The role of the Educational Audiologist in the UK: Experience and perspectives from the field

A study submitted in partial fulfilment of the requirements for the degree of Master of Science at the University of Hertfordshire

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Contents

List of Tables

List of Figures

Abbreviations

ALD	Assistive Listening Device
BAEA	British Association of Educational Audiologists
CPD	Continuing Professional Development
CRIDE	Consortium for Research in Deaf Education
CYP	Children and young people
CYPD	Children and young people who are deaf
FTE	Full Time Equivalent
QToD	Qualified Teacher of the Deaf
RCCP	Registration Council for Clinical Physiologists
SaLT	Speech and Language Therapist

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Abstract

This study investigates the role of the Educational Audiologist in educational services the UK, based on the views, perspectives and experiences of professionals in the field. It investigates the role with deaf children and young people across the UK, to identify the key elements of the role and the impact the Educational Audiologist has on these young people, in addition to the benefits offered by other professionals, such as Qualified Teachers of the Deaf.

The study comprises two strands. The first phase is a thematic content analysis of written assignments, submitted by trainee Educational Audiologists, focusing on individual case studies. These case studies focused on support given to an individual deaf child with whom the trainee was working with, either in the role of the Educational Audiologist or alongside one. The assignments provide information on how the Educational Audiologist worked within the individual cases, alongside other professionals, to support the young person. The second phase involves one-on-one semi-structured interviews with experienced Educational Audiologists, currently working within an educational service. These interviews provide insight into the broader aspects of the role, outside of a specific individual situation, as well as information on the wider, day to day role of the Educational Audiologist in nine areas of the UK.

The findings of this study show that the role of the Educational Audiologist is not standardised across educational authorities. The lack of mandatory status and underrepresentation of the role leads to variation of educational authorities which employ an Educational Audiologist. However, this study also identifies many areas of the role, such as training and support and assistive listening device management which, in the areas of the UK interviewed in this study, are vital services which the Educational Audiologist's provide. In many ways, this study raises more questions than it answers, as the role and subsequent value of the Educational Audiologist in educational services in the UK will be better defined with further study. The roles and attributes of the Educational Audiologist identified in this study are not proportionally represented across all parts of the UK, nor are they equitably distributed. The biggest finding however is that there are more education authorities who do not currently have access to an Educational Audiologist in the UK than those

which do. Based on all of the benefits of the Educational Audiology role identified throughout this research, this finding is a troubling one.

The impact of these conclusions is likely to be most felt by the children and young people who are deaf in the UK. By having a highly variable Educational Audiology offer across the country, the outcomes for this group of young people, not only in terms of their language and listening skills but more widely in their academic achievements and social development are likely to also be highly variable.

The main questions raised by this study surely must be: Should all deaf children and young people have access to an Educational Audiologist in their local area, to ensure the best possible and most equitable level of support? Would the outcomes for this group of young people and their families be greater if there was a wider access to these professionals? Finally if, as this study suggests, education services and deaf children and young people would indeed benefit from access to an Educational Audiologist working alongside their teams of Qualified Teachers of the Deaf, why do the majority of education services not employ one?

1. Introduction

The role of the Educational Audiologist is hard to define. They work in a range of settings and have a wide remit of tasks which they may undertake. They may be employed in the health sector, supporting clinical work in hospitals and cochlear implant centres or they can be employed by an educational local authority as part of their sensory support service. Within the education sector, it is often a misunderstood and undervalued position, with many local authorities in the UK not employing a professional in this role. However, in the remaining education services, Educational audiologists perform a vital role within the wider team of Qualified Teachers of the Deaf. For 50 years, the Educational Audiologist role has existed within education services but the seeming lack of consistency of the role after such a long time is surprising.

This research project will gather views from Educational Audiologists both at the training stage and of those working in the field today, to determine what the role looks like in practice, 50 years after its conception. It will look at the numbers of Educational Audiologists in the UK and analyse the distribution of these professionals. It will also explore how this role can bring benefits to education teams by working alongside Qualified Teachers of the Deaf.

This study's ambition is to bring clarity to the role of the Educational Audiologist in education services across the UK. As a small scale study, it may result in raising more questions than it can answer. However, this research will support and encourage future research projects to continue to explore the ambiguity and complexity of the Educational Audiologist role in education teams across the UK.

2. Literature Review

2.1 Introduction

This literature review contains four sections. The first will review the role of the Educational Audiologist in the UK, based on historical information and current data. The next section will look at the how the Educational Audiologist role links with the education and health services and how the role is linked to the roles of a Qualified Teacher of the Deaf (QToD) and of a clinical audiologist. The third section will look at the Educational Audiologist qualification and training compared with that of a QToD, based on legislation and training outcomes for both roles. The final section, will justify the current study.

2.1.1 Literature Review Methodology

To find the relevant information for this literature review, several searches were undertaken. The initial search, using SCOPUS, used the search terms: "Educational" + "Audiologist" and "Educational" + "Audiology". Using SCOPUS, the literature was then evaluated to find the most relevant papers as in table 2.1.1.

Table 2.1.1 Literature filtering strategy

Search Terms	First Filter	Second Filter	Third Filter
"Educational" + "Audiologist"	Both search terms adjacent to each other in abstract	Relevance to young and school aged children	Strong relevance of title and abstract content
176 results	**21 papers**	**15 papers**	**8 papers**

The search terms were then further used to search within the main University of Hertfordshire electronic library. These results were also evaluated to attempt to find research which is most relevant to this current study.

2.1.2 Possible Limitations with Current Literature

It is important to note that much of the current literature on Educational Audiology comes from the US. Whilst there is some literature from other countries, the most relevant and comparable for this project were from the US. Here however, services seem to be very differently structured compared to the UK. According to one study from the US, "ASHA suggests an optimal ratio of one Educational Audiologist per

10,000 students." (Allen & Mayo, 2020). The size of the US, along with population densities, differences in educational settings and healthcare between and across the various states is likely to play huge roles in coming to this 'optimal' figure. It is also important to note that the training routes and qualifications for an Educational Audiologist in the US are different to the UK. One example from a US article notes that in each state has different requirements for an Educational Audiologist, such as a doctorate in audiology (Marconi-Hutkay, 2015), which is now the minimum level of qualification expected for an audiologist training in the US today (American Academy of Audiology, 2021), as well as a pupil services license from the state Department for Education (Marconi-Hutkay, 2015). This shows that in the US, the background of Educational Audiologists, as well as their remit, is much more clinical in focus with additional training in education than perhaps that of the Educational Audiologists here in the UK, which can be more educational in nature, with additional training in clinical matters.

2.2 The Role of the Educational Audiologist in the UK

2.2.1 Training as an Educational Audiologist

The role of the Educational Audiologist is one which has been in use in the UK since legislation (Education (Handicapped children) Act, 1970) changed the remit of audiology for young people, giving professionals in education a responsibility for this. Since the 1990's, the training to become an Educational Audiologist has been run at Mary Hare (Rosenberg, 2016). In the UK, an Educational Audiologist is usually a trained QToD or clinical audiologist, who has completed an additional Master's level degree/diploma (BAEA, 2018). However, there is some flexibility with this, depending on relevant experience in fields linked to Educational Audiology. One example of this could be an audiology technician. If they have relevant subject knowledge then they may be eligible complete the Educational Audiology course, although this would likely be on a case by case basis, as some areas of the Educational Audiology course may be harder for them to have gained enough relevant experience in prior to the training. Another factor to consider when describing the role is the new accreditation by the Registration Council for Clinical Physiologists (RCCP) which allows Educational Audiologists to join the register. The RCCP describes an Educational Audiologist as being 'a specialist' that is 'required to

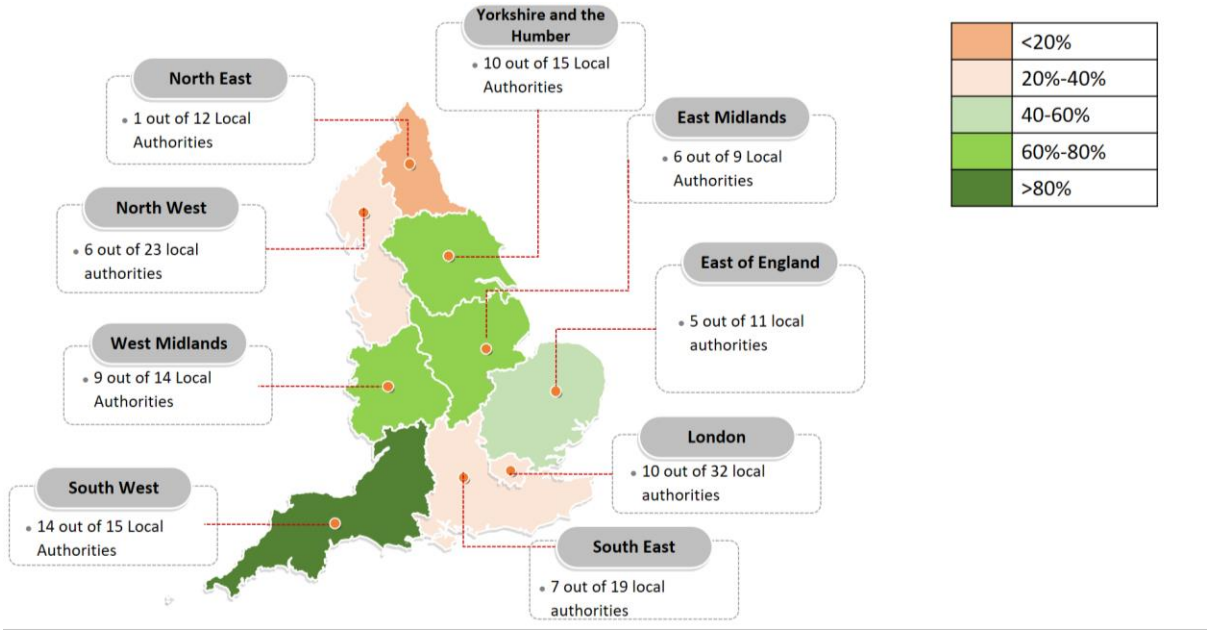
have a specialist qualification to work with children.' (RCCP 2019:4). This means that it could be possible for an Educational Audiologist to register with the RCCP with relevant experience gained through the Educational Audiology course but to not have had a specialist qualification, such as QToD prior to this. It also means that candidates with six years of relevant experience, including that of a QToD are able to apply to be added to the register.

This variation within the Educational Audiology community in the UK means that it can at times be hard to define what an Educational Audiologist is and what their job involves.

2.2.2 The Current Landscape in the UK

It is worth noting that an Educational Audiologist may work within an education service or within the National Health Service. They may work within a school based setting, a paediatric audiology department or a Cochlear Implant Centre. As there is large variation here and this is a limited piece of research, it will specifically focus on Educational Audiologists who are employed in education services.

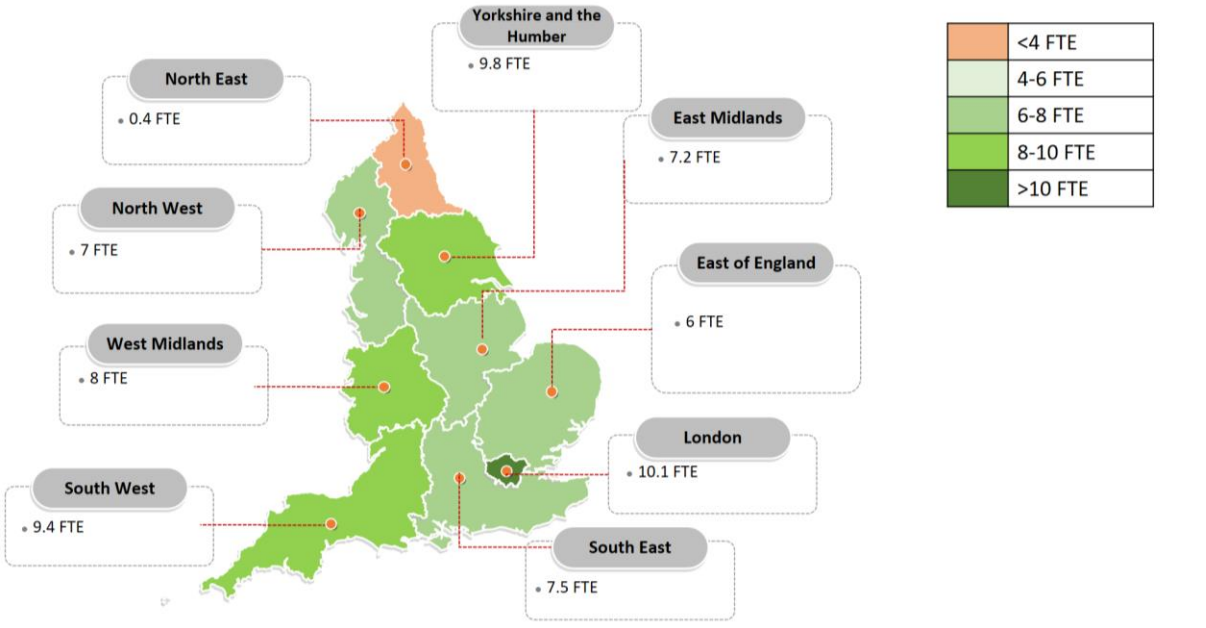
In the Consortium for Research in Deaf Education (CRIDE) survey, it has been reported that there are currently 53,954 deaf children in the UK (CRIDE, 2019). The same survey found that there are approximately 1,588 QToD posts (CRIDE 2019). This means that currently there are approximately thirty four deaf children for every QToD post. In the survey of deaf education in England, it was found that around 7% of working QToDs identified as having the Educational Audiologist qualification, which works out to be 71.4 QToD positions (CRIDE 2019). This is however based on data gathered from 132 authorities which shows that there is a significant proportion of England with services which do not employ an Educational Audiologist.



