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COVER PAGE

Review of the Visiting Teachers Service for Children with Hearing and Visual Impairment in supporting inclusive educational practice in Ireland: Examining stakeholder feedback through an ecological systems theory

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TITLE PAGE

Review of the Visiting Teachers Service for Children with Hearing and Visual Impairment in supporting inclusive educational practice in Ireland: Examining stakeholder feedback through an ecological systems theory

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Abstract

In line with recent developments in inclusive practice in Ireland, children with sensory needs are increasingly educated in mainstream rather than specialist provision. Educational supports are provided by a range of practitioners and include input from the Visiting Teachers Service (VTS) for Children with Hearing and Visual Impairment. This paper reports on findings from the first national review of the Service to examine its nature and role. A project team was commissioned to undertake the review with a view to making recommendations to the Department of Education and Skills, Ireland. The review process included desktop research, meetings with a range of key stakeholders as well as a national invitation for written submissions from interested parties (n= 1372). A key recommendation of the review was that a dedicated specialist service should continue to play a central role in the delivery of educational supports, but that aspects of the current function and role needed to evolve to reflect inclusive education developments within Ireland. The findings serve to illustrate the multi-faceted nature of the role of the specialist teachers who work in the service and the range of influences that impact on their work in facilitating inclusive educational practice. To support a more holistic analysis of their role, Bronfenbrenner's ecological systems theory (2005) is drawn upon as a lens through which to examine the inclusive educational 'supports' identified within the review that are provided by the teachers and contextualise their role *within* and *between* different 'systems'. Mapping the array of educational supports onto an ecological systems theory enables an appreciation of the multiple sources of influence and interconnections in relation to the role. The paper has significance for service providers seeking a theoretical framework that affords potential for comparison of activities across professional roles, settings and contexts.

Key words: sensory impairment, ecological systems theory, specialist teachers

1.0 Introduction

This article is written at an important juncture in the development of inclusive education systems for children and young people with sensory needs. These children constitute a heterogeneous group within which there is a wide spectrum of need and ability and includes children who are deaf or have a hearing impairment, children who are blind or have a visual impairment, or a combination of both (McLinden and Douglas, 2013). Whilst services for children with sensory needs were traditionally located in special schools designated for particular types of need, in line with broader developments in inclusive practice, children with sensory needs will increasingly be educated in mainstream rather than specialist provision where they will normally participate in subject areas alongside their mainstream peer group (McLinden and Douglas, 2013). Further, a significant proportion of children with sensory and complex needs will be educated in provision that is not specially designated for vision and/or hearing impairment (e.g. generic special schools for children with ‘learning disabilities’). In line with these changes, the support for children and young people with sensory needs will be provided by a range of practitioners who may not necessarily work in the school itself, and may include input from a specialist teacher of children with hearing and/or visual impairment working in a visiting or ‘itinerant’ role to support the inclusion of children in the education process.

In this article we draw on findings from the first review of the national sensory support service in Ireland to examine the nature and changing role of this service provision with a particular focus on the role specialist teachers undertake to facilitate inclusive educational practice. We provide an overview of the national service provision, outline the methodology drawn upon for the review and report select findings and key recommendations. The findings serve to illustrate the multi-faceted nature of the role of the specialist teachers who work in the service and the range of influences that potentially impact on their work in facilitating inclusive educational practice in different settings. As noted by McLinden et al. (2016) the array of activities specialist teachers are required to carry out when ‘directly’ and ‘indirectly’ supporting inclusive education can appear disconnected, and whilst each is important it is by considering them together that a broader picture can best be conceptualised. To support a more holistic analysis, we draw on Bronfenbrenner’s ecological systems theory (1976, 2005) as a lens through which to examine the inclusive educational ‘supports’ identified within the review that are provided by specialist teachers and contextualise their role *within* and *between* different ‘systems’. Mapping the array of educational supports onto an ecological systems

framework enables an appreciation of the multiple sources of influence and interconnections in relation to the role and offers the potential for comparison of activities across professional roles, settings and contexts.

