition and expression of emotions when considering B's results. He achieved a 40-percentage-point increase (Figure 15), regarding the number of statements placed under the 'I'm confident' section. The number of achieved objectives has increased and fewer statements have been placed in the 'I'm not sure' section resulting in a 35-percentage-point decrease. Similar to A, this participant lacked confidence when expressing his feelings of happiness or sadness to another person (Figure 14). B did not have a sound knowledge of recognising fear, sadness and happiness, as well as expressing fear, and sadness through the use of body language.

4.4.3 Child C

4.4.3.1 Pre-intervention assessment

C answered questions quickly and responded appropriately to statements read out to her; she displayed good eye contact and was able to move the statements to suitable headings depending on her understanding of the statement. When C was unsure about an objective she would say, 'I don't know how' or 'I'm not sure,' for example, when using body language to show happiness, sadness and fear (Appendix B-3). C explained that she tells her friends that she feels happy. She could recognise happy and sad facial expressions, and could confidently express anger, happiness and sadness through facial expressions. When asked how to sign frightened, the researcher pointed to the word and picture, C shouted frightened, showing a shocked face whilst signing angry.

4.4.3.2 During EL intervention lessons and guided observation record

During the EL lessons, C grasped concepts quickly and modelled language, expressions and body language to the rest of the class. Through discussions she could think of relevant anecdotes, explaining 'I want to play lego, mum angry say no, no, lego it's nearly 4 o'clock.' She also added 'Dad angry because C no say hello' whilst describing her father's facial expressions 'eyebrows went up'. Additionally, she could

recognise things that made her and others happy. When working independently, C applied her knowledge and could draw, sort and display emotions using body language accurately, showing a good understanding of EL (Appendix B-12). C also suggested that everyone use red, orange and yellow paint when creating a mask that represents anger (Appendix B-13).

4.4.3.3 Post-intervention assessment

C could read key vocabulary independently and recalled information learnt during the intervention. She made comments like 'now I can do it!' when expressing happiness through body language. When asked 'How do you know that this person is happy?' C explained 'because they are jumping-happy' 'because she is smiling.' C could justify how she recognised sadness 'they put the head down,' 'he is crying,' 'she very sad because she do her lips down,' 'she putting her hands in face she sad.'

4.4.3.4 Results

Figure 14- Child C- Colour-coded results from the pre- and post-intervention assessment

BASELINE- Child C

MODULE 1	I can sign/say "angry".	I can express anger - facial expression .	I can express anger - body language.	I can tell other people "I feel angry".	I can recognise when other people feel angry.
	I can sign/say "frightened".	I can express fear - facial expression.	I can express fear - body language.	I can tell people "I feel frightened".	I can recognise when other people feel frightened.
	I can sign/say "happy".	I can express happiness - facial expression.	I can express happiness - body language.	I can tell people "I feel happy".	I can recognise when other people feel happy.
	I can sign/say "sad".	I can express sadness - facial expression.	I can express sadness - body language.	I can tell people "I feel sad".	I can recognise when other people feel sad.

POST INTERVENTION

MODULE 1	I can sign/say "angry".	I can express anger - facial expression .	I can express anger - body language.	I can tell other people "I feel angry".	I can recognise when other people feel angry.
	I can sign/say "frightened".	I can express fear - facial expression.	I can express fear - body language.	I can tell people "I feel frightened".	I can recognise when other people feel frightened.
	I can sign/say "happy".	I can express happiness - facial expression.	I can express happiness - body language.	I can tell people "I feel happy".	I can recognise when other people feel happy.
	I can sign/say "sad".	I can express sadness - facial expression.	I can express sadness - body language.	I can tell people "I feel sad".	I can recognise when other people feel sad.

Figure 15- Child C's pre- and post-intervention assessment results

	Pre-assessment %			Post-assessment %			Percentage point increase	Percentage point decrease
	☺	😐	☹	☺	😐	☹	☺	☹
Child C	50	35	15	75	20	5	25	5

Figure 17 shows that, C was confident with 50% of the statements before the intervention started, however after four weeks, C achieved a 25-percentage-point increase, and consequently, 75% of the objectives had been accomplished. C was unsure about 15% of the statements during the baseline assessment, conversely, with a 5-percentage-point decrease only 5% of the statements were placed under the 'I'm not sure' section. C did not understand how to tell someone her feelings and could only recognise the emotions of happiness and sadness confidently.

4.4.4 Child D

4.4.4.1 Pre-intervention assessment

D used BSL and vocalisations to answer and speak about the statements. The statements were rephrased to support D's understanding. D could sign three-quarters of emotion words apart from frightened. Furthermore, expressing and recognising emotions was not familiar to D. When the statements were read out and signed, D did not show body language or expression, he would only sign the target words, as a result, he was unable to accomplish many of the statements.

4.4.4.2 During EL intervention lessons and guided observation record

During the intervention lessons, D drew characters that represented anger, sadness and happiness, he carefully thought about what their faces would look like (Appendix B-14). D could express sadness and happiness through body language (Appendix B-15). When other children showed specific facial expressions and body language to express an emotion, D could recognise the appropriate emotion. During independent tasks, D could sort pictures of people into groups of anger and fear. Through discussion lessons, D applied what he had learnt to his life experiences, he explained 'Daddy angry say no tv,' 'D is sad,' 'baby crying,' he then acted out what he would do whilst angrily pointing his finger saying 'crying no.'

4.4.4.3 Post-intervention assessment

D was able to retain some information from the EL lessons; he could confidently express emotions by using his face and body. He remembered how to express emotions using body language in different ways, for example sitting on the floor with his face in his hands to show sadness, which many children had not used during the post-intervention assessment.

4.4.4.4 Results

Figure 16- Child D- Colour-coded results from the pre- and post-intervention assessment

BASELINE- Child D

MODULE 1	I can sign/say "angry".	I can express anger - facial expression .	I can express anger - body language.	I can tell other people "I feel angry".	I can recognise when other people feel angry.
	I can sign/say "frightened".	I can express fear - facial expression.	I can express fear - body language.	I can tell people "I feel frightened".	I can recognise when other people feel frightened.
	I can sign/say "happy".	I can express happiness - facial expression.	I can express happiness - body language.	I can tell people "I feel happy".	I can recognise when other people feel happy.
	I can sign/say "sad".	I can express sadness - facial expression.	I can express sadness - body language.	I can tell people "I feel sad".	I can recognise when other people feel sad.

POST INTERVENTION

MODULE 1	I can sign/say "angry".	I can express anger - facial expression .	I can express anger - body language.	I can tell other people "I feel angry".	I can recognise when other people feel angry.
	I can sign/say "frightened".	I can express fear - facial expression.	I can express fear - body language.	I can tell people "I feel frightened".	I can recognise when other people feel frightened.
	I can sign/say "happy".	I can express happiness - facial expression.	I can express happiness - body language.	I can tell people "I feel happy".	I can recognise when other people feel happy.
	I can sign/say "sad".	I can express sadness - facial expression.	I can express sadness - body language.	I can tell people "I feel sad".	I can recognise when other people feel sad.

Figure 17- Child D's pre- and post-intervention assessment results

	Pre-assessment %			Post-assessment %			Percentage point increase	Percentage point decrease
	☺	😐	☹	☺	😐	☹	☺	☹
Child D	15	15	70	60	30	10	45	60

The intervention had a positive effect on D, the progression can be seen in Figure 19. The baseline assessment suggests that D felt confident with 15% of the statements, whereas, D achieved 60% of the objectives during the post-intervention assessment,

which is a 45-percentage-point increase. D reached a 60-percentage-point decrease in the number of statements that were placed under the 'I'm not sure' section of the talking mat. This means that D was unsure about 70% of the statements at the start, this dropped to 10% after the intervention, showing substantial progress. Figure 18 shows that the main areas for development are understanding how to tell someone his emotions and recognising emotions.

4.4.5 Child E

4.4.5.1 Pre-intervention assessment

E showed good eye contact. Assistance was provided to relocate statements under the appropriate sections according to her understanding and confidence. She was self-assured when expressing happiness; she kept smiling and pointing to her smile. She had difficulty expressing emotions other than happiness. When asked to show sadness, E's facial expression kept changing, her lips were moving up and down often resulting in a smile. When asked to sign/say angry by reading the word or looking at the visual, she began making angry grunting noises and smiling.

4.4.5.2 During EL intervention lessons and guided observation record

E found it challenging to express emotions other than happiness; she needed 1:1 support and the use of a mirror to help her understand how her face was moving. She tried to imitate facial movements shown by the researcher, but she would often produce a smile when representing anger, fear or sadness. E began to copy and show some facial expressions throughout the lessons; however, it was discovered that conveying emotions through body language came more naturally to E (Appendix B-16). She could independently sort pictures into the correct categories (Appendix B-18), however she had difficulties when labelling facial expressions and body language (Appendix B-17). During a discussion about anger, E explained 'Mum angry,' 'Make toast,' 'Dad snoring,' so it was difficult to comprehend her intended message. She found it easier to talk about happiness, she described a situation at home 'Mum say tidy up toys,' 'Mum was happy with me,' 'They buy me dolls,' she could recognise happiness from a family member.

4.4.5.3 Post-intervention assessment

E could sign/say angry, frightened, happy and sad. To support E, sentence stems were used to help the participant respond to questions and statements. When explaining

how she could recognise someone was happy, she put her hands in the air and copied the image, without an explanation. When recognising sadness E explained 'he sad he looking down,' demonstrating her ability to recognise characteristics of sadness.

4.4.5.4 Results

Figure 18- Child E- Colour-coded results from the pre- and post-intervention assessment

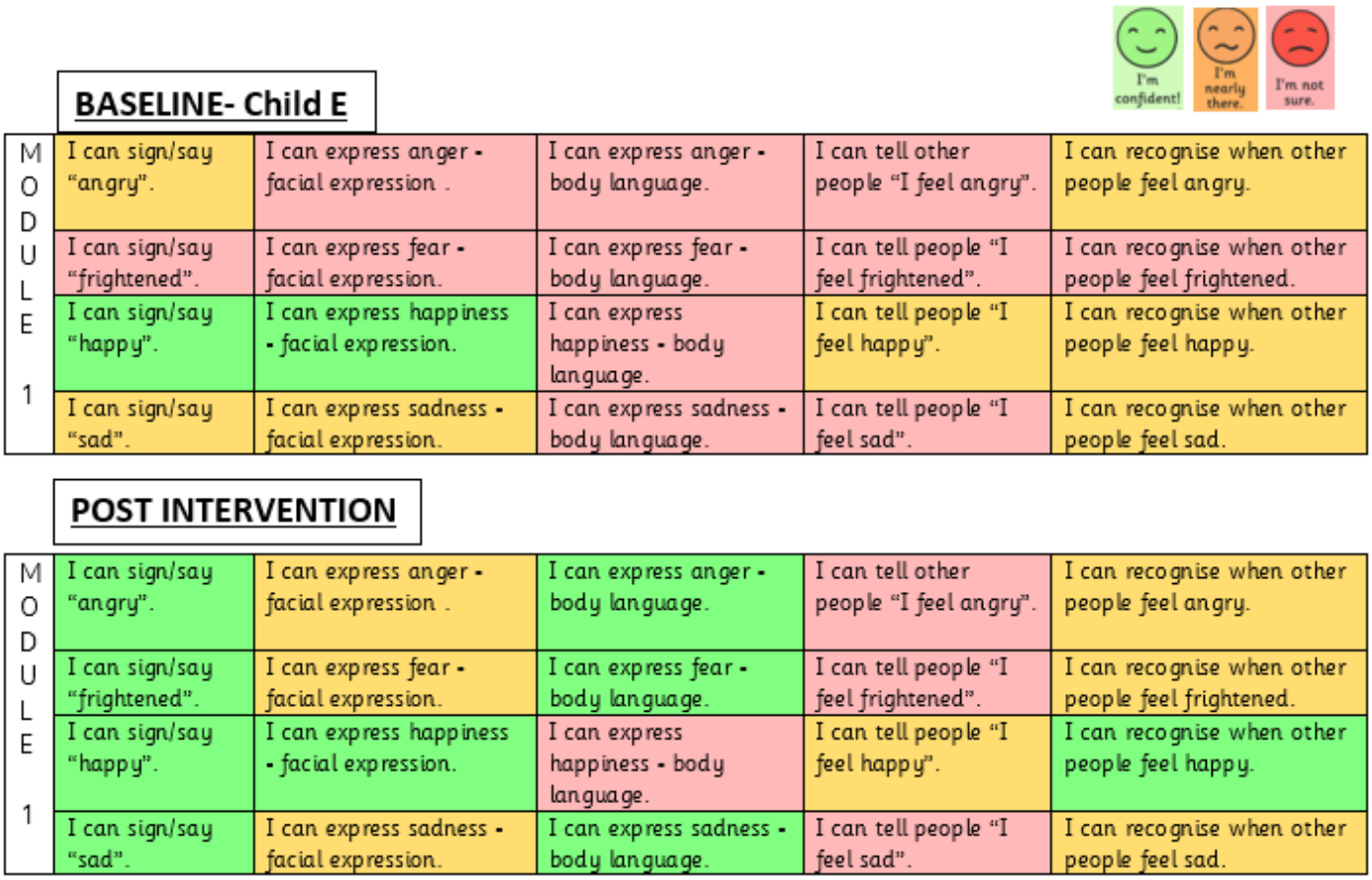


Figure 19- Child E's pre- and post-intervention assessment results

	Pre-assessment %			Post-assessment %			Percentage point increase	Percentage point decrease
	☺	😐	☹	☺	😐	☹	☺	☹
Child E	10	35	55	45	35	20	35	35

E has made progress when comparing data collated from the baseline and the post-intervention assessment. Figure 21 shows that E felt confident with 10% of the statements pre-intervention, however following the intervention, there was a 35-percentage-point increase, thus 45% of the statements were placed under the 'I'm confident' section. There was also a 35-percentage-point decrease when considering

the quantity of statements placed under the section ‘I’m not sure’ this suggests that more objectives were met. Figure 20 clearly indicates the need for further development in certain areas, particularly in improving the recognition and expression of emotions through facial expressions.

4.4.6 Child F

4.4.6.1 Pre-intervention assessment

F had a strong understanding of signing/saying angry, sad and happy, additionally, he could represent these emotions using facial expressions before the intervention took place. However, F did not recognise the word/visual of fear/frightened. When recognising emotions, he could justify why someone was feeling sad, ‘he is sad, he is crying, maybe he want ice cream.’

4.4.6.2 During EL intervention lessons and guided observation record

F was engaged, attentive and contributed well during group discussions. F grasped concepts quickly and could recall information from previous lessons, he could draw (Appendix B-19), label (Appendix B-21) and sort emotions effectively (Appendix B-22). He frequently assisted other students in the classroom and enjoyed modelling facial expressions and body language (Appendix B-20). Through discussions, F could explain when he felt happy and the things that made him feel happy; ‘I feel happy when baby sit on lap,’ sentence stems were used to support F’s sentence structure. F began to link colours to emotions and suggested the use of red to represent anger when creating masks (Appendix B-23).

4.4.6.3 Post-intervention assessment

F retained some information for the duration of the study and achieved many objectives. He could link emotions back to his own experiences and discussed occurrences in his own life ‘feel sad when somebody pushing too many time’. He could successfully recognise happy children when shown a poster of different emotions. With prompts and questioning, F could explain that the girl was happy because she was smiling. He could name some friends he speaks to about his emotions and could explain what makes him feel happy. F sometimes needed the support of a sentence stem so that he could focus on what he wanted to say.

4.4.6.4 Results

Figure 20- Child F- Colour-coded results from the pre- and post-intervention assessment

BASELINE- Child F

MODULE 1	I can sign/say "angry".	I can express anger - facial expression .	I can express anger - body language.	I can tell other people "I feel angry".	I can recognise when other people feel angry.
	I can sign/say "frightened".	I can express fear - facial expression.	I can express fear - body language.	I can tell people "I feel frightened".	I can recognise when other people feel frightened.
	I can sign/say "happy".	I can express happiness - facial expression.	I can express happiness - body language.	I can tell people "I feel happy".	I can recognise when other people feel happy.
	I can sign/say "sad".	I can express sadness - facial expression.	I can express sadness - body language.	I can tell people "I feel sad".	I can recognise when other people feel sad.

POST INTERVENTION

MODULE 1	I can sign/say "angry".	I can express anger - facial expression .	I can express anger - body language.	I can tell other people "I feel angry".	I can recognise when other people feel angry.
	I can sign/say "frightened".	I can express fear - facial expression.	I can express fear - body language.	I can tell people "I feel frightened".	I can recognise when other people feel frightened.
	I can sign/say "happy".	I can express happiness - facial expression.	I can express happiness - body language.	I can tell people "I feel happy".	I can recognise when other people feel happy.
	I can sign/say "sad".	I can express sadness - facial expression.	I can express sadness - body language.	I can tell people "I feel sad".	I can recognise when other people feel sad.

Figure 21- Child F's pre- and post-intervention assessment results

	Pre-assessment %			Post-assessment %			Percentage point increase	Percentage point decrease
	☺	😐	☹	☺	😐	☹	☺	☹
Child F	35	25	40	85	15	-	50	40

F showed noticeable gains when expressing and recognising emotions. In particular, the expression of emotions was found to increase by the end of the intervention (Figure 22). During the baseline, F felt confident with 35% of the statements, however after the intervention, his confidence grew and he was able to secure knowledge of 85% of the objectives. According to Figure 23, there was a 50 percentage-point increase from the baseline to the post-intervention assessment, showing an improvement in the recognition and expression of anger, fear, happiness and sadness.

4.4.7 Child G

4.4.7.1 Pre-intervention assessment

G could read and identify some key vocabulary independently, she was attentive and showed good eye contact. She needed some support to move the statements into the correct places but wanted to do this with the researcher. She was able to express emotions such as anger and happiness through facial expressions. When asked 'do you tell anyone if you are sad?', she replied 'don't tell.' G could use body language to display some emotions but this knowledge was not secure. When looking at characters displaying a range of emotions, the researcher asked 'Why do you think she is frightened?' G responded by copying the image and putting her hands over her eyes, however, no signs, vocalisations or explanation was given.

4.4.7.2 During EL intervention lessons and guided observation record

G grasped concepts quickly, she modelled facial expressions, body language and used her skills to support other children in the class (Appendix B-26). When completing independent tasks, G could label (Appendix B-25), sort emotions (Appendix B-27) and draw people representing different emotions, explaining 'hands up happy' (Appendix B-24). During discussion lessons, G shared anecdotes to explain how other people might feel, she explained 'dad angry' 'he say no no' 'no toys' whilst saying this she stood up and used her finger when saying 'no no.'

4.4.7.3 Post-intervention assessment

G showed confidence during the post-intervention assessment, her signs and speech were clear when saying the target emotion words. G accurately used facial expressions and body language to display emotions, copying visuals that we had looked at during the intervention. She was excited (clapping) when she noticed how many statements had been achieved. When asked 'How do you know she is happy?' G responded with 'smiling.' G was asked 'Do you tell anyone when you feel frightened?' G responded 'Tell mummy' 'I scared monster.' She was able to relate ideas to personal experiences and had a strong grasp on how emotions impact both herself and those around her.

