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Navigating professional roles in early literacy intervention: exploring the experiences of speech language therapy students, teachers and clinical tutors

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Speech-language therapists (SLTs) in South Africa are increasingly considering alternative models of service delivery to children at risk for language and literacy development delays. A transprofessional model of collaboration allows SLTs and teachers to share responsibility for primary prevention of literacy difficulties. Previous research has identified several challenges with regard to effective collaboration between qualified professionals, indicating that specific opportunities need to be created for professionals to 'cross over disciplinary lines' to gain more insight into a profession other than their own. Student training presents a valuable opportunity for role-exchange between pre-professional SLTs and teachers. The article describes the experiences of teachers, undergraduate SLT students and tutors with regard to transdisciplinary collaboration in the foundation-phase classroom, according to the 'embedded-explicit' model. The authors argue that a more in-depth understanding of the different role-players' perceptions of transdisciplinary collaboration will contribute to enhanced collaboration between SLTs and teachers.

Introduction

Speech therapists in the South African school setting: Changing roles

Speech-language therapists (SLTs) working in school settings are required to fulfil increasingly diverse professional roles. The past few decades has seen a move away from the 'pull-out' model of direct service delivery, to one based on close consultation and collaboration between the SLT and other professionals such as the classroom teacher, learning support teacher or a combination of professionals (Harn, Bradshaw & Ogletree 1999; Justice & Kaderavek 2004; Moonsamy 2015). Collaboration of this nature is of particular importance when providing intervention to young children who are at risk for language and literacy development delays. This is especially the case in a developing country such as South Africa, where it is estimated that only 13% of Grade 4 children are currently reaching the minimum international benchmark of reading competence (Mullis *et al*. 2007; Mullis *et al*. 2012). Similar statistics reported by the Department of Basic Education showed that 45% of Grade 3 children scored under 35% in literacy in 2011. A report from the National Education Evaluation and Development Unit (NEEDU 2014) indicates that 10% of Grade 5 learners who were assessed could not read a single word. There is clearly a great need for focused, intensive and evidence-based intervention to prevent literacy failure for South African learners. The widespread nature of the problem and the fact that many children are at risk for literacy failure as a result of environmental factors (such as literacy experiences being underemphasised or infrequent) is challenging SLTs in South Africa to consider alternative options for service delivery (NEEDU 2013, 2014; Prelock, Miller & Reed 1995; Wium 2015).

Teachers and SLTs: Complementing and overlapping professional roles

Primary prevention of literacy difficulties has been identified as a key professional role of SLTs because many reading disabilities reflect an underlying deficit in language processes and/or knowledge (ASHA 2001; Justice & Kaderavek 2004). Teachers, in turn, also have a primary responsibility for promoting literacy development in young learners, which may often lead to an overlap in professional roles and responsibilities between SLTs and teachers. On the one hand, SLTs have specialised content knowledge about, for example, phonemic awareness - the ability to analyse the individual sounds of words (Pascoe, Harty & Le Roux 2015; Spencer *et al*. 2008) – whereas the expertise of teachers in this area has been found to be limited (Cunningham,

Zibulsky & Callahan 2009; Dickinson & Caswell 2007). In South Africa, it has been found that teachers often have very low expectations of the literacy potential of Grade R-3 children and fail to provide challenging experiences for them to develop their reading and writing skills (NEEDU 2013). On the other hand, teachers have considerable knowledge of and experience in (amongst others) managing the behaviour of learners in large groups, whereas the adequacy of SLTs' training in this area has been questioned (Sanger, Hux & Griess 1995). In order to harness the collective expertise of both speech therapists and teachers and to simultaneously complement identified shortcomings in knowledge and experience between the two professions, a transdisciplinary model of collaboration would be particularly beneficial in providing early literacy intervention to all learners at risk for reading disabilities. In such a model, 'team members share responsibility for student learning by expanding and exchanging knowledge within and between team members' (Prelock *et al*. 1995:286). In order to achieve this, opportunities need to be created for professionals to 'cross over disciplinary lines' to gain more insight into a profession other than their own (Muñoz & Jeris 2005:6).