2.0 Support for children with visual and hearing impairment in Ireland

The function and role of the Visiting Teacher Service

The Visiting Teacher Service (VTS) provides support for the education of children who are deaf or hard of hearing, and children who are blind or who have significant visual impairment throughout Ireland. The national service was established in 1972 to provide specialist support for children with hearing impairment from diagnosis through to the end of their education. During the 1990s the service was restructured, amalgamated with the service for pupils with visual impairment and extended to cater for pupils with Down syndrome being educated in mainstream settings (INTO, 2003). With the introduction of resource teacher support, the VTS has effectively reverted to its original brief, and the current description pertains exclusively to children with hearing or visual impairment (INTO, 2003). Support is provided at the pre-school stage, and at primary and post-primary school levels by ‘visiting’ teachers (VTs). VTs within the service work directly with the children, and collaboratively with schools and other educational and health services. The support incorporates a wide range of activities including; assessing the needs of individual pupils, assessing the learning environment, teaching individual pupils’ specialist skills areas, advising class and subject teachers, advising families, providing in-service training to staff, facilitating access to the curriculum and liaison with other services.

Scope of Service Provision

A number of studies have attempted to evaluate the effectiveness of the itinerant model of service delivery for children with sensory needs (e.g. Powers et al., 1999; Lynas, 1999a; Luckner and Muir, 2001; Luckner and Howell, 2002.) As far as could be ascertained however no similar research had been carried out in Ireland. The VTS, at the time of the review, was split into regions, each of which was under a generic manager. The teams were located within the jurisdiction of the Department of Education and Skills (DES) in Ireland with individual VTs responsible for supporting children with sensory needs in a given geographical area. The provision is offered from the point of identification until an individual child leaves the education system or is deemed to no longer require input from the service. The VTs work in close partnership with families, schools, classroom and resource teachers, additional specialist services (for example, Audiology, Braille provision) and non-governmental organisations to facilitate inclusive educational practice.

During the review period the VTS supported approximately 2,700 children. The visiting teachers for hearing impairment provided direct support to approximately 1,600 children who had either a moderate hearing impairment (n=940), a severe impairment (n=340) or who are profoundly deaf (n=320). 45% of the children were in primary mainstream classes, 25% in post-primary mainstream classes, 13% were at home or in pre-school, and the remainder in special schools or special classes. A further 560 children were supported by the visiting teachers for hearing impairment on an *On Request* basis. The visiting teachers for visual impairment supported approximately 1,070 children who had either a moderate impairment (n=230), a severe impairment (n=500) and about 330 who are completely blind. In 2012-13 the VTS had 43 full time teacher posts. 29 posts were filled by teachers with expertise in the education of children who are deaf/hard of hearing with 14 posts filled by teachers with expertise in the education of children who are blind/visually impaired.

The changing context for the Service

Since the establishment of the Service, significant changes and developments have taken place in the education provision for children with special educational needs (SEN) in Ireland. Given the emergence and development of a number of support services in the area of special needs education and the significant increase that had occurred in the range and amount of

SEN-related resources provided to schools since the VTS service was established, the continued operation of the service as a *separate* organisation was considered to be worthy of review by the National Council for Special Education (NCSE) in Ireland in order to examine:

- how best supports of the type currently provided by the VTS should be provided to students and schools;
- whether the continuation of the current stand-alone service is advisable; and whether its functions might be more effectively provided through integration with other existing bodies or services.

In line with a recommendation in the National Council for Special Education (NCSE) Policy Document (NCSE, 2013), the Minister of Education and Skills approved a review of the Service in September 2013. A project team was commissioned to undertake the review with a view to making recommendations to the DES in relation to the delivery of the services which were provided by the VTS. In accordance with the Terms of Reference the review process included meetings with a wide range of invited key stakeholders by the project team, desktop research as well as a national invitation for written submissions from ‘interested parties’ in Ireland.

3.0 Methodology

The review was undertaken between November 2013 and March 2014. Key activities undertaken in each of the two main phases of work are outlined below.

Phase 1

1. *Meetings with Project Advisory Group.* Two meetings were held with the Project Advisory Group to discuss the project brief and the Terms of Reference, agree a project timeframe and consider the timeframe and format for the call of written submissions from interested parties within Phase 2.

2. *Meetings with invited key stakeholders.* The purpose of these meetings was to:

- find out about the work of the Service from a range of key stakeholders and hear their views about the focus of the review;
- consider any issues they wished to raise in relation to the work of the Service and/or the Terms of Reference;
- ascertain their views about the Service and to identify any aspects requiring review and provide clarification about the timeframe and format for the call of written submission within Phase 2.

3. *Consultation with service team members in the VTS.* A whole group consultation was undertaken with teachers and managers from the Service as part of an annual professional development event.