(Map created using http://yourfreetemplates.com)

Fig 2.2.2a Geographical Distribution of Educational Audiologists (by region) across England.

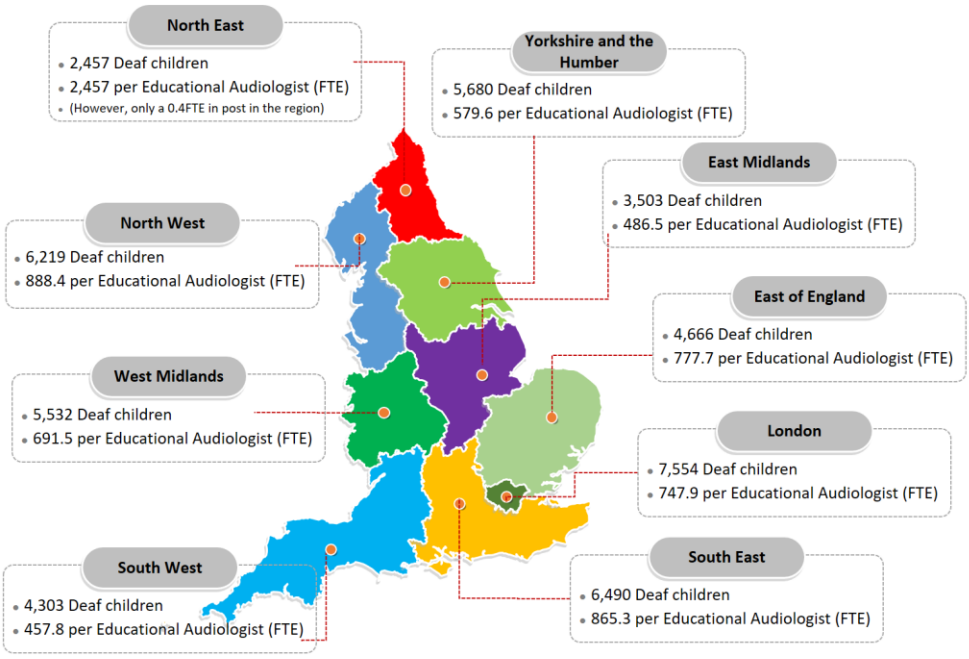
Fig 2.2.2a shows the density of authorities who have identified an Educational Audiologist as a member of their services in the most recent CRIDE survey (2019). This shows a significant regional variation. Fig 2.2.2b shows the number of Educational Audiologists employed in each region, based on Full Time Equivalent (FTE). This second view is useful as the number of educational posts does not exactly match the number of authorities who employ an Educational Audiologist, as several local authorities share Educational Audiologists between them.



(Map created using http://yourfreetemplates.com)

Fig 2.2.2b Number of Educational Audiologists (by region) across England.

Across the whole UK, the total increases to 75.4 QToD positions when Scotland, Wales and Northern Ireland's figures are added (CRIDE 2019). This means that on average there are approximately 715 deaf children for every Educational Audiologist post in education services across the UK. Even if the Educational Audiologists were evenly distributed across the UK, this number would be a significantly large caseload for an individual. Focusing on the regions of England, where there is more available data for, fig 2.2.2c shows the average number of CYPD for each Educational Audiologist, if they were fairly distributed across the regions.



(Map created using http://yourfreetemplates.com)

Fig 2.2.2c Number of CYPD per Educational Audiologists (by region) across England.

This again shows large variation across the regions of England. Some regions are less than the UK average of 715 CYPD per Educational Audiologist, suggesting that they may have a good ratio of professionals in that role, based on the population in their region. However, it is again important to remember that these averages are based on a fair and even distribution of Educational Audiologist and CYPD across all local authorities in each region, which in reality is not the case.

This research does not intend to be specific about particular local authorities. However, all three maps seem to show that the South West, West Midlands, East

Midlands and Yorkshire and the Humber would have better numbers of Educational Audiologists than the other regions of England. Conversely, all three maps indicate that the North East has a significantly lower level of Educational Audiology within the education services than the other regions of England. Again, it is key to remember that these are averages and are not local authority specific, meaning within each region there are areas with no Educational Audiologist in post.

The BAEA state that their position is that "as a minimum every service should have provision of an [Educational Audiologist] for all CYPDs who have a severe or profound hearing loss" (BAEA, 2018). Based on the information gathered through the CRIDE survey, this is not the case in any region of England. In fact, 68 out of 150 local authorities reported having an Educational Audiologist in post in the CRIDE data, meaning over half of authorities do not have one.

2.3 Educational and Health Services

2.3.1 The Educational Audiologist in an Education Service

The role of the Educational Audiologist is different to that of a QToD. "The Educational Audiologist is uniquely skilled in managing the effects of hearing loss on the child's educational development." (Van Dijk, Hugo and Louw, 2004). Additionally, a survey in the US concluded that Educational Audiologists should be available to support teachers when working with children with hearing loss (Richburg & Goldberg, 2005).

However, as Educational Audiologists are often also Teachers of the Deaf (Simkiss, 2013), there can be overlap in daily practice and caseloads. It is often down to individual education authorities to set out job descriptions for Educational Audiologists. A survey conducted in the US, concluded that there needs to be more awareness and information of the role of the Educational Audiologist (Knicklebein & Richburg, 2012). The Educational Audiology Association (EAA) in the US created a document to help highlight the areas of similarity and difference between Educational Audiologists and Teachers of the Deaf. This document has a strong clinical focus and shows that many Educational Audiologists in the US are responsible for hearing screening and testing (EAA, 2015). In the UK, there is not currently an equivalent document.

2.3.2 The Educational Audiologist in the Health Service

In the UK, paediatric audiologists, employed by health, are responsible for much of the hearing testing and equipment fitting. In some areas, Educational Audiologists work in collaborative clinics with paediatric audiologists (BAEA, 2018) but this is not true in all areas.

Through the training delivered at Mary Hare, Educational Audiologists learn about a number of and gain certification in some key clinical tasks, such as ear mould impression taking and pure tone audiometry. These modules are delivered in line with British Society of Audiology (BSA) standards and formal certification is provided on completion.

Furthermore, students are required to undertake clinical placements, as well as complete modules with clinical audiology at their heart (Mary Hare, 2020). By closely tailoring modules in line with professional bodies, such as the BSA and gaining course accreditation, Educational Audiologists can now apply to the Registration Council for Clinical Physiologists (RCCP) (Rosenberg & Bull, 2020). This demonstrates the skills and training which an Educational Audiologist has, which may help to promote understanding of the Educational Audiologist with clinical audiologists, potentially supporting an increased level of collaboration and joint working.

2.3.3 The Importance of Multidisciplinary Working

Being a key member of a multidisciplinary team is an important part of the Educational Audiologists' role (BAEA, 2018). Multidisciplinary working offers a range of benefits to deaf children and their families. These include improved outcomes, seamless services and is a more child centered way of working (Statham & Cooper, 2016). One example of this multidisciplinary working is clinical and Educational Audiologists jointly running clinics and pre-school groups leading to stronger links between health and education, as well as increased outcomes for deaf children and their families (Cooper & Statham, 2014). Another example could be Educational Audiologists working closely with Speech and Language Therapists (SaLT) to collaboratively develop joint goals and objectives for the CYPD (Richburg and Knickelbein, 2011). The importance of multidisciplinary working is outlined in the role of the Educational Audiologist (BAEA, 2016) and the training course at Mary

Hare emphasises multidisciplinary working as a key point throughout the modules across the two year course (Mary Hare, no date).

2.4 Qualifications and Training of Educational Audiologists

2.4.1 Mandatory Qualifications

In 2003, the UK government passed legislation which made the importance of the mandatory qualification for a QToD clearer, stating that the qualification was needed if an individual was to teach a class of hearing impaired pupils (Education (School Teachers' Qualifications), 2003). However, this legislation only implies that the qualification would be required for classroom teachers, and not peripatetic teachers. This may be why no consideration was given to the role of the Educational Audiologist, as it isn't a classroom teaching role and therefore also would not apply to the legislation, although Educational Audiologists may have a teaching remit within the QToD aspect of their role. Whilst most QToDs may start out in educational settings and as such gain their mandatory qualification before joining a visiting teacher service, this isn't guaranteed in the legislation. The mandatory qualification for QToDs is one of the key qualifications recommended by the BAEA who state that a candidate must ideally be a QToD or clinical audiologist prior to training as an Educational Audiologist (BAEA, 2018).

By not having the position of Educational Audiologist be a requirement nor having a mandatory qualification set in legislation, educational authorities are all at liberty to interpret the role as they see fit. A professional opinions survey highlighted the concern of Educational Audiologists around the lack of mandatory status (Rosenberg, 2017). This may cause huge variation in role and responsibilities, as well as job security and satisfaction.

2.4.2 Training of Educational Audiologists

In order to gain the mandatory qualification as a QToD, there are clear government expectations for courses. The most recent document clearly outlines the specific requirements a course provider must ensure are covered in order for the qualification to be awarded (DFE, 2018).

In order to become qualified as an Educational Audiologist, there are also clear training requirements. Currently, the training is run at Mary Hare, in partnership with the University of Hertfordshire. "The MSc/PG Diploma Educational Audiology significantly enhances skills and knowledge for working, assessing and evaluating the complete progress of the Children and Young People (CYP) who are deaf." (BAEA, 2018). This training is designed to ensure all graduates are equipped to work across a wide range of roles, as outlined by the BAEA roles and competencies document (BAEA, 2019). Whilst this document is based on a similar structure to that of the QToD requirements, as it is not based on a mandatory footing, it is incumbent on the BAEA themselves to create and manage this, not the government. This, once again, sets it apart from the QToD training.

2.5 Justification of the Current Study

Based on the current literature, the difference between the role of QToD and Educational Audiologist needs to be made clearer in the UK. The lack of mandatory status allows for significant variation between job roles in different authorities. This may mean that Educational Audiologists are not having their training fully utilized or valued in all local authorities where they are employed. Additionally, the lack of separation and formal status of the role, may limit the level of collaborative working which can happen between health and education services.

It is clear that the number and distribution of Educational Audiologists is not proportionate compared to the number of CYPD within different regions of the UK. Again, this may suggest that Educational Audiologists are not able to work with the full range of deaf children on a regular basis to offer support to all who need it. It may also mean that significant numbers of CYPD are not able to have access to the additional knowledge and experience which can be offered by an Educational Audiologist being part of the multidisciplinary team, which could have significant impacts on their overall outcomes.

This study will find more information from Educational Audiologists, working in the UK today, to explore their views and perspectives of the role.

3. Methodology

3.1 Design

This project is designed to investigate the variability of the Educational Audiologists' role across the country. In order to compare aspects of the role, this study will explore the views of Educational Audiologists in order to find the most common, valued or enjoyable elements of the job, from the professionals' perspective. This will be based on a combination of written and verbal evidence which will then be used to create a summary of responses.

The research method will use a combination of thematic content analysis and semi-structured interviewing to collect qualitative data. Firstly, thematic content analysis will be conducted on written assignments of trainee Educational Audiologists submitted during their course at Mary Hare. However, qualitative research is better when multiple sources of evidence are used, to triangulate and add corroboration to findings, through different research methods (Bowen, 2009). Therefore, once the assignments have been studied and themes have been identified from the data collection, the research will move to the second phase. This will involve the researcher conducting semi-structured interviews with Educational Audiologists who are currently in a post as an Educational Audiologist. This data will then be compared with the phase one results, in order to identify common points of view from the two participant groups.

3.1.1 Phase One

3.1.1.1 Qualitative Data

Qualitative research allows for the collection of quotes from participants which provides information on how things work, to understand the context of the participants and why it matters (Patton, 2015). One key benefit of this type of research, in the context of this project, is that it can uncover important issues which can then be investigated in a more structured way (Tracy, 2019). This research will highlight the key areas of the Educational Audiologist's role in UK. It will begin by analysing the content of written assignments, submitted as part of the whole case management module on the Educational Audiologist course. This task asked students to consider the role of the Educational Audiologist when working with a specific child and their aetiology. The assignment brief allows for the students to

have had opportunities to consider the full range of the Educational Audiologists' role and it is believed that the data which can be gathered from this specific set of assignments will provide pertinent data for this research project. Information from the assignments linked to aetiology of the hearing loss and not directly relating to the role of the Educational Audiologist was disregarded as this was not the primary focus of the research, except in cases where the discussed pathology had a direct link to the role which the Educational Audiologist was undertaking in that situation for that young person. The original assignments were already anonymised and the research had no identifying information. However, all personal or medical information included in the assignments was also disregarded and not included in this studies' analysis. The design of this research study did not require any personal information about the children involved in the work of the Educational Audiologists to be included as it is only the roles that the Educational Audiologists were undertaking which were of importance to this research.

3.1.1.2 Thematic Content Analysis

The use of thematic analysis in qualitative research is a method to find patterns within data, to create categories which can then be analysed (Fereday & Muir-Cochrane, 2006). Thematic content analysis is useful for a research to identify common themes across a range of documents and then present the data in a clear, reader friendly way. This method of analysis has previously been used to find themes across learning curriculums and resources on a given subject (White et al, 2017). However, there is limited information available to support thematic analysis to be conducted in a rigorous way, especially by novice researchers (Nowell et al, 2017). Therefore, it will be important to substantiate the findings from the thematic content analysis with information gathered in the second phase of the research, to enable conclusions to be based on more than just one approach.