4.4.7.4 Results

Figure 22- Child G- Colour-coded results from the pre- and post-intervention assessment

BASELINE- Child G

MODULE 1	I can sign/say "angry".	I can express anger - facial expression .	I can express anger - body language.	I can tell other people "I feel angry".	I can recognise when other people feel angry.
	I can sign/say "frightened".	I can express fear - facial expression.	I can express fear - body language.	I can tell people "I feel frightened".	I can recognise when other people feel frightened.
	I can sign/say "happy".	I can express happiness - facial expression.	I can express happiness - body language.	I can tell people "I feel happy".	I can recognise when other people feel happy.
	I can sign/say "sad".	I can express sadness - facial expression.	I can express sadness - body language.	I can tell people "I feel sad".	I can recognise when other people feel sad.

POST INTERVENTION

MODULE 1	I can sign/say "angry".	I can express anger - facial expression .	I can express anger - body language.	I can tell other people "I feel angry".	I can recognise when other people feel angry.
	I can sign/say "frightened".	I can express fear - facial expression.	I can express fear - body language.	I can tell people "I feel frightened".	I can recognise when other people feel frightened.
	I can sign/say "happy".	I can express happiness - facial expression.	I can express happiness - body language.	I can tell people "I feel happy".	I can recognise when other people feel happy.
	I can sign/say "sad".	I can express sadness - facial expression.	I can express sadness - body language.	I can tell people "I feel sad".	I can recognise when other people feel sad.

Figure 23- Child G's pre- and post-intervention assessment results

	Pre-assessment %			Post-assessment %			Percentage point increase	Percentage point decrease
	☺	😐	☹	☺	😐	☹	☺	☹
Child G	25	45	30	75	20	5	50	25

After the intervention, this participant has shown progress in both expressing and recognising emotions. There is a visible increase in the number of statements that have been achieved with a 50-percentage-point increase. The baseline assessment showed that G felt confident about 25% of the statements, nonetheless after the intervention period, G could place 75% of the statements under the 'I'm confident' section. Moreover, the data shows a 25-percentage-point decrease in the number of statements that were not understood, this implies that G had a better understanding of multiple objectives, as only 5% of the statements were not achieved. Some areas

of weakness include recognising anger and fear, as well as understanding how to express emotions to others.

4.5. **Summary**

The outcomes of the intervention have been positive. In the beginning, several participants had a limited knowledge of emotions. Even though many of the participants needed prompts during the pre-intervention assessment, the participants have shown progress. This suggest that the direct teaching of an EL intervention could have a positive impact on how participants express and recognise emotions.

5. Discussion

5.1. Introduction

‘Children and young people may experience a wide range of social and emotional difficulties which manifest themselves in many ways’ (DfE, 2015, p.6.32). Providing opportunities for CYP and CYPD to improve their emotional skills is crucial. The results from this study suggest that teaching EL lessons could successfully enhance the ability of CYPD aged 5-7, to express and recognise emotions.

Current literature lacks sufficient information on this subject (Terry, 2021). Therefore, this project investigates a research aim and addresses three related questions:

Research aim: How effective is an EL intervention when developing the emotional skills of children, who are Deaf, aged 5-7?

1) Can an EL intervention improve the ability of CYPD (aged 5-7) to say/sign emotion words?
2) Can an EL intervention improve the ability of CYPD (aged 5-7) to express and recognise anger, fear, happiness and sadness?
3) Can an EL intervention improve the ability of CYPD (aged 5-7) to communicate their emotions to others?

5.2. Importance of Emotional Literacy Intervention

The results from this study suggest that students had limited knowledge of emotions at the start of the intervention process. Despite one child achieving half of the pre-intervention statements, six participants only achieved 10%-35% of the objectives. Pre-intervention the participants expressed uncertainty with expressing, recognising and communicating feelings, they faced confusion regarding the intent behind several statements. The findings support Ludlow (2010), Wiefferink (2013) and Jones (2016), who suggest that CYPD have delays and difficulties with their emotional knowledge, due to factors including language acquisition. This relates to the MQ, which highlights how deafness may ‘impact a range of cognitive functions including memory, executive functioning, world knowledge and Theory of Mind’ (DfE, 2023, p.6K1). Based on the pre-intervention data, it is important to provide CYPD with the necessary resources and knowledge to help them express and recognise emotions. This could ultimately improve their mental health and wellbeing.

The study suggested that teaching CYPD how to express and recognise emotions directly was effective, regardless of their initial level of understanding or hearing age. In this study, hearing age did not appear to play a factor with the small number of CYPD involved within the study. Participants' EL skills increased within the 20 to 50-percentage-point range. Child F displayed significant progress; a 50-percentage-point increase over the course of the intervention. This affirms Miller (2012), Rees, et al. (2017) and Gilliver, et al.'s (2016) research, which suggests that CYPD benefitted from explicit instruction. A similar conclusion was reached by Ashdown & Bernard (2012); where direct instruction was highly beneficial for children when it comes to learning social and emotional lessons. However, these results should be interpreted with caution as they are based on hearing children in Australia. The results indicate that explicit teaching is an effective approach for improving EL skills. However, further testing over a longer period would be necessary to confirm this conclusion.

Some participants such as Child A and E, did not make as much robust progress, as indicated by a 20 to 35-percentage-point increase in the number of statements they achieved. Several factors could explain these small improvements. Riches (2013, p.165) proposes that the use of 'implicit learning mechanisms' can present 'significant improvements in production and comprehension.' The use of this strategy could have suited different learners, however, with a small sample size of hearing children, caution must be applied to Riches (2013) study. Conversely, more recent research by Burton, et al. (2021, p.1231) revealed that 'explicit teaching led to more significant spelling improvements than implicit' instruction. Additional research is needed to better understand the effects of explicit and implicit instruction in line with teaching an EL intervention to CYPD. Progress made by participants demonstrates that an explicit EL intervention is imperative for CYPD and should continue during weekly teaching; this is echoed by Luckner & Movahedazarhouligh (2019).

It is clear that participants displayed a high-level of confidence when signing/saying sad, happy and angry. After receiving an EL intervention, children began using target emotion words independently, for instance, they started sharing their feelings with teachers and students. Anecdotally, the participants improved vocabulary, facial expressions, and body language have resulted in positive relationships being formed and strengthened. In line with previous studies, Richels, et al. (2013, p.55) noted that 'improved linguistic skills in the form of understanding and labelling emotions may

improve the quality of child to child relationships'. Others have shown that typically, 'deaf children's friendships with deaf peers are less stable,' (Rieffe, 2012, p.477) and the expression of anger is used 'bluntly and explained less' (Rieffe & Terwogt, 2006, p.1261) this was consistent with participants before the project. The EL intervention has provided CYPD with opportunities to develop positive emotional wellbeing and stronger friendships (DfE, 2023). This emphasises the necessity and significance of implementing an EL intervention, which can support CYPD with challenges faced in the 21st century (Miyamoto, et al., 2015).

This study suggests that every participant made progress, albeit at varying rates. Barriers to learning for CYPD can begin to elucidate why Child A and E have achieved fewer statements than their peers by the end of the intervention process. This supports the view of Szymanski, et al. (2013, p.11), who noted 14 different barriers that 'prevent deaf and hard of hearing students from achieving their academic, linguistic, and social-emotional potential.' The MQ states that 'deaf children's language environments are diverse…and can have a direct effect on their social skills and emotional development' (DfE, 2023, p.7K6a). Some environments might not provide CYPD with 'opportunities for incidental learning and communication about their own and others' experiences of emotion' (Jones, et al., 2016, p.102). Therefore 'missing the opportunity for this kind of learning will disadvantage DHH children,' (Netten, et al., 2015, p.11) as they 'gain about 90% of their knowledge about their world incidentally' (NDCS, 2020). As a QToD, it is crucial to address social-emotional obstacles that can hinder the progress of CYPD, by providing an adapted EL intervention in suitable conditions.

5.3. **Emotions progress- happiness, sadness, fear and anger**

According to the results, the participants had difficulty understanding the emotions of 'fear' and 'anger'. Although children showed improvement throughout the intervention, knowledge of these emotions remained weaker than others. Post-intervention, one child could recognise anger and fear, whilst five to six participants could express anger and fear through facial expressions and body language. Four children could tell someone they felt frightened, however, only two children were able to express their anger effectively. This supports the view of Tsou, et al. (2021, p.478) who found that CYPD experience problems when expressing negative emotions as they are 'unfamiliar with the display rules or coping options toward different social situations.'

Similarly, Wiefferink, et al. (2013, p.181) found that both hearing and deaf children had difficulties distinguishing 'between emotions within the negative domain.' These findings may be somewhat limited as they involve children with CI living in the Netherlands, so care must be taken when generalising.

Expressing and recognising happiness was an area of strength for many of the participants, it appeared that children were more comfortable with using this term and could convey it easily. However, throughout the intervention and assessments, Child E often presented a happy face when asked to show different emotions and found it difficult to use her face to present feelings. A contributing factor is Child E's global development delay; Zhang, et al. (2018, p.1) noted that on average '200 million children under 5 years old failed to reach their potential in cognitive and social-emotional development.' This is in line with Fenning, et al. (2011, p.725), whose research indicates that 'delays generally displayed more problematic functioning.' It is therefore a necessity to ensure EL interventions are tailored to meet the needs of individuals with additional needs. This is reflected within the SEND and Alternative Provision Improvement Plan, (2023) stating 'meeting children's social, emotional and mental health…needs is a crucial aspect of strong SEND provision.' To gain a deeper understanding of the correlation between global developmental delay and emotional functioning in CYPD, further research is necessary.

5.4. **Emotional skills progress- sign/ say emotion words, express and recognise emotions, communicate emotions to others**

This study revealed that children could apply and recall target emotion words within the intervention and in daily life. After four-weeks, all children could sign/say sad, happy and angry, yet Child A was unable to sign/say frightened. Participants from this study began using target emotion words and phrases from the EL intervention during playtimes and other lessons, though they were not encouraged to do this, which is similar to Raver, et al.'s (2013) findings. Others have also reflected effective outcomes in 'eliciting target emotion words' (Richels, et al., 2013, p.55).

Another finding is that participants exhibited greater gains when expressing emotions through facial expressions and body language after the intervention took place. Children would often accentuate their expressions, especially when playing games associated with the objectives and drawing faces. These results reflect those of Jones,

et al. (2021) who found that CYPD could 'produce socially recognisable prototypical configuration of facial expressions' and similarly noted that the facial expressions were more exaggerated in comparison to their control group, which was five hearing children. The use of a control group has enabled Jones, et al. (2021) to compare and contrast results, this could be a factor to consider for future projects.

This study revealed that recognising emotions was a challenging task for the participants. They had poor knowledge of this skill at the start of the project and made slight improvements by the end of the intervention process. The results demonstrated that participants frequently misidentified facial expressions that conveyed the target emotions. The post-intervention assessment indicated that three children successfully identified the emotion of sadness, four children could recognise happiness and only one child could identify fear and anger out of seven participants. This result is in line with the ideas of Bachara, et al. (1980), Dyck, et al. (2004) and Ludlow, et al. (2010). It also underpins Waaramaa, et al.'s (2018) view that CYPD have difficulties with visual perception and the identification of emotions. It is important to be cautious when making generalisations, as the participants were between 29 and 67 years old, used CI, and the study was conducted in Finland. Bettger, et al.'s (1997) seminal work, provides contrasting conclusions, in line with Tsou, et al. (2021, p.1024) who found that 'children with limited auditory access…tend to collect visually observable information.' Correspondingly, Laya de Gracia, et al. (2021, p.1) noticed that CYPD were 'better at identifying emotional expressions…because frequent sign language use enhances deaf persons' visual skills.' The outcomes from this current study suggest that the seven participants involved, present a delay in emotion recognition tasks. Although this project focuses on a small group of CYPD, it is clear that they require support to enhance these crucial skills. With consistent strategies in place, CYPD could make progress with their emotion recognition skills.

Outcomes from this study indicate that Child A made no progress when communicating feelings to another person; Child A, B, C, D, E and G could not tell someone they felt sad and Child A, D and E could not communicate feelings of anger. During the post-intervention assessment, participants struggled to communicate emotions to others, they appeared confused and often responded with shrugs or an inability to answer the statements. Overall these findings are in accordance with Tsou, et al.'s (2021, p.469) study which suggested that 'children in less linguistically

accessible environments may not have adequate knowledge' to 'express negative emotions.' Despite Child A having no recorded progress during the formal assessment, she has since been able to recognise the emotions of others in her family when disclosing information to a teacher. Although she couldn't articulate the reason behind someone's emotions, she was able to express negative feelings through signs and speech. Whilst this development cannot be formally attributed to the intervention, the EL lessons appear to improve the participants' vocabulary skills, with evidence of using new words beyond the program's scope, meeting the study's aim.

Child F could express all four emotions by informing another person. This supports the view that 'if sign language and/ or oral language abilities are good, the children do not have a substantially higher level of psychosocial difficulties than do hearing children' (Dammeyer, 2010, p.50). Child F's progress could potentially be attributed to better language exposure, positive parental involvement, and early language interventions, despite the fact that data on this subject was not gathered. Furthermore, the MQ principle advocates a 'supportive home environment is essential for the development of…emotional development and wellbeing' (DfE, 2023, p.7K5).

Embedding an EL intervention into the curriculum could undoubtedly result in further progress for CYPD. Greenberg & Kusche, (1998) found that significant improvements were made when teaching intervention lessons over a year, this also led to maintained and increased gains in emotional and social skills after a 1 and 2-year post-test. EL needs to be woven into the curriculum for its effectiveness to be sustained. After the intervention took place, we decided to focus on social stories for our English block of learning, which supported children's EL skills further, as they 'had sufficient emotion vocabulary…to be able to use this knowledge effectively to enhance other learning' (Dyck & Denver, 2003, p.354).

5.5. **Limitations**

The intervention involved seven CYPD, due to this small sample size, similar to Richels, et al. (2013), generalisations should be applied with caution, as the findings might not be relatable to all CYPD. The data was obtained from a group of children that the researcher works with every day, this could generate a 'loss of objectivity and bias' (Saidin & Yaacob, 2016, p.849; Denscombe, 2021) leading to influenced outcomes. The EL intervention took place for four weeks, consequently, a longitudinal

study like Greenberg & Kusche, (1998) would provide a more in-depth understanding of the effectiveness of an EL intervention. Furthermore, like Jones, et al. (2021), including a hearing control group could allow comparative research to take place. Moreover, there has not been a formal follow-up to ascertain whether EL knowledge has been embedded, this means that we cannot measure the effects of the intervention over time.

5.6. **Recommendations**

Further research is required to examine whether external factors can enhance CYPD's EL skills, for instance 'working with parents to ensure that appropriate provision is in place to enable each child to flourish' (DfE, 2015, p. 4.37). Typically, CYPD 'participate less in daily conversations that concentrate around mental states' (Rieffe & Terwogt, 2000, p. 605) and have 'poorer quality and quantity of…interaction' (Wiefferink, et al., 2013, p. 184) with parents. This can have an impact on CYPD's expressive and receptive skills, which is likely to be the case concerning families within the sample. It would be interesting to examine whether training and coaching parents can 'enable and empower' (DfE, 2015, p. 2.21) them to support the EL learning of their children. Calderon, (2000) and Vohr, et al. (2013) found that parental communication and a language-rich environment in the home was directly associated with positive language development and academic success.

It is necessary to conduct a more detailed study to determine why some children have made more progress than others. Highlighting factors such as the participants' home language (Table 1) could provide insight into the progression of pupils, as this factor can be seen as a predictor of language development (Vohr, et al., 2013). To fully understand the effectiveness of an EL intervention for CYPD, a larger sample group and longitudinal study would need to take place for generalisations to be made.

After the intervention took place, it was noted that there were areas of EL that needed further attention, these included awareness and regulation of emotions and empathy (Rieffe, 2012; Netten, et al., 2015). It would be intriguing to explore the relationship between the regulation of emotions and empathy with CYPD aged 5-7.

Due to the positive outcomes of the EL intervention, as a RB, we have decided to continue teaching EL. The EC was originally designed for CYPD, but it requires further modifications to accommodate the additional needs of the participants.

It has been emphasised that EL interventions are necessary for CYPD, which is why I have taken the initiative to become a Mental Health First Aider. This is a significant step towards my personal and professional development. To better assist CYPD, it may be necessary for schools to implement specific training opportunities.

5.7. **Conclusion**

This research aimed to investigate and provide answers to a research aim and three key inquiries.

Research aim: How effective is an EL intervention when developing the emotional skills of children, who are Deaf, aged 5-7?

1) Can an EL intervention improve the ability of CYPD (aged 5-7) to say/sign emotion words?
2) Can an EL intervention improve the ability of CYPD (aged 5-7) to express and recognise anger, fear, happiness and sadness?
3) Can an EL intervention improve the ability of CYPD (aged 5-7) to communicate their emotions to others?

CYPD involved within the study demonstrated an improved ability to communicate target emotion words through both SL and speech. After the intervention, there was a noticeable enhancement in the children's grasp of emotional vocabulary, which they were able to proficiently utilise in various situations. In summary, the participants made significant advancements in conveying their emotions through facial expressions and body language. Significant progress was achieved in this domain, even though children initially displayed a deficit at the outset of the intervention. The most challenging areas were recognising emotions and effectively communicating feelings. Although some domains showed greater improvement than others, evaluations conducted after the intervention indicate that all participants made progress, albeit at their own pace. Embedding the EL intervention into daily practice could develop CYPD's EL knowledge and make positive changes in the researcher's setting (Atkins & Wallace, 2012, p.131).

This study unequivocally affirms that explicit EL interventions can effectively support and develop CYPD's emotional skills, language and can promote positive mental health and wellbeing. The results of the study affirm that the teaching of EL is a crucial aspect that must be continued, as it can significantly enhance one's ability to recognise and express emotions. Ultimately, this can lead to a better quality of life and greater success in the future (Camilleri, et al., 2011; Richels, et al., 2013; Eden, et al., 2017; Ashori & Jalil-Abkenar, 2020).