Fostering effective transdisciplinary collaboration: Undergraduate student training

Previous research has identified several challenges with regard to effective collaboration between qualified professionals, for example, reluctance of professionals to give up their role as experts (Baxter *et al*. 2009; Creaghead 1992). In order for collaboration to be successful, there needs to be a willingness to work together and an acceptance by team members of their role of learner as well as specialist (Lacey & Lomas 1993). Transdisciplinary collaboration in the context of student training presents a valuable opportunity for professional growth of teachers because the learning needs of the students and, by implication, their professional roles and responsibilities as future SLTs are explicitly highlighted. Early opportunity for students to collaborate with teachers also has the benefit that students can learn to form concepts across different theoretical perspectives before they are shaped by their scientific, discipline-specific experience (De Witt, Baldwin & Baldwin 2007; Nash 2008), although Szaz (cited in De Witt *et al*. 2007) criticised it for lacking relevance and being unrealistic as students have not yet established a strong professional identity. It should also be noted that transdisciplinary collaboration between speech therapy students and teachers presents additional, unique challenges because qualified teachers are teamed with novice speech therapists who are still in the process of mastering clinical skills. This could possibly create an unequal power balance between the two group members (Peña & Quinn 2003), for example, in that more value is placed on the skills and experience of the qualified professional. Peña and Quinn (2003) examined the daily journal entries of SLT students and clinical supervisors working with classroom teachers and their assistants to implement a collaborative team model in Head Start classrooms in the USA. Their findings illustrate the evolving nature of collaborative team

development and point to several factors that need to be considered for effective collaboration. These include the importance for collaboration to be undertaken voluntarily, that teachers should be provided with meaningful incentives for taking part in the collaboration and that all stages in team development are useful and that role-players should be made aware of the process. Miller, Freeman and Ross (2001) also pointed out that the learning needs and learning levels of students change during the different stages of professional development and thus need to be taken into account.

Learning how to be an effective collaborator: SLT students at SU

Students in the programme Speech-Language and Hearing Therapy at Stellenbosch University (SU) are prepared for their role as collaborators by exposing them to various models of collaboration with other professional persons during their theoretical modules. Their ability to implement these models in various healthcare and education contexts is then facilitated further during clinical training. Students' first formal opportunity to collaborate with teachers in service delivery to the community is in their second year of studies, during practical training at mainstream schools in Stellenbosch in the Western Cape Province. The focus of this once-weekly, year-long practicum is on implementing intervention programmes for the improvement of speech-language abilities and early literacy skills of preschool children. A transprofessional model is followed whereby the students, teachers and clinical tutors have joint responsibility for the implementation of an early literacy intervention programme. This model is based on the Embedded-Explicit (E-E) Approach of Justice and on the study by Kaderavek (2004). Within this model, a tiered process is followed by which intervention is provided as whole group instruction embedded in the classroom context (tier I) or explicit instruction in small groups or individually (tier II), and where teachers and therapists fulfil different roles. The classroom is an especially important context for intervention with school-aged children because it provides opportunities for embedded, meaningful activities related to early literacy and language learning (Law *et al*. 2002; Silliman *et al*. 1999; Wium 2015). During the application of the E-E model, students gain experience in the domains of early literacy, namely, phonological awareness, print concepts, vocabulary development and narrative skills.

It is crucial to consider the perspectives of all role-players in a collaborative partnership to ensure more efficient clinical training programmes. The study addresses the existing gap in the research by describing the experiences and perceptions of teachers, undergraduate SLT students and clinical tutors regarding transdisciplinary collaboration in the foundation-phase classroom, according to the E-E model (Justice & Kaderavek 2004). A more in-depth understanding of the different role-players' experiences and perceptions of transdisciplinary collaboration will ultimately contribute to enhanced collaboration between SLTs and teachers in providing intervention for literacy difficulties.

Methods

Research design and procedures

A qualitative, interpretivist research design was used to obtain a detailed understanding of the perceptions and experiences of role-players with regard to transdisciplinary collaboration in the foundation-phase classroom. Focus group interviews were conducted with the teachers, SLT students and clinical tutors directly involved in the class interventions. A focus group is a data collection technique that takes advantage of everyday forms of communication between participants to collect data about people's experiences. According to Kitzinger (2006:22) 'group discussion are particularly appropriate when the interviewer has a series of open-ended questions and wishes to encourage research participants to explore issues of importance to them', which was why it was selected for use in the present study. Examining the perceptions of all role-players in the collaboration enabled triangulation of data; this refers to the process of collecting data from many different sources and mapping the results onto one another to ensure a complete understanding of a phenomenon (Silverman 2006). This increases the validity of the study and makes it possible to gain a better understanding of the effectiveness of a project (Terre Blanche, Durrheim & Painter 2006).

