Evaluating the impact of peripatetic Teachers of Deaf Children and Young People (ToDs) on deaf children's outcomes: a participatory research approach using a mixed methods design

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Foreword

In the evolving landscape of Special Educational Needs and Disabilities (SEND) reforms and amidst increasing financial pressures on local services, professionals working within specialist educational support roles are frequently called upon to articulate and evidence the value and impact of their work. For Teachers of the Deaf (ToDs), this challenge is compounded by the limited availability of systematic, evidence-based research that captures the breadth and depth of their contributions—particularly during the critical early years of a child's development. While anecdotal reports and professional insights have consistently underscored the positive impact of ToDs, particularly in areas such as language acquisition, emotional wellbeing, and educational attainment, there has remained a notable gap in rigorous, firsthand research that explores and evaluates the long-term outcomes of their work with deaf children and their families. This study seeks to address that gap by focusing specifically on the early years—a period where timely, skilled intervention can make a profound difference.

When the research team at the University of Birmingham approached us to participate in this project, we welcomed the opportunity. As a team committed to both high standards and continuous improvement, we were eager to share our local experiences and to reflect on our practice. We are always striving to refine our approaches, balancing the delivery of vital, personalised services with the demands of administrative accountability.

Our involvement in this research has reaffirmed just how complex, varied, and essential the role of a Teacher of the Deaf truly is. From early identification and language development to safeguarding, mental health advocacy, educational planning, and multi-agency collaboration, ToDs play a pivotal role in the lives of deaf children and their families—often working in ways that are not captured in conventional educational data or performance metrics.

We hope that the findings of this study will contribute meaningfully to the evidence base for our profession. More than that, we hope it will influence future policy decisions, guide the development of training programmes, and support more

equitable allocation of resources—ensuring that deaf children and young people continue to receive the specialist support they need to fulfil their potential.

We are deeply grateful to all the pupils, parents, professionals, and Teachers of the Deaf who generously contributed their time, experiences, and reflections to this project. Your voices have helped to illuminate the often-unseen work of ToDs and will play a vital role in shaping future service provision.

Thank you for your trust, your candour, and your commitment to improving outcomes for deaf children.

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1. Executive summary

In this report we address the issue of a lack of evidence-based studies examining the specific impact of Teachers of Deaf Children and Young People (ToDs) on deaf children's outcomes ranging from 0-25 years of age. A research study was designed to examine the impact of ToDs on deaf children's outcomes, as perceived by ToDs themselves, parents, and collaborating professionals, and as measured by standardised language and literacy assessments, along with other evaluation tools.

Phase 1 focused on gathering insights from parents and professionals who work alongside ToDs, and deaf children and young people themselves from 11- 25 years of age exploring their perceptions of the influence of ToDs' work. Simultaneously, Phase 2 involved i) assessing intervention plans and reviewing recommendations from annual reports for deaf children in their early years between 0-5 years of age and ii) using the value-added assessment model to evaluate the impact of ToDs on deaf children's (5-11 years of age) language outcomes demonstrated by standardised assessments.

This study followed a participatory research approach, where practitioners from one local authority worked with the researchers at every stage of the project, from planning and implementation to analysis and reporting.

Headline conclusions

<u>Understanding and measuring impact</u>

- **Measuring peripatetic ToDs' impact requires holistic frameworks:** Evaluating ToDs' impact across the age range (from early years to 25) needs a combination of different approaches: incorporating stakeholders' perceptions, analysis of records of support and monitoring tools and value-added models whilst taking into consideration children's unique contexts.
- **Theoretical models support understanding of ToD Impact:** The bioecological development model and dual access model (i.e. access to learning/learning to access) provide valuable frameworks for evaluating ToD effectiveness.

Impact of ToDs work in early years:

- **Importance of detailed, consistent records:** High-quality, efficient record-keeping is essential to demonstrate progress and ToDs' impact beyond target-based outcomes.
- **Language support is key:** Targets related to sign language development are more frequently achieved than speech production targets, underpinning the importance of early access to accessible language (signed or spoken).
- **Wider role of ToDs in high-need areas:** ToDs often address broader family and wellbeing needs, especially in deprived contexts, before language and academic goals can be supported.
- **SMART targets enhance progress-monitoring:** The use of SMART targets is closely and clearly related to meeting the targets
- **Evaluating developmental progress:** Tools like 'Success from the Start' demonstrate developmental progress when combined with detailed records of support.

Impact of ToDs work for children aged 5-11 years

- **Increased ToD input positively correlates with greater gains in language and academic performance**

  More frequent and consistent ToD support leads to better performance in language-based standardised tests (i.e. measurable improvements in language development) confirming the value of targeted intervention.
- **ToD impact on language development is clear, measurable, and long-lasting**

  The study demonstrated the effectiveness of ToDs in enhancing deaf children's language outcomes with long-term benefits for academic success and independence.

Impact of ToD work for children 11-25 years of age

- **Direct and demonstrable impact on checking of hearing equipment**: Various professionals and parent perceive ToDs' main role to be the checking of hearing equipment. In addition, ToDs' work directly enhances deaf

children's confidence, wellbeing, identity, advocacy skills and inclusion in school life.

- **ToDs indirectly impact school life through staff training and parental support**
  While mainstream teachers have the most direct influence on language outcomes, ToDs shape children's lives and have an indirect impact on deaf children's outcomes via signposting to resources, staff training and supporting parents enabling those outcomes.
- **Parents view ToDs as trusted partners and key early support figures**
  ToDs are perceived by families as integral to the early communication journey and as part of the extended support network.
- **Children feel supported by ToDs in transition, independence, and self-understanding**
  ToDs help prepare deaf children for school, promoting independence and understanding of their specific needs
- **Leadership within sensory services is crucial to driving positive outcomes**
  Direct effective involvement of service leaders enhances accountability and impact on children's development.
- **Key barriers to ToD impact include lack of stakeholders' deaf awareness**
  ToDs are most effective when there is regular transparent support with parents and other professionals and a good understanding of the ToD's role

Key recommendations

- **Use triangulated approaches**—case studies, value-added models, and stakeholder feedback—to capture ToDs' full impact across diverse contexts.
- **Strengthen ToD leadership to drive systemic change**
  Develop leadership within ToD services to improve accountability, service quality, and visibility of outcomes.

Early Years (0–5): Strengthening ToD Support

- **Standardise and prioritise high-quality record keeping**
  Ensure consistent, efficient documentation to evidence ToDs' full contributions and facilitate collaboration.
- **Prioritise early access to signed and spoken language**
  Emphasize sign language modelling and support to ensure accessible early communication, particularly where speech targets are harder to meet. The study highlighted the critical importance of sign language and early language support, which extends beyond the scope of the ToD role, particularly since the mandatory qualification only requires Level 1 BSL although it is stated that If working with a child who predominantly uses BSL higher level, BSL skills/qualifications will be required (of at least level 3 BSL). Due to limited local authority funding for qualified BSL tutors, this is an issue that requires government intervention to better support deaf children and their families who communicate mainly using BSL.
- **Recognise ToDs' broader role in high-need contexts**
  Ensure that ToDs are supported adequately and effectively in high-need contexts when they need to support family wellbeing, safety, and emotional development before supporting language and language-related outcomes.
- **Use SMART targets for effective progress-monitoring**
  Ensure all goals are specific, measurable, achievable, relevant, and time-bound to drive meaningful intervention.
- **Combine monitoring tools for richer insight**
  Use tools like *Success from the Start* alongside support records to track developmental progress and evaluate ToDs' impact holistically.

Children Aged 5–11: Enhancing Language and Learning Outcomes

- **Maximize ToD involvement to enhance language development**
  Provide regular, targeted ToD support to improve deaf children's language outcomes
- **Ensure consistent and frequent ToD support where needed**

Prioritise early and sustained ToD input to promote later autonomy and reduced support needs.

Children and Young People Aged 11–25

- **Acknowledge ToD's direct impact and raise awareness of their role**: Acknowledge that ToDs make a direct impact not only on the listening environment but also on advocacy, confidence and wellbeing, independence, identity and academic progress of deaf children and young people.
- **Acknowledge ToDs' indirect impact through capacity building** Equip teachers and parents via ToD training and consultation to enable inclusive and accessible learning environments.
- **Increase visit frequency and multi-agency engagement** Facilitate more regular ToD contact and collaboration meetings to improve coordination and outcomes.
- **Improve Deaf Awareness among stakeholders** Provide targeted training for educators and professionals to better understand and support deaf children.

2. Introduction

The University of Birmingham has undertaken an evaluation of peripatetic Teachers of Deaf Children and Young People (ToDs) on deaf children's outcomes with a participatory research approach employing mixed methods.

The Consortium of Research in Deaf Education report for England (CRIDE, 2024) reported a total number of 46,933 deaf children in England. Deaf children have the potential to achieve at the same level as their hearing peers given the right support to access the curriculum. However, limited auditory input can present challenges in language acquisition and communication, which in turn can affect cognitive and social-emotional development, and this may impede learning as in literacy for example (Knoors and Marschark, 2014). Deaf children are a very heterogeneous group with a range of needs including the level of hearing loss, type of amplification, permanency, mode of communication and the age of diagnosis.

Central to the access to learning for deaf children is the type of communication they use. Thus, 87% of deaf children communicate using spoken English only in school or other education settings and 10% use sign language in some form, either on its own or alongside another language. Closely related to the type of communication is the type of education setting. Thus, children whose preferred method of communication is oral are mainly educated in mainstream schools whereas children who prefer to communicate using signs usually attend special schools. Around 78% of school-aged deaf children attend mainstream schools with about 787 peripatetic ToDs employed by local authorities (LAs) to support their learning.

The role of peripatetic ToD

Peripatetic ToDs are qualified specialist teachers who provide targeted support to deaf children and young people across a range of settings, rather than being based in one classroom or school. The term "peripatetic" means that they travel between mainstream schools, early years settings, special schools, and homes to offer direct teaching, advisory, and consultative services. In 2023, the Department for Education (DfE) in England released updated guidance outlining the requirements for the

Mandatory Qualification (MQ) for specialist teachers of children and young people with hearing impairment (HI).
https://assets.publishing.service.gov.uk/media/63ff5e168fa8f527fe30db7f/Spec_for_mandatory_quals_hearing_impairments_from_Sept_2023.pdf
According to the revised MQ standards, Teachers of the Deaf must maintain up-to-date knowledge of legislation and best practices, applying these across diverse educational settings for learners aged 0–25. They serve as role models, holding high expectations and using research to design and evaluate tailored interventions. Collaboration with families and professionals is essential to support the learner's educational, social, and emotional development. ToDs understand the critical role of language—both spoken and signed—in cognitive and social growth and provide continuous, family-centred support. They are skilled in managing hearing technologies and interpreting audiological assessments, helping learners and families develop independence. Understanding the cognitive impact of deafness, including coexisting conditions, ToDs optimise learning environments accordingly. They foster emotional resilience and social development through supportive, inclusive teaching strategies adapted to varied contexts, always with high expectations. Regular, ethical assessments guide individualised support and accommodations, ensuring learners' progress and equitable access to education.

Teachers entering posts that involve dedicated work with children and young people who are deaf or have a hearing loss—whether in mainstream schools, specialist units, or peripatetic roles—must already hold Qualified Teacher Status (QTS) or Qualified Teacher Learning and Skills (QTLS). Once appointed, they are expected to undertake and complete the Mandatory Qualification within three years. This ensures they develop the expertise needed to provide high-quality, personalised education and support. The MQ is typically delivered as a postgraduate-level programme over two academic years. The training is offered by several approved higher education institutions with the University of Birmingham being currently the largest course provider.

The MQ equips teachers with a robust understanding of audiology, language development, and the educational implications of hearing loss. It also covers practical knowledge, such as how to use and manage hearing technologies (like

hearing aids and cochlear implants), how to assess communication and cognitive needs, and how to adapt teaching strategies to suit individual learners. Teachers are also trained to support a range of communication modes, including spoken language, British Sign Language (BSL) Level 1, and total communication approaches. A key emphasis in the training is placed on multi-agency working, recognising that the educational success and well-being of deaf children depend on strong collaboration between teachers, families, audiologists, speech and language therapists, and other professionals. The programme also supports teachers in fostering inclusion, emotional well-being, and academic achievement for children with hearing impairments.

Research shows that early and consistent input from ToDs leads to significant gains in language development and literacy skills. (Harris & Terlektsi, 2011). ToDs facilitate meaningful inclusion in mainstream settings by adapting the learning environment and fostering deaf awareness among staff and peers (Foster & Cue, 2009). Despite evidence that children in mainstream schools require specialist support throughout their time at school (Harris & Terlektsi, 2011) and that peripatetic ToDs can support development of effective school strategies for social inclusion and social functioning of deaf children (Terlektsi et al., 2019), evidence-based research on the impact of those specialist teachers on children's deaf children's language, communication and social skills, and educational attainment is scarce.

3. Research study

A research study was set up to explore the impact of ToDs' work on deaf children's outcomes as perceived by ToDs themselves, parents and collaborating professionals and as measured by standardised language, literacy tests and other measures. Phase 1 focuses on the perceptions of parents and professionals working with ToDs regarding the impact that ToDs have on deaf children's outcomes. In parallel, phase 2 focuses on evaluation of intervention plans and annual report recommendations for deaf children in early years.

This was a participatory research programme where practitioners (including ToDs, mainstream teachers and Special Educational Needs Coordinators (SENCos)), parents and deaf pupils were working together with researchers across all stages of the project for the production of research (i.e. planning, delivery, analysis, writing up). Given the paucity of research on the topic and on the best methodology to explore such a complicated issue, we consider this project as pilot in nature and as a result we focused on the work of one local authority, Sandwell. Sandwell is located within the heart of the West Midlands and comprises of six towns. Sandwell Council is one of the seven local authorities which are part of the West Midlands Combined Authority (WMCA).

As of the 2021 Census, Sandwell's population stands at 341,900, marking an 11.0% increase from 308,100 in 2011. https://www.ons.gov.uk/census. This growth rate surpasses both the national average (6.6%) and the West Midlands average. In 2021, 48% of Sandwell's residents identified as belonging to Black, Asian, or Minority Ethnic (BAME) groups, a significant rise from 34% in 2011. This is notably higher than the national average of 26%.

The borough hosts substantial communities from various ethnic backgrounds, including:

- Indian: Approximately 23,500 residents (6.9%) Office for National Statistics
- Pakistani: Around 7,700 residents (2.3%) Office for National Statistics
- Sikh: The largest Sikh community in England, numbering over 39,000 (11.5% of the population).

Sandwell has been officially recognised as a Council of Sanctuary by the City of Sanctuary movement. This designation reflects the borough's dedication to providing a welcoming environment for asylum seekers, refugees, and migrants. The Sandwell Borough of Sanctuary Strategy outlines a collaborative approach between the council, local community groups, and residents to ensure that individuals seeking sanctuary can thrive safely, access essential services, and integrate into the community. https://consultationhub.sandwell.gov.uk/housing/sandwell-sanctuary-strategy

Sandwell ranks as the 12th most deprived local authority out of 317 in England, according to the 2019 Index of Multiple Deprivation. This ranking reflects challenges in income, employment, education, health, crime, and housing. A record number of pupils were eligible to receive free school meals in Sandwell in 2023. As of January 2023, approximately 19,814 pupils in Sandwell were eligible for Free School Meals (FSM), representing 31.7% of all pupils in the area.

Regarding Pupil Premium, while specific numbers for Sandwell are not readily available, individual schools provide insight into eligibility rates. For example, Sandwell Community School reports that 74.71% of its pupils are eligible for Pupil Premium.

At the time of the present study, the Sensory Support Team in Sandwell supported 355 deaf pupils with 5.6 qualified ToDs (QToDs), including the Lead Teacher of the Deaf, an Early Years Practitioner and 1 Audiology Technician. The team supports deaf children and young people with mild through to profound hearing losses including conductive, unilateral and temporary hearing losses from 0-25 years. Within this caseload, 194 deaf learners are currently known to be eligible to receive Pupil Premium.

This project aimed to address the following research questions:

- How can the perceived and objective impact of peripatetic ToD's work on deaf children's outcomes be evaluated?
- How do parents and mainstream teachers of deaf children, SENCos, deaf children, and peripatetic ToDs themselves perceive the impact that ToDs have on deaf children's outcomes?
- How successfully are the targets in deaf children's annual reports and recommendations met as evidenced by the support put in place by peripatetic ToDs?
- What is the impact that peripatetic ToDs have on deaf children's outcomes as measured by standardised language and literacy tests?