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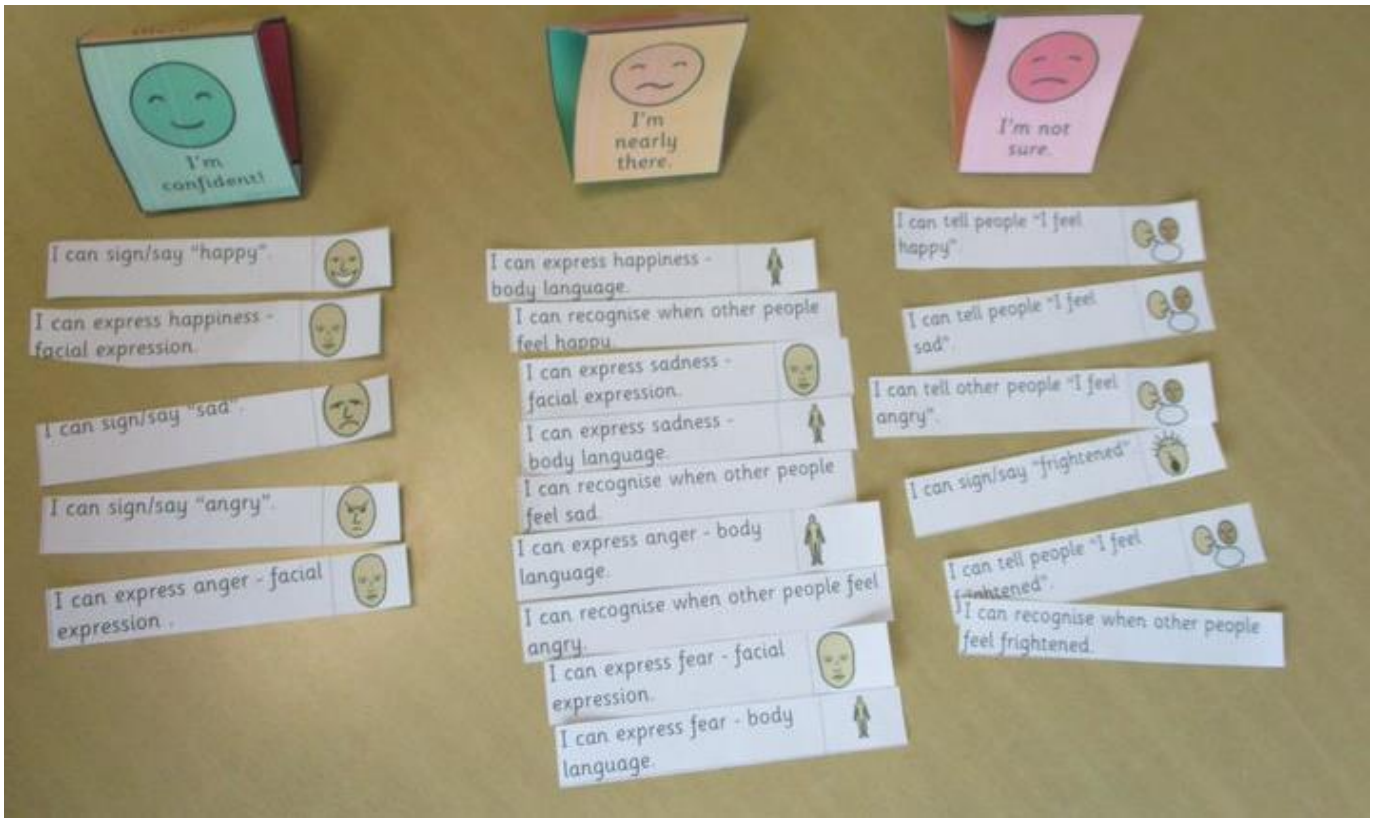
A- Appendices for methodology

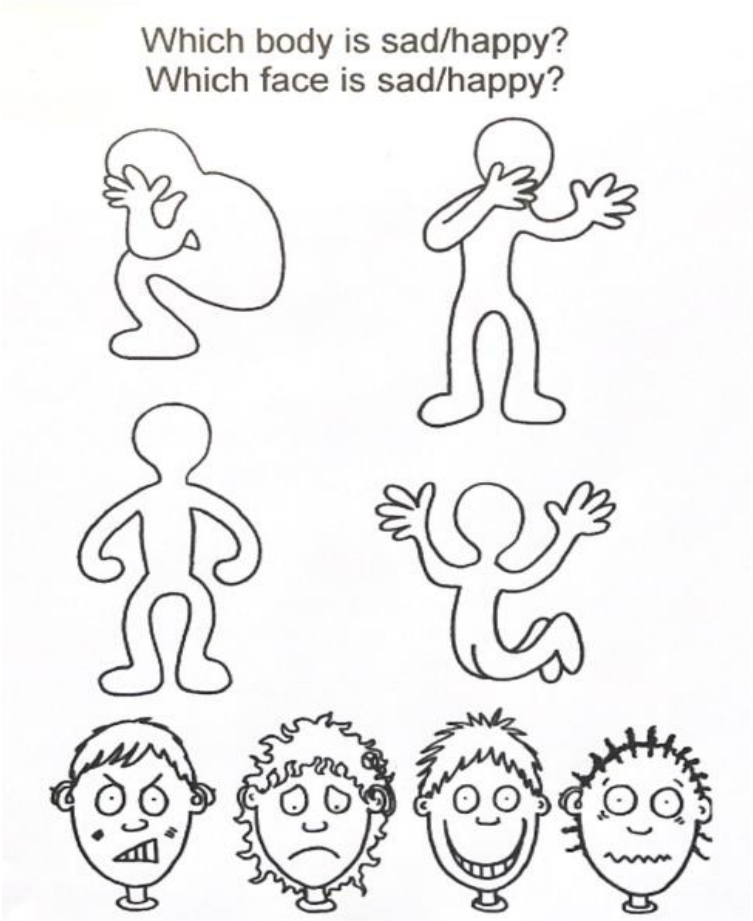
Appendix A-1 - Chat mat used for assessment

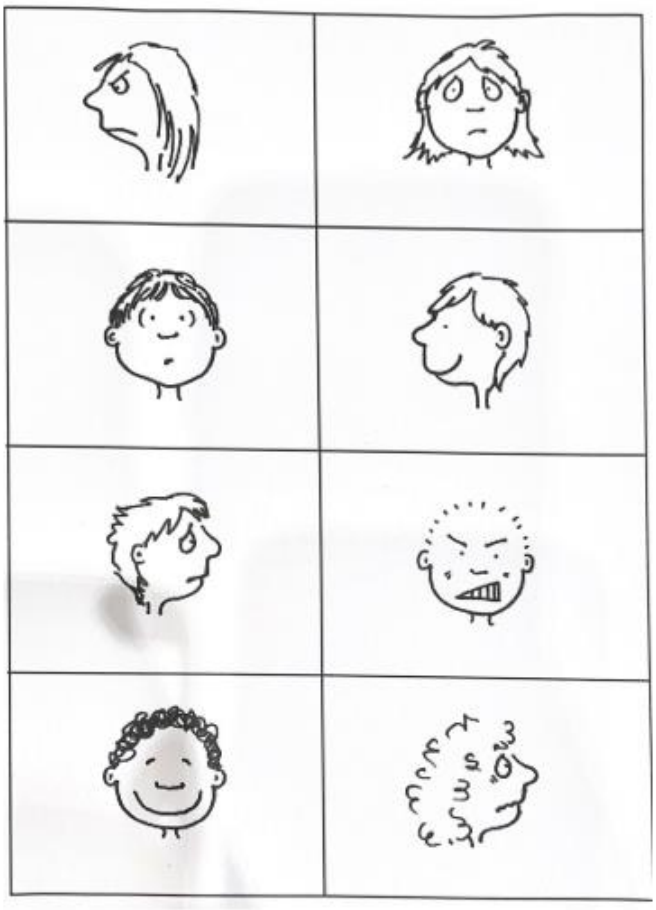


Appendix A-2 - Coloured labels that showed children's understanding during the assessment process.

Appendix A-3 – Emotion body language and facial expressions shown during assessment

Shown to participants to help identify body language and facial expressions of sad, happy, angry and frightened. Facial expressions and body language of real people were also shown, but these cannot





(Buxton & Hussmann, 2007)

Appendix A-4 - Pupil Asset – Point in Time Assessment Criterion

BWT	• Is largely or wholly unable to access the NC, even with heavily personalised support and scaffolding. This may be due to EAL or significant barriers to learning • Will undertake different tasks for the rest of the class.
BWT+	• Is able to access the NC only with heavily personalised support and scaffolding. This may be due to EAL or significant barriers to learning. • They may be undertaking some different tasks to the rest of the class.
WT	• Is able to access some elements of the NC with personalised support. • Has significant gaps in their learning • Struggles to embed concepts • Cannot apply their learning independently.
WT+	• Is able to access the NC and is meeting some of the NC objectives • Has some gaps in their learning. • Experiences difficulty in embedding concepts. • Often needs scaffolding or support. • Often struggles to apply their learning independently.
EXP	• Is meeting mostly all of the NC expectations/skills covered so far • Is successful at learning many new concepts • Is starting to apply their skills independently, but not consistently • May make errors but will usually be able to improve work following feedback and support • May have some small gaps in learning
EXP+	• Is meeting NC expectations covered so far • Is usually a successful learner and shows a good understanding of objectives/skills covered so far. • Is usually able to learn new skills and use them accurately and independently. • May make occasional errors in applying their learning in others concepts.
GD	• Is just exceeding NC expectations covered so far • Is almost always successful in understanding the key learning objectives • Is able to apply their skills in a range of contexts, making only a few errors which they attempt to rectify • Can often explain and justify their ideas.
GD+	• Is exceeding NC expectations for objects covered so far • Is always successful in understanding the key learning objectives • Is able to apply their skills in a wide range of contexts, making no errors. • Can explain and justify their ideas
AGD	• Is significantly exceeding NC expectations covered so far • Understands all key learning objectives and challenges • Can apply skills in a wide range of contexts making no errors • Clearly explains and justifies their ideas. • Demonstrates knowledge and skills beyond the curriculum • Analyses and evaluates their own and others work effectively.

Appendix A-5 - Data analysis- example of fraction and percentage calculation

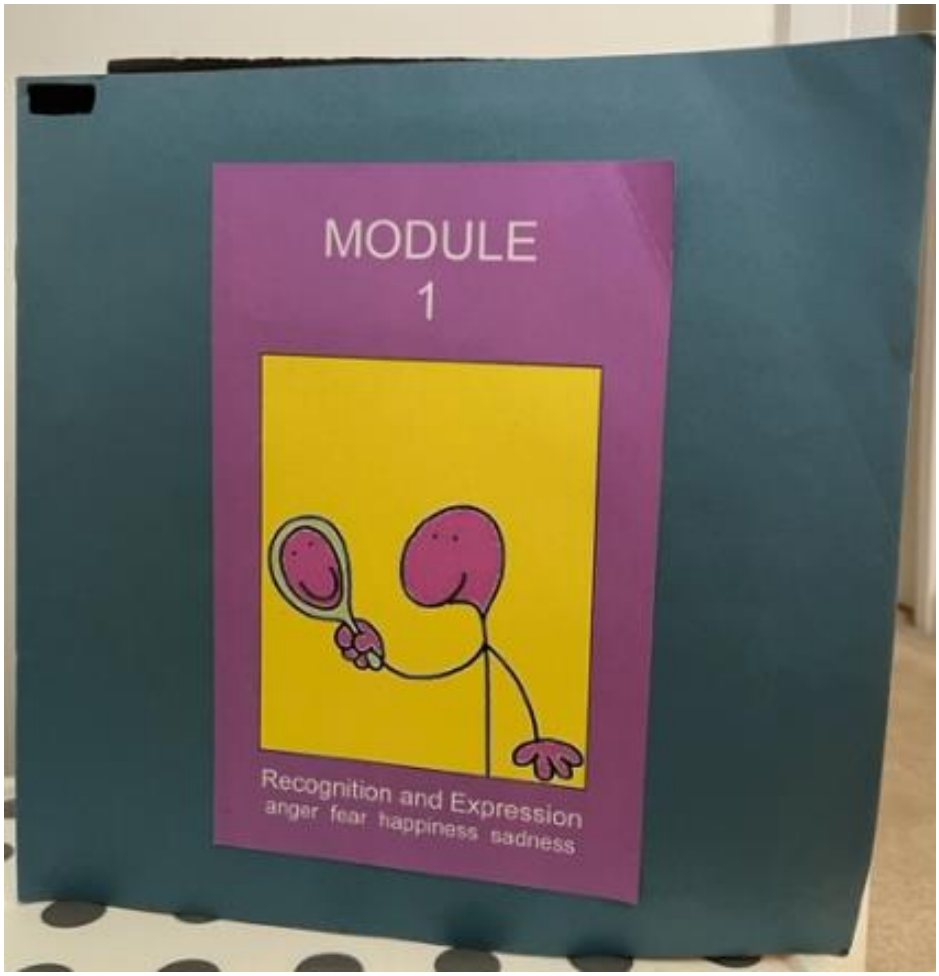
In this case, 5 statements were achieved (put under the 'I'm confident' section) out of 20. This gives us a fraction of 5/20. When converting this amount into a fraction (5 ÷ 20= 0.25, 0.25 x 100= 25%) we are given 25%. This shows that 25% of the statements were achieved.

Appendix A-6 - Data analysis- percentage-point increase and decrease

	Pre-intervention assessment %			Post-intervention assessment %			Percentage point increase	Percentage point decrease
	☺	😐	☹	☺	😐	☹	☺	☹
Child A	15	10	75	35	20	45	20	30

To calculate the percentage-point increase, we would look at the achieved statements. Child A achieved 15% of the statements during the baseline assessment and then achieved 35% of the objectives after the intervention took place. We would then find the difference between the two percentages (35-15= 20) therefore this child has achieved a 20-percentage-point increase.

Appendix A-7 - EL intervention book



(Buxton & Hussmann, 2007)

Appendix A-8 - Guided observation record – blank template

Module 1

Observation Record

Name:

Year Group:

Recognition	
Recognised and named emotions seen on another person's face and body language (Witness to write a brief description)	**Date Observed** **Signature of Witness**
Anger	
Fear	
Happiness	
Sadness	

Expression	
Expressed emotions through own facial expression and body language (Witness to write a brief description)	**Date Observed** **Signature of Witness**
Anger	
Fear	
Happiness	
Sadness	

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Appendix A-9 - Guided observation record - completed by researcher

Guided

Module 1

Observation Record

Name: [redacted] · Child A ·

Year Group: Year 1.

Recognition	
Recognised and named emotions seen on another person's face and body language (Witness to write a brief description)	**Date Observed** **Signature of Witness**
Anger – support needed – when sorting pics of fear and anger s. put anger under fear. [redacted] angry – choices given. Mummy angry.	11/11/22.
Fear – support needed, would often get confused between anger and fear.	11/11/22
Happiness she says mum happy ++ happy papa happy but cannot expand. I feel happy mummy happy birthday.	6/12/22 7/12/22.
Sadness who was sad? can't answer parrot. – did happy body lang.	2/12/22.

Expression	
Expressed emotions through own facial expression and body language (Witness to write a brief description)	**Date Observed** **Signature of Witness**
Anger – Found it difficult to show this 1:1 with [redacted] needed – used mirror & pics to show.	15/11/22. 21/11/22
Fear – no expression on face used hands to show this – most of the time signing instead of expressing. Did not understand to use blue to rep fear.	15/11/22. 21/11/22.
Happiness Copied everyone.	8/12/22.
Sadness	

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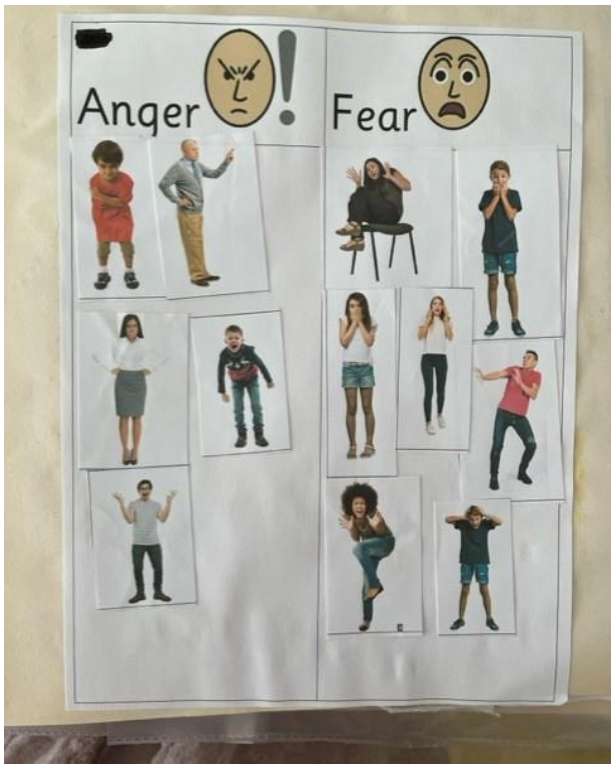
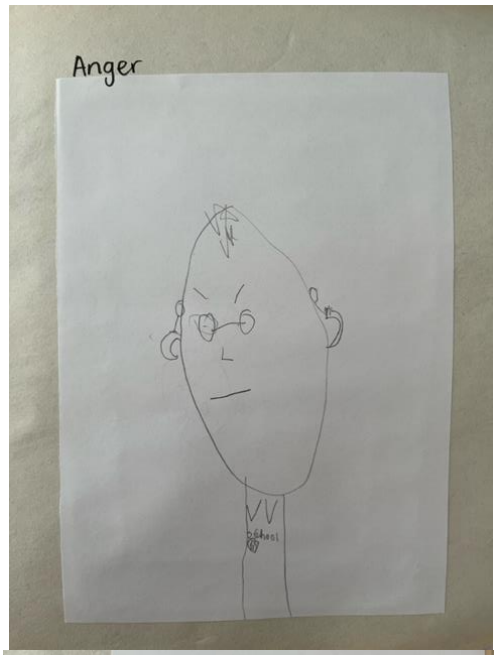
Noticed that [redacted] would vocalise more during the sessions esp. session 5 when painting – saying wet, wet, wet, sharing. saying ~~cool~~ colours- purple. 21/11/22.

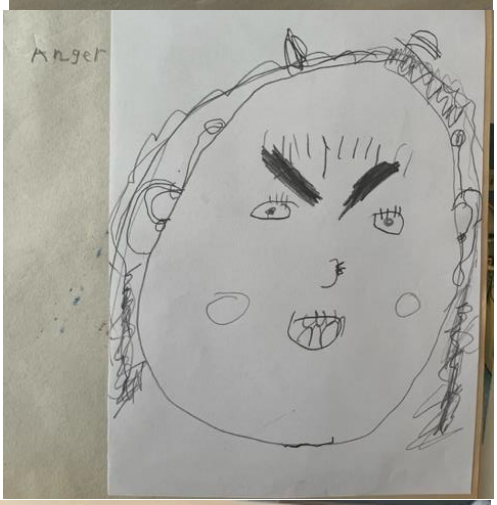
Appendix A-10 - Sorting pictures displaying different emotions into the correct category.