3.1.1.3 NVivo

NVivo is a widely used example of computer assisted analysis software in educational research (Leech & Onwuegbuzie, 2011). Coding using NVivo allows for themes to be presented in a visual way (Min et al, 2017), which can then can be organised into groups in order to present gathered data in a logical way. NVvio has been used in several studies in similar fields of focus (e.g. Arcagok & Ozbasi, 2020;

Park et al, 2017;) however this is believed to be to first use to analyse assignments of trainee Educational Audiologists.

NVivo is particularly useful when the data set is large, as smaller data sets may be more efficient when analysed by hand as the time to learn NVivo efficiently may outweigh any time saved over manual coding (Auld et al, 2007). In this study, due to the large amount of data from written assignments and interview transcripts, the time learning NVivo was justified in order to more efficiently analyse the data.

3.1.2 Phase Two

3.1.2.1 Semi-structured Interviews

In order to corroborate findings from the field, the key themes identified from the thematic content analysis were used to develop a series of semi-structured interviews of practicing Educational Audiologists from various educational authorities across the UK. Interviewees were asked a series of questions to explore which of the identified themes they felt were part of their regular practice as an Educational Audiologist in the UK. As the interviews were semi-structured in nature, each interview is unique and the specific questions varied, building on what the participant was saying. However, to create consistency, a range of key questions were made based upon the key themes generated by the thematic content analysis, as well as targeted questions to elicit more general views from the participants, in order to focus the discussions to explore the key areas highlighted in the thematic content analysis in phase one. The interviews responses were then thematically analysed, for consistency of method. There are several research studies in a variety of sectors, which used a thematic analysis of semi-structured interview responses, to find common themes from the views of participants (e.g. Mafinejad et al, 2013; Walker et al, 2018; Arcagok & Ozbasi, 2020) but this study is believed to be the first time this technique has been used to gather views of UK based Educational Audiologists on their practice and role.

In order to gain the required information from interviewees, there are many considerations, such as interview technique, location, duration and complexity of question (Irvine et al, 2012). However, due to the limited time scale of this study and the ongoing Covid-19 pandemic, some options were limited. One example is that all interviews took place remotely, either by phone or on Microsoft Teams. The study

by Irvine et al (2012) found that this type of interview tended to be shorter than a face to face one, due to the difference in the rapport and social nature of the environment. There is limited research in the use of video conferencing to conduct interviews, but some research shows that there are advantages over phone call interviews in establishing a rapport with the participant, but it is unclear whether this is better or worse than face to face interviews (Archibald et al, 2019). Therefore, this study limited the number and complexity of questions in order to reduce the time an interviewee would have to participate for, to try and compensate for the possible limitations of the phone and video conferencing method of interviewing. However, as the evidence is limited with regards to video calling, the interviews were flexible, enabling participants to talk for as long as they felt comfortable. It is useful to note here, that the video call interviews did last for longer than the telephone conversations and the rapport generated during these interviews felt more natural and made for a better process from the researcher's point of view.

3.2 Participants and Recruitment

3.2.1 Phase One

Initially, there were 33 assignments available from the previous cohorts of trainee Educational Audiologists. Two were removed as their authors declined to be included, leaving 31 assignments which were written by students who provided consent for their assignment to be analysed. However, it was initially not possible for the researcher to select the correct assignments. The 31 EC3 forms had named consent from the previous cohorts' students but the written assignments were anonymised by University of Hertfordshire student number. Therefore, before any assignments could be read, the researcher had to liaise with course administration staff at Mary Hare, to identify the two assignments which needed to be excluded. This was a time consuming process but was vitally important to ensure that full anonymity was maintained. Additionally, as a recent graduate of the Educational Audiology course, the researcher's own assignment was also included in the initial set. This was also removed prior to the analysis, leaving 30 participants for phase one.

3.2.2 Phase Two

An invitation was sent by email to the BAEA members, inviting them to take part in this project. The exclusion criteria for participation was that they must be working in an educational institution, service or authority and must be in the role of an Educational Audiologist, either full or part time. In total, thirteen Educational Audiologists responded to this invitation. Two did not return a completed EC3 form after initial contact was made. A further two were only able to be interviewed after the data collection period. Unfortunately, due to time pressures for this project, the data collection period was not able to be extended. This left a sample of nine Educational Audiologists who were able to submit the required EC3 and were available during the data collection window.

3.3 Ethics

For this study, an ethics modification was required. The assignment data used in phase one of the research had been collected under a pre-existing ethics application for which consent from the participants had already been sought. Therefore, an amendment to allow this data to be accessed and used within the boundaries of this research was needed. Ethical approval was granted by the Social Sciences, Arts and Humanities ECDA, University of Hertfordshire. Copies of the ethics approval can be seen in Appendix A. Additional EC3 consent forms were also collected for participants of the interviews in phase two of the research having been sent to participants along with copies of the EC6. Copies of these forms can be seen in Appendix B.

3.4 Procedure

3.4.1 Phase One

Before uploading into the NVivo software, each assignment was anonymised completely, by removing the University of Hertfordshire student number. Each file was given a numerical identification based upon the order in which they were anonymised. All of the case study subjects were already anonymised in the assignments. However, all information about the child was removed to ensure any identifying information was not included in the analysis. Each assignment was then

read through once. During this read through, sections linked to the type and cause of deafness were removed. Due to the brief of these assignments, significant sections were not specifically about the Educational Audiology role and were therefore not relevant to this analysis. All tables and figures were also removed, as these were all linked to the type and cause of deafness, not the Educational Audiologist's role. Finally, all references were removed from the documents. This thematic content analysis was designed to find the views of the trainee Educational Audiologist so any points included from literature were not appropriate to include in the analysis. This left all thirty documents with only sections with specific reference to the Educational Audiologists role. At this stage, three assignments were removed from the analysis. In all three cases, the remaining sections of the assignments were too limited and did not contain any focused information on the Educational Audiologist's role, making them unsuitable to be included in the project.

The final twenty seven assignments formed the data set which would be coded using NVivo. Initially, seven nodes were created, each based on a different BAEA roles and competency section (2019).

Table 3.4.1a Initial NVivo coding node labels

Node	Node Label
1	Child and Family Support
2	Educational Assessment, advice, access to learning and inclusion
3	In-Service training to Education and Health Professionals
4	Educational Amplification Systems and Acoustics
5	Professional contribution to the multi-professional team
6	Audiological testing
7	Selection, Verification and Evaluation of hearing aids. Evaluation and rehabilitation of Cochlear Implants

The assignment written by participant one was read and each relevant point coded to one or more of these nodes, which was then repeated for each of the twenty seven assignments. During the coding process, some points were too specific or too broad to fit into the seven nodes correctly. Additional nodes were created during the coding, to better organise and group similar points for ease of analysis.

Table 3.4.1b Additional NVivo coding node labels

Node	Node Label
8	Advice to parents
9	Aetiology of specific cause of deafness
10	Attending Clinic Appointments
11	Audiological Testing
12	Changing or improving local services
13	Children with additional needs
14	Counselling
15	Definition of the role
16	Diagnosis
17	Early Years Focus
18	Ear mould Impression
19	Enhanced knowledge base
20	Limited access to Educational Audiologist
21	Ongoing CPD for Educational Audiologist
22	Speech, Language and Communication
23	Supporting independence

During the coding process, some points were too general and were not directly attributable to the role of the Educational Audiologist. There were also examples where the point was not clearly defined as falling within the role of Educational Audiologist or the role of the QToD also involved in the case study but rather that the task was simply completed. Any points with this ambiguity were left un-coded, as only the most clearly defined data was deemed appropriate to include in subsequent analysis, to maintain clarity and reliability of the findings.

After the first read through, a second read through was undertaken of all twenty seven assignments. This was not only to improve accuracy, but was essential as not all assignments had been coded with all of the nodes available. This meant that some points needed to be coded to additional nodes, whilst others required their nodes to be altered, to better fit the new parameters of the coding. It can be noted here that the accuracy of the coding process could likely have been improved if there was capacity for a second researcher to also complete the coding process, using the full range of nodes. This coding process is subjective and is at the discretion of the researcher when deciding how to code a particular point, especially one which may fit into several nodes. For example, you could argue that everything an Educational Audiologist or QToD is doing to support a child could be coded as ‘child and family support’, as this is the nature of this type of role. However, this research project was only able to use one researcher due to the limitations on the research. Therefore,

each assignment was coded using the same value judgements in each case, which allows for a consistency of approach.

Once the coding was finished, the points for each node were exported into tables, to allow extracts to be viewed alongside similar points. These tables were then read to ensure all coded points were correctly coded and grouped.

3.4.2 Phase Two

Based on the tables generated from the coding in phase one, key themes were identified and were used to structure the interview process. These points were used to probe the interviewees to corroborate information from the coding process or to find information which was not readily available from the case studies. The main discussion points were around how, in their opinion, the role of the Educational Audiologist is different to the role of the QToD, how much ALDs (assistive listening devices) are a part of their role and how much clinical audiology is being undertaken in their day to day role as an Educational Audiologist.

Each of the nine interview participants was invited to select a convenient date and time for the interview, using an online Doodlepoll, designed to give as much flexibility as possible. They were each offered either a phone call or video call using Microsoft Teams, according to their preference. Six interviewees chose to have a video call and the remaining three chose a phone conversation. During the interview phase, it was noted that the video calls were advantageous to the project over phone for two reasons. Firstly, the video aspect to the call allowed, in the researchers opinion, to develop a stronger rapport with the participants and allowed for a more naturally flowing conversation. This meant that rather than reading from a list of question prompts, the conversations each went in their own directions and far more information was gathered than expected. The second advantage was that the ability to record the video interview to be viewed at a later date meant that the researcher was able to fully engage in the conversation throughout. When conducting the phone calls, consistent note taking was required to record key data, which created a less fluid conversation.

After the interviews, notes were analysed and key points were added into tables, in a similar way as in phase one. This allowed for similar points to be grouped and compared, to ensure the data was analysed accurately. This step would have

benefited if the interviews could have been professionally transcribed, as these transcripts could then have been added into NVivo, to allow for them to be coded in the exact way as the assignments, creating a consistency of approach. However, limitations on this project meant this was not possible. However, all key points were included and the data generated from the interviews accurately represents each conversation and the views of each participant.

3.5 Validity of Data

An important consideration for this research is the validity of the data collected in phases one and two. The nature of this research question relies on individuals' personal views, opinions and experiences in order to create the data needed to draw conclusions based upon perspectives from the field of Educational Audiology in the UK. There are many issues which need to be considered in order to reach conclusions which are fair and unbiased. It is down to the researcher to synthesise and not simply copy information from documents and use it in isolation, forgetting the original purpose of the document (Bowen, 2009). In this case, the written assignments, whilst containing information on the role of the Educational Audiologist, were not written with this as the aim. It is important that the data is analysed, taking this into account. The assignments were written to describe the role of the Educational Audiologist when considering a single CYPD, rather than as a holistic view of the role in a more general sense within their local authority. This slight difference in purpose means that generalisations cannot be made based on single statements or singular pieces of evidence.

There are also many potential problems when using semi-structured interviews as a basis for research such as researcher's own thoughts, the evolving nature of the research question, interviewee reliability and conscious or unconscious bias (Diefenbach, 2008). Furthermore, an academic method of validity for these types of qualitative data sets can be difficult to employ as by the very nature of this research, the data is personal views and opinions which are expressed in both the written assignments and the semi-structured interviews. These, whilst relevant, may be seen as bias towards the role of the Educational Audiologist, as all data has been gathered by those who are training or practicing in the field and has been conducted

by a researcher working in the field. In order to build validity it is even more vital that the researcher makes any assumptions, opinions and decisions clear (O'Brien et al, 2014). Additionally, creating a clear and unbiased analysis of the responses given, whilst seeking independent corroboration of personal views between participants, showing they are shared or disputed with the field of Educational Audiology in the UK, can hopefully lead to "holistically valid results" (Cho and Trent, 2006;335) which will lead future research towards more robust avenues of data and validity.

As a qualified Educational Audiologist, the conscious bias and personal opinions in this project are linked to the hypothesis and premise of the project, that the Educational Audiologist role is important and adds value to CYPD in addition to the QToD, through enhanced knowledge and expertise in audiological matters. However, as the researcher does not work within a large education service, instead being employed in a single educational establishment, means that many of the situations, views and opinions of the case study authors and interview participants are sufficiently different to personal experience, to allow for a fair assessment and evaluation of the data generated in this project. Whilst conscious bias may make the researcher expect particular findings from this research, the difference in job role prevents personal views from being unconsciously added and helps the findings in this research to be seen as valid.

4. Results

This project aimed to find evidence on what the role of the Educational Audiologist is in the UK, by gathering experience and perspectives from the field. The following sections contain the most relevant information from the two strands of research undertaken in this project, the thematic analysis of written case studies and semi-structured interviews of Educational Audiologists working in local authorities within the UK. To gain a clear understanding of the role of the Educational Audiologist in the UK today, the results will initially focus on the views and perspectives gained through the semi-structured interviews conducted with professionals currently in post as an Educational Audiologist. The sections will then draw on further information gathered from the analysis of the case studies from the twenty seven trainee Educational Audiologists to provide additional information and evidence, where possible. The results have been organised into four main subheadings, based upon the most common findings during the research project. The first two sections are only based upon findings from the interview participants, as this information was not possible to elicit from the case study analysis.