- What is the impact that peripatetic ToDs have on deaf children visited on a weekly/ fortnightly basis and on children monitored termly/ yearly as measured by the evaluation of the intervention plans and the annual report recommendations respectively?

3.1 Phase 1: Focus Groups, Questionnaires and interviews

The first phase aimed to answer the first research question by exploring how peripatetic ToDs, mainstream teachers working with them, SENCos, parents of deaf children and deaf children themselves perceive the impact that the different aspects of the ToD role (i.e specialist assessments, direct and indirect teaching, working with families and collaboration with mainstream teachers) has on perceived children's outcomes.

3.1.1 Focus groups

To assist with the development of the questionnaire and to ensure that the questions are relevant and meeting the aims of this phase of the study, focus groups with the relevant groups of people took place online via Zoom between November 2022 and May 2023 and were recorded. Fiona Patterson and her team identified the individuals and sent the relevant info letters and consent forms. Individuals willing to take part in this phase of the study got in touch via email with the research assistant. Our initial intention was to hold five focus groups with four participants in each (i.e. ToDs, parents, deaf pupils from Key stage 3 and above, mainstream teachers and SENCos).

However, recruitment of SENCos and deaf children themselves proved extremely difficult and reduced numbers were included in those focus groups. We did not manage to recruit any mainstream teachers for the focus groups. Thus, the following focus groups took place:

- A focus group with all six peripatetic ToDs and the Early Years Practitioner in Sandwell Local Authority (December 2022)

- A focus group with two parents of deaf children to get perspectives of parents of children with a range of age and needs (November 2022)
- A focus group with one SENCo working with ToDs having 2 children with hearing aids and 3 with cochlear implants in her school (November 2022)
- A focus group with one deaf female aged 23, two 13-year-old males to reflect on both the primary, secondary and further education experience (May 2023).

All transcripts from the focus group interviews as produced via Zoom were analysed thematically to identify the main themes that would be used to develop the questionnaires. Thematic analysis was used to identify, analyse, and report themes within data following six steps: (a) familiarisation with the data, (b) generation of initial codes, (c) search for themes, (d) review of themes, (e) defining and naming themes, and (f) report writing (Braun & Clarke, 2021).

3.1.2 Questionnaires

Following the findings of the focus groups (presented in section 3.1.1 above) online questionnaires for each of participant cohort including both close and open-ended questions were developed. Given that the focus groups took place in different times during the academic year 2022-2023, questionnaires of the different participant cohort were developed at different time points. The aim of the questionnaires was to explore the perceived impact that ToDs have on deaf children's outcomes which can then be further explored in depth using interviews. Questionnaires were designed using Microsoft Forms, a widely used programme to design questionnaires in schools. To ensure that digital exclusion is avoided, Fiona Patterson and her team ensured that parents and children were supported to access the questionnaire (without having any influence or input in its completion). Our initial intention was to collect questionnaires from:

- all six peripatetic ToDs, plus the Early Years Practitioner
- 30 children (aged 11- 25) that those ToDs support,
- 30 parents of deaf children aged 11-25
- 30 SENCos
- 30 from mainstream teachers who support deaf children in their classroom.

However, the data collected from the focus group with all the ToDs taking part was comprehensive and provided detailed information which could be further explored using interviews. Thus, a decision was made by the research team to not distribute a questionnaire to the ToDs. In addition, after the analysis of the transcription of the focus group with the deaf young people, it became clear that the support that deaf children aged between 11-15 get and the impact that this support has on these children's educational and wider outcomes is distinctively different from the support that deaf children aged 16 and above get. Thus, a decision was made to design two questionnaires for deaf young people: one for children aged 11-15 and one for children aged 16 and above.

The links to the questionnaires can be found here:
Parental questionnaire: https://forms.office.com/e/5YnzcTQKGe
Mainstream teachers: https://forms.office.com/e/xu7A99RWCb
SENCO questionnaire: https://forms.office.com/e/fqhf5ETwB7
Young people's questionnaire 11-15 years: https://forms.office.com/e/D7rnXs8WuW
Questionnaire 16+ years: https://forms.office.com/e/LN8WHvgSjj

2.1.2.1 Piloting of the questionnaires

One person for each participant cohort (i.e. parents, deaf children, SENCos, mainstream teachers) outside the Sandwell Local Authority, was asked to give feedback on the following aspects of the questionnaire prior to the release of the actual survey:

- Mistakes - Typos/missing words/repeated words
- Do the questions make sense?/Is the meaning clear?
- Can you give the answer you want to?
- Can you move through the questionnaire OK?
- Which questions are easy, which are difficult?
- Any thoughts/observations you have as you go through?
- How long does it take you to complete?

A parent of two deaf children—one in primary and one in secondary school—took part in the pilot study to test the parental questionnaire.

3.1.3 Interviews

The second part of the Phase 1 drew on the results of the first phase. Participants indicating good practice in the questionnaire, covering a range of educational approaches and different roles of a peripatetic ToD were selected to take part in online semi-structured interviews. Our intention was to interview a total of 30 participants - six from each of the five participants' group (ToDs, SENCos, parents, mainstream teachers and pupils). However, given time and work constraints of the participants this was not possible and a total of 11 interviews (i.e. seven interviews with the ToDs, three with parents and 1 with a SENCo) took place. Interviews took place online via Zoom, recorded and the Zoom transcription was used for analysing the data thematically (as per the thematic analysis of the focus groups interviews).

3.2 Phase 2: Evaluation of the intervention plans and the impact of the ToDs on student outcomes

This phase aimed to answer the research questions about the impact that peripatetic ToDs have on children's outcomes as measured by standardised assessments, annual reports and intervention plans. Given the pilot nature of the project and the importance of the early intervention for the development and future outcomes for deaf children and the huge impact that ToDs can have during these first years of children's life, this phase of the study focused on Early Years (children from 0-5 years of age) and followed a multiple case study design. Children between 0-5 years of age seen at home and/or at nursery - including children with additional to deafness needs - were selected using simple random sampling by Fiona Patterson and her team.

3.2.1 Evaluation of outcomes for children seen weekly/fortnightly

For children seen in the nursery environment who have annual reports and intervention plans, we were evaluating the targets set in the annual review process against the support and intervention plans put in place by the peripatetic ToDs.

For children who were seen in the home environment and for whom there were no intervention plans, we used the Success from the Start assessment and **RAG** rated

the progress (**R**-red/ not achieved, **A**- amber/ working on it, and **G**- green/ achieved) to track progress.

For each pupil on an intervention plan (i.e. a plan might cover a number of different targets), the following data were collected by the ToDs:

- Baseline data: nursery data on how the student performs on the specific skills/ tasks for which the intervention plan/ targets were put in. We used the Wellcomm Early Years assessment (the complete speech and language toolkit) which is only used in the nursery or school setting not the home and employs the RAG traffic system. For children seen in home environment we used Success from the Start and the Clinical Evaluation of Language Fundamentals (CELF-5) assessment.
- Progress data captured in a pre-populated form indicating the progress the learner is making each time is seen by the ToD, including the ToD's reflection on the reported progress.
- End point assessment data: data collected at the end of the intervention plan / targets using the same method of evaluation as in the collection of the baseline data.
- ToDs reflective journal: reflection on the successes, limitations and unforeseen elements of the intervention plan and the targets set.
- Data from the parents and or nursery etc: reflection on the involvement of key people other than the ToD on the implementation of the intervention plan and the progress of the child.

For children seen termly, the recommendations included in the annual report are evaluated termly. We also RAG rated the recommendations given to draw conclusions as to whether advice was taken into consideration, recommendations were achieved, and progress was made. Again, data evidencing the progress of the children and any reflections from the people (parents/nursey staff etc) directly involved with the child were collected and analysed using descriptive statistics and correlations.

3.2.2 Value added assessment model

One of the most used systems to evaluate mainstream teachers' effectiveness is the value-added assessment system, based on the notion that differential teacher effectiveness is a strong determinant of differences in student learning (Darling-Hammond, & Post 2000). The value-added assessment model treats student prior achievement (i.e., previous years' test scores) as a "blocking" variable intended to statistically adjust for differences in preparedness for instruction. The rationale is that "the child serves as his or her own 'control'" (Kupermintz, 2003). Information on children's and school background (e.g. support received in the classroom etc) were collected and taken into consideration in the analysis.

Since outcome evaluations (discussed in 3.2.1) focused only on Early Years children seen weekly, fortnightly, or termly, primary-aged children (5–11 years) were selected for the value assessment model. However, given the tight timeframe of the study, we employed simple random sampling to recruit 30 deaf children of primary school age from the caseloads of the six ToDs in Sandwell. We performed a year-on-year analysis using the value added model for those children using the following standardised assessments conducted by ToDs: APT assessment, Assessment of Comprehension and expression (ACE), the Test of Reception of Grammar (TROG), CELF 5 and the British Picture Vocabulary Scale (BPVS). The data for this analysis were collected for the Year 2023-24.

3.3 Ethics

The study has been approved by the University of Birmingham, Research Ethics Committee- ERN_22-0376. The participants for phase 1 were identified and recruited by Fiona Patterson. The information letters and consent forms were distributed via emails to the identified participants by the Sandwell Hearing Support Team. Participants interested in participating in the focus group interviews contacted the research office to get more information about their participation and to arrange a suitable time for the focus group interviews. Once the questionnaires were designed, a link to the online questionnaire was send by the Sandwell sensory team to all suitable participants. Participants who wished to take part in the interviews, completed their details at the end of the questionnaire and were contacted by the

research assistant to arrange a convenient day and time for the Zoom interviews to take place.

For the phase 2 of the study children were randomly identified by Fiona Patterson and information letters and consent forms were also sent to their parents to consent for their data to be collected and send to the research team for analysis.

4. Findings: Phase 1

4.1 Focus groups

The qualitative analysis of the focus groups resulted in four themes and 14 subthemes

Themes	Subthemes
The role of the ToD	Part of the family now Advice on listening environment Providing training
Collaboration work	Collaboration with parents Collaborative work with other professionals
Impact	Optimise listening Advocacy for deaf children Building of children's confidence Independence Identity Learning progress
Barriers to ToD's work	Being open and accept ToD's advice Time barriers Everything is perfect

The role of the ToD

This theme relates to the role and its different aspects as perceived by the deaf children, their parents, the SENCo and the ToDs themselves.

Part of the family now

A positive and very close relationship between the ToDs and the parents was described by the latter referring to the ToD supporting their children as part of their family.

The parents described a positive role of the ToD. They discussed the role that they played in terms of supporting the parents going through the shock of diagnosis. The ToD was described as the person who supported the parents from the first day of the diagnosis when parents were unsure on how to procced and what to feel:

‘‘Back in eight years, when [child’s name] was born. We are this hearing family, both me and my husband coming from hearing families. So just er and find out that our child is profoundly deaf child, you know that was a lot of shock, and that that just can be those of emotional breakdowns and everything. So my first meeting with the Teacher of the Deaf was [name of ToD] back in the days she came from the Sandwell Sensory Support so honestly she found me in the pieces”.

The importance of communication and partnership with parents and supporting the family from the very early days when a child is born deaf was also mentioned by the ToDs themselves. Establishing early good, trustworthy relationships was recognised by the ToDs themselves as one of the key roles of their work:

“*I think one of my key things that I've thought about is supporting parents at diagnosis so within that 48 hours after we get to that call from audiology, really going in and just providing that support. And be that listening ear through that grieving process for some of our parents*.”

The early relationship that the ToDs develop with the family contributes to a “nice team approach”. The trust the ToD builds with the family and how this can be a starting point for the work of other professions was also mentioned by the SENCos:

“The ToD was with the family since identification and because she's in so regularly, and has got such good relationships with the families as well, when obviously they join us, and it's like a very nice team approach for the family that it's quite emotive for, you know, for the families to trust us to look after their child.”

Advice on listening environment

Checking of the children’s listening equipment and providing advice on listening environments was a key point identified in all four focus groups.

The deaf learners stated that the ToD was the person responsible for checking that their equipment was working by providing visual but also checks using test boxes.

“Primary, they used to check my hearing aids over. I had different radio aids. So when I was at primary school, I had a little box with a wire coming out of it and they had to keep checking if the microphone is actually working. It's like you know, when you have an insurance check. No, we checked all that over. Make sure the hearing aid was working.”

The technical knowledge of equipment that only the ToD has and the importance of supporting the child’s listening environment was stated by the SENCos as one of the main aspects of the ToD’s role and their main expertise:

“She's also fantastic in the way that if we see if we seek support from her that we need immediate support, it may be equipment's been failing…. Obviously we wouldn't know how to deal with that so she's easily approachable.”

A major aspect regarding the children’s amplification is not only checking and fixing their equipment and ensuring that their listening environment is optimal but also is to support children to wear their hearing aids. As the ToDs mention this can be a big part of their role:

“I find a lot of my own little ones while they’re here are reluctant to wear their hearing aids or CIs [cochlear implants] and a lot of that is supporting that as well. How can we encourage them to wear their hearing devices?”

Parents also commented on the immediate and positive response to their children’s needs by their ToDs regarding equipment failure. In this aspect of the ToD’s role, parents also stressed that they had a negative experience regarding support when in a different authority. However, they commented highly on the positive and immediate support of the ToDs in Sandwell authority:

"[Name of Teacher of the Deaf], she took over when he was in Year 2. So about 2 years ago. So since then it's been absolutely positive, consistent, and [ToD]'s been…. we've been able to communicate with her. I mean, if I sent [ToD] and an email she respond back to me within 24 hours. If there's any problems with the hearing aids, [ToD} attends school the following day if possible, to fix the hearing aids and she's been… It's been very positive since we've moved to Sandwell."

Providing training

Another key role of the ToDs' work is to provide school training and training for parents as well. During the interviews the ToDs listed some of the aspect of the types of training that they deliver as part of their role:

"So whether that's the individual teachers in cluster, whether that's · Supporting parents at diagnosis · Joint working with audiology · 'listening ear' in grieving process · Providing school training – individuals or groups · Whole school DA whole school deaf awareness training or as well, whether that's whole class deaf awareness training, so providing that for the pupils themselves in the class or assemblies, whatever that might look like."

The recognition of the key role of the ToDs as being the main professionals knowing the children, being the experts in equipment and supporting deaf children's hearing is also recognised by the SENCo. They also mentioned that ToDs provide training to staff and they bring this expertise in the school:

"*The Teacher of the Deaf brings, is that expertise, and that training for the staff, so that, because for some of these children you might think oh, they're absolutely fine, like, you know, not… not a problem in the world, they're getting on, they've got their hearing aid. It's fine, but actually she reminds the staff and grounds the staff sometimes that just to… to remember that, you know, we might just need to give that additional pre teaching, or we might need to give them some additional prep beforehand or support in the lesson."*

Collaboration work

Working in collaboration with parents and other professionals having the deaf child in the centre is one of the key roles of the ToD as identified by all focus groups.

Collaboration with parents

The importance of positive collaboration of the ToDs with the school was highlighted by the parents in relation to the work regarding children's independence that the ToD is doing with the school staff:

"It's [name of ToD] work because I am not in school. So that is the school working with the Teacher of the Deaf, you know. Yeah, so and it's independence, you know, an ability to do it, you know, and it's not my work. It's work of Teacher of the Deaf because she is cooperating in school."

The positive collaboration that the ToD has built with families was also mentioned by the SENCo who shared the opinion that although they collaborate with a number of professionals and they can evaluate how those professionals work with parents, the ToDs tend to build positive relationships with parents and have the best collaboration with them:

"*That out of all the external professions that we have, the Teacher of the Deaf has the best collaboration with families, because I think you know...they are with them from birth more or less in some cases."*

Collaborative work with other professionals

The importance of establishing good relationships and collaboration with other professionals was mentioned by the ToDs. The collaboration work of ToDs with other professionals is particularly relevant and demonstrable in annual reviews and setting of targets for the children.

As the SENCo commented during the focus groups, the collaboration of the ToDs with them is particularly prominent regarding the development of Education, Health and Care plans (EHCP):

"*And I also appreciate the collaboration when we're creating an EHCP request. And so for many of the children who [name of ToD] works with, they do require an assessment for an EHCP and she will help support the school*."