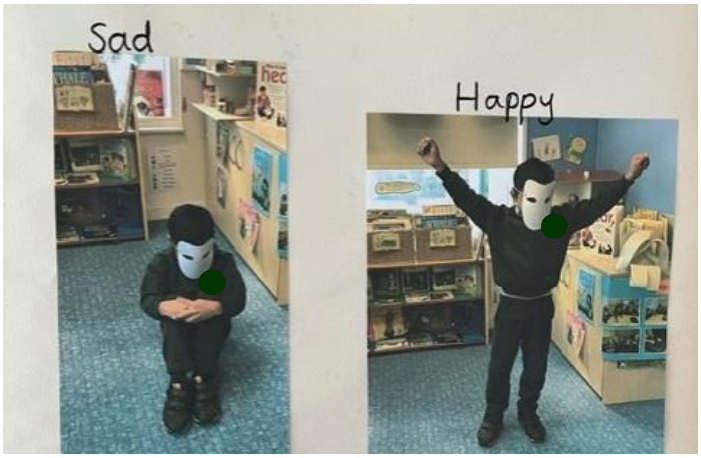
(Images used within the activity were sourced from google) (Google, 2023)

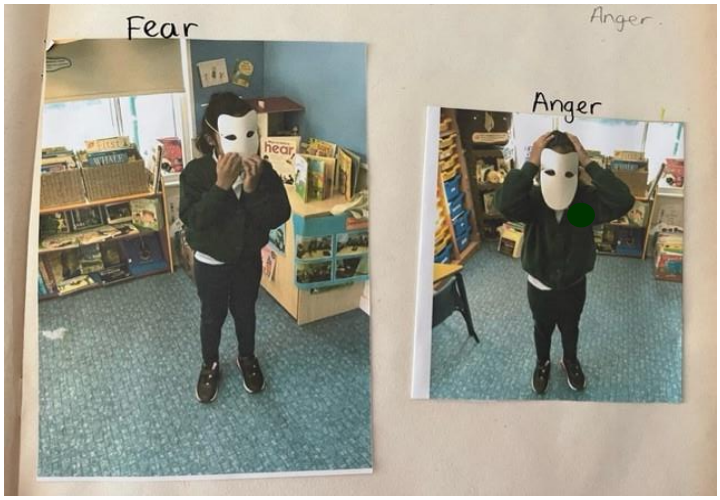
Appendix A-11 - Drawing different emotions using a range of media

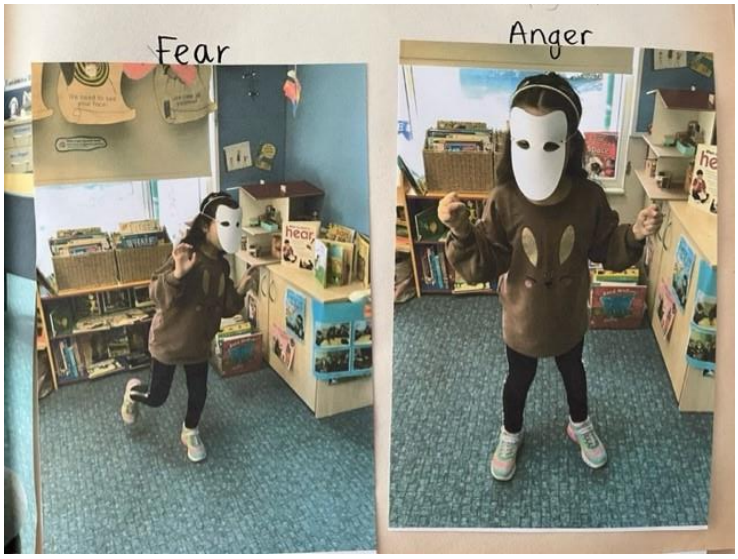


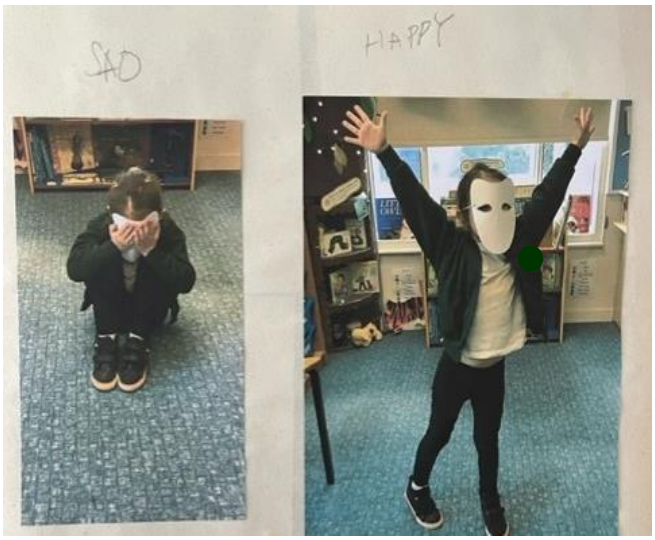


Appendix A-12 - Taking part in role-play to display different emotions-using masks and body language.



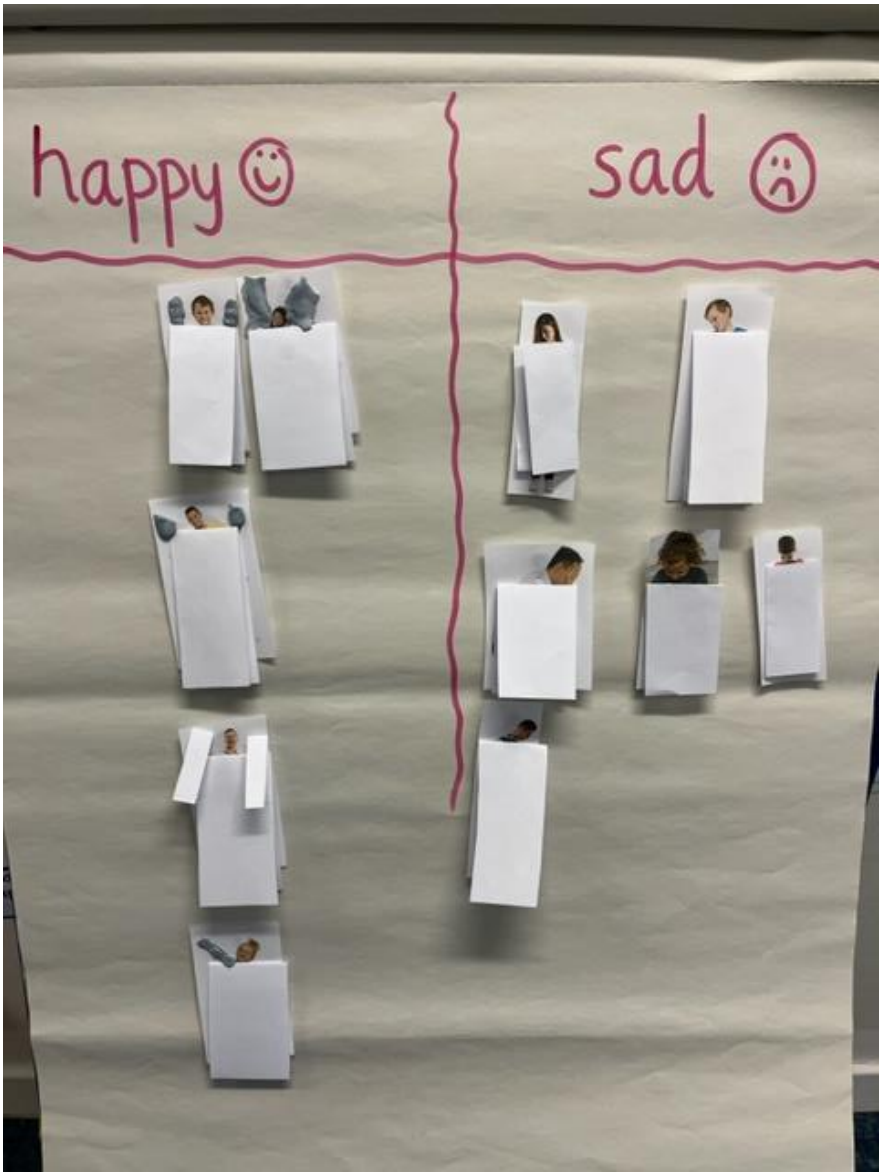






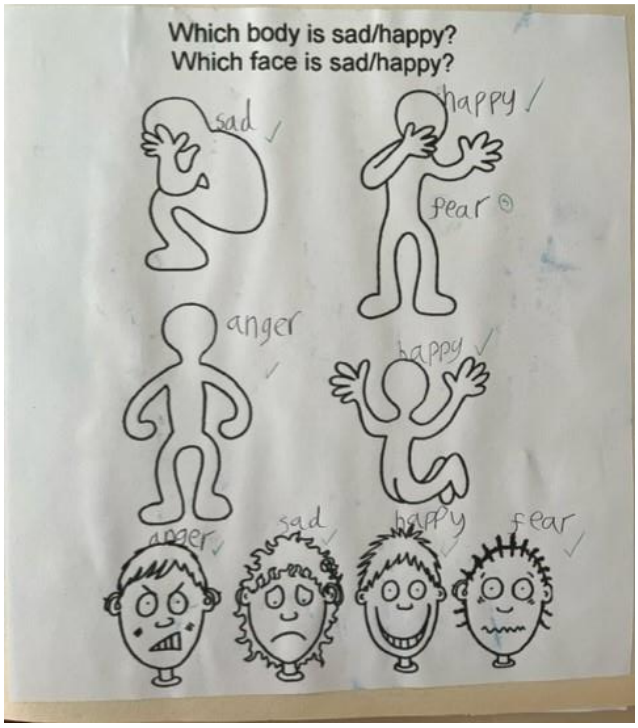
Appendix A-13 - Looking at visuals showing different emotions.

At first we looked at facial expressions, and then at body language.



(Images used within the activity have been sourced from google) (Google, 2023)

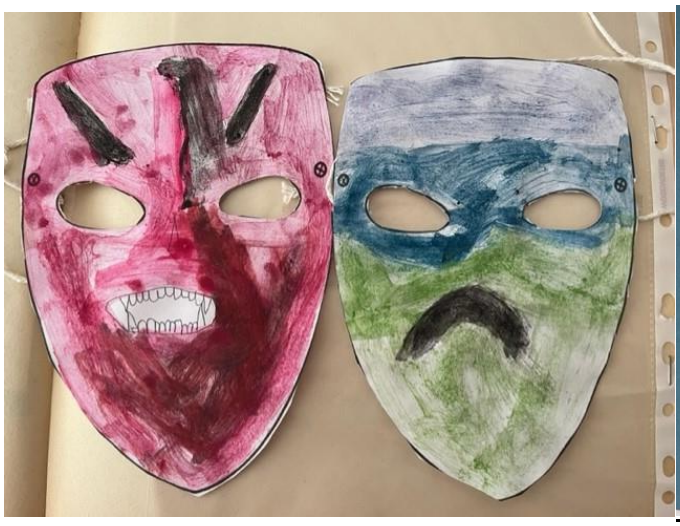
Appendix A- 14- Labelling facial expressions and body language

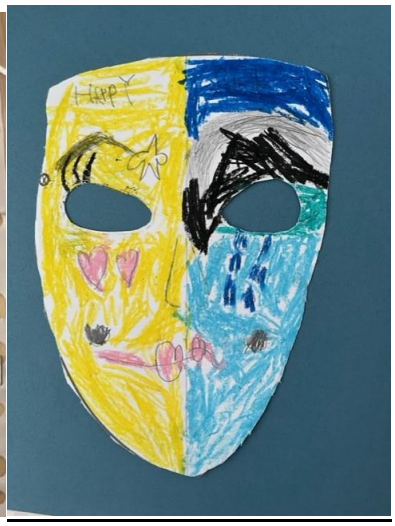


(Buxton & Hussmann, 2007)

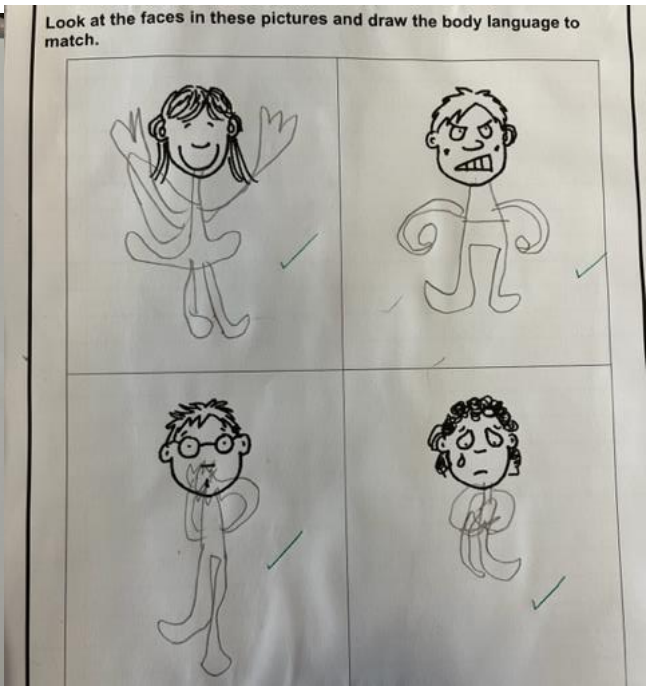
Appendix A-15 - Creating masks that represent different emotions.

We spoke about what colours also represent emotions. On the left, a child has created an angry mask, on the right is a mask showing fear. At the bottom, the task was to create one mask showing both happiness and sadness.





Appendix A-16 - Drawing faces and a body to represent different emotions.



(Buxton & Hussmann, 2007)

B- Appendices from results

I can sign/say "frightened".	
I can sign/say "sad".	
I can sign/say "happy".	
I can sign/say "angry".	

Appendix B-1 - I can sign/ say _____

I can express fear - facial expression.	
I can express sadness - facial expression.	
I can express happiness - facial expression.	
I can express anger - facial expression .	

Appendix B-2 - I can express _____- facial expression

I can express fear - body language.	
I can express sadness - body language.	
I can express happiness - body language.	
I can express anger - body language.	

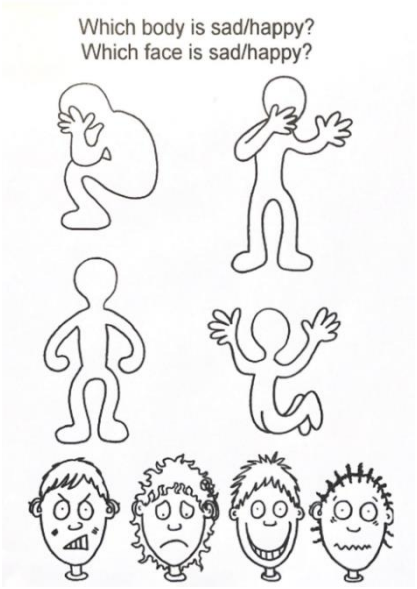
Appendix B-3 - I can express _____- body language

I can tell people "I feel frightened".	
I can tell people "I feel sad".	
I can tell people "I feel happy".	
I can tell other people "I feel angry".	

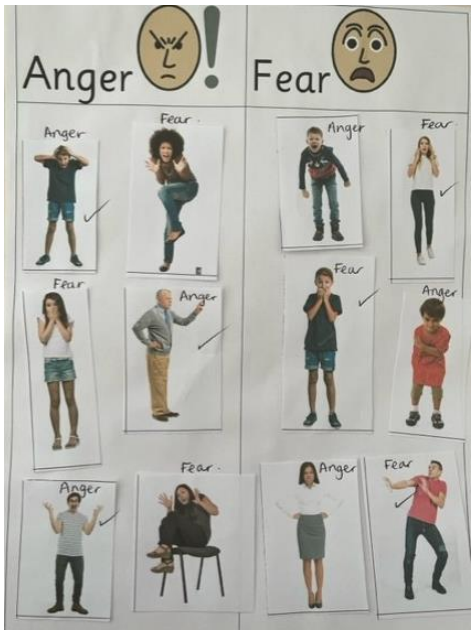
Appendix B-4 - I can tell people "I feel _____"

I can recognise when other people feel frightened.
I can recognise when other people feel sad.
I can recognise when other people feel happy.
I can recognise when other people feel angry.

Appendix B-5 - I can recognise when other people feel frightened.

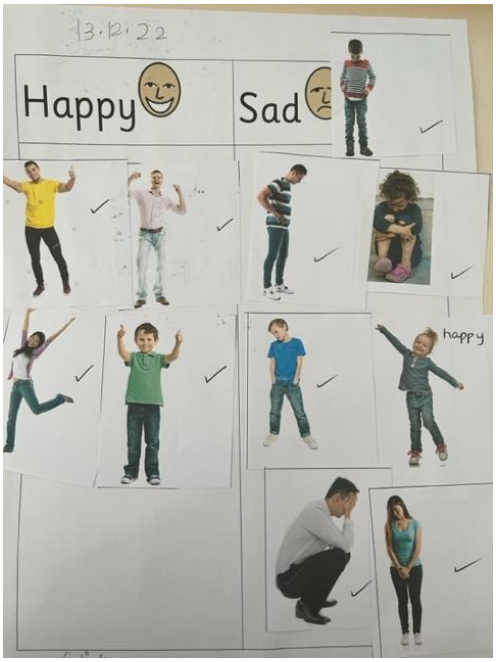


Appendix B-6 - Which body is sad/happy? Which face is sad/happy? Shown during assessement.

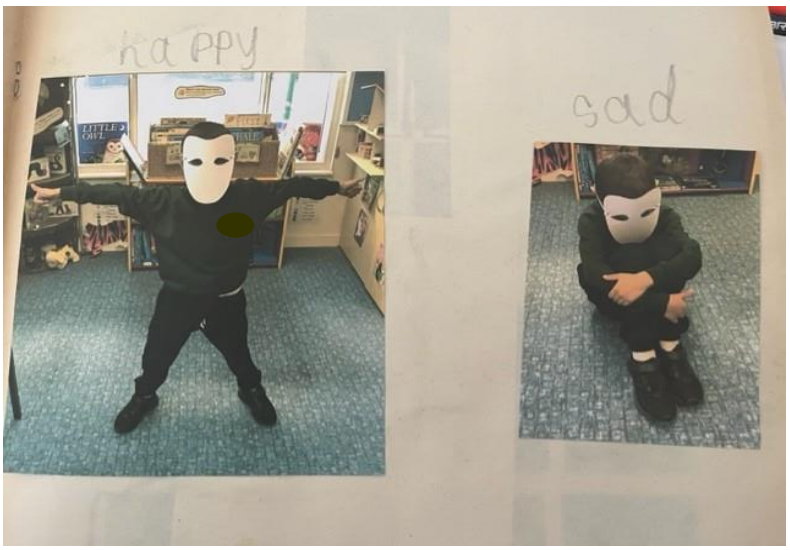


Appendix B-7 - Child A sorting pictures into the correct category of anger or fear.

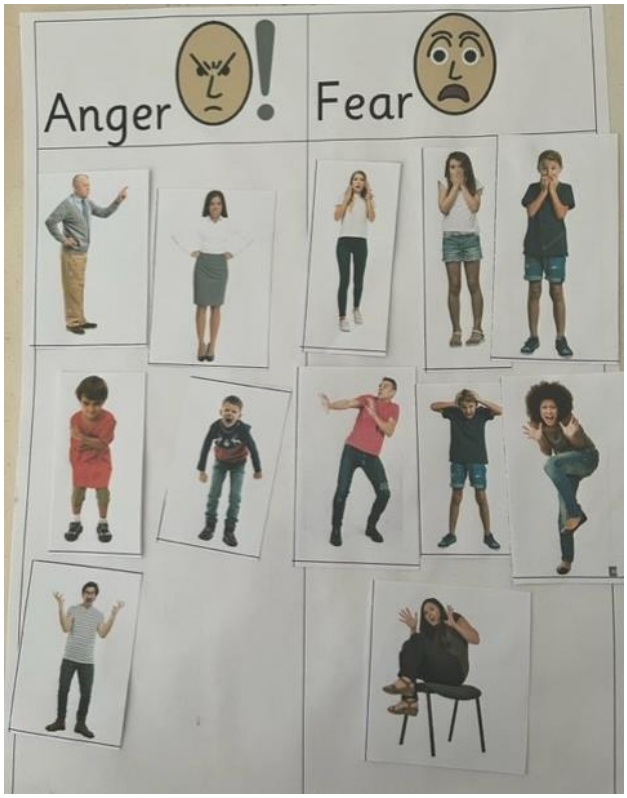
Appendix B-8 - Child A sorting pictures into the correct category of happy and sad.