4.1 Job Title

The job description of practicing Educational Audiologists in the field can be a good initial indicator of how the role is perceived in different authorities in the UK. Of the nine interview participants, eight have the term ‘Educational Audiologist’ in their official job title. This suggests that the role is recognised as a distinct job in the majority of authorities who have an Educational Audiologist post.

It is important to note that all nine participants had multiple roles within their title and areas of responsibility. This indicates that the Educational Audiology role is not viewed in isolation within education teams and local authorities. Four participants hold a position of manager, team leader or senior teacher in their authority. The Educational Audiologist role in two of these areas is specifically joined to the management role, whilst a third is an acting management role but this is usually separate to the Educational Audiologist, who typically acts in an assistant manager capacity. Furthermore, seven participants have QToD as part of their job title. Within the service structures in the majority of the participants’ authorities, the position of Educational Audiologist is within the QToD team so it is unsurprising that

this is also part of the job title. All nine participants were qualified and experienced QToDs prior to their Educational Audiology training. This shows that the knowledge and experience of Educational Audiologists is valued and utilised within their authorities, although this is not always audiology specific.

4.2 Educational Audiology Time Allocation

All nine participants interviewed have a specific allocation of time in their working week for dedicated Educational Audiology responsibilities and tasks.

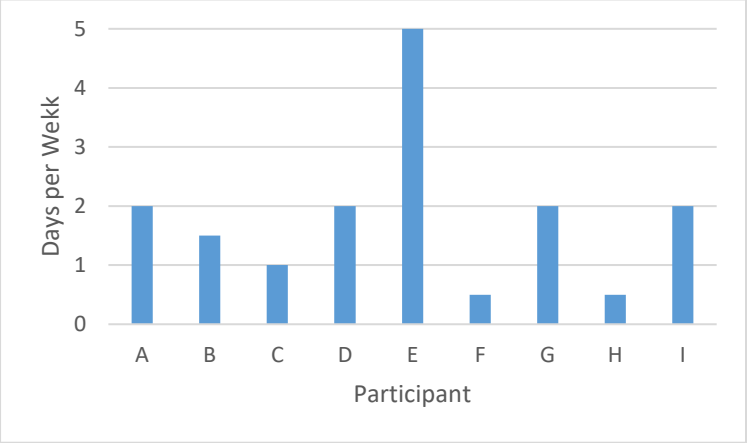


Figure 4.2a The amount of time allocated for Educational Audiologist Roles

Across the nine participants, the average time allocated for the Educational Audiologist role is just under two days per week. However, in one authority, the Educational Audiologist has a full five day week allocation whereas in two authorities, only half a day a week is allocated for these tasks. In one of these authorities, it was reported that the allocation has steadily reduced from two days, to one day and then to half a day during different service restructures as, in their opinion, the role is not recognised in the restructured service. Conversely, one participant reported the opposite trend, with their allocation moving from half a day, to one day and now one and a half days, caused by the increased demands for the support, linked to the Covid-19 pandemic. Does this mean that the pandemic has really created an increased demand for support, or has it exposed the need for the enhanced support of the Educational Audiologist? It would be interesting to see in the coming years whether this change in support is maintained or further increased, in light of the need for CYPD to ‘catch up’ following on from a series of school closures.

It is important to consider these figures in relation to the length of the working week for each of the participants. An addition of one day a week in Educational Audiologist allocation for a full time member of the team would equate to a 20% increase. However, the same additional day for a part time professional who works two days a week would be a 50% increase. This means that in isolation, the number of days increase alone cannot be used to analyse this increase.

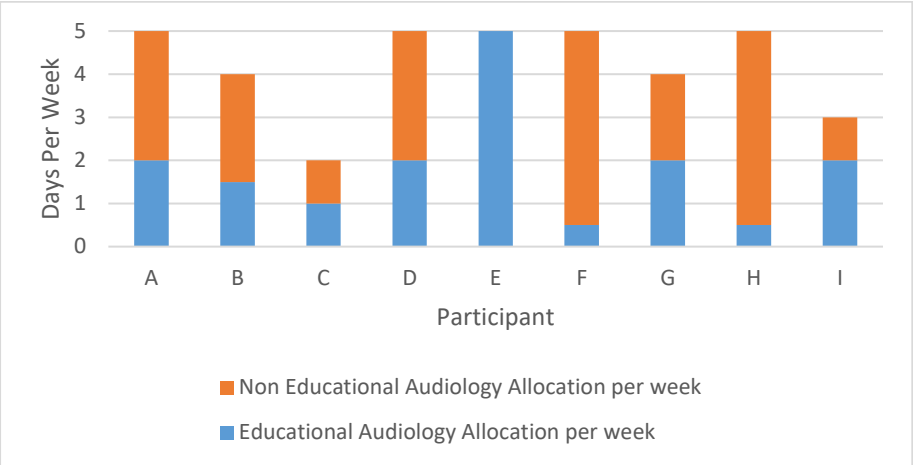


Figure 4.2b The proportion of time for Educational Audiology Roles Compared to Overall Working Hours.

The proportion of time allocated for Educational Audiology shows an average of 44% of the working week for these participants to spend on this role. Four authorities allocate an above average amount of time to this role, one of which is allocating it to the equivalent of a full time role. This proportion of time, along with the number of days each individual works, can be used together as a tangible amount by which the value of the Educational Audiologist role could be measured. When this proportion is compared, as in Fig.4.2b, it shows that some participants have a significantly larger amount of their working hours dedicated to the Educational Audiologist role. Two participants, F and H, only have 10% of their working week assigned to Educational Audiologist tasks. Whilst this is only half a day less than participant C, they spend 50% of their time on Educational Audiologist tasks. Whilst half a day in the real world may only equate to one or two visits, meetings or other tasks, the balance between the Educational Audiologist role and the QToD or manager role is vastly different. This may suggest that participant C works in an authority which values the Educational Audiologist more highly than many of the other participants, despite this individual working the shortest week. It may also suggest that many of

the other participants have various responsibilities and task which they are trying to split their time between.

4.3 Areas of Responsibility

4.3.1 Active Caseload of Children

All interview participants currently have an assigned caseload of children who they support, in addition to the overall support given to the team within their Educational Audiologist role. In some areas this case load is allocated by the geographical location of the Educational Audiologist in the authority whilst in other areas, specific children are on the Educational Audiologist's caseload, due to complexity of needs of individual children.

This information was not possible to elicit from the case studies in a clear way. Due to the nature of the assignment tasks, the authors were all writing about children with whom they were familiar with, suggesting they may have been on their caseload. However, in some case studies, the trainee described the Educational Audiologist as a separate person who was involved alongside them. This ambiguity means it is not possible to definitively provide accurate data on this point. This results in only being able to talk accurately about active caseloads based upon the smaller sample of nine interview participants. This small sample makes coming to definitive conclusions difficult here. Despite this, the fact that all nine of the interview participants reported having active caseloads, the sample suggests that this is a common aspect to the Educational Audiologists' role across the UK.

4.3.2 Assistive Listening Devices (ALDs)

The BAEA Roles and Competencies (2019) describes educational amplification systems in section 4. In this project, the broad term ALD is used to cover a wide range of technology, including radio aid systems and remote mics, from various manufacturers. All nine interview participants mentioned ALDs as a main element of their area of responsibility as an Educational Audiologist and are directly involved in the ordering and purchasing of this equipment, though some have audiology technicians to support them with this. They all work in authorities where QToDs are expected to be able to fit this equipment, though most of the Educational Audiologists will also fit, particularly in situations with more complex hearing losses, less experienced team members or newer equipment. The interviewees also said

their role involves overseeing this equipment across their authority and managing children's access to the equipment. This suggests that this is an important task which falls into the Educational Audiologist's for all of the interviewees. It is unclear from this research how this task is managed in authorities who do not employ an Educational Audiologist. In addition to overseeing equipment, they all also highlighted that providing troubleshooting and advice to QToDs was also an important task they undertake in this area.

Working with ALDs was also explicitly highlighted in ten case studies as a key component of the Educational Audiologist role. Six out of the twenty seven case studies had real world examples of Educational Audiologists issuing, setting up and managing radio aid systems for children.

Table 4.3.2a Case study extracts demonstrating the Educational Audiologist being involved in ALD systems.

Participant	Extract
3.	[The parents and Educational Audiologist] discussed the possibility of [the child] using a radio aid to improve the signal to noise ratio ... Subsequently a Roger Inspiro radio aid system with bilateral ear level receivers was issued.
4.	A radio system, and subsequently a Sound Field, were set up and monitored to ensure greatest benefit … [and] the class teacher and child's [Teaching Assistant] were trained on how to use and maintain the equipment.
9.	My role has changed over the years to include … provision of a personal FM system.
19.	I [Educational Audiologist] have set up and balanced [the radio aid system] for school use.
22.	I provided some specialist support by collaborating with the {Early Years Teacher of the Deaf] and [clinical] audiology to work with [the child's] family to trial a radio-aid system.
27.	Training was provided by the Educational Audiologist to both the parent and school to support appropriate use [of the radio aid system].

Four of the case studies further highlighted the Educational Audiologist's input into the monitoring and evaluation of the radio aid system.

Table 4.3.2b Case study extracts demonstrating the Educational Audiologist being involved in the monitoring and evaluation of ALD systems.

Participant	Extract
5.	The Educational Audiologist ensures that this system is giving [the child] benefit and monitors its use which is essential for supporting [their] listening in noise.
10.	The Educational Audiologist visits [the child] each half term to check her cochlear implants and radio aid system.
19.	I listened through the system with a radio aid attached and the delay was indeed noticeable.
22.	[The Educational Audiologist] support[ed] validation of the radio-aid within the home environment; and reinforce[d] information provided to the parents about how to [use] the radio-aid system.

There were also examples in case studies which mentioned the need for Educational Audiologists to use their experience, knowledge and judgement to offer the best level of support for children, although this 'best level' was not quantified here. It is assumed that the expectation of progress is linked to both academic and linguistic development, as both areas are enhanced when ALDs are used.

Table 4.3.2c A case study extract demonstrating the Educational Audiologist being necessary to ensure optimal amplification.

Participant	Extract
13.	It is the role of an [Educational Audiologist] to ensure that the CYPD achieves maximum progress through optimum amplification.

This enhanced expertise also allows the Educational Audiologist to look more critically at a situation and evaluate the ALD in a broader sense than other professionals may be able to. An example of this was found in one case study where a child was rejecting the radio aid system as they were getting older.

Table 4.3.2d A case study extract demonstrating the Educational Audiologist being involved with a CYPD who is rejecting their ALD system.

Participant	Extract
12.	[Using the radio aid] may have been beneficial for the student as [their] hearing loss is such that [they have] a requirement for assistive listening support and this has limited [their] ability to become fully involved in class discussions. I also wonder is [they] would have continued to use assistive listening devices for longer had [they] been in an environment where this is normalised.

In this case, the Educational Audiologist was able to work with the child and other professionals to find a compromise.

Table 4.3.2e A case study extract demonstrating the Educational Audiologist using experience and judgment to support the use of an ALD system.

Participant	Extract
12.	As a teenager developing his own opinions and views, it was agreed (with a view to keep him in education) that he could choose whether to use [the radio aid system] or not.

In another case study, the Educational Audiologist was able to find tailor the equipment and support to a specific individual and their unique situation, to ensure that support was optimal.

Table 4.3.2f A case study extract demonstrating the Educational Audiologist using experience to support the use of an alternative ALD system.

Participant	Extract
19.	I have provided and set up an old but fully functioning Phonak Zoomlink radio aid so [the child] can hear the ski instructor … I have been able to provide solutions to help [them] make the most of listening situations in school and in [their] private life.

Evidence from both the interviews and case studies shows that ALDs are arguably the most well-known and tangible role which Educational Audiologists are performing in the field today. Many of the interviewees highlighted this as the task many other professionals in their authority would understand to be their role and that it is important for someone like an Educational Audiologist to be in a position to oversee ALD provision, to ensure the most appropriate equipment is provided for all children in their authorities.

4.3.3 Training and Support

Training is described in section 3 of the BAEA Roles and Competencies (2019) and was highlighted in the majority of interviews, as another main responsibility of the Educational Audiologist. The example of training discussed during the interviews was training for QToDs in their authorities. The geographical and time constraints within local authorities means that it is not practical for the majority of the interviewees to be able to visit all of the deaf children in their area. This necessitates QToDs being required to undertake a variety of audiology roles, despite an Educational Audiologist being part of their team. The interviewees highlighted that they are responsible for providing varying types of training to the QToDs, such as refresher training on basic audiology tasks which were covered in the QToDs original training, organising and/or delivering update training on new equipment as it is released and training on more clinical audiology skills, such as being a second tester in audiology clinics or on conducting pure tone audiometry in the field.

Training was also mentioned in eight case studies. However, the type of training described here was very different. The majority of examples focused on the Educational Audiologist training education staff and families on equipment.

Table 4.3.3a Case study extracts demonstrating the Educational Audiologist's role in providing training to schools and families.