4. *Site visits to a range of educational provision* (e.g. specialist providers for children and young people with sensory needs).

5. *Desktop Research.* Review of relevant literature and key policy documents that had relevance to the terms of reference for the review.

6. *Design and piloting of the differentiated questionnaires to be used for written submissions by stakeholders.* Through the Project Advisory Group it was agreed that the main groups of key stakeholders would consist of:

1. 'Interested parties' - a group that included staff in mainstream schools, VTS staff, staff working for the NCSE, NSE, SESS, DES, representatives of non-governmental organisations, and any individual who had a specific interest in the provision of services to this group of children and young people.
2. Parents/carers of children who currently receive support from the Service.
3. Children and young people who were *currently* receiving support from the Service. Separate questionnaires were developed for children with visual impairment and hearing impairment.

Differentiated questionnaires were developed for each stakeholder group in accordance with the project Terms of Reference. They were designed to gather feedback on:

- How respondents viewed the service including aspects they ‘valued’, aspects they considered to ‘work well’ and aspects that would benefit from ‘review’ (all groups of stakeholders);
- Views about the *role* of the service including aspects of the current role of teachers in the Service (parents and interested parties);
- Views about the *organisation* of the service (parents and interested parties);
- Views about the *management* of the service (parents and interested parties);
- Other comments about the function and role of the service.

Ethical approval to include stakeholders was gained from the two respective higher education institutions where the project team leads were employed. Ethical issues were identified by the project team in the approval process including the steps that would be taken to ensure that individual respondents could not be identified in disseminating the findings. Children with sensory needs wishing to complete the questionnaire (online or hard copy) were required to obtain permission from a parent/carer with both parties requested to complete a project consent form. Information sheets, and child centred questionnaires were designed to promote access and allow the children to give assent and share their views in the knowledge that their responses would only be viewed by the project leads and would be reported anonymously in all the findings.

Phase 2

1. *Launch of survey.* The differentiated questionnaires were disseminated through a national survey in Ireland in order to find out views about the work of the VTS from the selected key stakeholders. The promotion of the call for written submissions included information on the DES website supported with requests from the project reviewers through the VTS. The questionnaires were designed to be completed in an online format through ‘SurveyMonkey’ and were hosted on the DES website. Word documents were available for respondents seeking to complete the questionnaire in hard copy or electronic copy format.

2. *Analysis of survey responses.* A total of 1362 responses to the call for written submissions were received by the deadline in the form of completed online and hard copy questionnaires. In addition 10 separate letters were received by the review team. All paper submissions received prior to the deadline were entered into the survey analysis tool to allow electronic analysis of the data.
3. *Production and publication of Project Final Report and recommendations.* A draft version of the project Final Report and supporting Recommendations was presented to the Project Advisory Board. Following revisions, the final version was approved in Spring 2014.

4.0 Summary of Key Findings

We draw on an analysis of the written submissions from the online survey to present select key findings with a particular focus on the ‘function’ and the ‘role’ of the VTS. These findings focus on:

- How respondents ‘viewed’ the service.
- Aspects of the service that respondents considered ‘worked well’.
- Aspects of the service that respondents considered would benefit from ‘review’.
- Delivery of educational supports.

Respondents

A total number of 1,372 completed questionnaires and letters were received in response to the call for written submissions. A breakdown of the number of responses is presented in Table 1.

Table 1: Breakdown of total number of written submissions (questionnaire and letters)

Function and Role of VTS

Key Finding 1: How the Service was valued

There was clear consensus amongst stakeholders who were consulted as part of the review that the work of the VTS was highly regarded with broad agreement about those aspects of the work that were particularly valued. Examples of commonly reported aspects that parents and ‘interested parties’ valued are presented in Tables 2a and 2b respectively.

Table 2a: Examples of aspects of the VTS that parents reported they valued

Table 2b: Examples of aspects of the VTS that ‘interested parties’ reported they valued

Examples of aspects that children commonly reported they ‘liked’ about the support they received from the Service are presented in Table 3.

Table 3: Examples of aspects of the VTS that children reported they liked about the support they received

Key Finding 2: Aspects of the service that were considered to work well

There was broad consensus amongst the respective groups of stakeholders about those aspects of the service that were considered to ‘work well’. Examples of aspects commonly reported by parents and interested parties as ‘working well’ are presented in Tables 4a and Table 4b respectively.