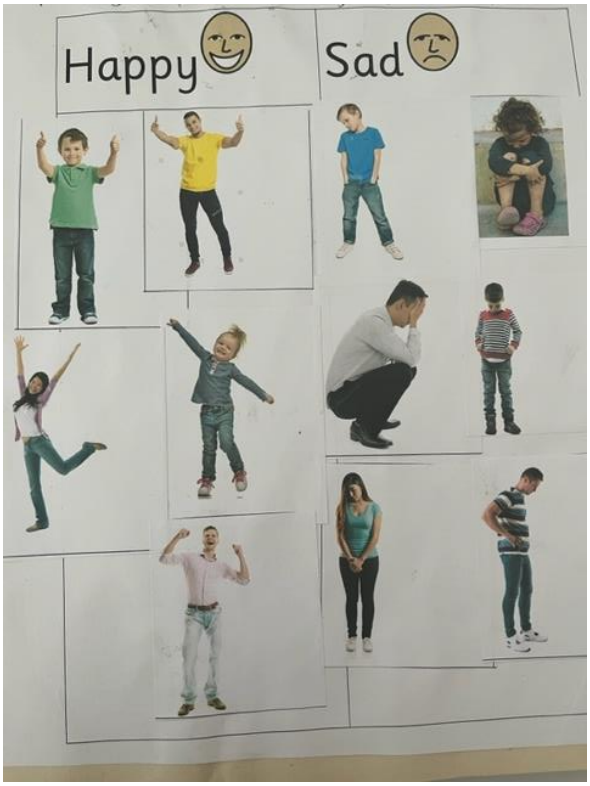


Appendix B-9 - Child B showing emotions through body language

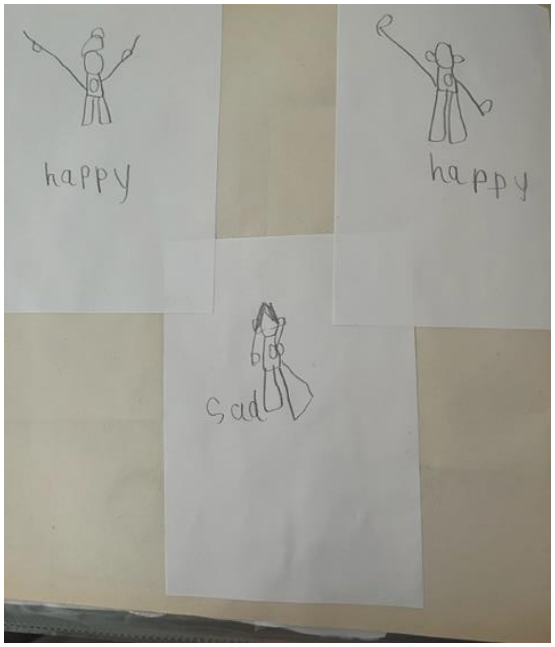


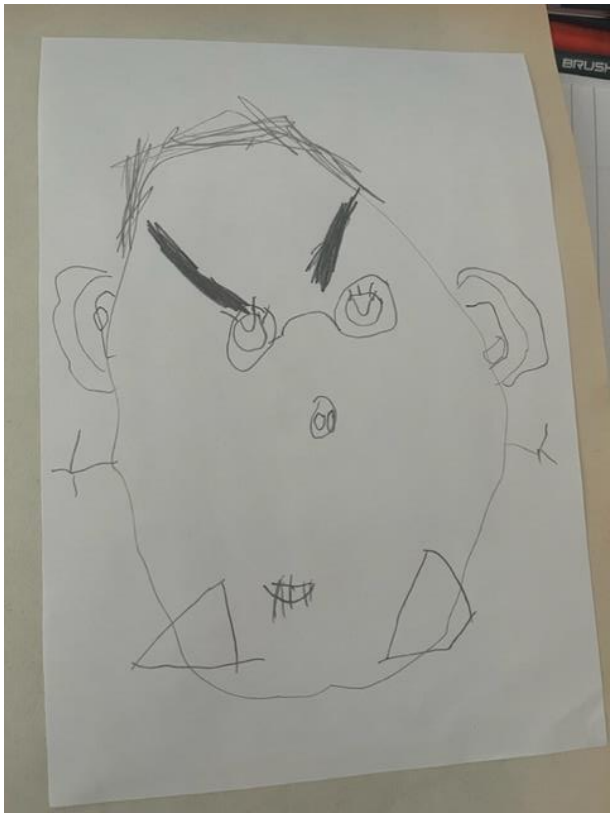
Appendix B-10 - Child B- sorting emotions



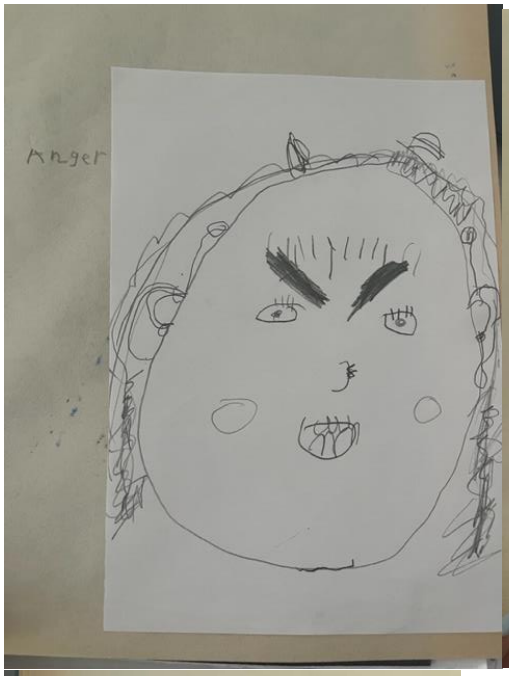


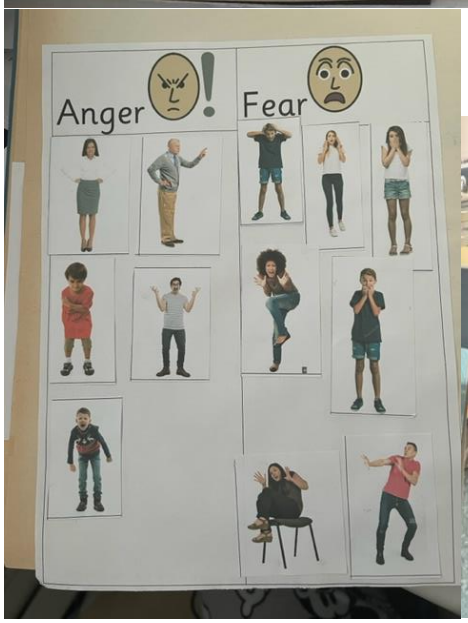
Appendix B-11 - Child B- labelling emotions shown on the face, drawing an angry face, drawing body language linked to emotions.



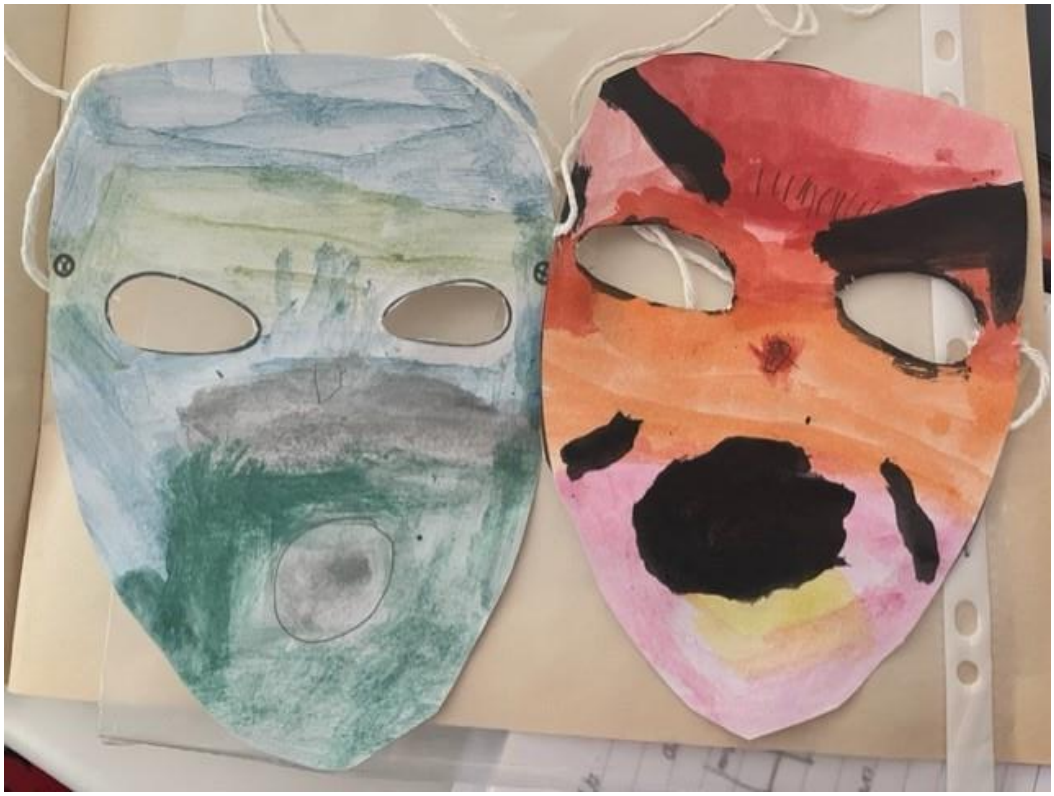


Appendix B-12 - Child C- draw, sort and use body language to represent emotions.

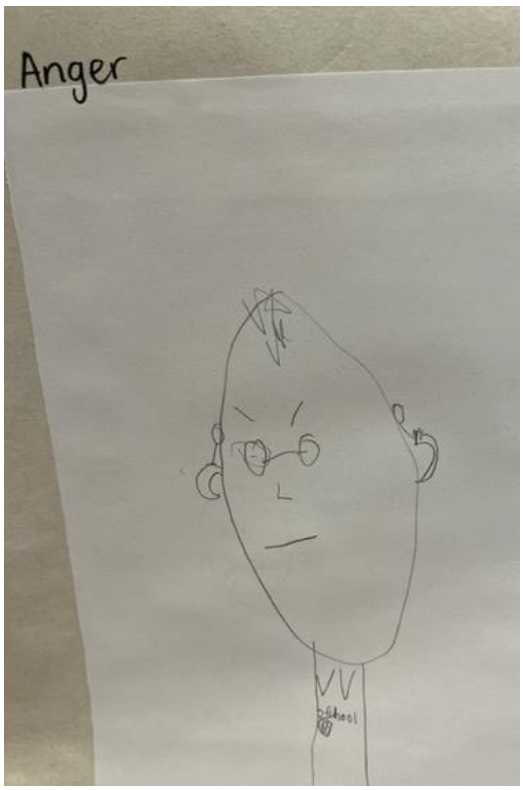




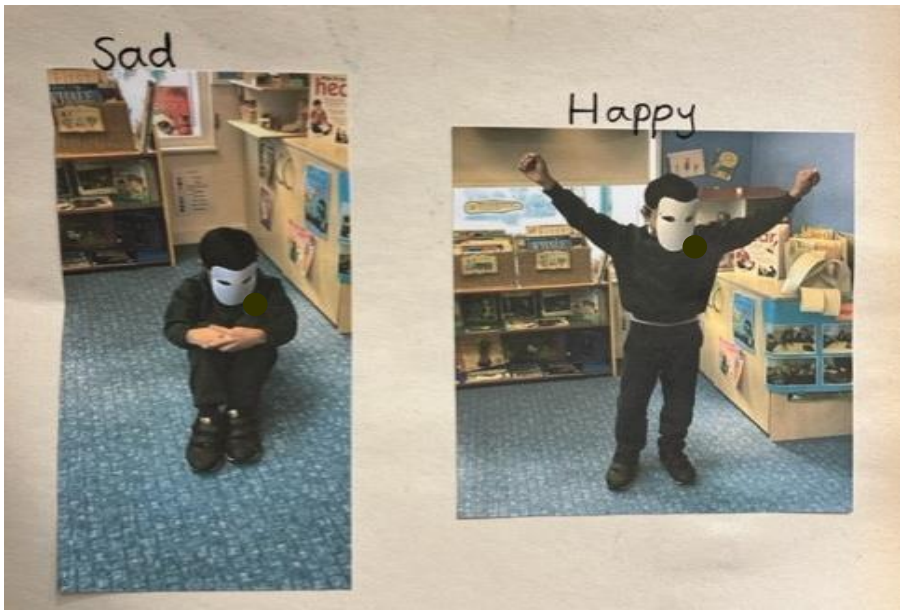
Appendix B-13- Child C- using water paints to create masks displaying fear and anger



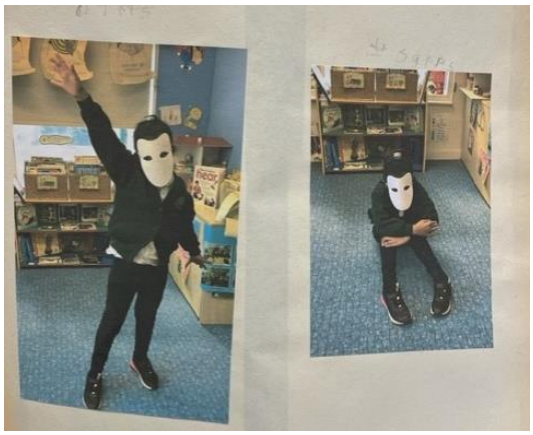
Appendix B-14 - Child D- Drawing facial expressions- anger and sadness



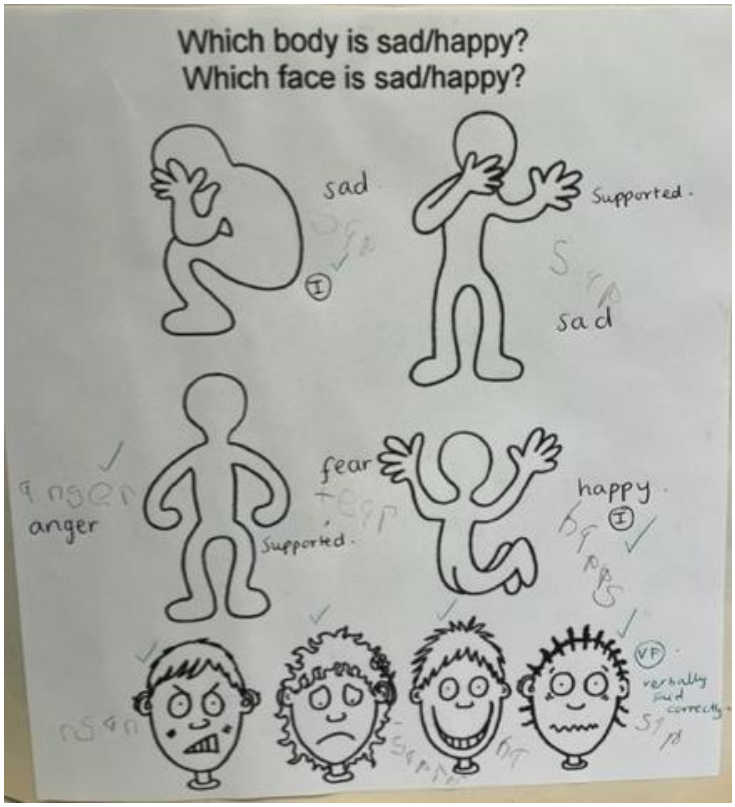
Appendix B-15 - Child D- Expressing emotion through body language



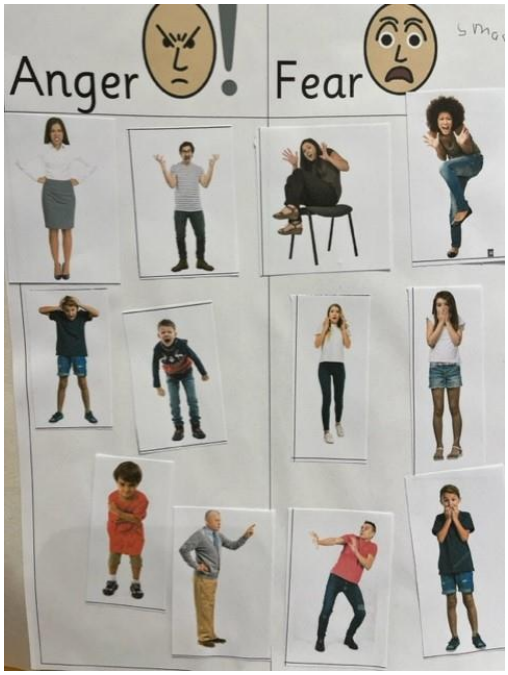
Appendix B-16 - Child E representing emotions through body language