Participant	Extract
1.	[The child] will be starting nursery so the remit [of the Educational Audiologist] will widen to offer training, support and advice for the setting.
2.	Ensuring the child accesses quality first-teaching in an environment that accommodates [their] needs requires on-going dialogue, training and sharing of practice; delivery of training around class-management, effective use of audiological equipment and supportive teaching techniques was provided.
4.	The class teacher and child's TA were trained on how to use and maintain the equipment.
9.	My role has changed over the years to include training mainstream staff.
11.	To prepare nursery staff effectively for the range of hearing profiles in the city, I will coordinate buying in Ear Foundation to deliver free to early years settings and their accredited early years course for teaching assistants supporting children with hearing impairment.
11.	Parents and involved professionals will be coached in the effective use of the Cochlear Sound Foundation for babies alongside the monitoring protocol.
13.	An [Educational Audiologist] has an important role in working with the new school to ensure that … all staff (and other CYP) in school are deaf aware.
21.	The school has been supported each new academic year with staff training.
27.	Training was provided by the Educational Audiologist to both the parent and school to support appropriate use [of the radio aid system].

There was also an example within one case study of training delivered to health colleagues about the Educational Audiology of a specific child.

Table 4.3.3b A case study extract demonstrating the Educational Audiologist providing training to health professionals.

Participant	Extract
11.	Throughout this second year, listening to the family, the priorities, in addition to those noted above, will include targeted training to all the health colleagues to ensure they understand [the child's] audiological and communication profile and differentiate their interventions effectively.

There was some evidence of training for QToDs within four further case studies, around specific aetiologies from the case study.

Table 4.3.3c Case study extracts demonstrating the Educational Audiologist providing training for education authority teams, including QToDs.

Participant	Extract
5.	It will be beneficial to the hearing impairment team to receive professional development training from the Educational Audiologist on cCMV.
23.	Educational Audiologists continually examine the latest data and guidelines. This will provide opportunities for INSET, to keep colleagues well-informed for supporting families considerately, as well as knowledge and expertise needed when liaising with families and other professionals.
24.	Interestingly many of my colleagues at work were not aware of it either, which made me realise the need for me, as the [Educational Audiologist], to research the subject and train our team.
26.	The [Educational Audiologist] intends to cascade this recently required knowledge of cCMV and UHL to all staff within the service during a pre-planned, shared training day between the local service, audiology staff and speech and language colleagues.

The evidence gathered from the case studies seems to describe a different job role to that given by the interviewees. It shows that some Educational Audiologists train their teams around specific causes of deafness, whilst the interviewees are training predominantly around equipment and testing. This discrepancy is most likely to be caused by the different question posed during the production of this information. The case studies focus on a specific child on caseload and therefore training described here would be child and situation specific. The interviews however were looking at the wider role of the Educational Audiologist in the field, which explains the more widespread, team training on everyday tasks described here. However, whilst the interviewees focused on their most common training, it is not conclusive to say that they would not deliver more specific training on aetiologies if this was required by their team. Both sources of evidence therefore describe the two facets of training which Educational Audiologists provide in the real world whilst also identifying the most common training which takes place in the field.

4.3.4 Audiological Testing

Section 6 of the BAEA Roles and Competencies (2019) focuses on audiological testing. During the interview process, the participants were all asked to what extent they undertake aspects of audiological testing in their day to day job role as an Educational Audiologist.

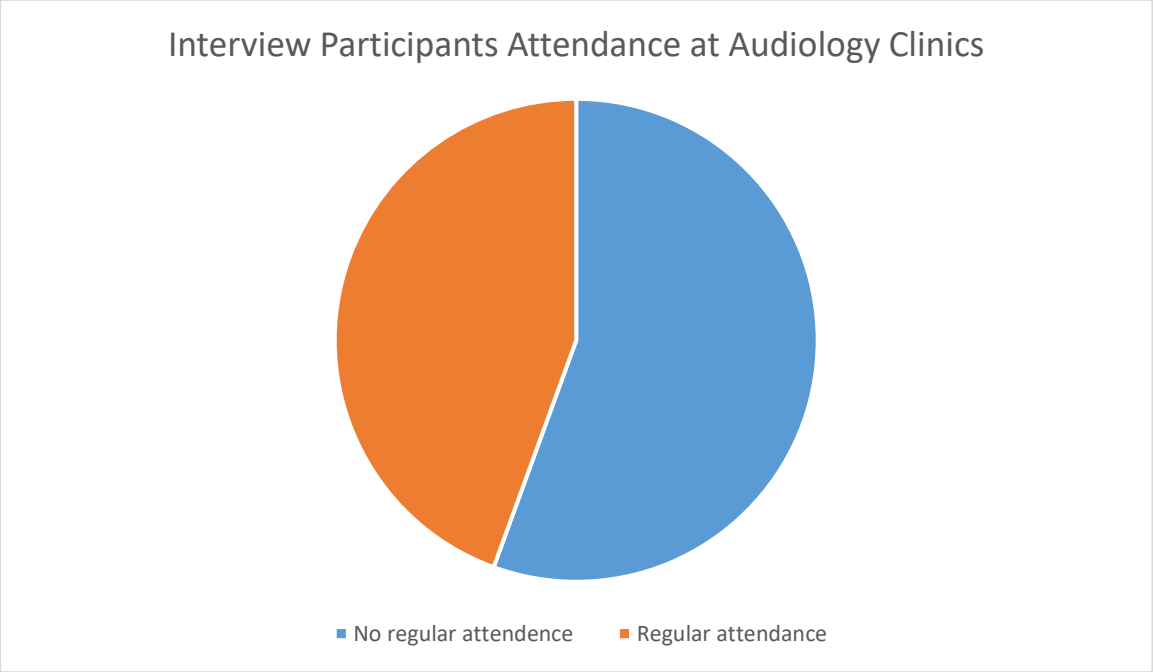


Figure 4.3.4a The number of interview participants regularly attending audiology clinics.

As shown in Fig. 4.3.4a, five out of the nine participants reported that that they currently do not have any direct involvement with audiology testing. Of the four participants who do attend regular audiology joint clinics, only one is actively involved as a second tester, providing an active role in the clinical process, for example, by acting as a distracting adult for the CYPD to hold a portion of their attention whilst the clinical audiologist presents sounds to the child and monitors responses. The majority of the participants who are not doing clinical work cited geographical constraints which prevent them from undertaking this work. In some of these authorities, there are up to ten different audiology departments which the Educational Audiologist could work with, so practicality prevents many of them from attending clinics regularly. Several of these participants did report that this is something which they would like to do more of if they were able to, acknowledging that it is an area with which Educational Audiologists can and possibly should be involved. In the areas where the Educational Audiologist is not attending regular clinics, all participants reported that QToDs are expected to attend clinics, where appropriate, for children on their caseload. The Educational Audiologist can then provide advice and support to the QToDs as required.

In six case studies, there were examples of the Educational Audiologist attending clinics and supporting clinical audiologists with testing.

Table 4.3.4a Case study extracts demonstrating how the Educational Audiologist may support clinical audiologists during appointments.

Participant	Extract
1.	In some areas of the country the Educational Audiologist is present at the time of diagnosis, able to support the consultant and, having been present, has first hand experience of what families have been told.
2.	Audiological testing is carried out at clinic with the [Educational Audiologist] supporting validation of settings.
16.	If possible the Educational Audiologist is present at the second ABR.
18.	For clinic visits the Educational Audiologist(who has an additional speciality in MSI) has been present. [Their] notes include details of testing procedures, with recommendations of strategies which worked and some which were less successful
19.	[The Educational Audiologist] also assist[s] in clinic and run[s] speech audiometry to assess the effectiveness of the hearing aids.
23.	Monthly combined clinics have been developed between paediatric audiology, ENT, Educational Audiology and more recently, specialist speech and language therapy.

One of the interview participants mentioned hearing testing in the field and reported that this was actually a responsibility of the QToDs, having undergone training from

the Educational Audiologist, due to the geographical constraints within the authority. There were examples of Educational Audiologists conducting testing in the field mentioned in two case studies.

Table 4.3.4b Case study extracts demonstrating how the Educational Audiologist can conduct audiological testing in the field.

Participant	Extract
6.	I wanted to check [the child's] aided thresholds and carried out a warble tone test.
18.	The Educational Audiologist who obtained these baselines also worked with [the child] in class, and was able to observe [them] turning to a warble tone in Sound field at 50dBA.

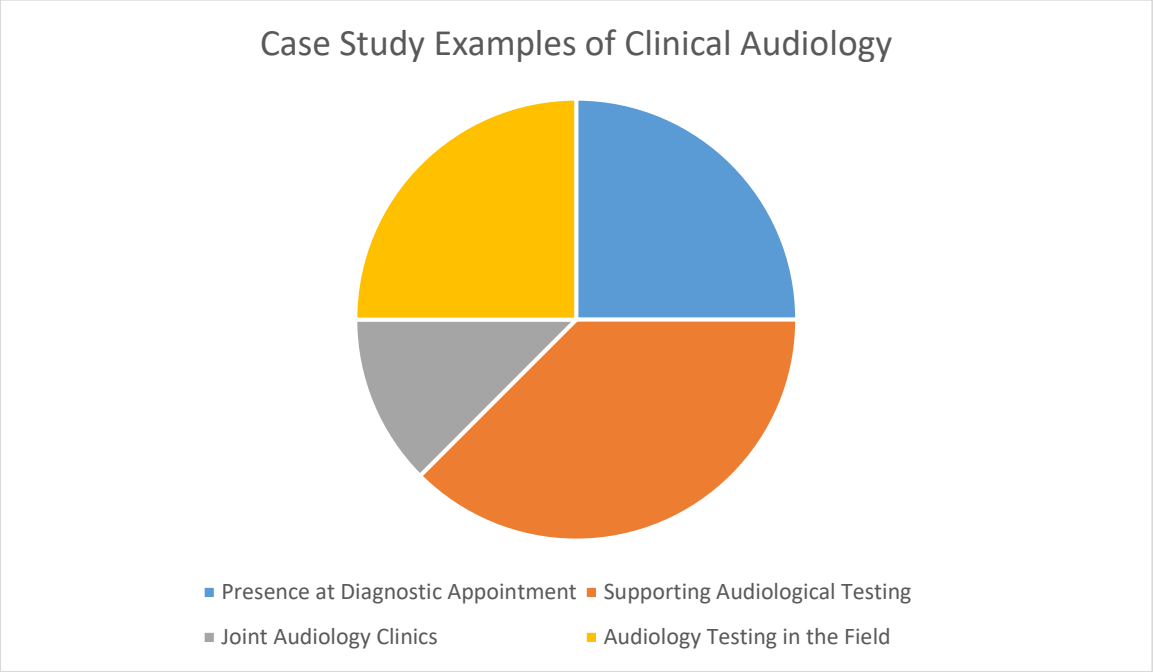


Figure 4.3.4b The number of interview participants regularly attending audiology clinics.

As shown in Fig. 4.3.4b, there are mentions of a wider range of clinical audiology work, such as diagnostic appointments and field testing mentioned in case studies, compared to the interviews. This is most likely caused by the case study being focused on a specific child whereas the interview questions are much broader, looking across a whole service of potentially hundreds of deaf children. It is also worth noting that only seven out of the twenty seven case studies had clear examples of this clinical work. This equates to just 26% of the studies compared to the 44% of interview participants who mentioned it. This difference between the interview participants and the case study data is most likely caused by the interview participants being asked directly if they undertake clinical work, which was not a key component of the written assignments analysed.

4.3.5 Hearing Device Selection and Verification

Within the BAEA Roles and Competencies (2019), section 7 focuses on audiological testing. Similarly to the previous section, the limitations on Educational Audiologists' ability to attend regular clinics in all authorities, there was not a big focus on hearing device selection and verification in the day to day role of the interview participants either. Whilst all interviewees have some involvement with this, many report that this is another area which is typically expected for QToDs to undertake with the children on their caseloads, with the Educational Audiologist providing an overview, advice and support to QToDs when interpreting results from assessments conducted in the field, such as speech in noise testing or electroacoustic checks using a testbox. The participants did mention that many of them are responsible for having conversations with manufacturers and clinical audiologists to discuss new hearing devices and their roll out into the service. During the interview period, many interviewees mentioned the new Phonak Marvel hearing aids as an example of this, as the way ALDs are managed by services may be significantly different and having an Educational Audiologist involved in these discussions was proving important in their areas. This cutting edge technology, and other similar systems coming to paediatric audiology, completely changes how ALDs interact with the hearing devices and may have significant impact on how systems are allocated and managed. By having close links with clinical audiologists, Educational Audiologists can ensure that the role out of these new devices is appropriately managed and that QToDs in their teams have the correct training and equipment to work with this new generation of devices.