Participants

Strategic and purposive sampling was used to select three groups of participants: (1) 30 second-year students in the programme Speech-Language and Hearing Therapy at the SU, (2) six tutors involved in clinical supervision of these students and (3) the six foundation-phase teachers in whose classrooms intervention sessions took place. The teachers were from three schools in the Stellenbosch area, where undergraduate SLT students provide speech therapy services under clinical supervision. Three of the tutors are full-time university staff members, and three are employed on a part-time or contract basis at the Division of Speech-Language and Hearing Therapy.

Procedures

The focus groups were conducted with 6–10 individuals on campus (tutors and students) and at two of the respective schools after school hours (teachers). Two teachers from one school were not able to attend the scheduled focus group because of unforeseen circumstances and were therefore interviewed separately at a later date. One of the tutors was also unable to attend the focus group because of prior work commitments. All interviews were conducted by an independent person not involved in the clinical practicum, namely, a qualified audiologist with experience in clinical supervision and a background in counselling. Training in in-depth focus group interviewing was provided by the researchers before the interviews with participants took place. Interviews were audiotaped by means of a VN-5500PC Olympus digital audio recorder and transcribed orthographically by the interviewer and a research assistant.

Interviews were guided by an adaptive interview guide (see Appendix 1) and consisted of open-ended questions on the main themes that relate to the research question, namely, the experiences and perceptions of teachers, students and clinical tutors with regard to transdisciplinary collaboration according to the E-E model.

Data analysis

Analysis was carried out using a modified contextualised content analysis approach. The following audit trail was established to enhance the reliability of the results: interviews were orthographically transcribed by the interviewer and a research assistant. The first and third authors (who also participated in the study as tutors) immersed themselves in the data by independently listening to the audio-recordings of the interviews and reading and rereading the transcripts. Any disagreements regarding the accuracy of the transcription were resolved through discussion. The interviewer met with the researchers to give general feedback and to highlight certain key aspects that emerged during the interview and transcription process. During this process, a set of main themes were identified, of which most were imposed based on the research question. Most of the subthemes were induced from the material. These themes were coded into the data by the authors using the Atlas.ti software programme, after which elaboration of the data took place to determine relationships between themes and subthemes within and across the different interviews and to include the influence of context on the results. Consider, for instance, the following utterances by a teacher and a student, respectively, from two different focus group interviews:

> 'At the beginning it was … the words were maybe a little too big, then we now had to give feedback. Then I just said that the word is maybe a bit too big for the child to understand'. (Teacher)

> 'Our goal was to expand their vocabulary. To expose them to more complex words'. (Student)

These utterances both presented two different perspectives on the students' involvement in transdisciplinary collaboration and were therefore grouped together under the theme of *Scaffolding learning of language, reading and writing skills*. Research memos were made throughout using the software programme to highlight or comment on pieces of text containing personal insights or to identify new subthemes that arose from the data. Reliability of coding decisions was addressed by having the first and third author code the data separately and meet weekly to discuss and compare emerging subthemes. Researcher bias was addressed by having the authors coding only the transcripts from schools where they were not involved in clinical supervision.

Ethical considerations

Approval for the study was granted by the ethical review committee of the Faculty of Medicine and Health Sciences of SU. Participation was voluntary and participants were informed of their rights, including anonymity and the right to withdraw from the study at any point. Although attendance

for the clinical practicum is compulsory for students, participation in the focus groups was voluntary. It was made clear to students that, should they decide not to take part in the study, it would not influence their clinical marks. Consent was obtained to make audio-recordings of the interviews and all personal details were removed from the transcript so that individual participants would not be identifiable. No personal details of participants were revealed to anyone not directly involved in the study. Data have been saved in a password-protected computer file to which only the researchers have access.

Results and discussion

This study explores the perspectives of different role-players in transdisciplinary collaboration following the E-E Model for early literacy intervention (Justice & Kaderavek 2004). Findings are reported and interpreted according to the main themes, summarised in Table 1. Selected quotations from the interviews are provided to illustrate key points in participants' own words; English translations are provided for Afrikaans utterances. Each theme will be discussed with reference to the perspectives of the three different groups of role-players.