Working with ToDs though transitions and supporting the family and the children through difficult circumstances and anxiety was one of the main positive experiences of collaboration shared by SENCOs and ToDs. As A SENCO identified:

"[Name of ToD] worked really closely doing a transition package between home and the boy and school, and I can safely say he's one of the happiest children we've ever experienced and I think it really was down."

Impact

Participants in all focus groups discussed about the impact that the ToDs have on different aspects of deaf children's and families lives and how this impact can be evidenced or measured**.**

Optimise listening

The deaf children described how the ToD would work with school staff to ensure that they were learning and interacting in an optimal listening environment. The learners gave several examples of how the ToDs would work with school staff so that the background noise would be decreased and that deaf children would have better access to sounds. Apart from checking that the children's amplification is working, the ToD would work with the class teacher on placing the deaf students in the best possible place in the classroom to ensure that they can hear better. For instance, as this 13 year old boy says:

"*So during PE, especially in halls, when the teacher's voice echoes, the Teacher of the Deaf would speak with the teacher in order to help me with understanding the PE teacher*."

The ToDs themselves described the impact they are having on ensuring that deaf children's amplification is working to the optimum and the hearing loss does not hinder their learning or causing any other difficulties.

"*We do a big focus in the spring term just ensuring that their hearing losses aren't causing any significant issues with their mental health and well-being and I'd written down things like 'practical advice', 'looking at acoustics in nursery' seems to be one of the biggest ones I've been doing this term.*"

The huge impact that the ToDs' work is having on children's outcomes is evidenced by the deaf learner's words:

"I know I would struggle a lot, and I think I wouldn't be able to do the things I would have done without them [ToDs] now because they gave me more, more more confidence with my hearing, more confidence in myself as a person. … Checking, more reassurance for checking my hearing aids, radio aids everything."

The ToDs are the experts on deaf children's equipment and parents commented on the impact that they have particularly on advising the children to use radio aids.

"[Name of ToD] suggested the radio aid, and which in regards to measuring the difference, it's completely different. Teachers will say, you know K is actually understanding now. He's able to answer questions confidently, and is able to reiterate what teachers said, even in assemblies, and even if they're not able to position him in the right position at the front of the assembly, where, no matter where he is, because he has the radio aid, he is able to hear. That's been a big impact in regards to him learning and even strategies that [Name of ToD] will have a conversation and say, 'Oh, you know, C, you do need wear your hearing aids because it would help in at school.' "

Advocacy for deaf children

During the focus group interview, the deaf learners themselves discussed the impact that the ToD was having on their lives regarding the better access they have in learning because of the advocacy work that the ToD is doing. One of the main types

of impact that the ToDs are having on the deaf children's lives is being an advocate for them as the 13-year-old boy states:

"*So one time I was in class, and then the teacher was telling me off because I was talking. But I wasn't talking for a bad reason. I was asking my friend what the teacher was saying. Next time my Teacher of the Deaf saw me I said I had a problem that I couldn't hear. And then she told me that she told the teacher that I have the hearing impairment. And then that's when I started to like.. the Teacher of the Deaf coming more regularly, and that's when I was starting moving to the front so I can hear better*."

Building of children's confidence

Two of the learners in the focus group discussed how the ToD worked with them when they had little confidence, and they were feeling isolated in the hearing world. Feelings of insecurity were commonly reported by them. The ToD would work with the children to make them feel special and good about their hearing aids and assistive learning devices and thus slowly build their confidence in themselves. As the 23 year old former learner says:

"When I was at school, I was being a bit more insecure about my hearing aids …affected me more because I was like 'I can't hear like I'm not like other hearing people' and my Teacher of the Deaf was reassuring me, and motivating me more, saying, 'No, you can. Well, you've got special powers.' That was trying to like help me like, make me more happy about it. We got special powers. It's like…And they said to me the once, 'You're like work in the Secret Service because with the radio aid, you can only hear like, if they walked out the classroom, you can only hear. The other people can't hear that'. (Laughs) Which made me like I was in the Secret Service that way which made me more like, 'Oh, just they accept my hearing loss then'. And now I'm more confident in everyone. I just want to raise awareness and encourage other young people."

ToDs also spoke about the impact of their work on children's confidence and how supporting deaf children to be independent users of their equipment helps them to

have more confidence to speak up to adults and ensuring that they have better access to sounds:

"And I just love hearing when pupils go and tell teachers off. You know, I had an example of ….some….. a young girl in an assembly. She went up to the head teacher, you know, 'Can you use this properly? Can you actually mute it? Can you do this and that?' And you know, really having that confidence to go and speak to, not only their known secure members of staff, but you know very senior members of staff and they're seeing what they need to, and I'm just so proud of them."

The parents commented on the huge impact that the ToD is having on supporting deaf children to have confidence to speak up about their needs and to function as independent learners:

"Lots and lots of deaf awareness, you know, like provided by [Name of the ToD], my Teacher of the Deaf to staff to children in the classroom, to whole school, you know, and that's how the confidence in my children is building up, you know, and they're able to play independently, speak for them independently. They aren't shy. They know when they need to say if they can't hear, they are able to switch the batteries, you know, when you know, switch the batteries, you know for example, because the radio it is powerful isn't it, and it's drained the power, the backpack, you know. So they are doing able to be confidently also to put the receivers on, you know. So she is empowering them."

According to the parents, the biggest impact that the ToD is having on deaf children's lives is the building of confidence, enabling the children to understand their hearing loss and how they can manage it. As a parent pointed out during the focus group interviews:

"*What is the biggest impact? It's just the building the confidence. You know that. Yes, I am different. Yes, I've got a hearing loss. That's what it is, that's what I need like, like hearing aids for you. For me it's a cochlear implant."*

Independence

One of the major impacts that the ToDs are having as illustrated by the deaf young people themselves was how the ToD would prepare them for adult life to become independent learners and adults without having to depend on other adults. Giving them the tools and enable them to understand what deaf children themselves need to function independently was one of the main types of impact as identified by the young people themselves:

"Yeah, so it's going to like, prepare me for life to be independent and mature in life as well. In college I started having a Roger Pen. And then my Teacher of the Deaf is trying to make me feel like an adult, not like pestering me all the while, so I'll just go to them if I needed like batteries, tubing, anything really, or advice yeah, so it's going to like, prepare me for life to be independent and mature in life as well."

The ToDs also confirmed the children's reflection on becoming independent and being able to use and manage their equipment, being able to use their radio aids.

Identity

The ToDs spoke about the impact that they were having on enabling the deaf children to understand about their deafness, what it means to be deaf and about their identity, explaining to them how their ear works and what their audiogram is. This means that they enable the children to better understand themselves and to build a positive identity:

"*When we talk to them about their audiogram and we sit and we draw the ear, we talk about why have you got hearing loss and we explain all those things, that has such a profound impact. The children love it because no one explains to them why they're deaf. No one explains to them why their ears don't work and I think it's such an important thing, and I think when you explain that to them, and you keep revisiting it. And you can see that they understand, and they can understand their audiogram and why they can't hear, and I think that has a really big impac*t."

Learning progress

The impact that the ToDs are having on children's' learning is reflective on the progress that deaf children are making evidenced by meeting their targets

and working closely with staff. The SENCo identified that the progress of the children is very well evidenced and defined as the ToD would set the targets and then is the same person who is responsible for monitoring, assessing and reporting the children's progress based on the specific targets:

"*When she's [ToD] been to see them, so she'll see them, and she'll probably do assessments at least termly. And then we receive a report from those assessments that she's done with that child, and to give us outcomes and targets for that specific timeframe*."

The ToDs themselves stated that children's progress can be evidenced by setting the targets and assessing them against those. They discussed about several assessment measures they use to evaluate children's progress. The assessment that is commonly used by them is Success from the Start:

"*We have Success from the Start so where we highlight where the children are at, and how they make progress. So I suppose you could measure it quite easily with that. They couldn't do that. Look this in pink they can do it now, and so less…"*

The importance of the ToDs' work on children's progress and the invaluable impact that they are having on deaf children's learning is evidenced by the SENCo's words:

"The Teacher of the Deaf team is vital, so I guess for me … the measuring of impact is the impact it's having on the children. Now do I personally feel that without that person designated, and for that role we'd have some children not making the progress, that they could not reach in their potential?"

Parents have also identified the fact that children are learning and are making progress as the biggest impact that the ToDs have in their lives:

"*I think the most important outcome is the learning, is able to learn and understand effectively. That's… that's the most, because that's, that's the key. And you know, the Teacher of the Deaf is involved in the child's school life."*

Barriers to ToDs' work

During all focus groups, the participants discussed the barriers that they face in the ToDs' work and how these barriers can affect the outcomes for deaf children's lives and the impact that ToDs have on the children's lives.

Being open and accepting ToDs' advice

One of the barriers in the work of the ToDs as identified by the SENCos is the fact that the child and the parents are not always positive and open to their advice and in some situations it might take a long time until they become responsive:

"*It wasn't until that she was in high school that that became a big barrier. So the child was not responding to the suggestions and then obviously the family also weren't very responsive to [Name of ToD] support*."

When families are reluctant to support their deaf children and there is no proper use of the equipment, this is a huge barrier for the work of the ToD. Children can only make progress when they can have good access to sound by using their equipment consistently:

"*You know, there so much of our job that this is a barrier, if they're not wearing the technology that could give them that much better access. And that starts with families, and being, you know, supporting that role and trying to make it a positive thing rather than a negative and that's at all ages, whether it's our preschoolers, late diagnosis, or teenagers that are rejected. Technology rejections, a huge negative."*

Time barriers

One of the main barriers in the work of the ToDs and the potential effect that this can have as identified by the SENCo is the lack of time related to the demanding workloads of ToDs. Closely related to time and being able to do things in a timely and effective manner is the difficulties with processes as identified by the ToDs themselves.

Everything is perfect

The three deaf learners in the focus group interviews identified no barriers to the ToDs works and no need for any improvements to the service they offer. They would not like to change anything in their ToD work as they have the best possible experience:

“I would never change anything because all the sessions I had was very helpful, and the way they tried to help me the best that I can. Even though they didn't know the answers themselves, they would try and go back to the office. So you know refer me to, not refer me, but like for what is it? Put me? Guide me to, and a website, or yeah book or something. They… they always try and give you an answer, even though they can't give you the answer themselves. They always try and find out for you as well.”

4.2 Questionnaire

A total of 77 participants from Sandwell Local Authority replied to the online questionnaire from October 2023 to June 2024.

Groups		**Participants (%) N= 77**
Parents	Mother	27 (35%)
	Father	3 (4%)
SENCo		19 (25%)
Deaf Children and young people	Children 9-15 years	16 (21%)
	Post 16	2 (3%)
Teacher/ TA		10 (13%)

Each group of participants (i.e. parents, SENCOs and teachers/teaching assistants (TAs)) were asked to have one child in mind and respond to the survey with this child in mind. Eighteen children and young people themselves replied to the survey.

The intention was to recruit a total of 120 participants, 30 from each of the groups displayed in the table. The aim was achieved for the parent group, but it was not possible to recruit an equal number of participants in the other groups. Despite working in collaboration with Sandwell as co-researchers and despite the efforts of the Lead ToD it was not possible to recruit the same number of SENCos, children and teachers.

Demographic characteristics for each group of participants are presented below.

Demographic characteristics for parents

Characteristics		Participants (%) N= 30
Number of deaf children in the family	One	26 (87%)
	More than one	4 (13%)
Hearing status of the parents	Hearing	21 (70%)
	Hard of hearing	5 (17%)
	Deaf	4 (13%)
First language spoken at home	English	28 (83%)
	Other	2 (7%)
Ethnic group	Asian or Black British	9 (30%)
	Black, Black British, Caribbean or African	2 (10%)
	Mixed or multiple ethnic group	1 (3%)
	White	17 (56%)

A total of 30 parents took part in the questionnaire. Most of the parents (23, 74%) were hearing whereas only eight (26%) were deaf or hard of hearing.

Demographic characteristics for SENCOs

Characteristics		Participants (%) N= 19
Number of deaf children you work with	One	3 (16%)
	More than one	16 (84%)
Professional Qualifications	Teaching Qualification (e.g. QTS, QTLS)	11(60%)

	SENCo qualification (e.g. National Award)	8 (42%)
Years of experience	Less than 2 years	3 (16%)
	More than 2 years	16 (84%)
Training received to teach deaf learners	No	12(63%)
	Yes	7 (37%)

A total of 19 SENCos took part in the survey. All SENCos were teaching in primary schools. Only 8 (42%) had a SENCo qualification with the majority (84%) having more than 2 years' experience. They reported results for 11 male deaf students (58%) and 8 females (42%) they work with. From these 19 children only 3 (16%) have a severe to propound hearing loss, 9 had two hearing aids whereas 4 had no aids. No additional device is used by 7 (37%) of those children.

Demographic characteristics of mainstream teachers

Characteristics		**Participants (%) N= 10**
Number of deaf children you work with	One	7 (70%)
	More than one	3 (30%)
Professional Qualifications	Teaching Qualification (e.g. QTS, QTLS)	7 (70%)
	SENCo qualification (e.g. National Award)	3 (30%)
Years of experience	More than 2 years	10 (100%)
Training received to teach deaf learners	No	3 (30%)
	Yes	7 (70%)

A sample of 18 children and young people also participated to the survey.

Those who took part in the survey themselves but also those who the parents, SENCOs and teachers focused on are presented below

Child's characteristics	**N (%)**	
Child's gender	Male	44 (57%)
	Female	33 (43%)
Hearing loss	Mild to moderate	32 (42%)
	Moderate to severe	23 (30%)
	Severe to profound	20 (26%)
	Don't know	2 (3%)
Phase of Education	Primary	51 (66%)
	Secondary	22 (29%)
Additional needs	No	48 (62%)
	Yes	27 (35%)
Additional device	No	43 (56%)
	Yes	34 (44%)

All the children who were using an additional device were using a radio aid.
The mean age of the children and young people who responded to the survey themselves (N=18) was 12 years of age. The age of the children and young people ranged from 9 to 19 years of age. However, only 2 young people were aged over 16.

Contact with ToDs

All participating groups were asked about the frequency of visit by the ToD, the frequency with which the progress of the children was communicated to them and the place where the ToD would visit the children.

As each of the participants was asked to reply to the questions by having a specific child in mind, data on the above questions was collected for 77 children in total.

Frequency of Tod visit	Participants (%) N= 77
Not sure	11 (14%)
More than once a week	1 (1.3%)
Weekly	12 (16%)
Fortnightly	10 (13%)
Monthly	10 (13%)
Half termly	14 (18%)
Termly	13 (17%)
Yearly	6 (8%)

Only parents were asked about the place that the visits take place with 28 out of 30 children been seen at school and 2 both at school and at home. The children themselves were asked about the way their progress was communicated to them with 10 out of 18 saying that their progress was communicated to them either every half term or every term whereas for three children 11-15 years of age their progress was communicated by the ToD to their parents and not to them directly.

Parents, SENCos and Teachers were asked about the way they communicate with the ToDs. Participants could tick all answers that apply.

Type of communication	**Participants**		
	Parent	SENCo	Teacher
Text message	25 (83%)	0	0
Notebook	1 (3%)	0	0
Email	8 (27%)	18 (95%)	8 (80%)
Phone Call	22 (73%)	7 (37%)	0
Letter	2 (7%)	1(5%)	0
Report	4 (13%)	11 (58%)	3 (30%)
Face to face meeting	4 (13%)	5 (58%)	6 (60%)

Chi square for multiple set response was used to explore any difference between the different participant group regarding the way they communicate with the ToD
X^2 (16, N= 59)-= 115,1, p< .000

There is significant difference between the groups regarding the way they communicate with the ToD with the majority of parents using text message, SENCOs using emails, and teachers - phone calls and face to face meetings. The main mode of communication was agreed with the groups and the ToDs in the following ways:

Participant groups	**Mode of communication decided**	**N (%)**
Parent N= 30	The visiting teacher informed me	5 (17%)
	We decided together	23 (77%)
	Other	2 (7%)
SENCo N=19	The visiting teacher informed me	5 (27%)
	We decided together	13 (69%)
	Other	1
Teachers/TAs N=10	The visiting teacher informed me	1 (10%)
	I stated my preference	1(10%)
	We decided together	7 (70%)

Other	1 (10%)

The majority of all groups decided with the ToD the mode of communication.
All participants reported that ToDs communicated with them within reasonable and appropriate time.