Table 4a: Examples of aspects of the VTS that parents reported as ‘working well’

Table 4b: Examples of aspects of the VTS that ‘interested parties’ reported as ‘working well’

Key Finding 3: Aspects of the service that would benefit from review

A common theme identified by stakeholders as benefiting from review related to management of caseloads. For all categories of respondent the overriding response was that the caseloads of VTs were too large and their time was too stretched. Examples of commonly aspects reported by respondents (parents and interested parties) as benefitting from review are presented in Table 5.

Table 5: Examples of aspects of the VTHVI Service that respondents (parents and interested parties) reported would benefit from review

The single most important aspect reported by children about how they felt the service could be made 'better' was to provide increased access to a specialist teacher to offer support and advice. Other common aspects reported by both groups of children was help in meeting peers who had similar sensory needs and the importance of ensuring their school peers understood the impact of their sensory loss. A number of children also noted that more support and advice to parents would be welcome and that out of hours and school holiday contact with teachers in the Service would be helpful.

Key Finding 4: Delivery of educational supports

There was broad consensus amongst stakeholders (parents and interested parties) about which educational supports should be provided by specialist teachers in the service. This included 'sharing advice on best practice in relation to the education of children'; 'providing some additional teaching for certain children with hearing and/or visual impairment'; 'advising parents'; 'support and assisting planning for the inclusion of children in schools'; monitoring the progress of children' etc. In feeding back on which types of support should be provided by another service, a commonly reported view was that the Service had specialised expertise that respondents did not feel any other organisation or group had in meeting the needs of sensory impaired children. An overriding concern was that any changes should serve to strengthen the role of the Service rather than dilute it. A number of stakeholders expressed

strong support for multi-agency working with the specialist teacher acting as the ‘keyworker’. The importance of joint working across agencies was stressed with challenges relating to management of such working practice being identified but that the lack of clearly defined roles and responsibilities raised concerns. Non-Governmental groups were seen by some parents as a valuable addition to rather than replacements for, the VTS. Value was placed on the professional expertise offered to mainstream staff with a strongly held view that the specialist support was considered to be vital in ensuring mainstream teachers could accept and appropriately work with sensory impaired children. The importance of offering informed choices to parents and ensuring families knew of the range of additional services available to them early in a child’s life was identified as important. Training of staff in a number of key areas was also identified including use of sign language, braille and assistive technology.

Overall, the review provided strong national stakeholder support for the continued role of a sensory support service in Ireland. There was broad consensus that the specialist teacher of children with sensory needs had a key role in working with families, schools and other agencies to facilitate participation in education, despite the establishment of other services in that had a remit to support the educational development of children with special educational needs. Significantly, it was highlighted by different groups of stakeholders that the input was unique in being offered by the Service across the child’s educational pathway from pre-school through compulsory education and that other practitioners could not be expected to have the same depth and breadth of experience in the area. Of the mainstream school staff who responded, approximately a third were mainstream school ‘teachers’. The mainstream staff valued the specialist expertise of the specialist teachers, including the individualised technical support, detailed assessment of needs and differentiation of materials which they saw these as underpinning positive inclusive practice. Visits by the specialist teachers were viewed as being central to provision allowing discussion with all staff including resource teachers and special needs assistants with individualised support and liaison with families being highly valued. Clarification of the precise role of the teachers and a request for reduced caseloads, together with a perceived lack of management structure were seen as main areas that required review. The children with sensory needs recognised the very specialist nature of support that was offered with many noting that this support both reassured and enabled them in their educational setting. There was broad consensus that they found their specialist teachers to be approachable and could provide practical advice that positively influenced their

broader educational experience. A number of children noted that they felt mainstream staff needed a constant reminder through members of the Service so that they remembered the individual needs of children and made appropriate adjustments.

Drawing on the stakeholder feedback and with reference to the desktop research undertaken for the review, a key recommendation was that a dedicated specialist service should continue to play a central role in the delivery of educational supports for these children, but that aspects of the current function and role of the Service needed to evolve to reflect current and proposed developments in relation to inclusive education in Ireland. The supporting recommendations presented to the Project Advisory Board indicated those aspects of the service that needed to evolve in line with these developments. This included a recommendation for a review of ‘case loads and delivery of educational supports’ with reference to revised service eligibility criteria and a support allocation matrix to consider the nature of specialist teachers role and identify where they might work in closer partnership with other practitioners in providing particular educational supports (e.g. mainstream school teachers).