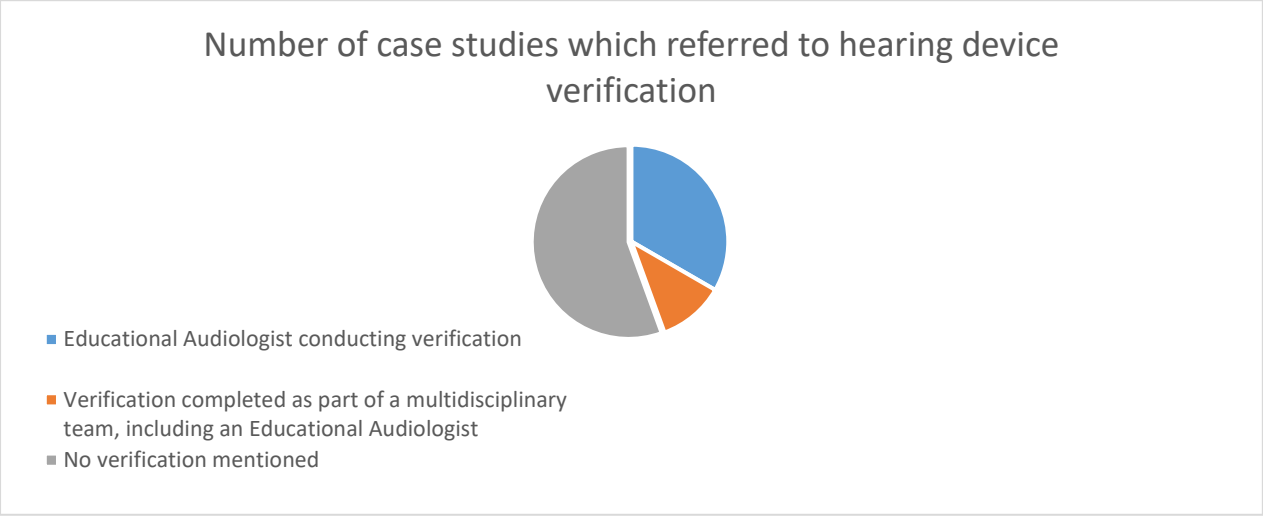


Figure 4.3.5 The number of case studies which referred to hearing device verification.

Within the case studies, ~30% mentioned hearing device verification happening in clinic and in the field, conducted by the Educational Audiologist.

Table 4.3.5a Case study extracts demonstrating the Educational Audiologist's role in hearing device verification.

Participant	Extract
2.	The [Educational Audiologist] records information for professionals, which includes evidence of [the child's] vocalisation and speech, which is sent prior to every audiology appointment to inform mapping
2.	The [Educational Audiologist] supported the family in carrying our regular listening checks and involving the [child] in the process.
11.	During subsequent home visits my [the Educational Audiologist] role involved coaching parents to trust their observations and to understand the rationale behind observation and monitoring of hearing behaviour.
13.	Closely analysed speech perception testing, conducted by an [Educational Audiologist], is a valuable tool to validate hearing aids, and to plan and to monitor rehabilitation, through functional hearing assessments.
13.	As [the child] has a deteriorating hearing loss it is essential that the [Educational Audiologist] works with the family to give them confidence (and understanding) to complete [Ling 6 sound] check regularly and to feedback any changes.
14.	Results achieved by the Educational Audiologist completing a speech discrimination assessment using the McCormick Toy Test (1977) indicated that [the child] was not optimally amplified.
15.	Feedback to [implant centres] or audiology departments can, and I believe should, have significant impact on programming options.
18.	The new programming clearly made [the child] uncomfortable from the start – feedback was constant, continuing even when the new ear moulds arrived. [The child] became distressed whenever the aids were inserted, and [their] foster Mother asked the Educational Audiologist to check [their] aids in school using the test box. The results obtained from the FP35 (and compared to the audiogram) suggested that the aids were indeed set too loudly, explaining [the child's] rejection of them and the ongoing issues with feedback. Discussion with the [clinical] audiology team meant that a new appointment was immediately booked for [the child] to attend and have [their] hearing aids reprogrammed to a more suitable level.
19.	Speech audiometry data are missing for [the child] because it is not conducted routinely at the audiology department he visits. Consequently, I [the Educational Audiologist] have made an appointment to visit him in school to perform an aided speech test and to assess the efficacy of his MM2+ in background noise. This will inform his SaLT, his [Teacher of the Deaf] and the [clinical] audiologist.
20.	With [the bilateral cochlear implants, ALD system and sound field speaker] being in continuous use the Educational Audiologist is a valuable link to enable the hearing devices and equipment to be repaired rapidly, replacements issued and regular validation checks of the whole system using the FM Advantage protocol.

Within these case studies, it is clear that the Educational Audiologist is able to provide crucial information to clinical departments on the real world impact of the listening devices. These points also show that this can be done in a variety of methods, utilising the knowledge and expertise of the Educational Audiologist.

There were also three case studies which cited a joint working approach when selecting and verifying hearing devices, which highlights the value that the Educational Audiologist can bring within the wider multidisciplinary team.

Table 4.3.5b Case study extracts demonstrating the Educational Audiologist's role in hearing device verification, as part of the multidisciplinary team.

Participant	Extract
3.	We [the Educational Audiologist and Teacher of the Deaf] conducted Manchester Junior Word List testing using both live voice and the Parrot Plus 2. Testing in quiet and noise, we found that [the child's] listening was impacted to a significant extent by background noise, particularly when lip patterns were not available to [them].
5.	The [Teacher of the deaf] has approached the Educational Audiologist to discuss the use of a second aid as functionally they report that [the child] find's communicating in a noisy room difficult.
27.	Liaison between the Educational Audiologist and clinical scientist took place to ensure the correct program was activated to use a Phonak Roger Touchscreen and Roger X (02) receivers for use at both home and school.

Both the interviews and case studies evidence that Educational Audiologists are able to offer direct intervention to individuals, using their knowledge and expertise. What is less clear from the data, is how this support is allocated. In some areas, the QToD needs to liaise with the Educational Audiologist, to seek advice and support. In others, the QToD share assessment information with the Educational Audiologist as a matter of routine, allowing the Educational Audiologist to decide where intervention is needed. Both systems can have benefits and the data is not able to definitively say one is a better method than the other. Based on the data gathered, the Educational Audiologist overseeing and allocating support is likely to have more advantages for the CYPD in their authority. QToDs are knowledgeable professionals and are able make decisions about their caseload using their experience and training. However, some interview participants cited the enhanced level of understanding of audiological matters which an Educational Audiologist possesses, which can be bought to bear to provide a critical, scientific rigor to analysing these assessment results which may provide for a deeper level of investigation and lead to better support and outcomes for individual children in the long term.

4.3.6 Liaison with Clinical Audiologists and Health Services

The interview participants all reported different levels of joint working with clinical audiologists, which is an important aspect of the multidisciplinary working described in section 5 of the BAEA Roles and Competencies (2019). As previously stated, some Educational Audiologists have up to ten audiology departments to liaise with,

making close joint working difficult. Therefore, the day to day liaison regarding specific children often is another expectation of the QToD in the majority of the authorities where the interviewees work. For the majority of Educational Audiologists, the liaison with their clinical colleagues comes both through discussions about specific children on their caseload but also looking at wider, strategic considerations around new equipment. As previously stated, current working is focusing on new paediatric hearing aids from both Phonak and Oticon and the possible training and ALD implications this will have on children and the team of QToDs.

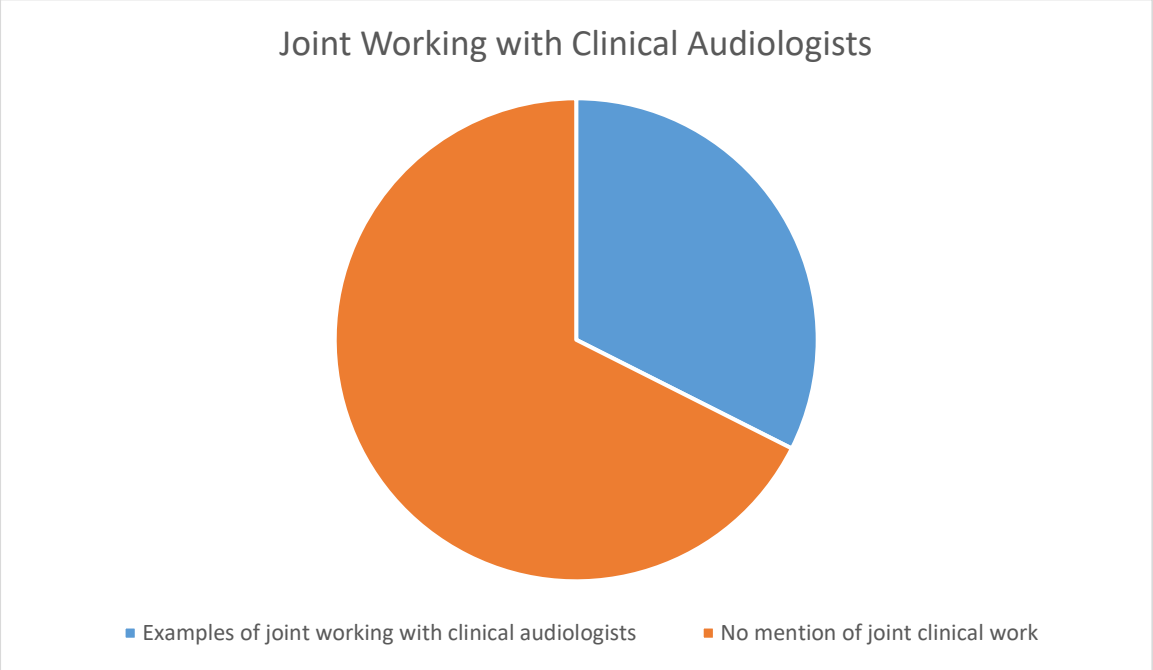


Figure 4.3.6 The number of case studies with examples of joint working with clinical audiologists.

Twelve case studies had examples of joint working with clinical audiologists, in terms of clinical working, consultation and support.

Table 4.3.6 Case study extracts demonstrating the Educational Audiologist's role in working alongside clinical audiologists.

Participant	Extract
1.	In some areas of the country the Educational Audiologist is present at the time of diagnosis, able to support the consultant and, having been present, has first-hand experience of what families have been told.
2.	The [Educational Audiologist] took a lead-role in engaging with the family in the period prior to implantation and liaised with the audiologists to ensure that pertinent information was shared.
3.	[The Educational Audiologist] being in clinic for [the child's] appointment was propitious as it meant that there was an immediate response to the issues raised around educational access and progress, negating previous communication errors, and highlighted the necessity for the good links forged between health and education services.
4.	Once the hearing loss was diagnosis, the Educational Audiologist was notified by the hospital. [They] met the family and school staff, and supported the initial hearing aiding.
10.	[The Educational Audiologist] was involved in the initial hearing aid fitting and then in discussions about cochlear implantation, ensuring the parents were given informed choice.
11.	The parents requested [the Educational Audiologist] liaise with the CI staff to ask them to consider, in light of their challenges and journey thus far, the impact of new information that relates to potential negative outcomes.
15.	I consider establishing a strong relationship with the CI centre to be a significant objective for me in my role as [Educational Audiologist] ... I feel strongly that in [this child's] case this did not happen, but that such valued [Educational Audiologist] input may have enabled [them] to access implantation sooner.
16.	If possible the Educational Audiologist is present at the second ABR … This is so the support can begin as soon as possible and the parent can see from the beginning the link between audiology and the Sensory Service.
18.	Through repeated appointments, feedback from Foster parents and liaison with [the child's] Teacher of the Deaf and Educational Audiologist, an accurate picture of [their] hearing loss has slowly been mapped, and hearing aids programmed accordingly.
19a.	Before major changes are made to hearing aid provision, I [the Educational Audiologist] am consulted in case there will be an impact with respect to the radio aid we provide. The information flow goes both ways and the [Teachers of the Deaf] in the service communicate concerns and queries either directly with the audiologists or through me so that the Clinical Audiologists are fully informed when reviewing hearing aid provision for individuals. I also assist in clinic and run speech audiometry to assess the effectiveness of the hearing aids.
19b.	[As the Educational Audiologist] I have formed extremely strong professional relationships with the Clinical Audiologists and communication is excellent. Before major changes are made to hearing aid provision, I am consulted in case there will be an impact with respect to the radio aid we provide. The information flow goes both ways and the ToDs in the service communicate concerns and queries either directly with the audiologists or through me so that the Clinical Audiologists are fully informed when reviewing hearing aid provision for individuals.
26.	[The Educational Audiologist] feels [the child] to be a suitable candidate [for a CROS system] providing a suitable fitting of moulds can be attained. The [Educational Audiologist] intends to raise this issue at the next multidisciplinary meeting.
27a.	The Educational Audiologist should further support the clinician in the introduction of additional hearing aid features through ongoing audiological management of [the child], monitoring developmental changes and educational transitions and the impact on the lived-listening experience.
27b.	Liaison between the Educational Audiologist and clinical scientist took place to ensure the correct program was activated to use a Phonak Roger Touchscreen and Roger X (02) receivers for use at both home and school.

Once again, the case studies are focusing predominantly on specific situations around a single child and not the overall strategic view many of the interviewees referred to as part of their day to day responsibilities as an Educational Audiologist. However, it is clear that positive outcomes can be achieved by close working between Educational Audiologists and their clinical counterparts. Direct intervention may have added benefits, making good use of the Educational Audiologist's enhanced knowledge and experience to inform discussions around fitting, testing and the wider educational implications these may have on the child. However, as with other areas of the role, geographical and time constraints make this impractical for many Educational Audiologists in the field.

4.3.7 Room Acoustics

The interviewees were all clear on the role they play in issuing and managing ALDs in their authorities. However, the BAEA roles and competencies (2019) also include acoustics into their 4th competency.