The effectiveness with which ToDs communicate children's progress to various stakeholders—including parents, professionals, and the children themselves—is closely linked to how their impact on outcomes is perceived. When communication between ToDs and stakeholders is infrequent, inconsistent, or lacks clarity, it often leads to a diminished understanding and undervaluation of the ToD's role. This weak engagement can result in misconceptions about the nature and importance of their work, thereby affecting how their contribution to children's academic, linguistic, and social development is recognised. In contrast, regular, transparent, and collaborative communication strengthens trust and reinforces the perceived value of ToDs in supporting deaf children's progress.

The role of the ToD

All participants were asked to indicate how they perceive the role of the ToD.

Perceived role of ToD	**Participants**			
	Parents (N=30)	SENCo (N=19)	Teacher (N=10)	Children (N=16)
Support children's learning	24 (80%)	14 (74%)	4 (40%)	
Checks hearing equipment	25 (83%)	18 (95%)	9 (90%)	14 (78%)
Signposts to resources	12 (40%)	15 (79%)	5 (50%)	
Design and carries out interventions		7 (37%)	2 (20%)	
Support families		13 (69%)	3 (30%)	
Advocate for child	18 (60%)			
Train staff on deafness	18 (10%)	11 (58%)	5 (50%)	
Encourages inclusion of the child	14 (47%)			
Monitors progress reports and advice	23 (77%)	11 (58%)	7 (70%)	
Introduce to other families with deaf children	11 (37%)			
Helps the family to choose school	5 (17%)			
Increase child's confidence	19 (63%)			11 (61%)
Advice on listening environment	16 (53%)	18 (95%)	5 (50%)	
Set targets		12 (63%)	6 (60%)	
Adapts/advice on teaching materials			3 (30%)	
Observes child's access to learning in the classroom			7 (70%)	
Attends inclusion support team		5 (27%)		
Support EHCP				
Carries out specialist assessments		10 (53%)	7 (70%)	
Identifies needs		5 (27%)	1 (10%)	
No change to child's hearing				12 (67%)
Help the child to understand deafness				11 (61%)
Help the child to become independent				10 (56%)
Write to audiologists				9 (50%)

Help teachers understand how to help the child	14 (78%)
Advice teachers about difficult listening spaces	12 (68%)
Shows to the child how to explain their needs	8 (44%)
Make sure the child's gets the right exam arrangements	6 (33%)
Ensure right equipment	3 (17%)
Support Disabled Students Allowances (DSA) application	2 (11%)

Although most of the options given to the different groups of participants were different, there were some specific duties of the role of the ToD that were similar for the groups of parents, SENCOs and teachers. Thus, while 80% of parents said that the ToD's role is to support their children's learning only 40% of teachers choose this answer. Also 79% teachers identified the role of the ToD as someone who signposts them to resources whereas this was true only for 40% of parents. However, all groups seemed to agree that the main role of the ToD is to check hearing equipment. Thus, there was a significant difference about the perception of the role of the ToD amongst the four groups of participants X^2 (96, N=77)= 854, p<000

The participants were asked to provide any additional expectations for the role of the ToD. About half of the participants 37 (48%) reported that there was nothing additional to the role of the ToD apart from the aspects discussed above.
The other half of the participants talked about the role of the ToD in attending EHCP and review meetings and supporting the needs of the child that way. The children themselves commented on seeing the ToD as someone who needs to find out the interests of the children and play games with them.

All participants commented on the impact that the absence of the ToD would have in their lives. The vast majority of parents (60%) commented that their children wouldn't be appropriately supported without the ToD in their lives. As parents reported:

"Without the ToD I am not sure that my child would still be at school. The visiting teacher has supported with having his deafness recognised as being a challenge in the school environment that needs supporting. We probably wouldn't have an EHCP without her support either."

"My child wouldn't have a radio aid. We wouldn't be supported as much. The school wouldn't have the skills to make sure my child can access all areas of learning."

"Lack of update on my child's hearing and development. Any problems with my child's hearing aid wouldn't be fixed. We would be without a professional hearing teacher who monitors our child's hearing at school and advocates for the right support to be implemented to support our child's hearing."

The SENCos (37%) also reported that without the ToD's support they would have a lack of understanding of how the equipment works, and no expert opinion to carry out the necessary checks. It would be harder to support the children as they would have no one to ask for advice:

"No expert opinion or tests carried out. No professional backing when requesting extra support/funding."

"Less appropriate hearing support. It would take longer for worries or concerns to be picked up by audiology etc. Reporting may be less relevant to our educational setting."

Similarly, the class teachers (40%) commented that they would not have been able to help children with their hearing equipment:

"I feel as a teacher I would have felt a lot less confident in how to meet the pupils needs. I don't feel we would have had certain equipment that proved to be invaluable. I feel we may not have fully met the needs of the pupil."

"I wouldn't be familiar with the needs of a deaf child or how his equipment worked if I didn't have the visiting teacher to advise me."

The children themselves commented that they would struggle without the help provided:

"I wouldn't feel I had any help".

"I would be really angry because people don't understand my needs and I wouldn't be able to ask for what I need."

"My teachers and school wouldn't understand my needs and I'd struggle in classes".

Collaboration

Parents, SENCOs and teachers were asked to identify the aspects on which they collaborate with the ToD.

Aspects of collaboration	**Participants**		
	Parents (N=30)	SENCos (N=19)	Teachers (N=10)
Targets for the termly/annual review	22 (73%)	7(37%)	4(40%)
Changes to help child's access in the classroom	14 (47%)	18 (95%)	5 (50%)
Applications for EHCP, etc.	11 (37%)	6 (32%)	
Support social and emotional			2 (20%)
Approaching a potential new school or college	7 (23%)		
Requests additional services for the child	9 (30%)	8 (42%)	
Friendship problems at school	6 (20%)		
Approach to homework	2 (7%)		
No collaboration	2 (3%)		2 (20%)
Meetings with families		7 (37%)	
Lesson planning			1 (10%)
Pre-teaching/post-teaching for deaf learner			5(50%)
Adaptations on learning materials			3 (30%)
As members of the inclusion support team			
Feedback staff		12 (63%)	

As shown in the table above, there is a difference between the three groups in the ways they collaborate with the ToD, with 95% of SENCos collaborating with the TOD

on changes to help the child's access in the classroom whilst only 50% of the teachers collaborated with the ToD on this aspect. Also, 73% of the parents collaborate with the ToD on setting targets for the annual review whilst this is true for only 40% of the teachers.

Chi square was performed to explore any differences between the three groups regarding the ways they collaborate with the ToD.

X^2 (30, N=59)= 169, p<000

Impact

All participants were asked to rank statements indicating the impact that the ToD is having on their children's life. The aspect on which the ToD had the greatest impact was ranked first while the aspects with the least impact were ranked last.
(1= The greatest impact, 2=second choice, 3= 3rd choice, 4= 4th choice, 5= 5th choice, 6=6th choice, 7= least impact).

The mean of each item was calculated indicating that the lower the mean, the greater the impact the ToD is having on the specific aspects as indicated by each group of participants. The greatest is the mean, the participants perceive that the ToD is having the least impact on this aspect.

Impact	**Participants**			
	Parents (N=30)	SENCos (N=19)	Children (N=16)	Teachers (N=10)
Improving communication skills	3.5	3.2		3.9
Optimal hearing in school	3.7	2.5		3
Positive self-image	3.7	3.9		4.4
Learning progressing in line with peers	3.8	5.9		5
Independence skills (including with hearing equipment	3.9	4.7		2.7
Inclusion in all aspects of school life	4.6	2.6		4.6

Improving language and literacy skills	4.7	4.9		4.4
Wellbeing /confidence/mental health			2.9	
Good hearing in class			3.4	
Independence with Hearing Aids/Radio Aids			3.4	
Having the right hearing equipment			3.6	
Acceptance of my deafness			3.9	
Hearing in difficult hearing spaces			4.1	
Getting the right conditions for exams			6.1	
Support with DSA, Personal Independence Payments benefits (PIP) and Access to Work (ATW)			7	

Participants (except students) were asked about the individual who has more direct impact on different outcomes.

Outcomes	**Participants**						
	Class Teacher	ToD	SENCo	Teaching Assistant	Parent	Not sure	No-one
Improving child's communication skills	17 (22%)	9 (12%)	0	15 (20%)	13 (17%)	5 (7%)	
Creating a good acoustic environment	24 (31%)	21 (28%)	5 (7%)	4 (5%)	1 (1%)	3 (4%)	1 (1%)
Improving language and literacy skills	35 (46%)	5 (7%)	2 (3%)	15 (20%)	0	0	2 (3%)
Child's confidence	19 (25%)	8 (10%)	0	9 (12%)	17 (22%)	6 (8%)	0
Child's positive self image	11 (14%)	10 (13%)	1 (1%)	7 (9%)	21 (27%)	9 (12%)	0
Child's independence	7 (9%)	23 (30%)	0	10 (13%)	14 (18%)	2 (3%)	0

Parents were asked in the questionnaire to identify the professional who has the most direct impact on different aspects of their child's life. Parents identified the ToDs as having the most direct impact on creating good acoustic environment in school. However, when it comes to improving language and literacy skills, 14 of the parents perceived that the class teacher is having the most direct impact whereas 11 thought that TAs had the most direct impact and only four mentioned the ToDs. In questions regarding confidence and self- image, more than half of the parents perceived that themselves as parents are making the most direct impact on these aspects of their children's lives. Regarding child's independence, parents were split almost in half with 11 of them feeling that the ToD is having the greatest impact whereas 12 believed that them as parents are having the most direct impact on this aspect.

Participants were asked to share their views in an open-ended question on the indirect impact that the ToD is making in their lives. 30% of the parents reported that the ToD is making an indirect impact on the children's life at school:

"Our ToD is part of our learning journey since the diagnosis. She kept me informed about the processes and services available to my child. She was there for me when I felt overwhelmed with lots of information, how and when to start the EHCP application, what is the best for my child at school, etc. She gave me the confidence that there is a bright future for my child despite the hearing loss.'

They also commented on the indirect impact that the ToD is making in supporting them as parents:

"Support me as a parent with Disability Living Allowance (DLA) application and understanding the progress and confidence gained since my son had hearing aids. Also with going forward to high school, what support is there for him"

The teachers located the indirect impact that the ToDs are making on improving their understanding of deafness:

"Improving our understanding of how best to teach a child with deafness, helping to improve the confidence of the pupil which then impacts them with school life. Providing and advising use on equipment and methods that have ensured we catered for the child's needs."

They also see the ToDs are making an indirect impact on the communication and language development of deaf children:

"Creating a good acoustic environment. Improving language skills. Improving communication skills."

60% of the SENCos see the ToDs as making an indirect impact on supporting and upskilling the TAs but also supporting SENCos themselves:

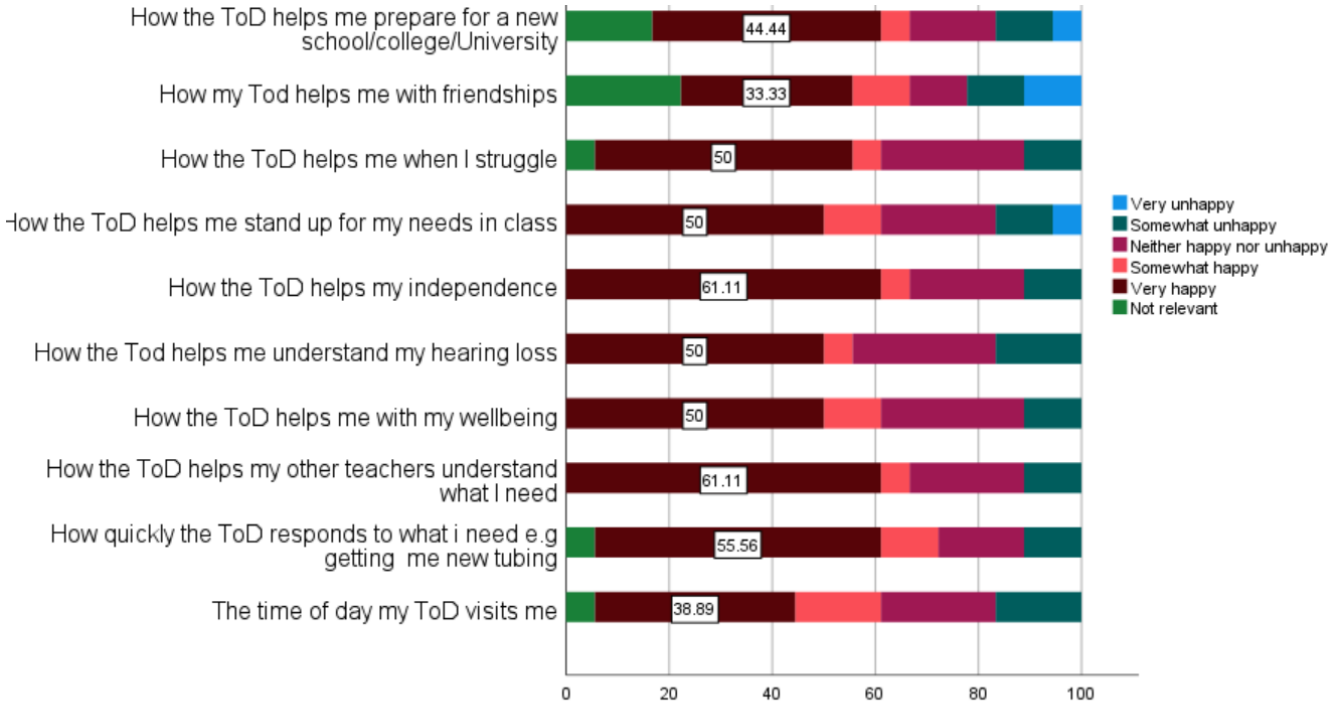
"Setting outcomes, supporting teaching assistant and teacher, communication thoughts and ideas."

"Supporting school staff to meet needs. Supporting parents to meet needs. Supporting child to meet needs".

"Signposting additional support networks. Staff confidence".

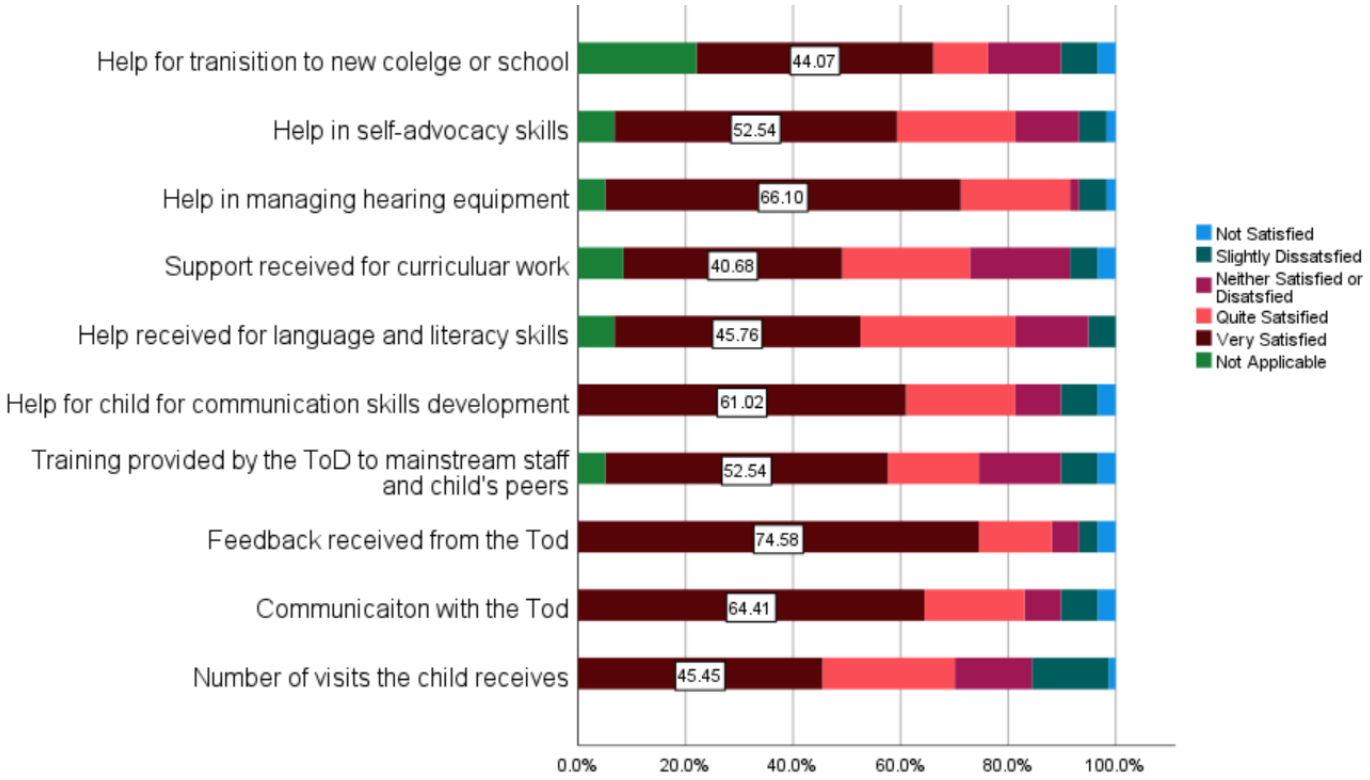
"Ensuring the environment is suitable."