Negotiating professional roles in early literacy classroom intervention

'I enjoyed standing in front of the class and to present it to them and teach them'. (Student)

'…. yes like I would now come into a class and the teacher is not cooperating very well then it isn't now a sudden shock or something and … so for me it was very good'. (Student)

'Those class sessions taught me an awful lot. Even if it is not necessarily how to stand in front of a class, but where to start, on what level a child is at that age'. (Student)

'But they often said to me that it feels like they are B.Ed [education] students, they were unsure about the relation between speech therapy and classroom therapy'. (Tutor)

'…. this is after all their first experience really, where they had to communicate with another professional person who didn't always know what they wanted to do. In that sense I think, I don't know it's just our perception we will have to hear what

the students say, but I think it was very valuable because they had to say these are our goals and then [the] teacher says okay this vocabulary is too difficult and it's then that they had to negotiate and say but why did they choose it and what else would teacher suggest. I think it was very valuable'. (Tutor).

Although all students valued the practicum as a learning experience, different individual preferences were apparent. Some students disliked doing what they described as 'the work of teachers', whereas other students clearly enjoyed taking on aspects of the teacher's role. The majority of the students nevertheless felt that their professional role and contribution to classroom intervention as SLTs-in-training was not fully understood by the teachers, a perception shared by the tutors. For example, some teachers were under the impression that SLTs work on mathematical skills, even though the roles of the SLT students had been outlined during the orientation meeting at the start of term. This apparent confusion could perhaps be attributed to the fact that undergraduate students from different degree programmes at SU visit these schools (e.g. education, social work and psychology). This might have contributed to a blurring of lines between professional roles and uncertainty of the teachers about the specific outcomes of the SLT students.

Some Grade R teachers were also resistant to the students encouraging emergent writing or letter knowledge because they felt this was only a formal outcome in higher grades. The tutors suggested that the teachers might have felt that learners' performance reflected on their own teaching abilities and that teachers therefore encouraged the students to include activities that they knew the learners could do. Clearly, a more open, ongoing dialogue between students and teachers is needed to negotiate intervention goals, clear up misunderstandings related to professional roles and foster greater trust between different role-players. The need for acceptance of different perspectives was identified by Muñoz and Jeris (2005) as one of the areas that is important for creating a setting where effective collaboration can take place. Students also recognised the value of having such discussions with the teacher to address issues as they arise, particularly halfway through the practicum.

In a transdisciplinary model, a key objective is to expand and exchange knowledge and skills within and between team members (Moonsamy 2015; Prelock *et al.* 1995), a process which requires time and commitment (Peña & Quinn 2003). An underlying assumption is that different group members contribute certain strengths and limitations to the collaboration. Judging by responses obtained during the interviews, taking part in the study made participants critically re-evaluate their own roles in early literacy intervention. The perceptions of the role-players in this study regarding their own and others' strengths and limitations, are discussed in more detail below. Note that the subthemes discussed below were identified from the interviews and reflect the perspectives of the participants in this particular study; it is not the purpose of this article to prescribe 'correct' professional roles or make judgments about how

TABLE 1: Main themes and subthemes identified from the data.

1. Negotiating professional roles in early literacy classroom intervention
11.1. Teachers as mentors of students
(1) Students managing classroom behaviour
(2) Teachers as experienced sources of practical knowledge
(3) Students' direct involvement in creating early literacy learning opportunities
11.2. Students learning in practice
(1) Scaffolding learning of language and literacy skills
(2) Students working with individual children
(3) Development of teaching tools
11.3. Tutors as the intermediaries
(1) Facilitate learning and collaboration
(2) Act as intermediary between students and teachers
(3) Assessment of student performance

transdisciplinary collaboration should be understood by the participants.