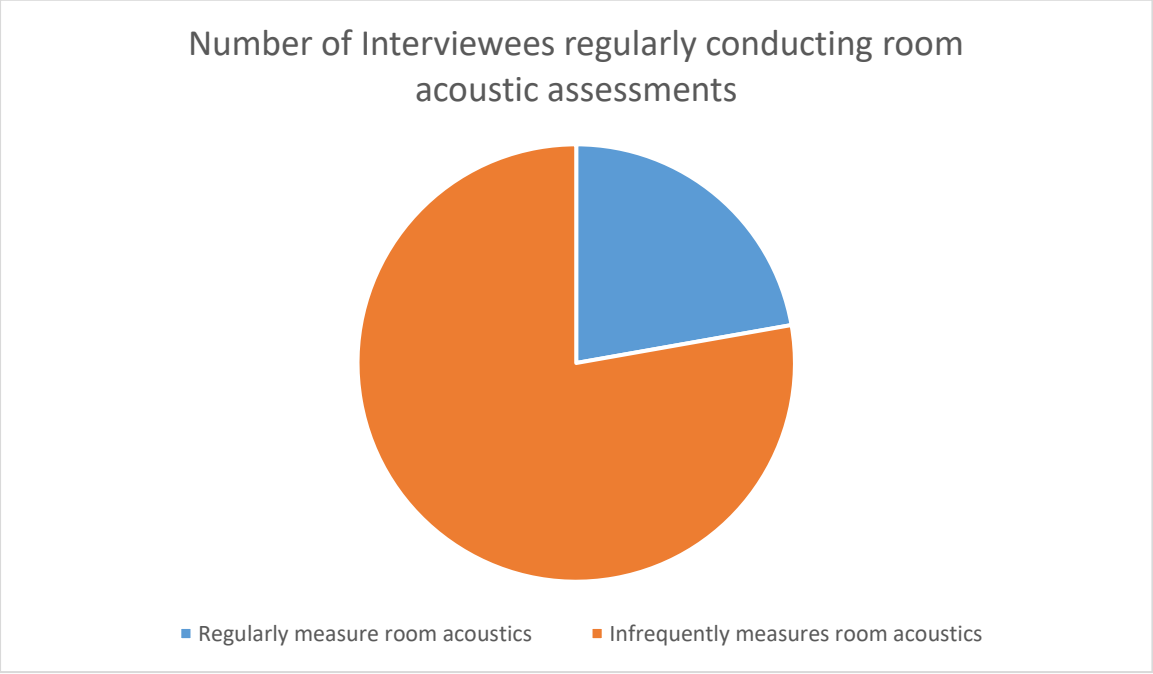


Figure 4.3.7 The number of interviewees who undertake room acoustic measurements within their role.

Out of the nine interviewees, only two specifically mentioned acoustic measurements as a role which they may undertake. Of these two, only one conducts them currently. The other has equipment which is non-functional and in need of replacement, but is unable to persuade their service that this is needed, due to the

infrequency that it was used. The other seven participants did not mention acoustic assessments within their interviews. This of course does not mean that it is not done by all seven of them however, it suggests that it is not a regular aspect of their day to day role.

A slightly higher number of 26% of the case studies mentioned acoustic assessments as being completed by the Educational Audiologist in these child's cases.

Table 4.3.7 Case study extracts demonstrating the Educational Audiologist's role in assessing acoustic conditions.

Participant	Extract
2.	[The child] attends nursery and the [Educational Audiologist] was able to carry out an acoustic audit and make recommendations to the setting around improvements in terms of both ambient noise and reverberation levels, as a favourable signal-to-noise ratio is vital for [them] as [the child] acquires language.
3.	The [class] room was carpeted and curtained and ambient noise levels in quiet were 45dBA rising to 85dBA when the children were active.
13.	An [Educational Audiologist] has an important role in working with the new school to ensure that [the child's] classrooms are as acoustically favourable as possible and that all staff (and other CYP) in school are deaf aware.
14.	The role of the Educational Audiologist was not solely confined to [the child's] early years post implant, it has been ongoing to date; evaluating … classroom acoustics, and the technological interventions being used in the classroom … The Educational Audiologist deemed [their]] role to be giving advice to the parents and nursery on acoustics.
15.	Qualified knowledge of room and speech acoustics also supports the child's teaching and learning as they progress; [Educational Audiologists] are able to recommend and ensure optimum acoustic environments for learning.
21.	[The Educational Audiologist advised] on the better of the three available classrooms for [the child]; here the acoustical environment [was] examined [and] both the internal and external noise is taken into account.
23.	Classroom acoustics were assessed by an Educational Audiologist prior to the child starting school and acoustic adaptations completed so that both ambient noise levels and reverberation times were within the levels recommended for children with hearing and communication difficulties.

The evidence from case studies suggests that acoustic assessments are indeed being done in the field by the Educational Audiologist but the data gathered from the interview participants implies that this is not a regular or large part of the day to day role. Therefore, it may be fair to assume that this is conducted as needed, on a case by case basis. This would make sense as once a child joins an educational establishment, concerns could be highlighted by parents or the QToD and then the Educational Audiologist may get involved. However, this is speculation as there isn't enough data within this study to prove this assertion.

4.4 The Overlapping Roles of the Teacher of the Deaf and the Educational Audiologist

It is clear from the interview data that QToDs are expected to undertake a varying amount of audiology input across different authorities. In regions where there is an Educational Audiologist in post, they are able to provide support, guidance and training to the QToDs to ensure that this audiology input is considered in a rigorous and scientific way. Based on the data gathered, it is not possible to say that in other authorities the quality of audiology support from QToDs is any better or worse and it is outside of the remit of this research to draw such conclusions. However, the data provided from the interview participants suggests that QToDs in their authorities may have access to a better level of training, support and oversight which others may not. By having an Educational Audiologist in post, to offer such training and support, it is likely that the QToDs in these areas can expect areas for development to be identified and addressed. In areas without an Educational Audiologist, it is possible that such training and support would either need to be identified by a line manager in the service who may not be a specialist in deaf education, or by QToDs themselves, who would then need to seek out support and training individually.

It is also clear that the role of the Educational Audiologist is not easily separated from the role of the QToD in all areas. All of the interviewees have an active caseload of children which falls into their expertise as a QToD which blurs the line between the roles to varying degrees. Most interviewees also highlighted their position within the structure of their sensory support services as one which is hard to separate out from that of the other QToDs, without including the additional management responsibilities they have.

4.5 Summary of Results

In summary, the findings for the interviewees clearly show that supporting and managing ALDs is a core part of the Educational Audiologist's role currently, as is offering training and support to QToDs within their services. The interview data also shows that clinical liaison is also an important element to the role but that practical clinical work is less frequent. This is also similar to room acoustic measurements which may be needed but are not common place for all Educational Audiologists.

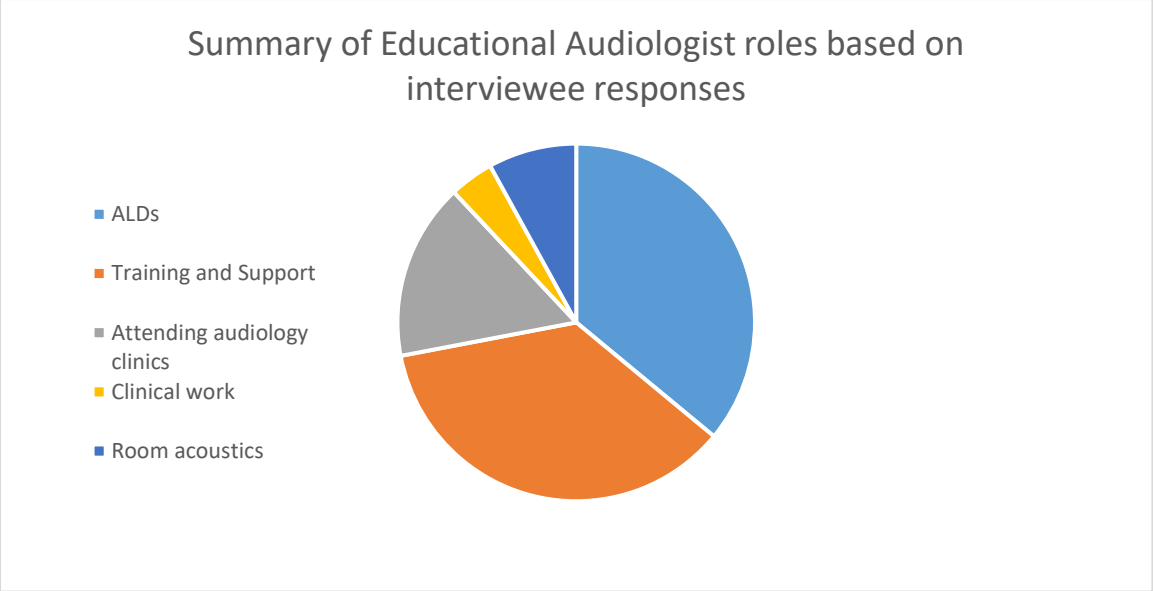


Figure 4.5a A summary of the key areas of the Educational Audiologist's role, according to interview responses.

These findings were also found in similar proportions within the case study analysis. There is some differentiation based on sample size and that the case studies were written with a single child in mind, rather than looking at the wider role of the Educational Audiologist. However, this similarity shows that the key elements identified during the interview process are also evident when focusing on a single CYPD from a caseload.

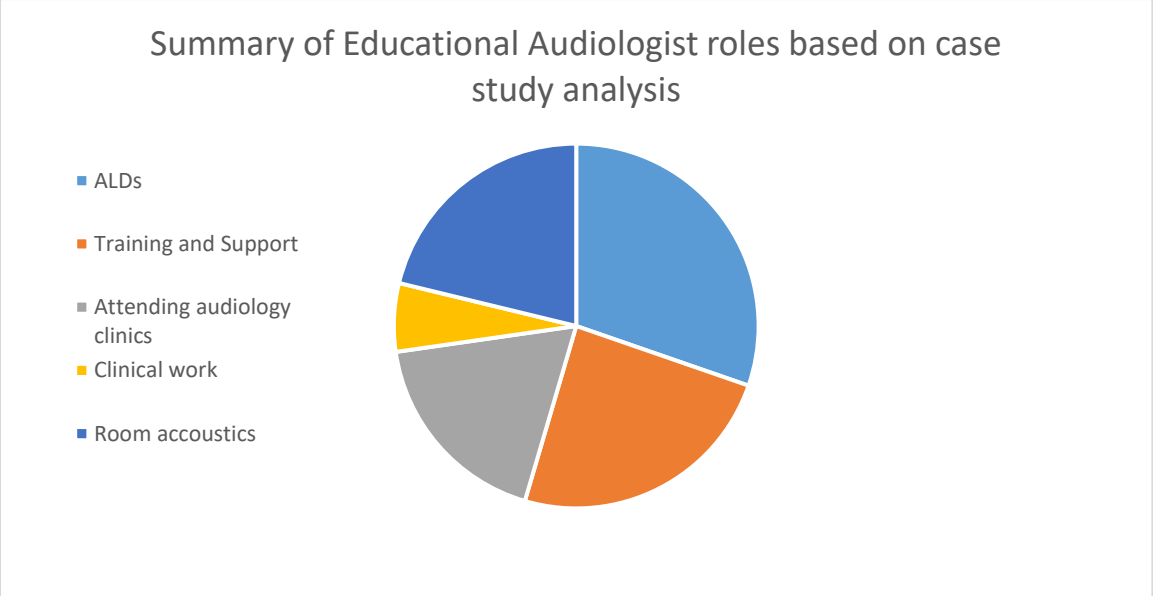


Figure 4.5b A summary of the key areas of the Educational Audiologist's role, according to case study analysis.

5. Discussion

It is important to reiterate that, despite the title of this research project stating that it is looking at the UK as a whole, some data is specific to local authorities in England. Whilst some of the case studies analysed had authors who work outside of England, the nine interview participants and CRIDE survey data can only be used to provide an insight into the English local authorities. Due to the limited responses from the other UK country CRIDE surveys, it is hard to know if the situation across the UK shares many parallels. If the data is accurate then there are far fewer Educational Audiologists working in other parts of the UK, suggesting that the situation for CYPD may be more greatly impacted by the limited availability of Educational Audiologists than in some parts of England.

It is also worth noting that this research in no way undermines the work of QToDs, nor does it intend to imply that areas without an Educational Audiologist are inferior to areas which have this job post. However, it hopes to show that there are added potential benefits to the Educational Audiology role being part of a wider educational service team of QToDs.

5.1 Educational Support Service Structure

Based on the findings from the interviews, across the UK, each educational support service is structured in a slightly different way. In most however, the QToDs and the Educational Audiologist are often part of a sensory support team within the service. The sensory support team has a manager but their knowledge and experience can vary. Some services have QToDs in this position, others have managers with other types of sensory support in their background. In many structures, the sensory support team are part of a wider collection of educational support services within the authority who then have a manager overseeing all departments. In one interview, the participant noted that this person is also a QToD in their authority. However, many have managers with varying backgrounds. Based on the research collected, this variation in management structure was noted by several interview participants as a point of difficulty in completing their role as an Educational Audiologist. For some, this was due to bureaucracy, having to spend large amounts of time justifying every individual ALD purchase because managers were focused on budget reduction and lacked the understanding of how important an ALD can be to a CYPD. For others,

the problem was trying to get managers to understand the difference between the QToD and the Educational Audiologist role which lead to some not having their role defined as much as they may like. Does wide variation in job role have the potential to breed animosity or disenchantment within the profession? Whilst this point doesn't fit into the remit of this research, future research may look into how these differences affect Educational Audiologists and the relationships they have with their peers in neighboring authorities. It is interesting to reiterate here that one interviewee reported a significant increase of time allocated for their Educational Audiology role, from 12.5% of their working week up to 37.5% in response to the Covid-19 pandemic. This shows that, in one authority at least, that the possible advantages of the Educational Audiologist role may have been identified, allowing a structural change and allocation increase. It will be interesting to see if this change is maintained after the pandemic or if other authorities have also adapted their structures to allow for more Educational Audiology hours.