Children were asked to rate how happy they are on a number of aspects they receive support with from the ToD.



As is demonstrated in the stack bar above, the vast majority of children reported that are very happy with all aspects of the support they receive.

Parents, SENCos and teachers were asked how satisfied they are with several aspects of how the ToD supports their child. The rating of all participants is presented in the chart below:



The vast majority of participants reported being very satisfied with all aspects of support received by the ToD. A breakdown of how satisfied the participants are depending on the group they belong is presented in the table below.

		Not satisfied	Slightly dissatisfied	Neither satisfied or dissatisfied	Quite satisfied	Very satisfied	Not relevant
Number of visits	Parent		7 (23%)	5 (17%)	7 (23%)	11 (37%)	
	SENCo		1 (5%)	1 (5%)	7 (37%)	10 (53%)	
	Teacher		1 (10%)	1 (10%)	1(10%)	6 (60%)	
Communication with ToD	Parent		3 (10%)	3 (10%)	4 (13%)	20 (67%)	
	SENCo		1 (5%)	1 (5%)	6 (32%)	11 (58%)	
	Teacher	2 (20%)	0		1 (10%)	7 (70%)	
Feedback	Parent		2 (7%)	3 (10%)	3 (10%)	22 (73%)	
	SENCo				4 (21%)	15 (79%)	
	Teacher	2 (20%)			1 (10%)	7 (70%)	
Training by ToD	Parent		3 (10%)	3 (10%)	5 (17%)	18 (60%)	1 (3%)
	SENCo		1 (5%)	4 (21%)	5 (26%)	7 (37%)	2 (11%)
	Teacher	2 (20%)		2 (20%)		6 (60%)	
Help communication	Parent		4 (13%)	2(7%)	3 (10%)	21 (70%)	
	SENCo	1 (5%)		2 (11%)	6 (32%)	10 (53%)	
	Teacher	1 (10%)		1 (10%)	3 (30%)	5 (50%)	
Help with language	Parent		2 (7%)	5 (17%)	5 (17%)	16 (53%)	2 (7%)
	SENCo	1 (5%)		2 (11%)	8 (42%)	6 (32%)	2 (11%)
	Teacher			1 (10%)	4 (40%)	5 (50%)	
Support curriculum	Parent	2 (7%)	6 (20%)		4 (13%)	15 (50%)	3 (10%)
	SENCo	1 (5%)		5 (27%)	6 (32%)	6 (32%)	1 (55)
	Teacher	1 (10%)	1 (10%)		4 (40%)	3 (30%)	1 (10%)

Management of equipment	Parent		3 (10%)	1 (3%)	4 (13%)	19 (63%)	3 (10%)
	SENCo				4 (21%)	14 (74%)	1 (5%)
	Teacher	1 (10%)			3 (30%)	6 (60%)	
Help advocacy skills	Parent		3 (10%)	5 (17%)	1 (3%)	18 (60%)	3 (10%)
	SENCo			1 (5%)	9 (47%)	9 (47%)	
	Teacher	1 (10%)		1 (10%)	3 (30%)	4 (40%)	1 (10%)
Preparation transition	Parent		4 (13%)	3 (10%)	1 (3%)	13 (43%)	9 (30%)
	SENCo	1 (5%)		4 (21%)	2 (11%)	11 (58%)	1 (5%)
	Teacher	1 (10%)	1 (10%)		3 (30%)	2 (20%)	3 (30%)

Improvement

In the question about improvements that the parents would like to see in the Sandwell Sensory Team, parents wanted more peripatetic ToDs and an increase in the number of visits received from the ToDs.

Aspects of improvement	**Participants**			
	Parent	SENCo	Children	Teachers
More ToDs	11 (37%)			
More visits	11(57%)			
Longer sessions with the children	8 (27%)	2 (11 %)		5 (50%)
Better signing skills	1 (35)	1 (5%)		1 (10%)
More contact with the ToD	5 (17%)	5 (26%)		2 (20%)
Faster response from the ToD	0%			1 (10 5)
More meetings between parents, ToDs and professionals	9 (30%)	8 (42%)		7 (70%)
Better communication between the ToD and professionals	2 (7 %)	4 (21 %)		1 (10 %)
Better partnership working	3 (10 %)	1 (55)		1 (10 %)
Say when to visit			2 (11%)	
Say what children prefer when the ToD visits			1 (6%)	
Bring spares quicker			1 (6%)	
Quick fix of hearing equipment			1 (6%)	
Faster response to children's messages			1 (6%)	
Talk to the child's class teacher more			7 (39%)	

Communicate to parents more	10 (66%)

Participants were asked to provide their own ideas of improvements that could be made for Sandwell Sensory Support Team.

All parents spoke with great admiration about the team, and the work they are doing:

"We are very lucky to have such an excellent support, so I believe the Sandwell Sensory Support Team is great team and they do everything they can to support our deaf children."

About 30% of the parents commented on improvements that could be made in relation to offering more activities for the children:

"It would be nice if there were more activities available for the children like the day camps/day trips they put on. As the children really enjoy them and as it's with children that also have the same needs it makes them feel more included and not so alone. My Teacher of the Deaf is amazing. We are very lucky to have her support as a family, and my children want her seeing them in school all the time if they could."

"Sign language lessons should be available for every child with a hearing loss and their family. It opens up a wider way to communicate in both the 'hearing world' and the 'deaf world' ensuring the child has the opportunity to be a part of both communities."

In relation to the answer in the close ended question and request for more visits the parents also commented on this in the free text:

"I would like our ToD to be able to visit my son more often in school on a more regular basis. Her input has been so positive it would be great if she was able to visit for weekly or bi-weekly well-being checks. I feel it would also help to remind other staff of my son's deafness and the challenges he faces allowing for more on-the-job

training and awareness. I'd like there to be more opportunities, during school time, for my son to be able to spend time with the ToD and other deaf students from other bases, or with the ToD and his own class peers, working on deaf awareness"

The children themselves commented that a greater number of visits together with support for their family would really improve their experience and the support they currently receive from Sandwell:

"More visits per week and connect me with other deaf people of my age."

The class teachers themselves suggested a more structured and standardised support regarding feedback that the ToDs provide:

"I believe that longer sessions with specialist teachers would have been extremely beneficial and more visits"

"More of a standardised approach to feedback at the end of the sessions, e.g. all TODs leave a 'Visited by the TOD' sheet at the end of the session with what has been worked on and suggestions for next steps."

"More advice on in-class support."

4.3 Interviews

The aim of the interviews was to gain a greater depth of understanding with individual stakeholders based on **focus group** and **questionnaire** responses.
The interview questions were elicited by the questionnaire and were presented to the interviewee participants. For instance, interviewees were asked to comment on the fact that, according to the questionnaire results, optimum hearing was ranked as the greatest impact of the work of the ToD. Also, examples of measuring indirect impact that were provided during the focus groups were presented to the interviewees as a starting point for their discussion between direct and indirect impact.

4. **Ensuring optimum hearing: greatest impact**
   Questionnaire data indicated that, out of the seven options given, SENCOs rank achieving 'optimum hearing' as the greatest impact the visiting teacher was having on the deaf learner. They ranked 'Learning progressing in line with peers' as lowest. What are your comments about this?
   - *Does it accord with your experience, or is yours different?*
   - *If your experience is different, please say in what way*

5. **Direct and indirect impact**
   This question is about the difference between direct and indirect impact. There are many examples in the focus group interviews of indirect intervention that a ToD has made e.g support for parents impacts on the child's development, training for staff impacts on deaf child's progress. Do you think it's possible to measure indirect impact like this?
   - *If so how?*
   - *Can you give your own examples of direct and indirect impact?*
   - *Do you think it is currently measured in any way?*

Thematic analysis of the interviews resulted in 7 themes and 27 subthemes.

Themes	**Subthemes**
Definition of impact	Impact is hard to define Making a positive change Impact is a long-term process Progress and impact
Greatest impact definitions	About foundations being in place Addressing the biggest barriers Understanding self and deafness Support child's confidence The hearing lady Parents extended arm Train and support staff
Making indirect impact	Training of staff Effect on parents ToD working with school staff Indirect support characteristics Indirect impact measurements
Perceptions of stakeholders about impact	Stakeholders hold the same view about impact Stakeholders hold different view about impact Holistic understanding of the child

Measurement of impact	General observations Methods of measurement Measurability in setting SMART targets Measuring impact by grades and attainment Soft measures Changes made by the Lead ToD
Factors influencing impact	Factors enhancing impact Factors which are barriers to impact

Definition of impact

Participants spoke about how impact can be defined as a positive change, which is also linked with progress and is not static. Participants also commented on the difficulty in defining impact. Participants suggested that one of the reasons that is hard to define is the fact that each person involved with the child focuses on their own role and aspects of their role making it difficult to have a more holistic approach and view of impact. As the Early Years Practitioner suggested:

"*Maybe it's down to role? So teachers and SENCOs are thinking 'This is my focus'. I'm thinking, 'Oh, communication and language'. How, you know, …and their development, how are they playing and how are they interacting and how are they feeling? And then obviously families are thinking, 'Oh, how can I do that now? Can I do this now?' and managing their day-to-day life. So I think, depending on your focus because of your role and your involvement, you're going to be thinking that way. Not quite tunnel vision, but you should have done it on the bit that you have control over I guess.*"

However other participants managed to define impact and provided a specific definition. For those participants, feedback can be defined as a positive change. When children exhibit a positive change in their behaviour, in their skills and attitudes this is what participants characterised as impact. The definition of impact as making positive change was given both from parents and professionals:

"*When you know, when he first went to school, when he was 4 he just turned 4 as well. So he's really young. He's like the youngest in his class. And you know, he was really frustrated because, you know, other kids could talk, and you know, no one could really understand him apart from myself and my husband. So you know that kind of behaviour got better with more of a focused approach on his, on his speech and sounds.*" (Parent)

"*And then having him initiating a sort of question with me and asking me to find something, he's pointing me to something, and me signing back to him. And yeah, going, 'Well, actually, that's an impact. We have those targets. Nursery's been working on it. Mom and dad have been working on it. And there we are. That's happened after so many ways*." (ToD)

Together with positive change, participants also commented that impact can only be measured and defined when progress is made:

"*So we have got a lot of things that we do try and measure. We also got you know the language assessments that we do so and they are you know like this the ones that give us the age-related bandings. Just so we can show that actually they are making progress and if the progress isn't big, it can even show those small steps.*" (ToD)

However, positive change and progress can only take place when the home and the school environment of the children is optimal and barriers to access the environment are removed.

"If you haven't got the optimum environment, nothing else is really going… you know, you're going to ... is going to have a massive impact on any progress that you see or you know or ... or the happiness of the child." (SENCo)

For a great impact to take place a lot of little steps and a lot of little things have to happen. Professionals commented on the fact that there are a number of little things that can make a difference. Before a big impact is created, a number of small steps have to take place:

"*So I think it's we do lots of little things, and then we see something bigger that happens, and it may be 3 or 4 different elements that we've put together to create that bigger impact and that bigger impact may be attainments. That bigger impact may be that that young person is wearing their amplification, or that they are more independent in managing their amplification, but it may also be that they are interacting with their friends in school or that they're going to interact with some other deaf peers because they're going to a youth club or wherever it might be, but that's taken 3 or 4 or 5 or 6 or 10 steps to get there of lots of little things that we've done to create that big bit of impact*." (ToD)

Greatest impact

Participants were also asked during the interview about what they thought that was the greatest impact of the work of the ToDs. Participants suggested several different ways that the great impact of the work of ToD can be perceived.

First of all, according to the interviewees the greatest impact is all about the foundations being in place. Participants talked about ensuring that the child's environment is accessible and the children have optimum access to it. Removing barriers for children to access learning is not only a basic first step but also the foundations of any work of the ToDs.

As a ToD said:

"I think one of the main things we do is obviously, when we're first observing and working out what we need to do is making sure those foundations are in place first. So making sure, you know, if it is a setting, I'm thinking because obviously my role is sometimes in the home as well, making sure the environment is accessible that they're able to have optimum access to their learning, that the hearing needs are fully supportive of their seating position. That the teachers doing all of the right things - facing them, you know, considering distance, not turning around all of those deaf awareness strategies. That would kind of be what I'd be looking at first." (ToD)

Similar to the view above, the Early Year Practitioner characterised greatest impact as the ability to address the biggest barriers. Interviewees spoke about supporting children to overcome their biggest difficulty. Supporting children to overcome their main struggle is what defines the greatest impact of the ToD's work:

"*But I suppose I sort of think something that was going to make the greatest impact would be addressing the biggest barrier. So what's this child struggling in whatever way, what's their biggest barrier? Or like they cannot communicate, or you know that they're not happy. They're not happy at nursery. They're just… why are they not happy? Is it about their identity? Do they not feel the place? Do they not know the routine? Is that why they they're not happy? And then addressing what are deemed to be the biggest barriers, and then start from there, and then you can add um from there. I think, being early years trained I tend to focus on those prime areas. So are you happy*?" (EY practitioner).

Similarly though for parents, the greatest impact that a ToD is making in their lives is enabling the deaf child to understand themselves, to develop an identity and understand their hearing loss. Developing an appropriate identity but also having a clear understanding of what it means to be deaf and what their degree of hearing loss means for the children themselves can be defined as the greatest impact of the ToDs' work:

"*I think it was more of an impact for the child understanding himself and the differences he has. She [ToD], you know, made him aware to say, 'Oh, I can't hear you' and to explain to people sometimes that you know, 'I can't hear you. I'm not ignoring you.' And that really, that, you know, he needs to sit in the front of the class. He doesn't wear his aids anymore to be honest with you. But having that visiting teacher explain where he should be sitting in the environment of the classroom, and things like that has really helped support him. Without the aids you know, he might come back to wearing aids in the future. But it was just too much of a battle, and we have to pick our battles*." (Parent)

ToD roles and impact

One of the main impacts that was recognised as the ToD having on deaf children's lives was the development of children's confidence. It was perceived by participants that a ToD's work had an impact when children were able to advocate for themselves, to speak out for themselves and be able to talk about things that are not working and that they need help with. Deaf children reaching their EHCP targets was another achievement, another example of evidence of impact that was down to the support that the ToD offers to the child:

"*Support child but I think also it's just the confidence, the impact, the confidence that the children have in being advocates to their own needs, and being able to speak out if, for example, equipment not working. Those things are harder to measure, aren't they? But actually all of our children, and who receive support and you know we do see their confidence increase. And then they do meet the targets that are often on their EHCP, relating to being more independent and in being a self advocate for themselves."* (SENCo)

When the professionals were asked about the role of the ToD and the impact they are making, they referred to the main role that the ToDs are playing regarding staff training and provision of deaf awareness workshops. It is clear that because of the knowledge of hearing loss, the ToDs are having a clear impact not only on training professionals but also on the deaf children's lives:

"*And she's also, you know, she's also helping us with the children. So she's helping us with our deaf awareness workshop. So she'll come in and she'll speak to the children. So it's not just me talking to them, you know. It's always nice if an external professional comes in and speak to the children what is it like, you know having a hearing impairment."* (SENCo)

Due to this specialist and specific knowledge about hearing loss that ToDs have, there is this perception that they are the people who are mainly responsible for hearing aids. Thus, it is not uncommon that the ToDs are perceived as the 'hearing lady':

"*We still get called the hearing aid lady or the person for the hearing aids and some… and I mean staff that have trained and said, you know, this is how equipment works*." (ToD)

Adopting a more holistic approach though, parents see the ToDs as part of their family and more as their extended arm. Parents identified the ToDs as being part of their life, part of their own journey and they could not really think of their lives without the contribution and support of the ToD:

"*So that was one group you know how the Teacher of the Deaf…. is a part of my life, part of my journey, and I would… And I said, you know, that is most important person event that child has been diagnosed like saving the days… That is massive impact, you know, like, like I wouldn't be, I wouldn't imagine, you know, if I haven't had this type of the teachers in my life. I don't know how I would end it. I don't want to even think about that, but I'd like a brilliant experience*." (Parent)

"*She's kind of like part of their family, I would say, because she, you know, if she supported them through the whole journey*." (SENCo)

Making indirect impact

In addition to the direct impact that ToDs have on the lives of deaf children and young people, participants were also asked about the indirect impact and how this is evidenced or measured. One of the key themes that came out from both professionals' and parents' interviews was the effect that ToDs have on parents. The relationship that ToDs build with parents but most importantly the effect that they first have when they support the parents from the minute of diagnosis was mentioned as a key indirect impact of the ToDs:

"You know, she influenced how she explained the world of deafness as a 1st point of contact after the medical professionals. Yeah. And also, you know, like, I have to, I have to, you know, like really I can't never forget, you know, the ToD reframed my mindset." (Parent)

"*So a lot of those… a lot of the things we do aren't measurable. But you know,it's making a difference. Yeah. You know that by the relationship you have with parents, you know that things are positively moving forward*."(ToD)

The importance of the ToD's role and the indirect impact they are making on parents on the first day of diagnosis is also evident by the fact that the ToD was there to hold their hand and to boost their confidence. That support enabled the parents to feel more confident, whereas they would have felt lost otherwise.