Whilst the work of the VTS was clearly highly regarded, feedback from stakeholders provided evidence of a need for greater clarity about the roles and responsibilities of the specialist teachers, and in particular what might be considered to be *distinctive* about these in seeking to facilitate inclusive educational practice within the national educational landscape. In examining this ‘distinctiveness’ there is evidence from the stakeholder feedback presented above, that the educational supports:

- were provided through a variety of *approaches* (eg teaching an individual child, supporting peers, working with families, liaising with other agencies);
- involved engagement with a range of *stakeholders* (e.g. child, families, teachers, other agencies etc);
- were delivered within a number of *contexts* (e.g. home, school, services).

To support a more holistic analysis of this array of activities, we draw on an ecological systems theory (Bronfenbrenner 1976, 2005) as a lens through which to examine the inclusive educational ‘supports’ identified within the review that are provided by specialist teachers and contextualise their role *within* and *between* different ‘systems’. Mapping the array of educational supports onto a broader theoretical framework in this way enables an

appreciation of the ‘multiple sources of influence and interconnection’ (Coleman (2013, p47), and as indicated by McLinden et al. (2016) offers potential for a comparison of activities across professional roles, settings and educational contexts.

5.0 Analysis of findings through an ecological systems theory

The review findings suggest that an important aspect of the visiting teacher in facilitating inclusive educational practice is the ability to navigate a complex array of social relationships and ‘systems’. Anderson and Boyle (2014) draw on Bronfenbrenner’s ecological systems theory to help conceptualise these relationships (e.g. Bronfenbrenner 2005), arguing that ‘any attempt to study either the construct as a whole, or aspects of it, must consider the relationships between various people and societal systems involved in its creation, from the individuals being ‘included’ to the national and global contexts within which it is situated’ (p27). The ecological systems theory is commonly illustrated as a nested system of ‘environments’ presented as concentric circles (e.g. Anderson et al, 2014, Rogoff, 2003, McLinden et al. 2016) with environments conceptualised as existing ‘separately, definable independently of each other’ and ‘related in a hierarchical fashion as the “larger” contexts affect the “smaller ones, which in turn affect the developing person’ (Rogoff, 2003, p 46). The notion of a ‘chronosystem’ was introduced in later versions of the theory (e.g. Bronfenbrenner, 2005), as a way of capturing the time element of development (Coleman (2013). (Figure 1)

Insert Figure 1 about here

Anderson et al (2014) argue that the ecological systems theory provides an ‘invaluable framework within which to organise the environmental factors and understand their influence on inclusivity by placing the learner at the centre’ with each contributory factor ‘located in relation to the learner’s educational ecosystem’ (p28). They map out an ‘ecology of inclusive education’ (IE) to illustrate how factors within each system are influenced by other factors within the same and other systems, noting that the ‘amount of influence a factor has on the experience of IE for the learner will depend on where the systems are positioned within which a factor sits, as well as by the importance attached to a

factor by those responsible for the system.’ (Anderson et al. 2014, p30). We draw on this theory below as a lens through which to view select stakeholder feedback in relation to the ‘micro-’, ‘meso-’, ‘exo-’ and ‘chrono-’ systems with a particular focus on the educational supports provided by the specialist teacher in facilitating inclusive educational practice.

Analysis of Microsystem

Within the ‘ecology of inclusive education’ outlined by Anderson et al (2014) the microsystem is conceptualised as being situated directly around the child, and contains all the factors in which the learner directly experiences ‘both formal and informal learning, as well as the social aspects of schooling. It includes the teacher or teachers, non-teaching staff, peers, physical learning spaces, classroom cultures and routines, resources and the playground’. (p 29) There is evidence from the stakeholder feedback to highlight the value placed on the distinctive role of the educational supports provided by the visiting teacher within this system in line with such an analysis. As illustrated in Table 6, this can be summarised through the particular educational supports provided by visiting teachers within the home, the school as well as in other settings.