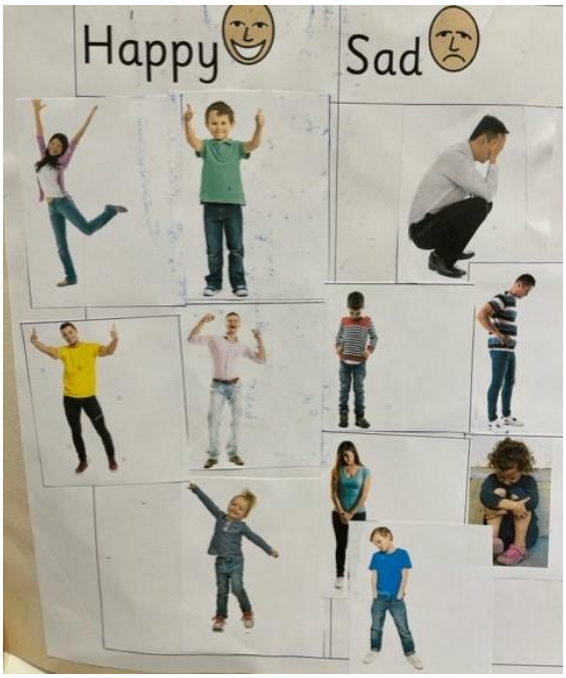


Appendix B-17 - Child E- labelling body language and facial expressions

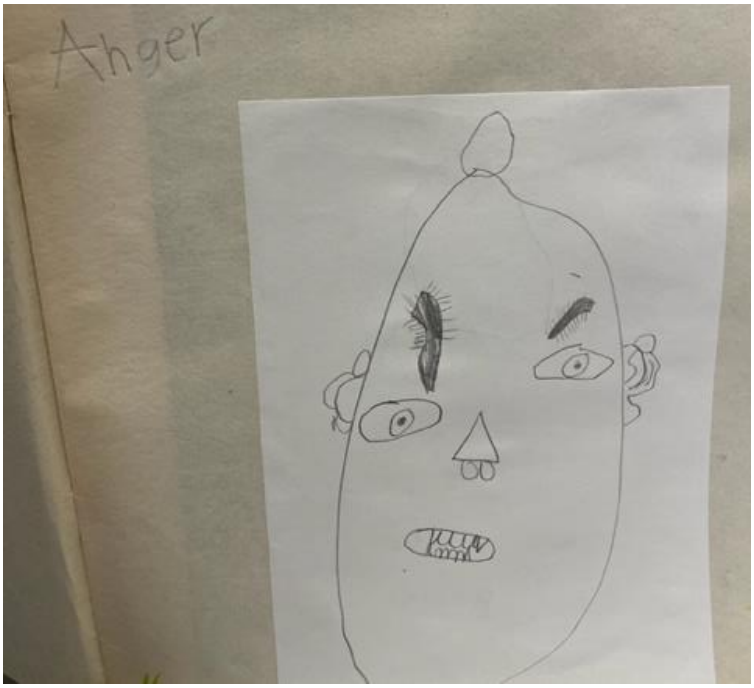


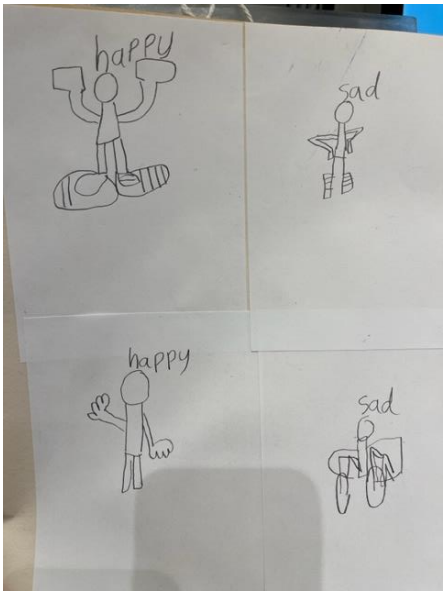
Appendix B-18 - Child E- Sorting emotion pictures



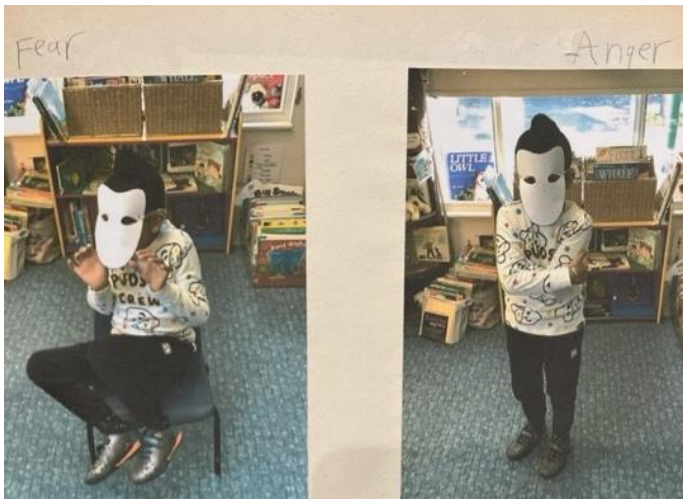


Appendix B-19 - Child F- Drawing facial expressions and body language to show emotions

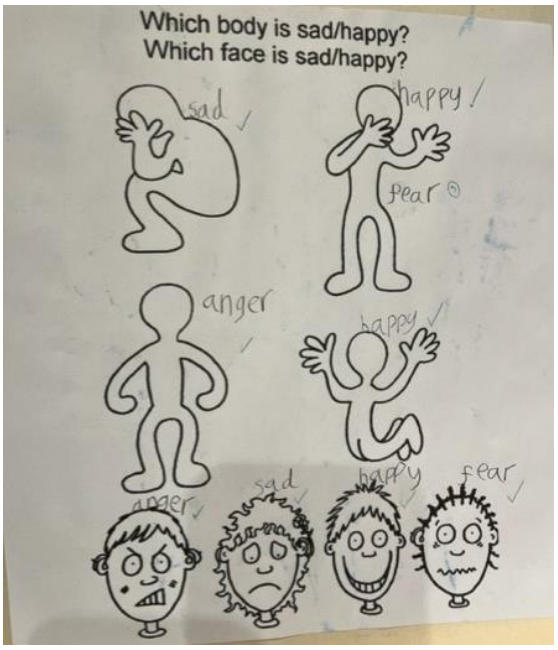




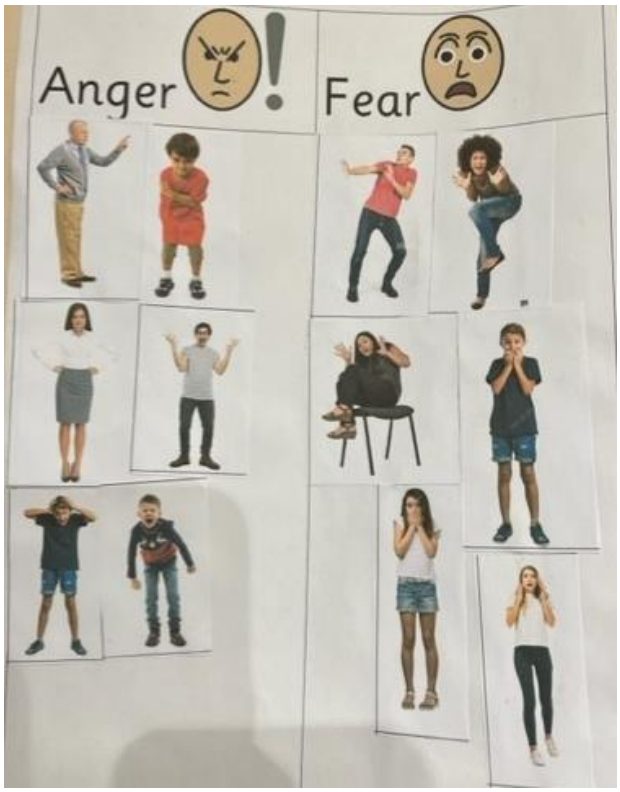
Appendix B-20 - Child F- Showing emotions through body language

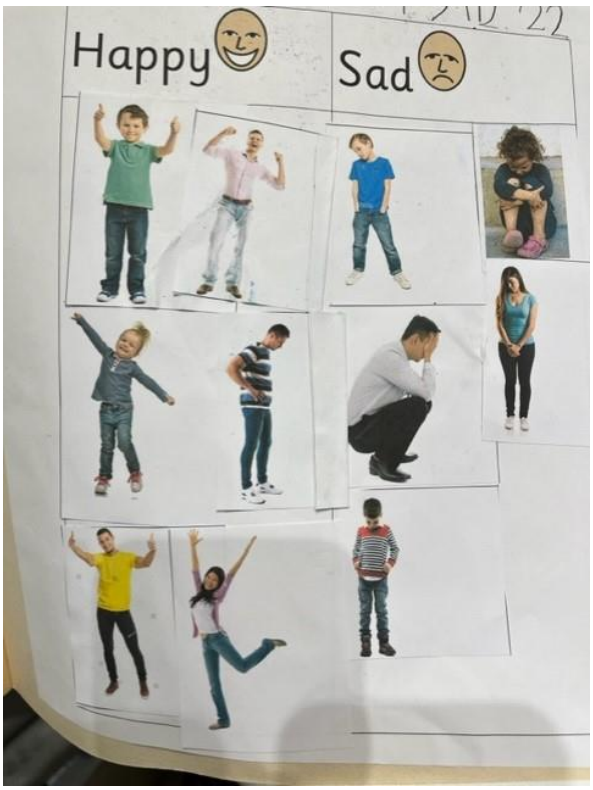


Appendix B-21 - Child F- Labelling emotions

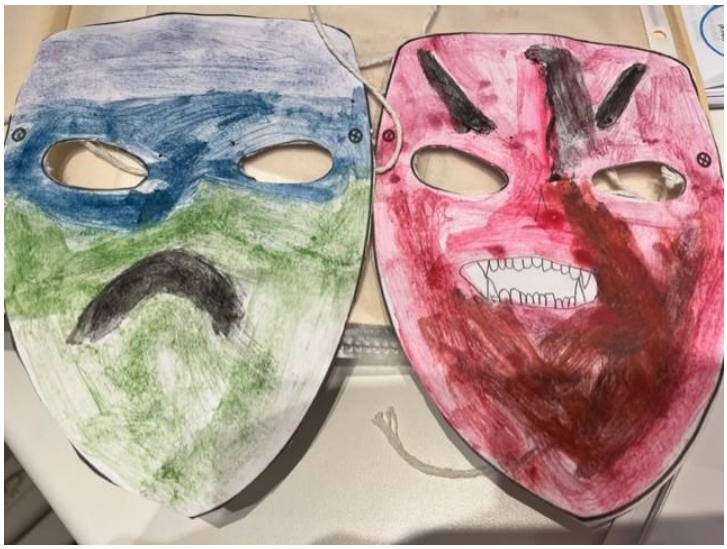


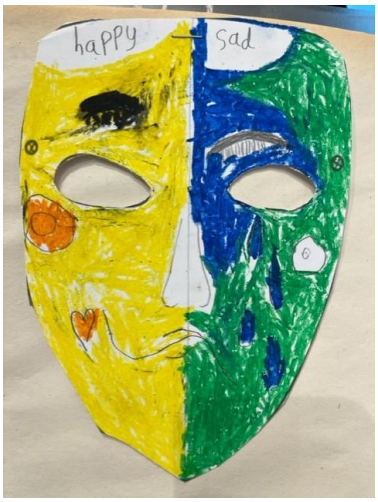
Appendix B-22 - Child F- sorting emotion pictures



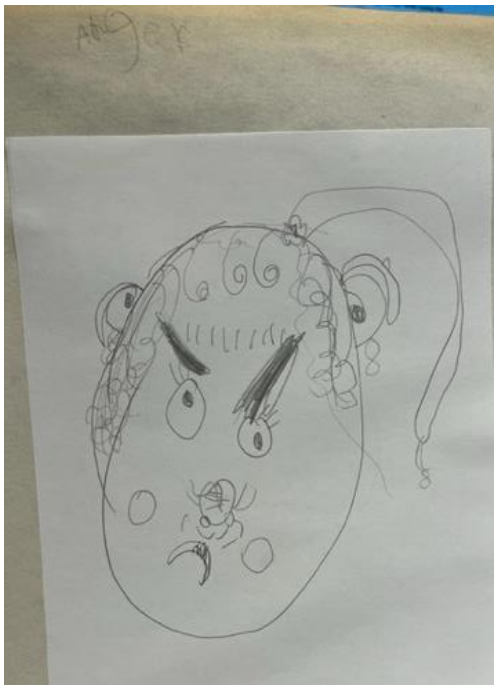


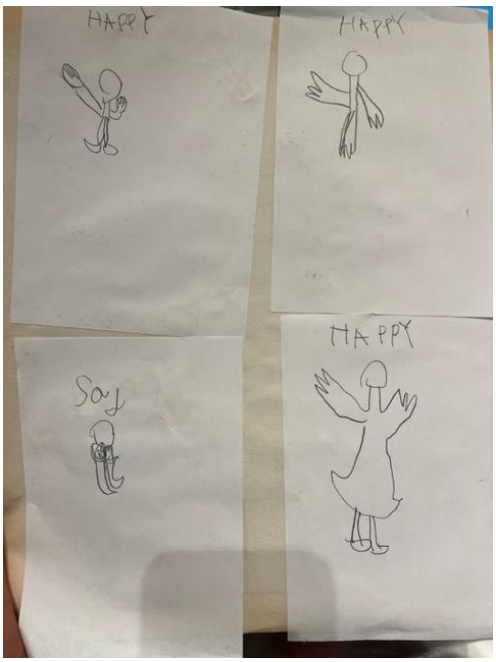
Appendix B-23 - Child F- Creating emotion masks



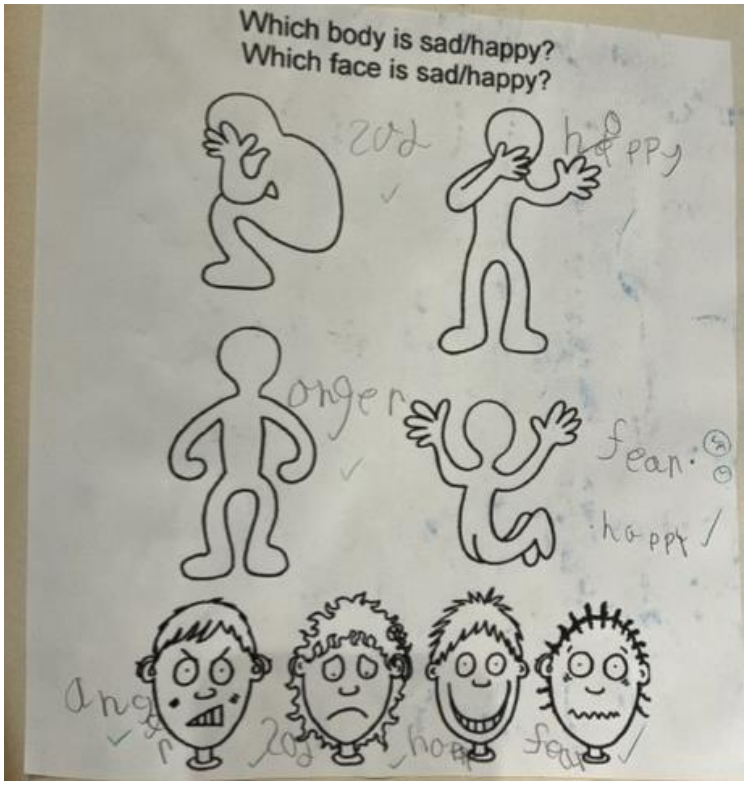


Appendix B-24 - Child G- Drawing facial expressions and body language that represents emotions

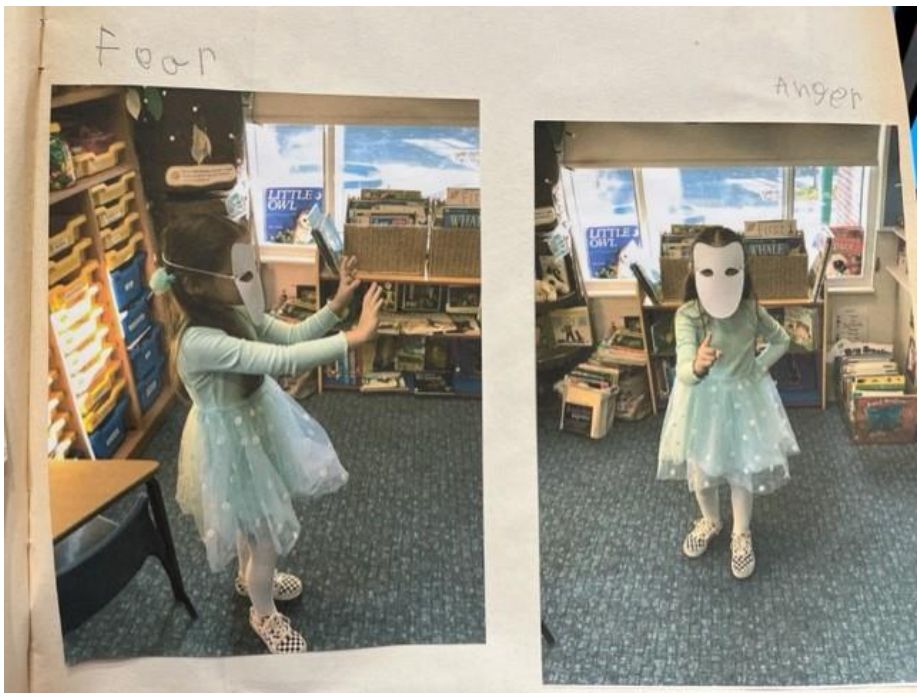




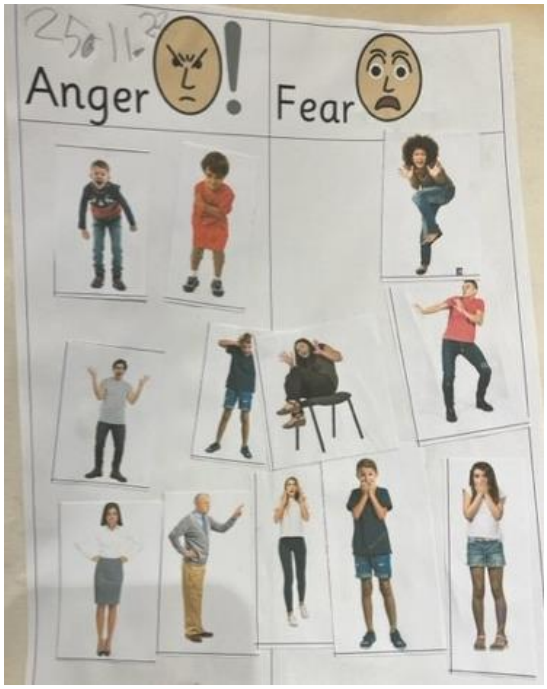
Appendix B-25 - Child G- Labelling emotions



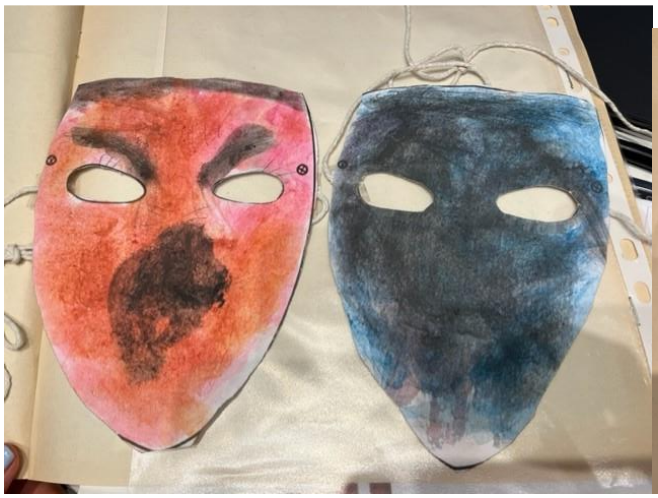
Appendix B-26 - Child G- Expressing emotions through body language

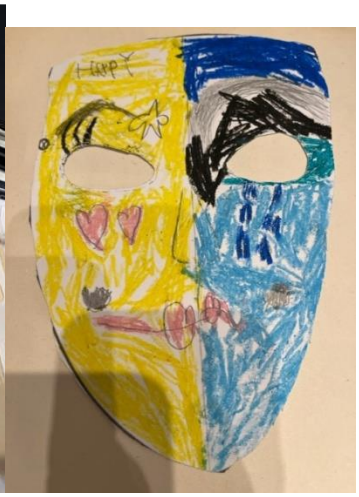


Appendix B-27 - Child G- Sorting emotion pictures



Appendix B-28 - Creating emotion masks





7. Ethics

Appendix I - Ethics approval

University of Hertfordshire UH

SOCIAL SCIENCES, ARTS AND HUMANITIES ECDA

ETHICS APPROVAL NOTIFICATION

TO Simran Nandra

CC Sarah Davis

FROM Dr Ian Willcock, Social Sciences, Arts and Humanities ECDA Chairman

DATE 11/10/2022

Protocol number: SHE/PGT/UH/05729

Title of study: How effective is an emotional literacy intervention when developing emotional skills of children who are Deaf aged 5-7?