Perceptions of stakeholders about impact

Regarding impact of the ToD's work on deaf children's outcomes it was evident that stakeholders can share the same views about impact but can also hold different views. Some participants discussed the fact that all professionals and parents work all together for the best outcomes for the child and they are all on the same page in terms of the support provided:

As the SENCo said:

"…*but actually, I feel that everybody working for these children and with these children, including parents, etc, and we are on the same and same wavelength in terms of support"*

On the other hand, some professionals and parents suggested that they all hold different views regarding the impact the ToD is having on deaf children's outcomes. Both parents and professionals comment on the fact that different stakeholders are concerned with different aspects of the ToD's role and of the children's outcomes. As one parent commented:

"I think they might be, I think they might be different. So, 'Do you think people's perceptions of the visiting teachers impact are the same as yours?' No, because as a parent I'm looking at the visiting teacher as an aid for my child, whereas… because in teaching itself the lesson is so compact for the teacher… an hour's lesson. If that visiting teacher has to take my child out of their lesson, then the teacher might think

this is more of a hindrance rather than help. And from the teacher's point of view they yeah. So they might give him the work and say, 'Oh, you missed 20 min or half an hour' or they might just think, 'I'll just leave it, because I'll do a recap, anyway, next week."

Specifically, ToDs themselves conveyed that mainstream schools and some of the professionals do not have an awareness of deafness and how it affects the child outcomes and as a result they are more pre-occupied with the children's progress and not other aspects of the child's development that the teacher supports the child with:

"*I think it depends on the child, doesn't it? I think it depends on what your common goal is for that child. I think the issue is that a lot of schools are concerned about attainment and progress.*" (ToD)

"*And I find that a lot of SENCos and teachers don't understand the impact deafness has on a child. So when they start talking about progress, they don't understand where do we have to start to get that progress*." (ToD)

Despite the fact that some stakeholders might have the same or different goals for the development of the deaf children and different views of the impact of the ToD on children's outcomes, there was a common thread about looking at the child in a holistic way. Participants mentioned all stakeholders aim to put the child at the centre of their work although impact is perceived from their different and divergent perspectives:

"There is all kind of the same goal that we've got the child at the centre, but I think we look, we all look at impact slightly differently because of processes and things that we have to work towards." (ToD)

Looking at the child in a holistic way enables stakeholders to look at the little steps and the little milestones that the child has achieved and not only at the progress that the child has made in all different aspects.

Measurement of impact

When participants were asked to identify how impact can be measured, a number of different themes emerged. There are many ways to measure impact but participants stressed that measuring impact numerically is only one way whereas it is equally important to measure impact through observations and in qualitative ways:

"*But we're measuring it and that's not necessarily numerically measuring it but we're identifying it. So, whether that's through observations, whether that's through phone calls to parents, whether that's through discussions with young people, discussions with teachers. It's not always numerically. So it's through lots of different ways. Maybe through audiology, and that may be numerically, because we then may be seeing that the hearing aid wearing was so many hours. And it's now brilliant. So you know, we can measure numerically, and we can look at it through data. But I don't think we are just data and numerically driven, I think we take impact from a lot of different ways*." (ToD)

However, what can be measured quantitively is the progress and attainments of the children. Participants suggested that change that ToDs are making on children's lives can be measured by grades and attainment:

"*Obviously, the facts and figures… the hard measures they're easily measured for impact. So you know, what we've already said is not the be all and end, or but in terms of attainment data*…" (SENCo)

In relation to measuring impact, one aspect of impact that cannot be measured is people's attitudes. Although participants claimed that ToDs made a difference to people's attitudes this cannot be measured:

"*We can't really measure the attitudes of people or the attitudes we've changed. We can only see that things have changed positively. A small part of measuring but big impact, but not always measurable*." (ToD)

Another way to measure impact is by looking at the wellbeing of the children. When children have established friendships, they feel safe and supported and fully included in the school then this is a clear and measurable aspect of impact:

"*So you know, making sure that they have got a friendship circle that they do feel safe you know we do our well being questionnaires in school. So I'd expect that theirs isn't flagged up as an area of concern, that they do feel that they've got friendships, and that they're well supported and that they do feel fully included in the school.*" (SENCo)

Developing SMART targets is an excellent way to measure impact. When targets are SMART then capturing the change and measuring the impact is easier. SMART targets help small steps to be captured:

"*So you can see that journey. You can see that progress, and that's where we come back to what I was saying earlier on is about having those really SMART targets. And if we've got really SMART targets, and if we've got targets that really capture what it is that we're doing in those really small steps, then we can measure the impact of that. And we've got direct evidence of that. But it's about really highlighting those small steps that we're doing and making sure that they are SMART*." (ToD)

The use of 'soft measures' is also evidence of impact. Professionals and parents commented on aspects of pupils' progress which are not evident by hard data but by behaviours that point towards change. For instance, a ToD commented on the fact that when a child is putting up their hand and they are speaking up for themselves and they are actively seeking and asking for support in order to access learning, this is itself an indication of impact. Although this cannot be measured it is nevertheless an indication of child's advocacy skills and confidence levels:

"And you know, in terms of EHCP outcomes and you know our provision plans they're not always hard data, such as you know, attainment it could be you know, this child is putting their hand up, you know, for help. So you know, you can measure those things as well. And there are some of the softer measures, I guess, that are more difficult to assess for impact. So a lot of the confidence levels. I think that's

probably more of a dialogue that you'd have with the teacher or support staff for your observations that you've had yourself as to well, they were like this before. But you can clearly see now that they're doing more of this. So more of a qualitative measurement, I guess, through observations." (ToD)

Participants described the Lead ToD's efforts to make a direct impact and to evaluate impact through their work and the changes that are implemented. Changes are implemented by the Lead ToD in a collaborative approach taking into consideration team's views and constantly looking and exploring impact:

"In our team meeting yesterday, I think it would be the fourth or fifth edit since I've joined the team, and it was the whole team together. What do you want this heading to be? Do you want to get rid of that box? Do you want to merge that? And I think that is…. that means we're definitely on track to trying to streamline, get a better balance. We're not doing things for things sake, and I think it's giving us a bit more time to look at the impact. And look at the provision that we're offering a little bit more". (ToD).

Bringing consistency in the way tasks are completed and the way that reports are written is another change that the Lead ToD made enabling the team to do great work. The effective changes that the Lead ToD made an impact not only on deaf children's outcomes but also on the advice the team members provide to different stakeholders and the way that ToDs work in the team.

"So, our reports were a bit wishy washy. We're a bit lackadaisical. Sometimes they were handwritten when we were working in school. Sometimes they weren't, and there was no consistency across. So one thing the Lead ToD has brought in is consistency." (ToD).

"We've done all of this great work. We've done all of these changes since Fiona has taken over, and they are right, and they are proper, and our report, our advice, our work, I think, is improved as a consequence of it." (ToD)

Providing a specific focus on different aspects of ToDs work at different times is another change brought in by the Lead ToD which had an impact ToDs' work and on children's outcomes:

"And we get a gentle reminder from the Lead ToD like 'This term we're looking at this', and that gives us a real focus on what we're going in to have a look at. We kind of, we do focus like the first time we sort of had an audiology - I didn't even put test boxing down on that -but we have that focus. And then in the springtime we have a semi focus. And so we always sort of know what we're going in to look at and to measure which is quite nice. And it can change, you know, if you're going into the summer when you referral you're not expected to do everything else. But it just gives you a focus, really, for that half term." (ToD)

Factors influencing impact

Participants also discussed about different factors that can influence impact. One of the factors that influences impact and can contribute to the greatest impact of the ToD on children's outcomes is the knowledge of the child. Knowing the child really well - not only their individual characteristics but also their family and the system around them really makes a difference and takes impact a step forward.

As a ToD mentioned:

"I think the greatest impact that I would be looking for the teachers on the team is to know that student well. To know obviously all their audiological needs, but also a step away from that. How that child learns how that child. What sort of support they need at school. I'd be looking for them to know the parents' style of parenting and what it is the parent wants from that relationship. And again we have that liaison, then with school."

Another fact that can make a difference and lead to impact is also the team around the child. Joint work of shared goals to meet the needs of the children is considered an important factor of impact:

"*And then, obviously, we work together, then joined up working to make sure that you know we can tackle any… any things that we need to you know, change to make sure that you know the maximum amount of impact is achieved." (SENCo)*

Impact can also be influenced by lack of high expectations. When teachers working with deaf children have low expectations of the children's achievements and attainment then this is perceived as an important factor influencing impact on the child's outcomes:

"*I believe that a lot of the teachers that I do speak to have very low expectations of the children they teach. So when I voice concern about this child's speech and language, or this child's language is a little bit behind and it might be because of their hearing it's, 'Oh they're not the worst in the class. They are certainly not the worst in the class*." (ToD)

Similarly impact of peripatetic ToDs work on deaf children's outcomes can be influenced by lack of awareness and understanding of mainstream school regarding deafness and its impact on the child's needs and skills:

"I think it's a lack of understanding of deafness, how it impacts a child, how it impacts their language, how it impacts their confidence. Their listening every single day, the barriers that they face every single day. They don't see these children as deaf because they attend a mainstream school. They don't understand how hard it is for these children to listen all day every day. They can't switch off like what the children do, and they are still messing around and playing with their fidget things and still listening. These children can't do that. They have to listen all the time." (ToD)

Lack of understanding of hearing loss and its impact on a number of aspects on the child's s development is perceived as one of the main factors negatively influencing impact.

Summary

In summary, impact is perceived as a positive change of child's behaviours/outcomes but is often hard to define and measure. Reflecting on small changes and find ways to evaluate direct but most importantly indirect impact is crucial. ToDs are mostly seen as part of the family, the parents' extended arm. The close relationship that ToDs build with the families is really crucial and plays an important role on the impact they are having on children's outcomes. Impact can be enhanced by having a good knowledge about the child and by building a team around the child ensuring that all professionals have a common goal and understand the impact of deafness on children's outcomes.

5. Findings: Phase 2

Case studies

The aim of this phase was to answer the following research questions:

- How successfully are the targets in deaf children's annual reports and recommendations met as evidenced by the support put in place by peripatetic ToDs?
- What is the impact that peripatetic ToDs have on deaf children visited on a weekly/fortnightly basis and on children monitored termly/yearly as measured by the evaluation of the intervention plans and the annual reports' recommendations respectively?

This second phase of the study focused on children in early years from 0-5 years of age. Referrals to the sensory support caseload for under 5s come from the newborn hearing screening programme (NHSP), audiology clinic, ENT, paediatricians, health visitors, the Inclusion Support Early Years team, school nurseries and private nurseries. The team occasionally receives referrals direct from a parent. The number of cases under 5s, the number of eligible cases and the number of cases that were finally included in the study based on the consents received is presented in the table below:

Total number of EY on caseload 0-5 years (September 2022 academic school year 2022-23)	40
Total number of EY caseload with diagnosed/undiagnosed additional needs	16
Total number of EY caseload without diagnosed/undiagnosed additional needs	24
Parents of EY who decided not to engage in the study	5
Parents of EY who agreed to engage in the study	18
Number of EY visited weekly and fortnightly (Frequency of visits 1&2)	14
Number of EY visited termly or annually (Frequency of visits 3&4)	4

Number of families where English is the first language in the home	6
Number of families where English is not the first language in the home	13

To evaluate how children's target and recommendations are met and the impact that the ToDs are having on children monitored weekly/fortnightly and termly/ yearly, the records of support were analysed. Records of support are live, working documents and are essential for tracking service delivery, monitoring progress, and demonstrating impact. These records can serve multiple purposes: informing practice, supporting multi-agency collaboration, and providing evidence for reviews, EHCPs, and inspections. These records begin with a pupil profile, including the child's name, date of birth, educational setting, type and degree of hearing loss, language(s) used, hearing technology, and any additional needs.
Each visit is logged with details such as date, duration, location, and professionals involved. The focus of support typically includes language and communication development, access to the curriculum, listening skills, use of technology, staff training, and family support. Observations note the child's progress, engagement, and any barriers in the learning environment. Advice and actions detail recommended strategies, adaptations, and resources provided. Progress is tracked through 'Success form the Start' measured against individual goals and targets.

Records of support were read and re-read and data was extracted in Excel (thematic analysis). Further coding in SPSS and analysis using case summaries reports for each child across a year (Term 1,2, 3). The following data was extracted in Excel and SPSS:

- Place of support: Home, nursery phone calls, visits at toddler group
- Type of support: focus on hearing equipment, support parents, play activities, discussion with professionals, speech tests of hearing
- Child's observable behaviours during visits/impact on child: vocalising, playing skills, producing gestures/signs/ words, following instructions, pointing, etc.

- Baseline, review of targets, targets achieved/not achieved
- Independent use of hearing equipment
- Success from the Start steps
- Recommendations followed the assessments
- Intervention description

A form for each case was developed where all the above information was added. An example of an empty form is below:

	Time 1	Time 2	Time 3
Support date started in each term			
Number of visits			
Number of absences			
Place of visit			
Visit at home			
Visit at nursey			
Phone calls			
Toddlers play group			
Visit to primary school			
Clinic visit			
Focus of visit- What Tods and professionals focus during visits			
Playing activities			
Improve communication			
Hearing Equipment			
Speech tests of hearing			
Support parents			
Discussion with professionals			
Visit of Early Year practitioner			
Child's observable actions during visits			
vocalising			
Play skills			
Pointing			
Copying skills/ Follow instructions			
Following instructions			
Use of Hearing Equipment			
Producing new signs/ gestures/ expressions			
Baseline			
Review date of targets			
Targets achieved/ or not achieved			
Assessments			
Date of assessment			
Age of assessment in months			
Use of Hearing Equipment			
Success from the start			
Communication and language			
Listening			
Vocalising			
Social development and wellbeing			
Playing and understanding			
Physical development			
Recommendations followed the assessment			
Intervention			

As the support and the targets set for children seen weekly/fortnightly and those seen termly/yearly varies, the information for those cases were analysed separately. A case by case analysis was performed for the children seen weekly and fortnightly. Given that the participating local authority is quite small and identification of individual participants can be a risk, the case analysis is not presented here. The findings across cases are discussed below. For children seen termly/yearly not enough information was provided as the number of visits was very limited and thus general conclusions are drawn.

Findings across all cases

Common themes across all cases were identified. For each case summary the ToDs' visits focused on the following aspects:

- Playing activities
- Improvement of communication
- Hearing equipment
- Speech tests of hearing
- Support of parents
- Discussions with professionals.