Whilst this difference in structure causes real world issues for individual Educational Audiologists, it also causes a problem with the profession as a whole. It is unclear how it could be possible to employ Educational Audiologists across the UK on equal standing, when they are seemingly treated so different from authority to authority. Whilst there is likely difference between QToD roles in each area, most interview participants reported very similar conditions to each other, when talking about this aspect of their job. The wide variation only seems apparent within the Educational Audiology aspect of the role. How then can QToDs across different services expect to do very similar jobs but Educational Audiologists cannot? The hypothesis, based on the limited scope of this research is that it is likely to do with the larger number of QToDs across the UK in comparison to Educational Audiologists.

It is clear that because the role of Educational Audiologist is not a mandatory role, like that of QToD, this allows for each authority to make the role fit their purposes. Whilst this flexibility seems to work in some areas, with interview participants reporting good job satisfaction, it is possible that having a more rigid expectation for the role would allow for local authority managers to better understand the benefits of the role. It is worth noting that even in the areas who are employing Educational Audiologists, most participants in this research also have other management or

QToD responsibilities. Again, a mandatory role may help authorities to better understand the Educational Audiologist and therefore better allocate time and resources to that individual, based on the real world needs of their authority.

5.2 Active Caseloads

As previously stated, the lack of understanding of the Educational Audiologist by managers of education support services can lead to real world difficulties for an Educational Audiologist. The majority of interview participants in this research are not full time Educational Audiologists and have an active caseload of CYPD in their local area. For many, this caseload is smaller than that of other QToDs on their team, depending on the size of the authority in question, both in terms of numbers of CYPD but also geographical size. In geographically larger authorities, caseloads are reported as being, at least in part, based on the location of individual QToDs within the area. This is also true for many of the Educational Audiologists who took part in the research. At the start of this project, one hypothesis was that caseload allocation for Educational Audiologists may be based, in part, on the deafness of the CYPD, the overall needs of the whole caseload of the authority and the potential benefits of having the Educational Audiologist involved specific individuals. Whilst some participants did report having some children on their caseload for whom this did apply, it is not as common as expected. Therefore, another question which may benefit from future study is do CYPD on the caseload of the Educational Audiologist receive a better level of audiological support and potentially better outcomes than similar children in their area without Educational Audiologist involvement and can this be easily measured? It is conceivable that the disproportionate nature of caseload allocation based on geography rather than the need of the CYPD could lead to an unfair or unbalanced allocation of resources within an authority and may mean that some CYPD who are in need of additional support from an Educational Audiologist miss out.

5.3 Training and Support

Many interviewed Educational Audiologists reported that an important part of their role was to provide audiology training and support to QToDs on their teams. Whilst some of this training will be around specific causes of deafness identified within the authority or update training from new types of hearing equipment, several

participants reported that this training and support was also linked to much more typical tasks which QToDs do on a regular basis. This raises an interesting point. QToDs, as part of their mandatory training, have a range of audiology objectives which they are expected to achieve (DFE, 2018) which should enable them to complete a wide range of audiological tasks when working with CYPD on their caseload. However, several interesting questions have been identified which, whilst outside of the scope of this research, may prove the basis of a useful and important future study. If the mandatory qualification for QToD is sufficient to prepare professionals for the real world, why do many Educational Audiologists report needing to offer support and training to QToDs on their teams? If the Educational Audiologist is important to provide additional, update or refresher training to QToDs to enable them to work effectively in the real world, why is the Educational Audiologist role not mandatory? Additionally, if QToDs require training and support in audiology but are working in areas without an Educational Audiologist, how is this identified and remedied?

5.4 Assistive Listening Devices

For the majority of Educational Audiologists interviewed, managing ALDs is a cornerstone of the role. For some, this involves physically setting up, fitting and evaluating the device. For others, it is ordering, budgeting and managing the numerous devices across their authority. In some areas, this involves putting business cases forward to budget holders and justifying why the device is needed, for others it is discussions with individual schools about loan programs and insurance. This is another area which raises a question that falls outside of this research, what happens in the authorities without an Educational Audiologist? Does the management fall to individual QToDs, increasing their workload or is it overseen by a manager, potentially one without a background in deaf education?

As previously discussed, many Educational Audiologists have QToD caseloads. For these CYPD, do they automatically receive a better level of support with their ALDs by virtue of having an Educational Audiologist assigned to be their QToD, compared to other CYPD in their authority? Case study participant nineteen for example, set up an old ALD for their CYPD to use whilst skiing as the more modern ALD was not able to be used. This single example shows the potential benefits a CYPD may receive which a child somewhere else in the authority may not, if the Educational

Audiologist is not aware of them. Therefore, Educational Audiologists providing a larger, overseeing role and working alongside QToDs in their team can offer a better solution, one which could be more equitable for all.

5.5 Liaison between Clinical and Educational Audiologists

For the majority of interview participants, there is a limited amount of hands on clinical work happening in many authorities. For most, this is due to geographical and time limitations preventing them from attending several audiology clinical sites regularly. However, having a strong, up to date knowledge of clinical audiology is still a key part of the job role which enables Educational Audiologists to liaise effectively with paediatric audiologists, which is something the majority of participants identified as an important aspect of their role. For some Educational Audiologists, they are liaising with multiple hospital departments across their authority. Several reported that they have different relationships with these multiple sites, some being easier to liaise with than others at times. Others reported that it is often down to QToDs on their teams to attend clinical appointments and liaise with local departments, with this being overseen by the Educational Audiologist. At a local level, Educational Audiologists are required to adapt their practice based on the landscape in which they are working. As with previous points, this may raise a question for a future strategy around how this liaison is managed in the authorities without an Educational Audiologist and whether or not this affects the outcomes for CYPD in these areas.

The addition of Educational Audiologists within the Registration Council for Clinical Physiologists (RCCP) (2019) is a positive step forward to raise the clinical profile of the role. For Educational Audiologists working in clinical settings, such as implant settings, this is likely to be a very welcome development in raising the profile of their clinical work. However, for Educational Audiologists working in education service teams, such as those who have participated in this study, RCCP registration may have limited bearing on their day to day job role. However, by having the option to register with the RCCP, this may have the potential to help individual Educational Audiologists engage with clinical audiologists, to develop closer working and build relationships, to aid the outcomes CYPD can achieve.

5.6 Value of the Educational Audiologist Role in the UK

What is clear from this research is that the role of the Educational Audiologist is variable across education services. Individual Educational Audiologists are using their knowledge and expertise to work within their services to provide the support they can, based upon the structure of the service, as well as the size and geography of their area. In addition, this research has identified an interesting anomaly in the data which it is important to consider here. The data gathered from CRIDE (2019) identified seventy one individuals within education services who hold the qualification of Educational Audiologist. So far, this research has looked at how this is spread across the UK, England in particular. Additionally, the BAEA membership for 2020-21 is sixty five members. This membership however, is open to Educational Audiologists who work in clinical settings as well as education services. Therefore, an initial hypothesis prior to this research was that the BAEA membership would be higher than the number generated from the CRIDE survey. This suggests that there are a significant number of Educational Audiologists who are not a member of the BAEA. The cost of BAEA membership is currently £30 for the year. It was believed that for a small amount of money, it would be expected that the majority of Educational Audiologists would be a member of the BAEA, however this is not the case. This finding could suggest an important aspect for future study. The BAEA roles and responsibilities (BAEA, 2019) is an important document which is used by Educational Audiologists to define their role. It is also a document which helps support the training aims of Educational Audiology at Mary Hare. Therefore, the BAEA should be a useful and important organisation for qualified Educational Audiologists to be active members of, to help develop and shape the role. If this is not the case, there may be benefits to future research exploring this in more detail, to find out how the BAEA can increase membership and thereby move towards engaging more Educational Audiologists with their own profession. This would be an important step in raising the profile and potential benefits of the role across the UK.

5.7 Limitations

This study is a small scale one, conducted during a global pandemic. Therefore, the methods used were chosen not only for their reliability in collecting the data being sought but also for their level of achievability within the limitations of the project. In order to create a more robust data set, additional coding of more assignments from

across the Educational Audiology training modules could have been used to gain further insight and evidence. Participation in the second phase was also limited, in part due to work commitments of Educational Audiologists. If the data collection window had been longer, more views and perspectives could have been gathered, increasing the sample size and the reliability of the results. This increased amount of data may also have allowed for statistical analysis to create more quantitative data improving the triangulation and corroboration of findings (Bowen, 2009). Finally, this study has focused on the educational service role for the Educational Audiologist, due to the data available and time limitations. A larger study could have included looking at the role within health services too, which would have resulted in even more information demonstrating the full breadth of the role of an Educational Audiologist.

6. Conclusions

Without a mandatory job role of an Educational Audiologist within education settings, the role can only be clearly defined to a point. They are not one thing. All have a wealth of knowledge and experience which they can bring to bear, to improve the outcomes of CYPD across the UK, by working alongside QToD and clinical audiology colleagues. However, it does seem clear that the provision of Educational Audiology across educational services in England is highly variable. If the role of the Educational Audiologist is to become equitable across the UK, managers of education services and sensory support teams, should be made aware of the benefits to having an Educational Audiologist within their team of QToDs. It would seem that other professional bodies involved in CYPD lives and education, would be useful organisations for the BAEA to work closer with, to ensure that the value and benefits of the Educational Audiologist within the education sector are more widely shared than they may be now. By working together, these organisations may prove to be instrumental in persuading a larger number of authorities to consider employing or training Educational Audiologists to work within their regions.

This research has been able to identify that a singular definition of an Educational Audiologist is elusive. It has also generated a lot of further questions which would benefit from additional research. If the role of the Educational Audiologist was mandatory and sat alongside the QToD role within the structure of educational authorities, would that allow for better joint working between QToDs and the Educational Audiologist? By bringing in the Educational Audiologist to support QToDs with the more complex or challenging CYPD and situations, would that lead to better outcomes for all? There is a real world need for Educational Audiologists to provide training and support to QToDs, especially to update them on new hearing equipment. If this is a core part of the role and a clear and definable benefit for the Educational Audiologist, why do so many areas not employ one? The bespoke support an Educational Audiologist can offer which may not always be something all QToDs can, in terms of the deeper audiological experience and understating they possess, is an important aspect of the role and one which local authority managers would do well to fully understand and utilise, if they want better potential outcomes for CYPD in their authorities.

The role of the Educational Audiologist in the UK has been recognised since the 1970s. However, decades later, the variability of the aspects of the role individual Educational Audiologists undertake is surprisingly large across England whilst over half of the educational authorities in England do not employ one. This research suggests that there are large areas of potential research which should be undertaken, to ensure that this role is fully understood, used effectively in education services and, most importantly, leads to raising outcomes for all CYPD who would benefit from the additional expertise of this misunderstood and underrepresented professional.

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Appendices

Appendix A – EC2 Ethics Approval

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: 27/08/2020

To: 01/05/2021

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 a further EC2 request.
Approval applies specifically to the research study/methodology and timings as detailed in your Form EC1A or as detailed in the EC2 request. 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.

This EC2 application is approved under the following condition:

The supervisor must see and approve that assignments the student is proposing to look at are anonymised prior to his analysis of them.

Original protocol: Any conditions relating to the original protocol approval remain and must be complied with.

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.

Appendix B – Participant EC3 and EC6 Forms

University of Hertfordshire UH Ethics Committee

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

FORM EC3
CONSENT FORM FOR STUDIES INVOLVING HUMAN PARTICIPANTS

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

Value of the Educational Audiology Role from the perspective of Case Studies

(UH Protocol number EDU/SF/UH/04128)

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 my 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 to participate in it.

2 I have been assured that I may withdraw from the study at any time without disadvantage or having to

University of Hertfordshire UH Ethics Committee

7 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.

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

Signature of participant……Date……

Signature of (principal) investigator……  ……Date…4.11.20……

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

……*SIMON ASH*……

University of Hertfordshire UH Ethics Committee

UNIVERSITY OF HERTFORDSHIRE

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

FORM EC6: PARTICIPANT INFORMATION SHEET

1 **Title of study**

Value of the Educational Audiology Role from the perspective of Case Studies

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 investigate the role of the Educational Audiologist across England, in order to find out what parts of the role are most valued.

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?**

None

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

If you decide to take part in this study, you will be involved in it for the duration of a brief interview, where your views will be recorded and then analysed at a later time.

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

The first thing to happen will be an mutually convenient time will be arranged for the interview to take place, either over the phone or via Microsoft Teams, depending on participant preference.

You will then be asked a series of questions about your role as an Educational Audiologist and about the role in a more general sense.

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

None are identified.

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

Demonstrating the value and impact for children and young people (CYP) who are deaf and their families of the Educational Audiology role will benefit the professionals themselves and the CYP and families they serve, by raising awareness of the role's value to stakeholders.

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

No personal data nor service-identifying data will be collected other than the consent form which will be kept securely and confidentially in password-protected electronic storage.

11 **Audio-visual material**

Interviews will be recorded to aid subsequent transcription of the answers given. During this process, all audio and visual recordings will be stored securely and confidentially in password-protected electronic storage. Following the transcription process, all audio and visual recordings will be deleted.

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

The data collected (which does not include personal data nor service-identifying data) will be stored electronically, in a password-protected environment, up until the dissertation is completed and passed, anticipated July 2021, after which time it will be destroyed under secure conditions;

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

The data will not be used in any further studies.

14 **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
EDU/SF/UH/04128

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

No factors have been identified. As standard for ethics approval, 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.

16 **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:s.ash@mildmay-jun.essex.sch.uk

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.