Teachers as mentors of students

1. Students managing classroom behaviour: right at the beginning the students need the teacher's authority to get the children to be quiet but after that they can do it but they cannot do it from the beginning … 'I think the students don't even see it as a skill that you have to have. Before the chaos happens'. (Tutor)

> 'Because if I didn't jump in, then it was chaos. So … maybe they just have to be a little bit more strict, but oh well … it will still come along. Like, after all, we all started out like that. (Teacher)

> After all they know [*their*] teacher. So they know exactly how teacher's rules are and how teacher is. If teacher says they have to keep quiet or the whistle blows, then they know now. Now they see new little faces, now they first want to see where we can take chances, or we're not going to listen now. So many times … no, it wasn't exactly like that but I had to sit there to maintain discipline'. (Teacher)

Teachers felt that they were able to provide valuable input and support with regard to maintaining discipline in the classroom, especially during the first few sessions. The ability to manage the behaviour of large groups of learners was an important clinical outcome for the practicum, and the teachers were clearly considered a valuable resource in achieving this outcome. Tutors felt that it was especially useful for teachers to assist with discipline at the beginning of the practicum, when students did not yet know the learners' names or were still unsure of the strategies to use for discipline, and actively encouraged students to consult with teachers on this issue. Students were commended by teachers and tutors for managing to develop their own innovative and creative strategies for managing learners' behaviour (e.g. learning the names of all the learners in the class, using a reward system and visual reminders or prompts to highlight group rules). Tutors remarked that the same students typically took on this responsibility.

However, most students did not enjoy or feel comfortable maintaining discipline during the class sessions. They seemed to feel strongly that it remained the teacher's responsibility because she already had an effective system in place that the learners were familiar with and that discipline should not be an area on which they be assessed. They also seemed anxious that they might run into trouble with parents by being too 'strict'. Teachers, however, pointed out that students should be more consistent in implementing their reward system (e.g. if they said the child wasn't getting a sticker because he misbehaved, then they should not give him a sticker). In general, students reported more positive experiences related to behaviour management in classrooms where the teacher was more actively involved in the class sessions.

Teachers differed in the degree to which they provided input to the students. Tutors reported that, on the one hand, some teachers initially tended to take too much responsibility for

maintaining discipline during the students' sessions and did not give them enough opportunities to develop these skills. On the other hand, teachers at one particular school were perceived by students and tutors as not giving enough guidance in this area. Tutors remarked that some teachers seemed to struggle to release or share their professional role in this area, even though this particular outcome was explained to them at the orientation, and students were encouraged by the tutors to consult with the teachers:

2. Teachers as experienced sources of practical knowledge:

> 'I think the teachers are quite a useful resource as well. When we were planning class therapy especially our teacher she told us specifically what she wanted. And then helped us to see that 'cause obviously we don't know where the children that … are developmentally in terms of how they are performing in the classroom and how it differs for each child. And then it was quite cool when the teacher actually said actually no they're really battling with prepositions or they battle with this or that and then can you work it into therapy for us. So that was quite useful'. (Student)

Teachers also felt they could give students valuable practical advice on how to tailor activities to learners' abilities, interests and background; a perception supported by the other role-players. An additional strength identified by the tutors was that it enabled students to slot into an existing, structured framework under a qualified teacher's guidance. This strength was also highlighted by feedback from students at two of the schools, who felt they benefitted greatly from the teachers' experience, guidance and feedback regarding the general developmental level of the children in their classroom, and in selecting targets for intervention. Teachers reported that students also never questioned the rating they received on the rating form; this seems to suggest that students valued and tended to place a higher premium on effective collaboration in their interaction with teachers than on knowing how teachers had scored them on the rating scale.

Tutors and students at one particular school felt they did not experience the benefit of this guidance and structure because teachers were less actively involved with the students and did not always appear to follow the prescribed curriculum. However, these teachers maintained that they did refer to the most recent curriculum when determining their goals for phonological awareness, although they did not explicitly discuss this with students beyond giving them the theme for the week. The tutors acknowledged that their perception of the gaps in the teachers' roles could be influenced by the fact that they enter the school as outside persons.

3. Students' direct involvement in creating early literacy learning opportunities:

> 'we gave her the session plan then we asked her afterwards what … how did she feel about it, did she have any recommendations for us. The rule initially was that they had to give us the five vocabulary items. But she did not do it so we just got our own five words and um … so she did not actually do anything'. (Student)

After some initial adjustment difficulties, students generally found it enjoyable to work with the teachers. They felt that their input was valued and found it highly motivating when they saw that teachers were revising the content of previous sessions with the learners and using the students' materials in their lessons. Teachers, in turn, generally felt that the students were as professional and well prepared. They also appreciated the fact that students consulted them when planning class sessions and were willing to implement their feedback. One group of students, though, experienced their teacher as being very passive, despite their attempts to actively engage with her; this is illustrated by the above quotation. This particular teacher had only recently started working at the school and was relatively inexperienced in collaborating with students, which could explain her perceived reluctance to actively engage with them.