Table 6: Examples of educational supports provided by visiting teachers (Microsystem)

Mesosystem

The mesosystem is considered to be made up of the interrelationships between the significant settings within a child’s microsystem (Bevridge, 2005). Anderson et al. (2014) report that relationships and connections within this the mesosystem are ‘continuously occurring, changing and evolving; they are never static but rather dynamic influences on the learner sitting at the centre of the framework.’ (p29). There is evidence from the stakeholder feedback to illustrate the distinctive role of the educational supports provided by the visiting teachers within the mesosystem. Thus teachers were described by stakeholders as having a central role in developing and promoting connections between structures within the child’s microsystem (e.g. facilitating support networks within school, linking parents with services, working with the child and his/her teachers in the school environment, support

transitions and paving the way for entry into new class/school environments), as well as making connections with external agencies (eg social services, mobility instruction). Table 7 provides examples of educational supports provided by visiting teachers in relation to the mesosystem.

Table 7: Examples of educational supports provided by visiting teachers (Mesosystem)

Exosystem

Rogoff (2003) argues that ‘exosystems relate the microsystems in which children are involved to settings in which children do not directly participate’ (p 47) but which are considered to be influential in a child’s development. Within an ‘ecology of inclusive education’ Anderson et al (2014) report that this system includes school structures, teaching and non-teaching staff, school culture, values and ideology, resource allocation, school policies and procedures etc. Examples from stakeholder feedback about the role of the specialist teachers in supporting inclusive practice within this system include advising the NCSE, the State Examinations Commission (SEC), as well as providing guidance to schools, in relation to resources, reasonable adjustments and interventions for children with hearing and visual impairments. Table 8 provides examples of educational supports provided by visiting teachers in relation to the exosystem.

Table 8: Examples of educational supports provided by visiting teachers (Exosystem)

Chronosystem

As Anderson et al. (2014) report, within an ‘ecology of inclusive education’ ‘the timeframe for this system is that of the learner’s enrolment within formal school education – the years of primary and secondary schooling.’ (p30). The chronosystem is of particular value to this analysis given the value stakeholders placed on the unique role of the service in potentially supporting children *throughout* their compulsory educational pathway. Pound (2011) notes that the chronosystem is not represented in the nested systems model as an

additional ring but rather as a passage of time in relation to the child's development (as illustrated in Figure 1).

Macrosystem

Anderson et al. (2014) note that in relation to an 'ecology of inclusive education', the macrosystem 'encompasses the varying contexts in which the school exists – social, political, historical and global – as well as other factors such as the education system or systems, current agendas (standardisation of student achievement and professional performance; increased accountability), and, if applicable, a mandated curriculum.' (p30). An example of a 'factor' is the commission of the review of the VTS itself, which arose as part of a broader review of support for children with special educational needs in Ireland. Whilst the macrosystem may be considered to be outside the immediate agency of the learner at the centre of the ecological systems, and indeed the day to day activities of the specialist teachers, the outcomes of the review may permeate through the nested systems over a given timeframe and as such have *direct* impact on future service provision.

Mapping educational supports onto an ecological systems theory

Drawing on the analysis presented above and with reference to the 'ecology of inclusive education' outlined by Anderson et al (2014), Figure 2 illustrates how the array of educational supports provided by the VTS can be mapped onto a schematic representation of the ecological systems theory (Figure 2).

Insert Figure 2 about here

In the context of such an analysis, the arrows represent the role of the specialist teacher in supporting the process of inclusive education through providing a range of educational supports *within* and *between* the respective systems throughout the child's educational pathway (depicted through the chronosystem). The array of activities provided by the specialist teachers to facilitate inclusive practice within different systems is illustrated in Tables 9a and 9b respectively through examples of 'microsystem supports' and 'mesosystem supports' (Coleman, 2013).

Table 9a. Examples of *microsystem* supports provided by VTS

Table 9b. Examples of *mesosystem* supports provided by VTS

7.0 Conclusion

As far as we can ascertain, this paper is the first to present an analysis of stakeholder feedback of a sensory support service through an ecological systems theory. It therefore has potential significance for service providers in offering a broad theoretical framework illustrated with examples from practice that provides the potential for comparison of activities across professional roles, settings and contexts. We would argue that drawing on such a theoretical framework, has enhanced the initial analysis of stakeholder feedback given it serves to focus attention on the *social* dimension of the role and in particular, the relationships *within* and *between* environments that the visiting teachers afford in supporting inclusive practice, thereby drawing attention to the complex ecology in which a service provider operates. Indeed, Beveridge (2005) notes that Bronfenbrenner's model 'provides a convincing theoretical rationale for why home, school and the relationship between them are so significant. It also emphasises how important it is that the child be recognised as an active participant in both home and school contexts.' (p8). By conceptualising the child at the heart of this framework, the model serves to focus the multitude of activities that take place at different proximities to the child to support inclusive educational practice. As an example Swanick (2014) has drawn on the ecological systems framework to emphasise the role of teachers of the deaf within different systems, acting for example, as a 'mediator' in some systems and an 'agent of change' in others.