Your application for ethics approval has been accepted and approved with the following conditions by the ECDA for your School and includes work undertaken for this study by the named additional workers below:

No additional workers named

General conditions of approval:

Ethics approval has been granted subject to the standard conditions below:

Permissions: Any necessary permissions for the use of premises/location and accessing participants for your study must be obtained in writing prior to any data collection commencing. Failure to obtain adequate permissions may be considered a breach of this protocol.

External communications: Ensure you quote the UH protocol number and the name of the approving Committee on all paperwork, including recruitment advertisements/online requests, for this study.

Invasive procedures: If your research involves invasive procedures you are required to complete and submit an EC7 Protocol Monitoring Form, and copies of your completed consent paperwork to this ECDA once your study is complete.

Submission: Students must include this Approval Notification with their submission.

Validity:

This approval is valid:

From: 11/10/2022

To: 30/06/2023

Please note:

Failure to comply with the conditions of approval will be considered a breach of protocol and may result in disciplinary action which could include academic penalties. Additional documentation requested as a condition of this approval protocol may be submitted via your supervisor to the Ethics Clerks as it becomes available. All documentation relating to this study, including the information/documents noted in the conditions above, must be available for your supervisor at the time of submitting your work so that they are able to confirm that you have complied with this protocol.

Should you amend any aspect of your research or wish to apply for an extension to your study you will need your supervisor's approval (if you are a student) and must complete and submit form EC2.
Approval applies specifically to the research study/methodology and timings as detailed in your Form EC1A. In cases where the amendments to the original study are deemed to be substantial, a new Form EC1A may need to be completed prior to the study being undertaken.

Failure to report adverse circumstance/s may be considered misconduct.
Should adverse circumstances arise during this study such as physical reaction/harm, mental/emotional harm, intrusion of privacy or breach of confidentiality this must be reported to the approving Committee immediately.

Appendix II - Application for ethics approval

UNIVERSITY OF HERTFORDSHIRE

FORM EC1A: APPLICATION FOR ETHICS APPROVAL OF A STUDY INVOLVING HUMAN PARTICIPANTS

(Individual or Group Applications)

Please complete this form if you wish to undertake a study involving human participants.

Applicants are advised to refer to the Ethics Approval StudyNet Site and read the Guidance Notes (GN) before completing this form:
http://www.studynet2.herts.ac.uk/ptl/common/ethics.nsf/Homepage?ReadForm

Applicants are also advised to read the FAQ General Data Protection Regulation (GDPR) before completing this form.
http://www.studynet2.herts.ac.uk/ptl/common/ethics.nsf/Frequently+Asked+Questions/4AD88CD88D0F3F2D8025829800300621

Use of this form is mandatory [see UPR RE01, 'Studies Involving Human Participants', Sections 7.1-7.3]
Approval must be sought **and granted** before any investigation involving human participants begins [UPR RE01, S 4.4 (iii)]

Note: Supervisors should submit this form on behalf of their students.

Please submit this form and any accompanying documentation to the appropriate Ethics Committee with Delegated Authority (ECDA):
Health, Science, Engineering and Technology ECDA: hsetecda@herts.ac.uk or
Social Sciences, Arts and Humanities ECDA: ssahecda@herts.ac.uk

(If you require any further guidance, please contact either hsetecda@herts.ac.uk or ssahecda@herts.ac.uk)

Abbreviations: GN = Guidance Notes UPR = University Policies and Regulations

---

THE STUDY

Q1 Please give the title of the proposed study

How effective is an emotional literacy intervention when developing emotional skills of children who are Deaf aged 5-7?

THE APPLICANT

Q2 Name of applicant/(principal) investigator (person undertaking this study)

Miss Simran Nandra

Student registration number/Staff number

20011606

Email address

Simi_nandra@hotmail.com

Status:

☐Undergraduate (Foundation) ☐Undergraduate (BSc, BA)

☒Postgraduate (taught) ☐Postgraduate (research)

☐Staff ☐Other

If other, please provide details here:

Click here to enter text.

School/Department:

School of Education

If application is from a student NOT based at University of Hertfordshire, please give the name of the partner institution: Mary Hare

Name of Programme (eg BSc (Hons) Computer Science): MA Deaf Education Studies

Module name and module code: Research Methods and Dissertation Module 7FHE1108

Name of Supervisor: Sarah Davis Supervisor's email: s.davis@maryhare.org.uk

Name of Module Leader if applicant is undertaking a taught programme/module:

Dr Imran Mulla

Names and student/staff numbers for any additional investigators involved in this study (students should read GN Sections 1.5 and 2.2.1 concerning responsibilities of all members of the group)

Is this study being conducted in collaboration with another university or institution and/or does it involve working with colleagues from another institution?

☐Yes ☒No

If yes, provide details here:

DETAILS OF THE PROPOSED STUDY

Q3 Please give a short synopsis of your proposed study, stating its aims and highlighting where these aims relate to the use of human participants (See GN 2.2.3)

How effective is an emotional literacy intervention when developing emotional skills of children who are Deaf aged 5-7?

An emotions scheme written by Shanee Buxton and Christine Hussmann will be used, I will choose parts of the scheme and teach lessons linked to emotional literacy for a 4-week period (to the 7 children within the Centre for the Deaf, which is a resource base for children who are deaf attached to a mainstream school). I will undertake a baseline test (with the 7 children who are deaf), to assess the children's understanding and use of emotional literacy and complete the same test post-intervention to use as a guide of effectiveness.

With little being known about this population group (children who are deaf and aged between 5-7) and their understanding of emotional literacy, I would like add to current literature/ research and focus my study on equipping children with emotional language and literacy to help express themselves, support their social and emotional skills as well as build empathy.

Q4 Please give a brief explanation of the design of the study and the methods and procedures used. You should clearly state the nature of the involvement the human participants will have in your proposed study and the extent of their commitment. Ensure you provide sufficient detail for the Committee to, particularly in relation to the human participants. Refer to any Standard Operating Procedures SOPs under which you are operating here. (See GN 2.2.4).

Qualitative research: Action research.

Human participants will take part in a 4-week intervention period to support and develop emotional literacy skills. The participants will be aged 5-7 and have a bilateral type of deafness with either a mild/ moderate/severe/ profound degree of deafness. Hearing aids, cochlear implants and other devices are used to support children's hearing. The children involved attend an Infant school and are supported in a resource base attached to a mainstream school, for part of the day. For other parts of the day, the children who are deaf are integrated within the mainstream setting, so they will work and learn with their hearing peers.

The intervention will take place in the resource base, where children who are deaf, are from year 1 and year 2. They will work together in an acoustically treated classroom to develop their emotional literacy skills. The intervention will consist of a range of activities for the children to take part in, this could be writing, drawing, games, role-play etc. Activities will be differentiated in order to support children of different needs (adaptations will be made before the lessons). Children will be supported by the researcher and notes will be taken down after each session to assess how well children understand the objective of the lesson and what could be done to improve the lessons. The children's work will also be collected and used during the analysis stage (anonymously). Children will continue to work through the scheme with the researcher, as well as incorporate the emotions scheme to different parts of the children's lives so that the scheme does not become an isolated subject being taught. Using my teacher judgement, I can assess whether children are applying their knowledge to different situations.

At the start of the project, the group of children will take part in a baseline assessment to gauge their level of understanding linked to emotions and emotional literacy. The same test will be completed at the end of the 4-week intervention stage to see how effective the intervention was. The assessment will be linked closely with the emotions scheme that will be taught to the children. The researcher will support the children when the assessment takes place, by using the children's method of communication (Spoken language, British sign language, Sign Supported English), visual support and teacher judgement.

Their assessment data collated before and after the intervention will be used anonymously. Their progress throughout the intervention will be used when analysing data.

Q5 Does the study involve the administration of substances?

☐Yes ☒No

PLEASE NOTE: If you have answered yes to this question you must ensure that the study would not be considered a clinical trial of an investigational medical product. To help you, please refer to the link below from the Medicines and Healthcare Products Regulatory Agency:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/317952/Algothrim.pdf

To help you determine whether NHS REC approval is required, you may wish to consult the Health Research Authority (HRA) decision tool: http://www.hra-decisiontools.org.uk/ethics/

If your study is considered a clinical trial and it is decided that ethical approval will be sought from the HRA, please stop completing this form and use Form EC1D, 'NHS Protocol Registration Request'; you should also seek guidance from Research Sponsorship.

I confirm that I have referred to the Medicines and Healthcare Products Regulatory Agency information and confirm that that my study is not considered a clinical trial of a medicinal product.

Please type your name here: Simran Nandra

Date: 09.09.22

Q6.1 Please give the starting date for your recruitment and data collection: 26.09.22

Q6.2 Please give the finishing date for your data collection: 30.06.23
(For meaning of 'starting date' and 'finishing date', see GN 2.2.6)

Q7.1 Where will the study take place?
At my place of work, Norwood Green Infant and Nursery School.

Please refer to the Guidance Notes (GN 2.2.7) which set out clearly what permissions are required;

Please tick all the statements below which apply to this study

Q7.2 **Permissions**

This question is about two types of permission you may need to obtain. Depending on the study you may need more than one of each of these:

i Permission to access a particular group or groups of participants to respond to your study

ii Permission to use a particular premises or location in which you wish to conduct your study

If your study involves minors/vulnerable participants, please refer to Q18 to ensure you comply with the University's requirement regarding Disclosure and Barring Service clearance.

TICK THE APPROPRIATE BOXES IN EACH COLUMN

(i) Permission to access participants		**(ii) Permission to use premises/location**	
(tick)		(ti	
	I confirm that I have obtained permission to access my intended group of participants and that the permission is attached to this application		Permission has been obtained to carry out the study on University premises in areas outside the Schools and the agreement is attached to this application.
/	I have yet to obtain permission but I understand that this will be necessary before I commence my study. For student applicants only: I understand that the original copies of the permission letters must be verified by my supervisor before data collection commences		Permission has been obtained from an off-campus location to carry out the study on their premises and the agreement is attached to this application
/	This study involves working with minors/vulnerable participants. I/we have obtained permission from the organisation (including UH/UH Partner Institutions when appropriate) in which the study is to take place and which is responsible for the minors/vulnerable participants. The permission states the DBS requirements of the organisation for this study and confirms I/we have satisfied their DBS requirements where necessary	/	I have yet to obtain permission but I understand that this will be necessary before I commence my study. For student applicants only: I understand that the original copies of the permission must be verified by my supervisor before data collection commences
	Permission is not required for my study. **Please explain why:**		Permission is not required for my study. **Please explain why:**

-

HARMS, HAZARDS AND RISKS

Q8.1 It might be appropriate to conduct a risk assessment (in respect of the hazards/risks affecting both the participants and/or investigators). **Please use form EC5, Harms, Hazards and Risks, if the answer to any of the questions below is 'yes'.**

If you are required to complete and submit a School-specific risk assessment (in accordance with the requirements of the originating School) it is acceptable to make a cross-reference from this document to Form EC5 in order not to have to repeat the information twice.

Will this study involve any of the following?

Invasive Procedures/administration of any substance/s? ☐YES ☒ NO

IF 'YES' TO THE ABOVE PLEASE COMPLETE EC1 APPENDIX 1 AS WELL AND INCLUDE IT WITH YOUR APPLICATION

Are there potential hazards to participant/investigator(s) from the proposed study? (Physical/Emotional or other non-physical harm) ☐YES ☒ NO

Will or could aftercare and/or support be needed by participants? ☐YES ☒NO

Q8.2 Is the study being conducted off-campus (i.e. not at UH/UH Partner?) ☒YES ☐NO

It might be appropriate to conduct a risk assessment of the proposed location for your study (in respect of the hazards/risks affecting both the participants and/or investigators) (this might be relevant for on-campus locations as well). Please use Form EC5 and, if required, a School-specific risk assessment (See GN 2.2.8 of the Guidance Notes).

If you do not consider it necessary to submit a risk assessment, please give your reasons:

The project will take place in a school (Norwood Green Infant and Nursery School). As the study will be conducted in my place of work, I shall follow all of the risk assessment policies that are followed during the day-to-day activities within the school. These policies include safeguarding and child protection, health and safety, behaviour, prevent, confidentiality and teaching and learning policy which can be found when following this link Norwood Green Infant and Nursery School - Policies (norwoodgreeninfants.org.uk). The school also has a Covid risk assessment policy that is in line with current national requirements, this can be found by following this link Norwood Green Infant and Nursery School - Covid Risk Assessment

(norwoodgreeninfants.org.uk). All policies are reviewed regularly.

ABOUT YOUR PARTICIPANTS

Q9 Please give a brief description of the kind of people you hope/intend to have as participants, for instance, a sample of the general population, University students, people affected by a particular medical condition, children within a given age group, employees of a particular firm, people who support a particular political party, and state whether there are any upper or lower age restrictions.

-Children who are deaf (mild, moderate, severe or profound type of deafness).
-Primary School children (Infant)
-Aged between 5-7
-Year groups 1 and 2
-Diverse and different ethnicities
-Some children within the group have additional needs

Q10 Please state here the maximum number of participants you hope will participate in your study. Please indicate the maximum numbers of participants for ***each*** method of data collection.

7

Q11 By completing this form, you are indicating that you are reasonably sure that you will be successful in obtaining the number of participants which you hope/intend to recruit. Please outline here your recruitment (sampling) method and how you will advertise your study. (See GN 2.2.9).

The researcher currently works with the participants in a resource base at Norwood Green Infant School. The participants have built a rapport with the researcher and parents also understand that the researcher is undertaking a project. Parents will be given consent forms to fill out, as well as in-depth information about the project and what it entails. Participants taking part in the project will be aged 5-7, in year 1 and year 2 and they work in the resource base during part of their day.

CONFIDENTIALITY AND CONSENT

(For guidance on issues relating to consent, see GN 2.2.10, GN 3.1 and UPR RE01, SS 2.3 and 2.4 and the Ethics Approval StudyNet Site FAQs)

Q12 How will you obtain consent from the participants? Please explain the consent process for each method of data collection identified in Q4

☐ Express/explicit consent using an EC3 Consent Form and an EC6 Participant Information Sheet (or equivalent documentation)

☐ Implied consent (participant information will be provided, for example, at the start of the questionnaire/survey etc)

☒ Consent by proxy (for example, given by parent/guardian)

Use this space to describe how consent is to be obtained and recorded for each method of data collection. The information you give must be sufficient to enable the Committee to understand exactly what it is that prospective participants are being asked to agree to.

As the children are aged 5-7, an EC4 consent form will be issued to all parents to ask whether their child can take part in the project anonymously.

If you do not intend to obtain consent from participants please explain why it is considered unnecessary or impossible or otherwise inappropriate to seek consent.

Q13 If the participant is a minor (under 18 years of age) or is unable for any reason to give full consent on their own, state here whose consent will be obtained and how? (See especially GN 3.6 and 3.7)

EC4 form will be issued to parents, who can give consent for their children to take part in the project.

Q14.1 Will anyone other than yourself and the participants be present with you when conducting this study? (See GN 2.2.10)

☒YES ☐NO

If YES, please state the relationship between anyone else who is present other than the applicant and/or participants (eg health professional, parent/guardian of the participant).

1. Head of Centre
2. Centre support staff

Q14.2 Will the proposed study be conducted in private?

☒YES ☐NO

If 'No', what steps will be taken to ensure confidentiality of the participants' information. (See GN 2.2.10):

Q15.1 Are personal data of any sort (such as name, age, gender, occupation, contact details or images) to be obtained from or in respect of any participant? (See GN 2.2.11) (You will be required to adhere to the arrangements declared in this application concerning confidentiality of data and its storage. The Participant Information Sheet (Form EC6 or equivalent) must explain the arrangements clearly.)

☒YES ☐NO

If YES, give details of personal data to be gathered and indicate how it will be stored.

Personal data such as name, age, gender, date of birth, when the child was aided, degree of deafness, type of amplification, home language and child's history is confidentially stored by the researcher. Data is protected and anonymously stored on the school computers in line with the General Data Protection Regulations. The files are password protected and passwords are kept safe. Personal data kept in paper files are stored in locked drawers, where the keys are put in a safe cupboard. The cupboard is within a room that is locked.

PLEASE NOTE: If you are processing personal information you MUST consider whether you need to complete a Data Protection Impact Assessment (DPIA). Please read the DPIA guidance available from the FAQ section of the UH Ethics Approval StudyNet site:

http://www.studynet2.herts.ac.uk/ptl/common/ethics.nsf/Frequently+Asked+Questions/935D97CDBC546E69802583A9005213A6

If you need to complete one, please find the DPIA template in the University's website here

The DPIA must be completed in consultation with the University's Data Protection Officer and submitted with your application for ethics approval.

Will you be making recordings?

☐YES ☒NO

If YES, give details of the types of recordings to be made and describe how and where they will be securely stored.

Q15.2 If you have made a YES response to any part of Q15.1, please state what steps will be taken to prevent or regulate access to personal data and/or recordings beyond the immediate investigative team, as indicated in the Participant Information Sheet.

Data is protected and stored on school computers and on student's One Drive securely. The files are password protected and passwords are kept safe. Personal data kept in paper files are stored in locked drawers, where the keys are put in a safe cupboard. The cupboard is within a room that is locked. Data will be deleted after the exam board which will be after 31st December 2023.

Indicate what assurances will be given to participants about the security of, and access to, personal data and/or recordings, as indicated in the Participant Information Sheet.

Data is protected and stored on school computers and on student's One Drive securely. Names and personal data is anonymised to protect families. Files are password protected and passwords are kept safe. Personal data kept in paper files are stored in locked drawers, where the keys are put in a safe cupboard. The cupboard is within a room that is locked. Data will be deleted after the exam board which will be after 31st December 2023.

State as far as you are able to do so how long personal data and/or recordings collected/made during the study will be retained and what arrangements have been made for its/their secure storage and destruction, as indicated in the Participant Information Sheet.

Personal data collected or made during the study will be kept safely and anonymised, via school computers and on student's One Drive securely. Names will be crossed off children's work and replaced with letters not linked to the child's name. Children's work will be put in a locked drawer, where the key is kept in a locked cupboard. The researcher and Head of Centre are the only members of staff that use this key. The cupboard is within a room that is locked. All electronic data is protected and stored on school computers. Names and personal data is anonymised to protect families. Files are password protected and passwords are kept safe. Personal data kept in paper files are stored in locked drawers, where the keys are put in a safe cupboard. Data will be deleted after the exam board which will be after 31st December 2023

Q15.3 Will data be anonymised prior to storage? ☒YES ☐NO

Q16 Is it intended (or possible) that data might be used beyond the present study? (See GN 2.2.10) ☐YES ☒NO

If YES, please indicate the kind of further use that is intended (or which may be possible).

Data will be deleted after the exam board which will be after 31st December 2023.

If NO, will the data be kept for a set period and then destroyed under secure conditions? ☐YES ☐NO

If NO, please explain why not:

Q17 Consent Forms: what arrangements have been made for the storage of Consent Forms and for how long?