Students learning in practice

1. Scaffolding learning of language, reading and writing skills:

'Well we would … our tutor said that we must look at their [*the learners*'] level and do one step above it. And I think most of the time it was like this where the teacher wanted us to stay on their level. Which is actually silly because then they actually don't learn anything. (Student)

… we felt that and the students too, that the teacher hopelessly underestimated the learners. That their goals are so low that while we are training students that this is the core year before children go to school, these are emergent literacy abilities. These skills have to be in place. Where the expectations that the teachers set for the children were much lower, if any'. (Tutor)

Firstly, tutors and students highlighted their in-depth knowledge of language and therapeutic principles as a definite strength of their involvement, as it enabled them to challenge learners to move further than their current level of ability. However, this particular philosophical perspective on child development did not seem to be shared by all the teachers, whose goals for intervention were not always clearly aligned with the students' goals in the same areas. On the one hand, students felt that teachers tended to underestimate the language and early literacy abilities of learners, by focusing on skills and vocabulary that the learners had already mastered, instead of challenging learners to start thinking more about language. The teachers, on the other hand, seemed to view the students' approach as an inability to select vocabulary appropriate to the learners' age, background or interests. The tutors felt that an important role of the students in the transdisciplinary collaboration was to empower the teacher and provide information related to early literacy and language intervention. Tutors at one of the schools where, in the past, collaboration had been less successful, also saw the practicum as a valuable opportunity for them to subtly encourage or influence the teacher to follow the prescribed curriculum more closely. However, they expressed the concern that the teachers could have perceived this as criticism, especially because it came from outsiders rather than from their colleagues based at the school.

2. Students working with individual children

The teachers perceived the ability of students to provide intervention in smaller groups as a main strength, as it allowed them to identify and assist struggling learners and to further establish early literacy skills targeted by the teacher during class activities. For this reason, small-group classroom intervention was also preferred by most teachers over large-group sessions. The fact that students were able to assist with intervention for the second-language learners in the classroom was also perceived as a definite strength. This was mentioned by the tutors, as well as teachers at one of the schools where the first language of several learners is isiXhosa, a language not spoken by the teachers but one in which SLT students at SU are trained to have a working proficiency.

3. Development of teaching tools

'But this was a plus for me because all their things they told me teacher you can use it again. (Teacher)

Not just a picture or something. [*It*] was laminated, it's colourful, like they … we cannot [make] such pictures for the little ones. They enlarged and covered [*it*] …. Exactly like we want them. (Teacher)

And we really tried to lower the costs as much as we could but then it makes it harder and it means you have to draw more pictures and you happen to use your own stuff so it doesn't feel like you're spending and that kind of thing. So that was quite hard and the teachers would be like we really liked the book would you make one again. (Student)

And then it was so much illustrating because there are not like culturally appropriate books and books that are appropriate for their age that are this big and that you can use in front of the whole class and everything. We were ending up sitting hours in front of our computers drawing things for hours and hours and we had so much other work to do'. (Student)

Students were required to develop suitable intervention materials for each classroom session, based on the classroom theme and target vocabulary, and to make this available to teachers to use during the following week. Teachers felt that they particularly benefitted from these intervention materials and praised students for developing materials that conformed to their expectations, in that they were colourful, laminated and enlarged for the learners. In addition, they felt the materials were of high quality, fit in well with the class theme and helped learners to generalise skills learnt in the class session to other situations. Students at one school reported that, at one point, teachers' enthusiasm over the materials created an almost competitive atmosphere between the two student groups to create more attractive materials. This was experienced as demotivating by the students, an indication that teachers did not appreciate their effort in planning the class sessions. This issue was addressed by the tutors through discussion with the teachers and students.

Students clearly felt ambiguous about the development of the resources: on the one hand, they were motivated by the positive feedback from teachers and the positive influence this had on collaboration whilst, on the other hand, they were

reluctant to contribute the materials because of the resulting financial and time implications. Students as well as tutors also felt that, initially, teachers did not fully understand the implications of their feedback in terms of the costs to the students. Tutors were sympathetic to students' frustrations regarding the development of resources and commented that the allowance of 25 rand per group, per week, was not nearly enough to cover the expenses of the materials. Some teachers and students seemed to be quite competitive when it came to developing the resources, which placed additional strain on those students who could not cover expenses from their own pocket and were limited to the weekly allowance.