Equally, children's observable actions during visits were identified to fall into the following categories:

- Vocalising
- Play skills
- Pointing
- Copying skills/Following instructions
- Use of hearing equipment
- Producing new signs/ gestures/expressions.

Regarding targets, when children were seen at home no targets were written in the records of support as this is the common practice in the local authority. Writing the targets and providing a written record to the parents was not deemed appropriate as all these children had parents whose first language is not English and do not read English. Although in those cases no conclusions and evaluations can be drawn

between the support offered and meeting the targets, Success form the Start offered a good measure and has been used effectively to capture progress of children seen at home.

For the children seen at nursery, each term a range of targets were drafted. The number of targets ranged from 2-5 depending on the needs of the children. Most of the targets set were not achieved. Those targets fully or partially achieved in early terms were moved to the second and third term so they could be achieved. It is argued that evaluating the progress of deaf children solely based on support records can be misleading, as these records often do not provide a comprehensive picture of the assistance provided by the Teacher of the Deaf (ToD) during each visit. They may overlook the specific steps taken towards achieving individual goals and fail to consider the diverse needs of each child and their family, such as variations in cultural and linguistic backgrounds.

Targets focusing on the use of hearing equipment were achieved throughout the year. Whereas targets relating to production of words, mimicking speech sound and word production were not all achieved even in Term 3. It is important to note that a lot of emphasis was placed on producing and modelling signs. Development of signs is perceived by ToDs as the best way to support them during this critical period for language acquisition. The majority of targets focused on the acquisition of age appropriate signs emphasising the importance of establishing a good language foundation to prevent language deprivation. Having established a good foundation of sign language, spoken language can then build on.

Most of the targets were partially or not achieved. There were several reasons for children not achieving their targets. In some instances, targets could not be achieved due to children's persistent absences. There were also cases where the targets could not be achieved because of inconsistent nursery staffing and lack of consolidation. In those case where intense and consistent work with nursery staffing was put in place in later terms then, all targets were achieved. All targets referring to consistent use of hearing aids were achieved. The reward system and the intervention put in place made a difference and supported the achievement of the target.

In a number of cases, a disconnection between the type of support and the type of the targets set was identified. The vast majority of the support provided by the ToDs was related to supporting parents with the use of hearing equipment and with appointments. ToD's work in most cases was focused on supporting parents. Unless families have the right level of support and basic needs are met it is not possible to effectively support their children. It can be concluded that although it was not in the ToD's remit to support parents with daily living tasks such as housing and taking out cash, etc, no help from other services was noted. A lot of emphasis was also put on discussing with parents how the child could be supported at home with book sharing, vocabulary and Ling sounds. The parents were supported to fill in EHCP applications and attend meetings. As Sandwell is among the most deprived local authorities in England, ToDs often play a unique role as primary staff most closely involved with families. They are in a position to address the basic safety needs of the children - such as security, stability, and protection from harm - before they can focus on supporting language development, communication skills, and social-emotional growth. Additionally, ToDs help fulfil children's love and belonging needs, providing social connections, intimacy, and a sense of belonging, which are foundational for effective learning and development.

In contrast, there were cases where the support provided by ToDs and the interventions put in place were directly and closely related to the identified targets. The intervention that was put in place was intense and closely related to the identified targets of the use of Ling sounds and the choice made. The majority of the support provided by the ToDs was support provided to the parents in relation to hearing equipment, concerns about lack of speech and paperwork for EHCP plan. In Term 2 there was loads of information in the support sheets about the recognition of Ling sounds, the Ling sound games and the sounds that the children were able to make and demonstrate during visits. All these actions are closely related to the target although not clearly identified in the record sheets.

Evaluation of targets
The vast majority of targets written were SMART: specific, given time frame and included all the necessary details.

Example of a SMART target: *X will be able to carry out the correct action 4/5 times in one session. Actions – Jumping, drinking, running, brushing, eating, sleeping*.

Only in two occasions the targets were not characterised as SMART.

Example of a non- SMART target:
For staff who work with XXXX to alert her to sound such as when her name is being called, songs are being sung daily

They should have been written with a greater clarity and precision especially regarding timeframes and frequency of the targeted behaviour exhibited.

Success from the Start
"Success from the Start" is a developmental resource and progress monitoring tool created by the National Deaf Children's Society (NDCS). It is designed to help Teachers of the Deaf and early years professionals track and support the progress of deaf children aged 0–3 years across key developmental areas. The purpose is to:

- To provide a structured, evidence-informed framework for observing and recording a deaf child's development.
- To measure progress over time, helping to identify strengths and areas needing support.
- To inform planning, interventions, and partnership work with families and other professionals.
- To support early identification of needs and to ensure appropriate support is in place from the beginning.

The process begins with a detailed baseline assessment, where the ToD, often in partnership with families and early years professionals, gathers a comprehensive picture of a child's abilities in key areas such as communication, listening, social development, and use of hearing technology.

Based on this baseline, the ToD helps set personalised developmental goals that reflect both the child's needs and the family's priorities. As the child progresses, the tool is used termly to document growth and identify any emerging concerns. This ongoing tracking enables ToDs to clearly see where progress is being made and whether it aligns with the areas they have been actively supporting.
By linking a child's developmental progress to specific interventions or levels of support from the ToD, it becomes possible to evaluate the impact of their involvement. The majority of the children performed at stages below their chronological age in all different profiles throughout the year. Some of the children seen fortnightly and yearly performed at steps commensurate with their age but not in all different profiles. Most children were able to exhibit progress through the steps from Term 1 to Term 3 (mainly 1 to two steps).

Value added assessment

The second part of Phase 2 looked at identifying ToD's impact on deaf children's expression and comprehension. The intention was to recruit 30 deaf children between 5-11 to look at those children's outcomes on these standardised assessments. However, only 30 children in total who met the inclusion criteria of not having additional needs and being between the age of 5 to 11 were identified in the local authority database. From those, consent was gained from only 13 children. Data was on those children's assessments was collected on
APT assessment. Assessment of Comprehension and expression (ACE), the Test of Reception of Grammar (TROG), CELF 5 and the British Picture Vocabulary Scale (BPVS). However, not all children had data on all assessments.

The characteristics of the children are presented below.

Characteristics	Participants (%) N= 13

Frequency of visits	Weekly or up to 38 visits per year	3 (23%)
	Monthly or fortnightly -up to 19 visits a year	2 (15%)
	Termly up to 6 visits a year	7 (54%)
	Annually up to 3 visits a year	1 (8 %)
Level of Hearing Loss	Mild	5 (39%)
	Moderate/severe	5 (39%)
	Profound	3 (23%)

The table below presents the regression coefficients (B) for the independent variable frequency of visits. The coefficient is the outcome of the regression of a standardised score on the frequency of visits and the blocking variable which is the standardised score measured in Time 1. The coefficient estimates the average change in the dependent variable when the independent increases by one unit (one level of support). Thus, the table shows how the scores in standardised assessments change if the frequency of visits of ToDs changes from levels 1 to 2, to 3, to 4. The p value indicating statistical significance is not reported as the sample size is too small to reach reliable conclusions. Thus the following results should be interpreted with caution.

Standardised assessments	B
APT Standard score	1.80
TROG	Cannot be calculated due to small numbers
ACE Standard Score	4.25
BPVS	Cannot be calculated due to small numbers

The regression coefficients are interpreted as follows. For the first dependent variable which is the APT assessment, if the category of frequency of visit increases by 1 (i.e. frequency of visits from weekly become fortnightly, from fortnightly termly and from termly year), then the APT standard score on average will increase by

1.80. For ACE, if the category of frequency of visits increases by 1, then the ACE standard score will increase by 4.5. Thus, the intense support that children receive from ToDs has a significant impact on deaf children's outcomes on standardised assessments. As they progress, their scores increase and thus the support can be decreased and they can be put to the next level. For two standardized scores the regression results are not available due to missing data in student responses. The results above capture the causal effect of increasing the frequency of visits as the "blocking" variable of the first set of scores statistically is included in the regression.

6. Conclusions

It is important to emphasise that this is the first study attempting to evaluate the impact of peripatetic ToDs on children's outcomes. Thus, the study is pilot in nature and is based on the work on one local authority. The significance of the study though lies on the participatory methodology used where the academics leading this study worked closely with the local authority in planning, shaping and delivering the research project. The study explored the impact of ToDs in two phases looking both at the perceived and actual impact on deaf children's outcomes. It has demonstrated that is possible to evaluate the perceived and actual impact of ToDs but only when evaluations consider the unique characteristics of each child and the broader educational, familial, and social systems influencing development.

Perceptions of parents and professionals of the ToD's impact on deaf children's outcomes

Parents and professionals view ToDs as having a positive impact on deaf children's outcomes, largely due to effective communication. SENCOs primarily use email for formal coordination, parents prefer text or phone for quick, personal contact, and mainstream teachers engage via both email and face-to-face meetings. These communication methods are agreed upon collaboratively with ToDs, highlighting their flexibility and approachability. This adaptable communication fosters trust and strengthens partnerships, which are key to supporting deaf learners effectively. The Royal College of Speech and Language Therapists (RCSLT, 2019) underscores the importance of such collaboration in improving outcomes. Overall, effective communication is central to the positive perceptions of ToDs' influence on children's development and education.

The perceptions of various stakeholders regarding the role of ToDs differ based on their interactions and priorities. SENCos' focus is on receiving guidance from ToDs about optimising listening environments, ensuring the proper functioning of hearing devices, and accessing relevant resources. Thus, they see the ToDs as having more of a consultancy role. Working within mainstream education classrooms necessitates a distinct set of skills and attributes, such as flexibility, organisation, and, most

importantly, the capacity to collaborate and consult with other educational professionals. While consultation has traditionally been a component of the ToDs' role, it has recently evolved to constitute the majority of their responsibilities (Dorn, 2019). However, parents, teachers and children themselves viewed ToDs as instrumental in checking hearing equipment. In addition, deaf children perceived ToDs as the main individuals responsible for assisting teachers in understanding how to support them effectively in the classroom. It is evident that the specialist knowledge that ToDs have in relation to hearing equipment and providing advice on the listening environment is a key aspect of the ToD's role. These insights highlight the fact that ToDs are seen as the specialists in managing hearing equipment and supporting deaf children in accessing the listening environment.

Although this is a really important part of their role, it is only one aspect of their multifaceted role as indicated by the DfE (2023). However, the findings here strongly suggest that there is a lack of understanding of the wider role of specialist teachers on deaf children's outcomes. Although different stakeholders perceived the ToD role differently, they all highlighted the negative impact that the absence of ToD would have in theirs and their children's lives. These findings collectively highlight the indispensable role of ToDs in ensuring appropriate support and positive educational outcomes for deaf children.

Regarding the aspect on which ToDs have the greatest impact, again there was great variation amongst different professionals and parents. According to parents, ToDs have the great impact on improving communication skills and ensuring optimal hearing in school. These findings are in accordance with a study by Zaidman-Zaitet et al. (2019) exploring parents' perspectives of their deaf children's transitions where parents were particularly attentive to their child's ability to participate successfully in inclusive school settings and the level of support they would receive. This underscores the importance parents place on effective communication and appropriate hearing accommodations facilitated by ToDs.

According to SENCos though, ToDs have the greatest impact on inclusion of deaf children in all aspects of school life. Their expertise and collaborative efforts ensure

that deaf students receive the support they need to succeed both academically and socially.

On the other hand, mainstream teachers indicated that ToDs are having the greatest impact on independence skills of deaf children. ToDs play a crucial role in fostering the independence skills of deaf children, enabling them to navigate various aspects of life with confidence and autonomy. However, deaf children themselves see ToDs as having the greatest impact on their wellbeing/confidence and mental health. A number of studies have emphasised the importance of specialised support, such as that provided by ToDs, in fostering the overall well-being and confidence of deaf students (Brown and Cornes, 2015).

All participants (i.e. parents and professionals) highlighted that the greatest impact of ToDs lies in establishing foundational support for deaf children's education. This involves ensuring that the learning environment is accessible and that students have optimal access to educational content. A key aspect of the ToD's role is to remove barriers to learning, which serves as the essential groundwork for their interventions. By focusing on these foundational elements, ToDs play a crucial role in facilitating the educational progress of deaf children. Participants have identified that the greatest impact lies in their ability to address and overcome significant barriers faced by deaf children. They emphasised that supporting children in overcoming their primary challenges is central to the effectiveness of ToD's work and that one of the most significant roles ToDs have on deaf children is facilitating their self-understanding, identity development, and comprehension of their hearing loss. This perspective is supported by research emphasizing the importance of language access and cultural identity in the development of deaf individuals. For instance, Sutton-Spence (2010) discussed the role of sign language narratives in the development of Deaf identity in children. By enabling access to language and supporting cultural identity, ToDs play a crucial role in helping deaf children understand themselves and their hearing loss, thereby fostering their overall development and well-being.

Parents identify ToDs as having the most direct impact on creating an optimal acoustic environment in schools. ToDs are trained to monitor and advise on the

acoustic conditions of educational settings, ensuring that deaf learners have access to environments conducive to effective listening and learning. In the realm of language and literacy development, parents' perceptions of who has the most direct impact vary. Some parents view class teachers as pivotal in enhancing language and literacy skills, given their direct role in curriculum delivery and daily instruction. Other parents believe that teaching assistants have a significant impact, especially when they provide individualised support to deaf students, reinforcing learning and facilitating communication. Fewer parents may mention ToDs in this context, possibly due to their specialised role, which might not always involve direct instruction in language and literacy within the classroom setting. Regarding confidence and self-image, parents are perceived as having the most direct impact on these aspects of their children's lives.

Parents often perceive ToDs as having an indirect impact on their children's school experiences. This perception stems from the supportive and advisory roles that ToDs typically fulfil, rather than engaging in direct, daily instruction. Similarly, a study on parents' experiences with services during the early period of identification until early school years, revealed that parents value the support from ToDs, especially in advisory capacities that impact their children's school life indirectly (Fitzpatrick et al., 2016). Teachers have reported that ToDs indirectly enhance their understanding of deafness through consultative and supportive roles. They now often function as providing guidance and resources to mainstream teachers to better accommodate and support deaf students (Pedersen & Anderson, 2019). SENCos often perceive ToDs as having an indirect yet significant impact on supporting and upskilling teaching assistants, as well as providing guidance to SENCos themselves. This collaborative dynamic enhances the overall support system for students.

Parents often view ToDs as integral to their family's journey, as their extended arm, deeply valuing their support and contributions. This comprehensive support reinforces the perception among parents that ToDs are indispensable allies in their children's educational and personal development. ToDs play a crucial role in supporting parents from the moment of their child's diagnosis, offering guidance that significantly boosts parental confidence. This early intervention ensures that families feel supported and less overwhelmed during challenging times. In summary, the

multifaceted role of ToDs—from empowering parents at the onset of diagnosis to influencing school-wide practices—underscores their indispensable contribution to the development and well-being of deaf children.

The vast majority of deaf young people reported that are very happy with all aspects of the support they receive. Students themselves reported that '*Everything is perfect'.* The results are similar to the study by Pedersen et al. (2023) indicating that parents were generally satisfied with the services provided to deaf children. Young people were more satisfied with the support they receive about their independence skills and less satisfied with the support they receive about their friendship. Parents and professionals reported being mainly satisfied with the feedback they receive from the ToD and the help in managing hearing equipment and less satisfied from the transition support. Similarly, Pedersen et al., (2023) reported that the highest levels of parent satisfaction were the ToD's support of their child's communication mode and support for self-advocacy skills and fostering independence.

Parents wanted more visiting teachers and increase in the number of visits received from ToDs. Children suggested more communication with their parents whilst parents commented on improvements that could be made in relation to offering more activities for the children. The children themselves commented that a greater number of visits together with support for their family would really improve their experience and the support they currently receive.

Participants have highlighted that the impact ToDs is perceived as a dynamic and positive influence on the progress of deaf children, rather than a static outcome. However, they also noted challenges in precisely defining the specific contributions of ToDs to children's outcomes. The role of ToDs encompasses various responsibilities, including direct instruction, collaboration with mainstream educators, and support for families. Participants have observed that achieving significant impact often requires a series of small, deliberate steps.