The main focus of an analysis of the microsystem through this framework is often outlined in relation to the home and school with the mesosystem describing the relationships between for example, home and school, thereby demonstrating the 'complex system of relationships that a child has with the immediate environments in which he or she is living and learning' (Beveridge, 2005, p8-9). However, as Beveridge (2005) argues, drawing on the framework to analyse educational practice for children with special educational needs is also helpful in highlighting that the activities in this microsystem will include 'other' types of settings and relationships that may be particular to that child or group of children (for example, in relation to this study, regular attendance at an eye or ear health clinic).

Finally, whilst we would argue that there is a valuable role for Bronfenbrenner's ecological systems theory in helping to analyse the complex inclusive education 'ecology' within which children with sensory needs are educated, it is important to acknowledge the limitations of the data that has been drawn upon in this analysis (i.e. stakeholder feedback through a national survey). Further work is therefore required that seeks to examine for example, through observation and interviews, the particular ways in which the specialist teachers support inclusive practice within different 'systems'. Such a view is articulated succinctly by Derksen (2010) in arguing that there is more to ecological theory than 'simply understanding that children are part of a nested system of ecological contexts. Ecological theory also pays particular attention to the ways in which *reciprocal interactions* between these systems influence development.' (p 336, italics added). To explore the nature of these reciprocal interactions through an ecological systems theory themes for future research include:

- Comparative studies of practice in different *national* contexts with a focus on examining the 'macro-' and 'exo-' systems and how these systems might serve to define the function and nature of specialist teachers with a similar role but within a different national context.
- Within country case studies with a focus on the 'micro-' and 'meso-' systems to examine in greater detail *what* the specialist teachers of each type of sensory need do, *where* they undertake these activities, and *how* effective their work is considered to be in supporting inclusive educational practice.
- Within country case studies to compare selected practitioner roles within the 'micro-' and 'meso-' systems (e.g. a specialist teacher, an audiologist, an optometrist, a special needs assistant etc.) to help gain a better understanding of the distinctive nature of the respective roles in supporting and promoting inclusive practice within a given 'ecology'.

In mapping out such an agenda we are mindful of the cautionary note sounded by Tudge et al (2009) in outlining four elements that need to be included if seeking to draw on Bronfenbrenner's 'mature' theory (e.g. Bronfenbrenner, 2005) to undertake research. This entails ensuring the design includes reference to each element that is drawn upon in what is termed the 'PPCT' model (i.e. *Process* – progressively more complex reciprocal interactions between child and the environment; *Person* – personal characteristics of the child, *Context* – the particular 'system' under examination and *Time* – evaluating interactions through a

longitudinal dimension). Further work is planned to develop and pilot a suitable design that draws on these elements in order to examine the role of specialist teachers of children with sensory needs in the complex 'ecology' within which these children are educated to provide a basis for further enhancing inclusive practice.

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Tables

Table 1. Breakdown of total number of written submissions (questionnaire and letters)

Type of questionnaire	Number
Parents/carers of children who currently receive support from the VTHVI Service	506
Interested parties	692
Children who currently receiving support from the VTHVI Service (Visual Impairment)	57
Children who currently receiving support from the VTHVI Service (Hearing Impairment)	105
Total number of completed questionnaires	1,362
Number of letters submitted	10
Total number of written submissions	1,372

Table 2a. Examples of aspects of the VTS that parents reported they ‘valued’

a.	The individualised specialist support provided to their child
b.	The support offered to parents in their own homes and to the teachers and support workers within school
c.	Input to an assessment of their child’s needs
d.	Explanations of appropriate ways to work with a child at home to ensure that development progress was monitored and supported

Table 2b. Examples of aspects of the VTS that ‘interested parties’ reported they ‘valued’

a.	Expertise in the management of sensory impairment in order to meet the needs of sensory impaired children
b.	The support provided in accessing specialist technology to promote curricular access; advice on appropriate adjustments
c.	Assessment of individual learning needs
d.	Appropriate differentiation of materials to ensure optimum inclusive practice