Consent forms which are handed to parents on paper will be stored in a safe location (drawer with a key). The key is kept within a drawer; this is within a locked building.
If consent forms have been sent to parents via email, they will be sent via egress (a safe method of sending emails or with a password protected file. The attachment within the email will be downloaded to the school computer and saved within a password-protected file. The email will be deleted safely, so that it cannot be accessed again. All consent forms will be kept for the length of the project and then destroyed after the exam board has made decisions regarding grades after 31st December 2023.

Q18 If the activity/activities involve work with children and/or vulnerable adults satisfactory Disclosure and Barring Service (DBS) clearance may be required by investigators.

You are required to check with the organisation (including UH/UH Partners where appropriate) responsible for the minors/vulnerable participants whether or not they require DBS clearance.

Any permission from the organisation confirming their approval for you to undertake the activities with the children/vulnerable group for which they are responsible should make specific reference to any DBS requirements they impose and their permission letter/email must be included with your application.

More information is available via the DBS website - https://www.gov.uk/government/organisations/disclosure-and-barring-service

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REWARDS

Q19.1 Are you receiving any financial or other reward connected with this study? (See GN 2.2.14 and UPR RE01, S 2.3)

☐YES ☒NO

If YES, give details here:

Click here to enter text.

Q19.2 Are participants going to receive any financial or other reward connected with the study? (Please note that the University does not allow participants to be given a financial inducement.) (See UPR RE01, S 2.3)

☐YES ☒NO

If YES, provide details here:

Click here to enter text.

Q19.3 Will anybody else (including any other members of the investigative team) receive any financial or other reward connected with this study?

☐YES ☒NO

If YES, provide details here:

Click here to enter text.

OTHER RELEVANT MATTERS

Q20 Enter here anything else you want to say in support of your application, or which you believe may assist the Committee in reaching its decision.

Click here to enter text.

DOCUMENTS TO BE ATTACHED

Please indicate below which documents are attached to this application:

☐ Permission to access groups of participants

☐ Permission to use University premises beyond areas of School

☒ Permission from off-campus location(s) to be used to conduct this study

☒ Form EC5 (Harms, Hazards and Risks: assessment and mitigation)

☒ Consent Form (See Form EC3/EC4)
☒ Form EC6 (Participant Info Sheet)
☐ Data Protection Impact Assessment (DPIA)

☐ A copy of the proposed questionnaire and/or interview schedule (if appropriate for this study). For unstructured methods, please provide details of the subject areas that will be covered and any boundaries that have been agreed with your Supervisor

☐ Any other relevant documents, such as a debrief, meeting report. Please provide details here:

Click here to enter text.

DECLARATIONS

1 DECLARATION BY APPLICANT

1.1 I undertake, to the best of my ability, to abide by UPR RE01, 'Studies Involving the Use of Human Participants', in carrying out the study.

1.2 I undertake to explain the nature of the study and all possible risks to potential participants,

1.3 Data relating to participants will be handled with great care. No data relating to named or identifiable participants will be passed on to others without the written consent of the participants concerned, unless they have already consented to such sharing of data when they agreed to take part in the study.

1.4 All participants will be informed **(a)** that they are not obliged to take part in the study, and **(b)** that they may withdraw at any time without disadvantage or having to give a

reason.

(**NOTE**: Where the participant is a minor or is otherwise unable, for any reason, to give full consent on their own, references here to participants being given an explanation or information, or being asked to give their consent, are to be understood as referring to the person giving consent on their behalf. (See Q 12; also GN Pt. 3, and especially 3.6 & 3.7))

Enter your name here: Simran Nandra Date 09/09/2022

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2 GROUP APPLICATION

(If you are making this application on behalf of a group of students/staff, please complete this section as well)

I confirm that I have agreement of the other members of the group to sign this declaration on their behalf

Enter your name here: Click here to enter text. Date Click here to enter a date.

DECLARATION BY SUPERVISOR (see GN 2.1.6

I confirm that the proposed study has been appropriately vetted within the School in respect of its aims and methods; that I have discussed this application for Ethics Committee approval with the applicant and approve its submission; that I accept responsibility for guiding the applicant so as to ensure compliance with the terms of the protocol and with any applicable ethical code(s); and that if there are conditions of the approval, they have been met.

Enter your name here: Sarah Davis Date 21/09/2022

Appendix II - Ethics consent form

UNIVERSITY OF HERTFORDSHIRE

ETHICS COMMITTEE FOR STUDIES INVOLVING THE USE OF HUMAN PARTICIPANTS

('ETHICS COMMITTEE')

FORM EC4- CONSENT FORM FOR STUDIES INVOLVING HUMAN PARTICIPANTS

FOR USE WHERE THE PROPOSED PARTICIPANTS ARE MINORS, OR ARE OTHERWISE UNABLE TO GIVE INFORMED CONSENT ON THEIR OWN BEHALF

I, the undersigned *[please give your name here, in BLOCK CAPITALS]*

……

of *[please give contact details here, sufficient to enable the investigator to get in touch with you, such as a postal or email address]*

……

hereby freely give approval for *[please give name of participant here, in BLOCK CAPITALS]*

.....

to take part in the study entitled *[insert name of study here]*

How effective is an emotional literacy intervention when developing emotional skills of children who are Deaf aged 5-7?

.....

(UH Protocol number : SHE/PGT/UH/05729

1 I confirm that I have been given a Participant Information Sheet (a copy of which is attached to this form) giving particulars of the study, including its aim(s), methods and design, the names and contact details of key people and, as appropriate, the risks and potential benefits, how the information collected will be stored and for how long, and any plans for follow-up studies that might involve further approaches to participants. I have also been informed of how my personal information on this form will be stored and for how long. I have been given details of his/her involvement in the study. I have been told that in the event of any significant change to the aim(s) or design of the study I will be informed, and asked to renew my consent for him/her to participate in it.

2 I have been assured that he/she may withdraw from the study, and that I may withdraw my permission for him/her to continue to be involved in the study, at any time without disadvantage to him/her or to myself, or having to give a reason.

3 I have been told how information relating to him/her (data obtained in the course of the study, and data provided by me, or by him/her, about him/herself) will be handled: how it will be kept secure, who will have access to it, and how it will or may be used.

4 I understand that his/her participation in this study may reveal findings that could indicate that he/she may require medical advice. In that event, I will be informed and advised to consult a GP and I acknowledge that, following discussion, he/she may be required by the University to withdraw from the study. If, during the study, evidence comes to light that he/she may have a pre-existing medical condition that may put others at risk, I understand that the University will refer him/her to the appropriate authorities and that he/she will not be allowed to take any further part in the study.

5 I understand that if there is any revelation of unlawful activity or any indication of non-medical circumstances that would or has put others at risk, the University may refer the matter to the appropriate authorities.

6 I have been told that I may at some time in the future be contacted again in connection with this or another study.

7 I declare that I am an appropriate person to give consent on his/her behalf, and that I am aware of my responsibility for protecting his/her interests.

Signature of person giving consent

…….Date……

Relationship to participant

.....

Signature of (principal) investigator

.....Date……..

Name of (principal) investigator *[in BLOCK CAPITALS please]*

SIMRAN NANDRA.....

Appendix III - Participant information form

UNIVERSITY OF HERTFORDSHIRE

ETHICS COMMITTEE FOR STUDIES INVOLVING THE USE OF HUMAN PARTICIPANTS ('ETHICS COMMITTEE')

FORM EC6: PARTICIPANT INFORMATION SHEET

1 **Title of study**

How effective is an emotional literacy intervention when developing emotional skills of children who are Deaf aged 5-7?

2 **Introduction**

You are being invited to take part in a study. Before you decide whether to do so, it is important that you understand the study that is being undertaken and what your involvement will include. Please take the time to read the following information carefully and discuss it with others if you wish. Do not hesitate to ask us anything that is not clear or for any further information you would like to help you make your decision. Please do take your time to decide whether or not you wish to take part. The University's regulation, UPR RE01, 'Studies Involving the Use of Human Participants' can be accessed via this link:

https://www.herts.ac.uk/about-us/governance/university-policies-and-regulations-uprs/uprs

(after accessing this website, scroll down to Letter S where you will find the regulation)

Thank you for reading this.

3 **What is the purpose of this study?**

- To measure the effectiveness of an emotional literacy scheme.
- To equip children with emotional language and literacy to help express themselves, support their social and emotional skills as well as build empathy.
- To see if children make progress when teaching them about emotional literacy.
-

4 **Do I have to take part?**

It is completely up to you whether or not you decide to take part in this study. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a consent form. Agreeing to join the study does not mean that you have to complete it. You are free to withdraw at any stage without giving a reason. A decision to withdraw at any time, or a decision not to take part at all, will not affect any treatment/care that you may receive (should this be relevant).

5 **Are there any age or other restrictions that may prevent me from participating?**

To participate in this study children must have a mild, moderate, severe or profound bilateral type of deafness and they should be aged between 5-7. They must attend Norwood Green Infant and Nursery School and work within the resource base for part of their day.

6. **How long will my part in the study take?**

If you decide to take part in this study, your child will be involved in it for 4 weeks.

7. **What will happen to me if I take part?**

The first thing to happen will be an emotional literacy baseline assessment with your child, next, there will be 4 weeks of intervention, teaching them about emotions, emotional language, understanding emotions and expressing their emotions. Then another assessment will take place after the intervention has been completed.

8**. What are the possible disadvantages, risks or side effects of taking part?**

There are no anticipated disadvantages, risks or side effects of taking part

9. **What are the possible benefits of taking part?**

- Your child will learn about emotions
- They can apply their knowledge about emotions to their everyday life
- They can begin to recognise different emotions
- They might be able to develop empathy
- They can develop their social and emotional skills.

10 **How will my taking part in this study be kept confidential?**

- Personal data completed on the consent form will be kept in a locked drawer, the key will be kept in a secure building.
- Children's data and information will be kept anonymous.
-

11 **What will happen to the data collected within this study?**

- The data collected will be stored electronically, in a password-protected environment, for 12 months, after which time it will be destroyed under secure conditions;
- The data collected will be stored in hard copy by Simran Nandra in a locked cupboard for 12 months, after which time it will be destroyed under secure conditions;
- The data will be anonymised prior to storage.
- The data will be transmitted/displayed in a dissertation whereby no identities will be revealed.

12 **Will the data be required for use in further studies?**

The data collected may be re-used or subjected to further analysis as part of a future ethically-approved study; the data to be re-used will be anonymised.

13 **Who has reviewed this study?**

This study has been reviewed by:

- The University of Hertfordshire Social Sciences, Arts and Humanities Ethics Committee with Delegated Authority

The UH protocol number is < SHE/PGT/UH/05729>

14 **Factors that might put others at risk**

Please note that if, during the study, any medical conditions or non-medical circumstances such as unlawful activity become apparent that might or had put others at risk, the University may refer the matter to the appropriate authorities and, under such circumstances, you will be withdrawn from the study.

15 **Who can I contact if I have any questions?**

If you would like further information or would like to discuss any details personally, please get in touch with me, in writing, by phone or by email:

Simran Nandra

Teacher of the Deaf

Norwood Green Infant & Nursery School

Tel: 020 8574 1456 (voice only)

Email: snandra7.313@lgflmail.org

Although we hope it is not the case, if you have any complaints or concerns about any aspect of the way you have been approached or treated during the course of this study, please write to the University's Secretary and Registrar at the following address:

Secretary and Registrar

University of Hertfordshire

College Lane

Hatfield

Herts

AL10 9AB

Thank you very much for reading this information and giving consideration to taking part in this study.

Appendix V - Employer confirmation

Employer Confirmation of Job Role Activity in relation to individual Dissertation Study

Employer Confirmation of Job Role Activity in relation to individual Dissertation Study as part of MA/MSc Deaf Education Studies Programme

- I confirm that Simran Nandra is undertaking a dissertation study related to their agreed job role activity in their workplace Norwood Green Infant and Nursery School.
- I understand that the student is applying for ethics approval to access the data of individual pupils related to their agreed job role activity, which they will normally have access to as part of their role as a Teacher of the Deaf or Educational Audiologist.
- I confirm that all data will be accessed and stored in compliance with the GDPR arrangements in place within the workplace Norwood Green Infant and Nursery School.
- I confirm that the researcher will be operating within the current workplace-based risk assessments which relate to their role.
- I am aware that if I have any queries I should contact the Module Leader Imran Mulla i.mulla@maryhare.org.uk or Programme Leader Joy Rosenberg (j.rosenberg@maryhare.org.uk) for further information.

Signed:

Name: Dinusha Tulleth 2/9/22

Role: Head of Centre for the Deaf

Appendix VI - Harms, hazards and risks

UNIVERSITY OF HERTFORDSHIRE
ETHICS COMMITTEE FOR STUDIES INVOLVING THE USE OF HUMAN PARTICIPANTS ('ETHICS COMMITTEE')

FORM EC5 – HARMS, HAZARDS AND RISKS:
ASSESSMENT AND MITIGATION

Name of applicant: Simran Nandra Date of assessment: 21.09.2022

Title of Study/Activity: How effective is an emotional literacy intervention when developing emotional skills of children who are Deaf aged 5-7?

If you are required to complete and submit a School-specific risk assessment (in accordance with the requirements of the originating School), it is acceptable to make a cross-reference from that document to form EC5 in order not to have to repeat the information twice. The purpose of Form EC5 is to consider how a participant might react to the activities in the study and to indicate how you will manage such reactions; the Form also addresses the safety of the investigator and how any risks to the investigator will be managed.

Activity Description			
1. IDENTIFY RISKS/HAZARDS	2. WHO COULD BE HARMED & HOW?	3. EVALUATE THE RISKS	4. ACTION NEEDED

Activities/tasks and associated hazards Describe the activities involved in the study and any associated risks/ hazards, both physical and emotional, resulting from the study. Consider the risks to participants/the research team/members of the public. In respect of any equipment to be used read manufacturer's instructions and note any hazards that arise, particularly from incorrect use.)	Who is at risk? e.g. participants, investigators, other people at the location, the owner / manager / workers at the location etc.	How could they be harmed? What sort of accident could occur, eg trips, slips, falls, lifting equipment etc, handling chemical substances, use of invasive procedures and correct disposal of equipment etc. What type of injury is likely? Could the study cause discomfort or distress of a mental or emotional character to participants and/or investigators? What is the nature of any discomfort or distress of a mental or emotional character that you might anticipate?	Are there any precautions currently in place to prevent the hazard or minimise adverse effects? Are there standard operating procedures or rules for the premises? Have there been agreed levels of supervision of the study? Will trained medical staff be present? Etc/	Are there any risks that are not controlled or not adequately controlled?	List the action that needs to be taken to reduce/manage the risks arising from your study for example, provision of medical support/aftercare, precautions to be put in place to avoid or minimise risk or adverse effects NOTE: medical or other aftercare and/or support **must** be made available for participants and/or investigator(s) who require it.

There are no risks involved in participating in the study. Contamination with Covid-19 has been risk assessed.	All pupils, staff and visitors to site and site users (The study will take place in the researcher's workplace – a primary school – as such, risk of contaminatio n of Covid-19 is regularly reviewed by the school in line with government guidelines. All staff and pupils will be together as part of their usual day and the risk on catching Covid-19 is not increased by participating in the study)	No children or adults are identified as high risk within this group. Risk of catching Covid-19, if precaution takes place this will prevent/ minimise the risk of contamination.	Pupils shown the correct way to wash hands and reinforced regularly. Children regularly reminded of sneezing and coughing etiquette Whole class handwashing on arrival and before and after food and after break times Hand sanitiser at key entry points across building Remote temperature readers in place. Windows and doors to be left open during school day as much as possible.	No	Follow current precautions and review immediately in line with any revised government guidelines.

			CO2 monitors in all classes to be used to check air quality. If poor air quality, windows and doors must be opened to allow fresh air enter. Cleaning of touch points takes place. All staff have been appropriately vaccinated Masks to be worn in critical situations- however, there are no current regulations for adults to wear masks – children are below the age that they have to wear masks. Secondly, mask-wearing is not deaf-friendly. Therefore, clear		

			masks or shields are to be worn if you are around staff or children that have Covid-19 symptoms. No intimate care is needed for any children.		

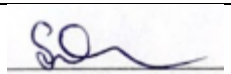
Contamination from outside the school (There are no risks involved in participating in the study. Contamination with Covid-19 has been risk assessed.)	Staff, pupils, visitors (The study will take place in the researcher's workplace – a primary school – as such, risk of contaminatio n of Covid-19 is regularly reviewed by the school in line with government guidelines. All staff and pupils will be together as part of their usual day and the risk on catching Covid-19 is not increased by participating in the study)	No children or adults are identified as high risk within this group. Risk of catching Covid-19, if precaution takes place this will prevent/ minimise the risk of contamination.	Children to wear PE kits on appropriate days, so that additional clothes do not need to be brought to school.	No	Follow current precautions and review immediately in line with any revised government guidelines.

Member of staff or pupil shows symptoms of contagious disease (There are no risks involved in participating in the study. Contamination with Covid-19 has been risk assessed.)	Staff pupils, wider family groups (The study will take place in the researcher's workplace – a primary school – as such, risk of contaminatio n of Covid-19 is regularly reviewed by the school in line with government guidelines. All staff and pupils will be together as part of their usual day and the risk on catching Covid-19 is not increased by participating in the study)	No children or adults are identified as high risk within this group. Risk of catching Covid-19, if precaution takes place this will prevent/ minimise the risk of contamination.	Seriously unwell pupils or staff members are sent home immediately (high temperature, cough, Covid-19 symptoms). If pupil is waiting to be collected, they must remain in Owl room away from others. Welfare staff must wear PPE whilst with unwell children. Practice relating to staff absence reverts to pre-Covid, where individuals should apply their own judgement with regards to fitness to work.	No	Follow current precautions and review immediately in line with any revised government guidelines.

			Pupil absence rules from pre-Covid return. Staff member/pupil advised to take LF test. In the short term, the school will provide one LF test to staff members who become unwell at school. If staff become unwell at home with Covid symptoms, it is the responsibility of staff to source own tests. If staff/pupils test positive for Covid-19, they should not return to school until at least 6 days after the onset of symptoms and two consecutive negative tests.		

			No intimate care is needed for any children.		

Maintaining social distancing in the classroom (There are no risks involved in participating in the study. Contamination with Covid-19 has been risk assessed.)	Staff, Pupils (The study will take place in the researcher's workplace – a primary school – as such, risk of contaminatio n of Covid-19 is regularly reviewed by the school in line with government guidelines. All staff and pupils will be together as part of their usual day and the risk on catching Covid-19 is not increased by participating in the study)	No children or adults are identified as high risk within this group. Risk of catching Covid-19, if precaution takes place this will prevent/ minimise the risk of contamination.	Staff to return room design to flexible and group formation, return all required furniture, etc. Carpet space for children to seat to return as appropriate. Where possible lessons to take place outdoors. Children to be sat in a curved shape so they are not extremely close to each other. No intimate care is needed for any children.	No	Follow current precautions and review immediately in line with any revised government guidelines.

Signed by applicant: 	Dated: 21.09.22