Participants emphasised that measuring impact should not rely solely on numerical data; qualitative methods such as observations are equally important. Participants noted that the progress and achievements of children can be quantitatively assessed

through metrics such as grades and attainment levels. Assessing the well-being of children through their established friendships, feelings of safety, support, and full inclusion in school is a clear and measurable aspect of impact. Research indicates that a strong sense of school belonging is associated with positive psychological health, including increased happiness and emotional stability. SMART targets (Heery & Noon, 2008) are also perceived as an excellent way to measure impact.

A number of different factors affecting impact of ToDs on deaf children's outcomes were discussed by professionals and parents. Understanding a child's individual characteristics, family dynamics, and surrounding systems is crucial for ToDs to maximize their positive impact on student outcomes. This holistic approach enables ToDs to tailor their support effectively, fostering better educational and personal development. A lack of deaf awareness among school staff can hinder the provision of appropriate support, thereby impacting the educational experiences of deaf students. In addition, collaborative teamwork among professionals involved in a child's development significantly enhances the effectiveness of interventions and positively influences outcomes. Teachers' expectations significantly influence the academic achievements of deaf children. Low expectations can lead to reduced opportunities and support, adversely affecting student outcomes. To counteract these challenges, fostering high expectations and providing appropriate support are essential.

Impact of ToD's role on children monitored weekly/fortnightly and termly/ yearly as measured by the evaluation of intervention plans and annual reports

A total of 18 cases of children in Early Years from 0-5 years were collated. Records of support were read and re-read and a data extraction form which summarises the key aspects of each case was developed. The individual targets set cannot fully capture the broader outcomes for deaf children, particularly in relation to language development, communication skills, emotional wellbeing and 'softer outcomes' such as confidence and attention. These outcomes are often less tangible and harder to measure, yet they represent some of the most significant areas of progress for a child. This creates a challenge: while ToDs provide critical support in these areas, it

can be difficult to evidence the direct impact of their work using conventional measures. The support offered often extends beyond what is reflected in narrow, target-focused frameworks. A key question arises: how can this broader impact be measured, and who holds responsibility for doing so? In this context, detailed and consistent records of support maintained by ToDs are essential. These records document not only the nature of the intervention but also the progression over time, providing valuable insight into how ToD involvement contributes to outcomes that are not always visible through standard assessment tools.

The quality and quantity of records of support maintained by ToDs showed considerable variation. This raises important questions about the primary purpose of these records and who their intended audience is. While comprehensive documentation is vital for tracking progress and demonstrating impact, it is equally important that these records are practical and efficient to complete. Given the demanding workload of ToDs, there is often limited time available to dedicate to writing and developing detailed records.

Therefore, records of support must strike a balance between thoroughness and time efficiency to ensure they are sustainable and consistently maintained. High-quality, consistent records are essential for capturing the full scope of ToDs' work, providing evidence of their contribution to individual learners' development. Moreover, well-maintained records support effective communication and collaboration across educational settings and wider multi-agency teams, thereby enhancing the recognition of ToDs' impact within broader frameworks. Investing in improving both the quality and consistency of records of support is fundamental. Doing so not only benefits monitoring and evaluation but also strengthens the case for the vital role of ToDs in supporting deaf children's educational and social outcomes.

For deaf children seen weekly or up to 38 visits a year (Level 1 support) who are seen at home no targets are provided. Thus, for those children the support offered by the ToDs and the progress could not be cross referenced and evaluated. The National Sensory Impairment Partnership (NatSIP) emphasise the importance of setting clear targets and closely monitoring the progress of each deaf child to ensure desired outcomes are achieved. Without specific targets, it becomes challenging to

assess the impact of the interventions and make necessary adjustments to the support strategies. However, verbal recommendations and activities for parents to rehearse with their child are consistently shared with the families. In addition, all parents of children seen fortnightly had parents whose first language is not English and who are not proficient in reading English. Additionally, despite early diagnoses, nine of these parents were slow to accept their child's hearing loss and to support the use of hearing aids. While these issues were not reflected in the records of support, they present significant obstacles to meeting the targets and recommendations provided to these families.

For deaf children seen in nursery, targets were recorded and followed throughout the year. Achieving targets related to the use of hearing equipment is often more straightforward compared to those focusing on speech production in deaf children. This discrepancy can be attributed to the complexity of developing speech skills, which may require more intensive and specialized interventions. Most of the targets focusing on producing and mimicking speech sounds were not achieved whereas a lot of emphasis has been put on targets regarding production and modelling of signs. These targets were largely achieved. The evaluation of the targets put in place by the ToDs emphasised the need for support with sign production and modelling. Providing access to a language that is accessible for deaf children is highly important in those early years. Previous research evidence supports this finding. Early exposure to sign language and literacy practices should be integrated into early intervention and family communication strategies. Professionals have a key responsibility in ensuring that deaf children have access to both signed and spoken language from infancy, fostering a more inclusive and promising future for them (Rowley, Snoddon, & O'Neill, 2022). Sandwell authority offers a basic family sign language course, typically lasting six weeks. However, this course is provided by the ToD team due to the authority's financial limitations, which prevents funding for a qualified deaf tutor to fully teach sign language. This provision extends beyond the scope of the ToD role, particularly since the mandatory qualification standards set by the Department for Education (DfE) only stipulate Level 1 BSL although it is stated that If working with a child who predominantly uses BSL higher level, BSL skills/qualifications will be required (of at least level 3 BSL).

The effectiveness of support provided by ToDs is significantly enhanced when there is a clear alignment between the support offered during visits and the specific targets set for each child. A lack of detailed documentation linking support activities to these targets can impede the accurate assessment of ToDs' impact on children's outcomes. While ToDs primarily focus on educational support, they often find themselves addressing broader aspects of a child's life, including daily living tasks and family support. Given the high deprivation rate in Sandwell, the focus on these aspects is the biggest area of support by the ToD team in Sandwell. The constraints that the ToD team face, the lack of additional services and the challenges of working in an area characterised by high need are a massive factor in the work that the ToD team does. The ToD team often supports families in the primary areas of safety and belonging before they can work on supporting children's communication, self esteem/confidence and achievement. This is reflective of education in general as the work done in schools is far more than just educating a child.

Most targets were developed using SMART criteria—Specific, Measurable, Achievable, Relevant, and Time-bound—providing clarity and focus. However, in two instances, targets lacked specificity, particularly in relation to timeframes and behavioural frequency, which can undermine effective goal-setting. Research consistently shows that clear, specific targets support better performance and progress.

Assessment using *Success from the Start* revealed that many deaf children perform below age-related expectations across developmental domains. While children seen fortnightly or annually met expectations in some areas, most made progress of one to two steps from Term 1 to Term 3. This highlights the value of structured monitoring and specific goal setting in supporting development.

However, evaluating only written records of support or visit notes does not fully capture the complexity of ToD interventions. These records may overlook key aspects of each session, such as personalised strategies and nuanced interactions. Therefore, to gain a fuller picture of impact, records of support should be considered alongside tools like *Success from the Start*, recognising them as dynamic, complementary sources of evidence.

In summary, to enhance the developmental outcomes of deaf children, it is imperative to provide early and adequate language exposure and to establish clear, measurable targets in all intervention settings, including home-based programmes. These strategies facilitate accurate assessment of progress and the effectiveness of interventions, ultimately supporting the child's overall development.

Impact of ToDs on deaf children's outcomes as measured by standardised language and literacy tests

Support provided by ToDs was shown to positively influence deaf children's language outcomes, as evidenced by standardized assessments. The findings from the current study indicated that increased support from ToDs correlates with improved performance in standardised language assessments. As children progress, they may require less frequent support and can function more independently. Deaf children who receive consistent support from ToDs exhibit significant improvements in language development. This targeted support helps bridge language gaps and fosters better academic performance.

Furthermore, early and consistent intervention by ToDs is associated with better language outcomes, enabling children to transition to lower levels of support or increased independence over time. The effectiveness of ToDs in supporting deaf children's language development is well-documented, with increased support leading to better performance in standardised assessments and greater independence in the long term.

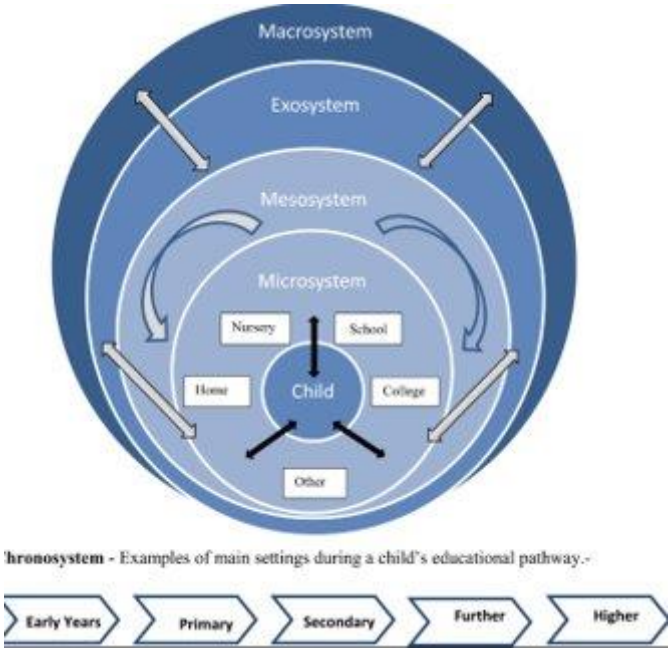
Understanding and measuring the impact of peripatetic ToDs

It is possible to measure the impact of peripatetic ToDs if their work is evaluated within a framework that reflects the full scope of their role and the complex environments in which they operate. ToDs work across multiple settings—home, early years, school, and community—delivering tailored, relationship-based support. This study has demonstrated that evaluation of the impact of the ToD's work is possible using a triangulation method involving a holistic assessment of case

studies, value-added models, and stakeholder feedback (including from the children themselves). However, impact can only be meaningfully assessed when the diverse needs and contexts of deaf children are considered, including levels of deprivation, cultural and linguistic diversity, and any additional needs. In summary, while the outcomes of ToDs may not always be immediately visible in standardised data, their influence is measurable—particularly when the focus is on developmental progress, rather than narrow academic attainment alone.

The impact of peripatetic ToDs can be further understood and measured using two complimentary theoretical frameworks extensively used in the education of deaf children: The bioecological model of development and the access to learning/ learning to access model.

The Bronfenbrenner ecological systems model is a valuable theoretical framework for understanding the work of ToDs, especially those in peripatetic roles supporting deaf children and young people. This model helps explain how various environmental systems interact to influence a child's development—and how ToDs operate across these systems to provide holistic support.



Application to the work of ToDs:

1. Microsystem: Direct Support

ToDs provide tailored support to deaf children in their daily environments, such as:

- Early intervention at home (birth–5 years)
- Classroom support in mainstream or specialist schools
- Coaching and modelling for parents, teachers, and carers

2. Mesosystem: Linking Home, School, and Services

ToDs often act as liaisons between parents, educators, and health professionals, ensuring consistent messaging and strategies. For example:

- Sharing communication strategies between home and school
- Coordinating care plans with speech and language therapists and audiologists
- Facilitating effective transitions between settings

This coordination is crucial to ensuring the child's needs are consistently met across contexts.

3. Exosystem: Navigating Systems on Behalf of the Child

ToDs influence decisions in settings where the child is not directly involved, such as:

- Attending multi-agency planning meetings
- Advising on EHCPs
- Supporting families to access services, funding, or assistive technologies

Their advocacy helps ensure that external decisions do not disadvantage the child.

4. Macrosystem: Challenging Societal Norms

ToDs also operate at a systemic level, advocating for:

- Inclusion and accessibility in education policy
- Increased awareness of the needs of deaf learners
- Representation of deaf identity and culture in curriculum and practice

They often educate others about deaf awareness and inclusive teaching, influencing broader attitudes.

5. Chronosystem: Supporting Long-Term Development

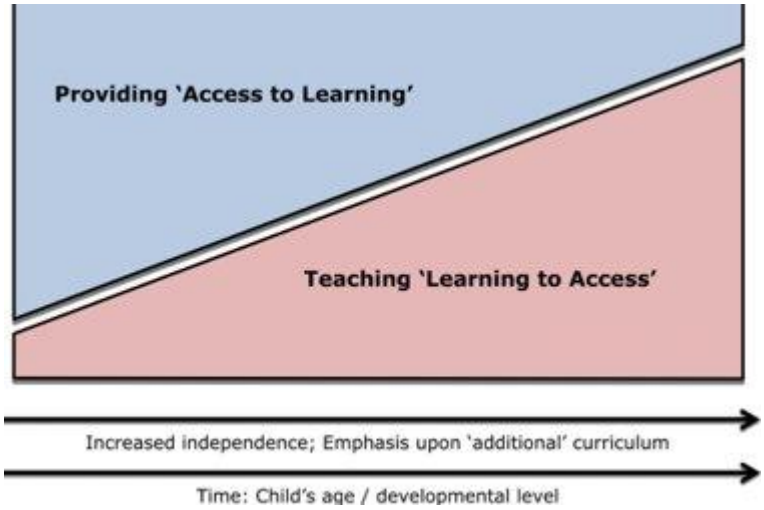
ToDs work longitudinally, often with the same child and family over several years. They support:

- Key developmental milestones
- Transitions (e.g., nursery to school, primary to secondary)
- Adjustment to changes in hearing, family circumstances, or educational placement

This long-term involvement enables them to respond dynamically to changing needs over time.

By applying Bronfenbrenner's model, ToDs function not just as educators, but as connectors, advocates, and facilitators within a child's broader ecosystem. Their work extends beyond direct teaching to include system-level influence, ensuring that deaf children are supported holistically across all aspects of their development.

In addition, the "Access to Learning – Learning to Access" model is a helpful framework for understanding and guiding the work of ToDs in supporting deaf children and young people.



It highlights two interconnected aspects of education for deaf learners:

1. **Access to Learning** – ensuring deaf children have the means and opportunities to engage with teaching, curriculum, and school life. ToDs support this by:

- Advising on listening environments (e.g. reducing background noise, seating arrangements).
- Supporting the effective use of hearing technology (e.g. hearing aids, cochlear implants, radio aids).
- Training school staff on deaf awareness, inclusive communication, and language development.
- Working with families to create communication-rich environments at home.

2. **Learning to Access** – equipping deaf children with the knowledge, strategies, and independence needed to navigate barriers and advocate for themselves. ToDs support this by:

- Teaching children how to use their hearing technology independently.
- Helping children understand their hearing loss and communication preferences.
- Developing self-advocacy (e.g. asking for repetition, explaining needs to teachers).
- Supporting identity development

Limitations and future research

The current study is pilot in nature, focusing solely on the work of one local authority. As a result, the findings should be interpreted with caution, as they are specific to this authority and cannot be generalised to others. However, the study suggests that a triangulation model—combining direct feedback from children, parents, and other professionals involved in the child's education, alongside case analysis of support records and a value-added assessment model—provides an effective means of evaluating the work of ToDs. This approach is particularly effective when the characteristics of the local authority are taken into account during the evaluation process.

Future research should focus on refining and adapting the existing evaluation model, with the goal of applying it to a wider range of local authorities that vary in their characteristics across the country. By broadening the scope of the study to include a

more diverse set of participants, including a larger cohort of children, parents, and professionals, future studies would benefit from enhanced statistical analysis. This would provide stronger, more reliable findings, allowing for more confident conclusions to be drawn about the effectiveness of ToDs across different contexts.

Expanding the research in this way would also help identify any regional disparities or common trends, offering valuable insights into how the work of ToDs can be best supported and evaluated in diverse educational settings.

Final conclusion

This study highlighted that the effectiveness of peripatetic ToDs can be meaningfully assessed through the perceptions of key stakeholders—namely, the professionals who collaborate with them, the deaf children they support, and the ToDs themselves. It is feasible to objectively measure the impact of ToDs through a value-added model and detailed case study analysis. However, this is only reliable when evaluations account for the unique characteristics of each child, as well as the broader systems—educational, familial, and social—that influence the child's development and outcomes.

There is widespread recognition and strong appreciation for the role of ToDs among parents, professionals, and deaf children. Many stakeholders reported that ToDs frequently exceed the expectations of their formal duties, offering dedicated support that helps children and families feel secure, empowered, and better able to navigate everyday challenges.

However, despite this appreciation, a significant misunderstanding persists regarding the full scope of ToDs' contributions. Parents, professionals, and even children often focus disproportionately on their involvement with hearing technology and environmental listening strategies, which can obscure the broader educational, communicative, and emotional support that ToDs provide.

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