Table 3. Examples of aspects of the VTS that children reported they ‘liked’ about the support they received

a.	Facilitating active participation in the life of their school
b.	Supporting themselves and their peer group in understanding the implications of their sensory needs
c.	Supporting a responsive approach to curriculum access within mainstream settings;
d.	Providing children with a sense of consistency and trust that their needs would be advocated for

Table 4a. Examples of aspects of the VTS that parents reported as ‘working well’

a.	Liaison between home, school and with other agencies
b.	Reliable and consistent support in schools
c.	Supporting and advising mainstream staff about the individual needs of sensory impaired children
d.	The empathy and professional expertise of the VT that helps both children and their parents to feel more secure

Table 4b. Examples of aspects of the VTS that ‘interested parties’ reported as ‘working well’

a.	The specialist advice available for mainstream teachers
b.	The support provided for resource teachers and support staff
c.	Individualised support that included assessment of child’s needs
d.	Liaison with a child’s family and other agencies

Table 5. Examples of aspects of the VTS that respondents (parents and interested parties) reported would benefit from review

a.	Clarification and definition of roles and responsibilities of the VTVIHI to support interagency working, parental expectations and support for schools
b.	Caseload and available hours to provide support
c.	Management structures to ensure that appropriate CPD opportunities are provided for visiting teachers

Table 6. Examples of educational supports provided by visiting teachers (Microsystem)

<i>Home</i>	<i>School</i>	<i>Other Settings</i>
<ul style="list-style-type: none"> • Assessment and monitoring of needs • Teaching child (eg early braille literacy, sensory development skills) • Supporting family in understanding implications of sensory impairment • Expertise (eg in management of sensory impairment) • Supporting transition to school 	<ul style="list-style-type: none"> • Assessment and monitoring of needs • Teaching child (eg braille literacy, sensory development skills) • Facilitating participation in school life (eg extra curricular activities) • Facilitating curriculum access in response to individual needs (eg assistive technologies) • Advice on adjustments (assessment) • Peers – understanding implications of sensory impairment • Staff – understanding implications of sensory impairment • Advocacy role 	<ul style="list-style-type: none"> • Attending health clinic with child and/or family • Attending clinical assessment of hearing and/or vision • Advocacy role on behalf of family

Table 7. Examples of educational supports provided by visiting teachers (Mesosystem)

<i>Mesosystem</i>
<ul style="list-style-type: none">• Establishing connections with child's teachers (e.g. transition planning)• Establishing connections with child's peers• Linking parents with specialist support services• Facilitating a network with other children who had a similar sensory loss• Liaison with agencies that could provide social activities, support and advice

Table 8: Examples of educational supports provided by visiting teachers (Exosystem)

<i>Exosystem</i>
<ul style="list-style-type: none">• Advising the NCSE and the State Examinations Commission (SEC) on issues relating to the educational of children with sensory needs• Providing guidance to schools on policy developments that focus on reasonable adjustments and interventions for children with sensory needs

Table 9a. Examples of *microsystem* supports provided by VTS in different settings

<i>Home</i>	<i>Nursery/School/College</i>	<i>Other</i>
<ul style="list-style-type: none"> • Advising the family • Assessing the child's needs in home and local environment • Assessing the home and surrounding learning environment • Supporting skill development (e.g. sensory development) 	<ul style="list-style-type: none"> • Advising staff on inclusive practice in given environment • Assessing the child's needs in educational • Assessing the nursery/school/college and surrounding learning environment • Facilitating curriculum access (core and/or additional curriculum) 	<ul style="list-style-type: none"> • Advising staff in other settings (social/extra curricula) • Supporting the child and/or family in assessment (e.g. clinical) • Assessing 'other' learning environments (e.g. social club, evening class)

Table 9b. Examples of *mesosystem* supports provided by VTS

<ul style="list-style-type: none"> • Building relationships and connecting services within the child's microsystem • Promoting active home-school partnerships • Preparing for key transition points Advocacy on behalf of the child/family • Advising regional and national agencies concerned with inclusive education • Providing guidance to schools (e.g. exam requirements and reasonable adjustments for children with sensory impairments) • Providing in-service training to staff • Liaison with other specialist services

Figures

Figure 1. An overview of Bronfenbrenner's nested systems of environments (adapted from Bronfenbrenner, 1979; 2005)

Figure 2. Mapping the educational supports provided by the VTS onto a schematic representation of Bronfenbrenner's (2005) ecological systems theory