Nevertheless, tutors were of the opinion that the ability to develop appropriate intervention materials for under-resourced communities, within a specified budget, was an important outcome for the practicum, and valuable in preparing students for their community service year in particular. Tutors agreed that it was important for students to come up with sustainable and cost-effective ways of creating and locating intervention materials, especially because it is unlikely that students would continue to receive funding for materials in future practicums. Suggestions by tutors included making use of colour pictures from advertising flyers or magazines, using existing classroom materials related to the theme (e.g. learners' drawings) and incorporating teachers' resources (e.g. educational toys or puzzles) into the class sessions.

The provision of intervention materials by students was included as a meaningful incentive for teachers to participate in classroom-based collaboration with SLT students (Peña & Quinn 2003). However, this seems to have placed an unanticipated but ultimately unfair financial and logistical burden on students and had perhaps de-emphasised the crucial contribution that the teachers could make in planning early literacy activities. Alternative incentives should therefore be identified to encourage teachers' participation, and future practicums should instead aim to be a joint exploration of available resources in order to improve early literacy intervention (Muñoz & Jeris 2005). This would ultimately contribute to student–teacher interaction, which more closely resembles transprofessional collaboration as outlined in the E-E model.

Tutors as the intermediaries

1. Facilitate learning and collaboration

'Just wondering if we as tutors are not then like almost a hindrance. We have to be there at this stage to facilitate things or as intermediary but it feels to me it forces more interaction between the teachers and the students if we are not there. (Tutor)

… also for the teachers because they know beforehand what the curriculum for each year will be. That they [select] five words let's say it's the ten themes that they and the tutors and the teachers just go ahead and identify five words and let's say we choose these words because it's difficult and now we are going to discuss it with you so that it fits in with the theme. So that we don't arrive there every week and she quickly gives a few words or we have to come up with it ourselves and then she says it's too difficult'. (Student)

The tutors perceived their main role as that of facilitator. This entailed providing guidance to the students in the form of written or verbal feedback, reorientating them to their role as future SLTs in early literacy intervention and also to guide and support students in their collaboration with teachers (and vice versa). Tutors felt that the practicum allowed sufficient opportunity for effective tutoring, which was of particular importance for students giving therapy to clients in their second language. Some tutors felt reluctant to interrupt students during their presentation of the class sessions, even though this often presented valuable opportunities for clinical teaching. This reluctance is likely related to the concern voiced by one of the tutors, namely, that their presence might be inhibiting collaboration between students and teachers (discussed further in ii. below). In other words, tutors might have avoided interrupting students' sessions in order not to highlight students' clinical limitations in front of teachers because they might have felt that this would negatively impact on teachers' perception of pre-professional students as peers (Peña & Quinn 2003). Interestingly, teachers perceived tutors' involvement during students' small-group sessions as helpful to the students rather than a hindrance. Students generally found their tutors approachable, although some were hesitant to make suggestions or query decisions communicated by the tutor. They attributed this to differences in prior experiences and personality and the fact that some individuals preferred to avoid confrontation, especially with someone they viewed as an authority figure. They also felt that they would have benefited from the input of more than one tutor, to have different perspectives on a particular clinical problem.

Students were of the opinion that tutors' role should also extend to assisting them in planning for the following week's session. The need for a more direct involvement between tutors and teachers were expressed by some students, for example, in preselecting the target vocabulary for all the intervention sessions. Although not having to collaborate directly with the teachers would admittedly make it easier for students, it would also decrease the opportunities for them to learn the interpersonal skills needed to function effectively in a collaborative team. However, the students' comments do reveal a definite need for more adequate long-term planning of intervention sessions. For example, many students were frustrated by the fact that teachers typically only confirmed the class theme with them a week before the next session, which left limited time for planning. They also felt that there should have been more discussion between the teacher and the tutor regarding the management of discipline in the classroom. However, (1), tutors were of the opinion that their expectations regarding the maintenance of discipline had been clearly communicated to the tutors during the orientation meeting and that any misunderstandings in this regard likely resulted from other factors.

Tutors at one school in particular, felt that the adaptations that were made to the practicum had created a more comfortable space where they could involve teachers without feeling like they were taking up valuable class time (as experienced in

the past). It is likely that closer involvement of the teachers in classroom-based intervention made them more aware of the benefit of SLT services to learners' early literacy development, and thus more positive about the students' involvement at the school. Lastly, teachers described interaction with the tutors as good-natured and mentioned that they never felt uncomfortable in their presence in the classroom. Interestingly, not all teachers felt a need to collaborate directly with the tutor, but preferred instead to talk to the students themselves.

2. Act as intermediary between students and teachers

Tutors reported that they sometimes had to act as intermediaries between the students and the teacher in instances where either party did not feel comfortable addressing misunderstandings or issues directly. They felt that students initially tended to view the teachers as authority figures and preferred to avoid direct interaction with them, whilst certain teachers preferred to interact directly with the tutors rather than giving critical feedback to the students. One teacher, for instance, would give positive general feedback to the students but write any critical comments to the tutor on a separate page. It is possible that foundation-phase teachers in general might be less familiar or comfortable with the tutoring and assessment of young adults (versus young children) or that they did not fully understand the training outcomes of the practicum. A further possibility is that teachers might have been particularly sensitive to the unequal power relation inherent in transdisciplinary collaboration between students and teachers. Some tutors felt ambiguous about their role as intermediary, whereas students, in turn, felt that they were often in the difficult position of being caught in the middle of the expectations of the tutors on the one hand and the teachers on the other. Not surprisingly, students' interaction with tutors was also influenced to a great extent by the fact that tutors were responsible for their assessment, an issue discussed in more detail in section (3).

3. Assessment of student performance

> 'That was also a hard thing, the tutors and teachers telling us different things. And the teachers liking what we did and the tutors not because it was too like technical or they couldn't see the benefit, or the tutors not liking what we did but the teachers actually told us to do that and that was quite hard. And they'd mark us down for it even though it was what we've been asked to do by the teacher who was supposed to be helping'. (Student)

> 'But I wasn't really worried about marks, more about how to make it better. Obviously marks matter a little now but when you finish one day and actually practicing you want to do the best therapy possible. So I would like to know like okay so this goal is really good and I really liked your activity that's something I would use or I really don't think you should do that. You are not actually achieving the goal you were trying to. So I [*would*] rather have feedback about my actual goals and how I would change it or how you would change the activity or the instructions rather than knowing you [*have*] 70% or something'. (Student)

In addition to supervision and providing support, tutors are also responsible for assessing students in order to generate a mark for the clinical module. It is therefore not surprising that anxiety and uncertainty about marks and assessment in general emerged as a recurring theme during focus groups with the students (although it was not limited to the class sessions but extended to individual intervention as well). Some students felt that they would have appreciated input from more than one tutor, but were concerned that this could make them lose marks because of perceived subjective differences between tutors in their approach to assessment. Most students felt that they had benefitted from their tutor's qualitative feedback but mentioned that they did not always have clarity regarding their marks. Students also felt that they would have benefitted from more opportunities to observe qualified SLTs (tutors or otherwise) providing individual as well as large-group intervention.

All role-players completed a weekly rating scale in which they rated their ability to achieve the specified outcomes of the practicum with regard to classroom collaboration. The form consisted of several statements to which participants had to respond by selecting an option on a simple Likert scale (1 = strongly disagree and 5 = strongly agree). Teachers were satisfied with their ability to assess the students using the rating scale, which they experienced as user-friendly, although they felt that students benefitted more from the qualitative feedback, a perception confirmed by the students as well as the tutors. Teachers preferred to give qualitative written or verbal feedback to students if they felt that a specific point was not relevant to that specific session or if there were subtleties that could not be conveyed effectively only by marking off a number. Likewise, tutors noted that teachers' ratings often did not correspond with their qualitative feedback (e.g. a teacher would tell students that the vocabulary was not appropriate but still give them a 4 or 5 on the form) and felt that the current form was maybe not effective in encouraging reflection on the part of the teachers. However, incorporating use of the rating scale by the teachers into the practicum seems to have been effective in facilitating active involvement of the teacher without compromising transdisciplinary collaboration between them and students in the process. Most students complained that the form was not sensitive enough to contextual factors and that it was of limited use in improving their clinical skills. Some tutors also expressed uncertainty with regard to attaching a final mark for the class sessions. It seems clear the rating scale used in the practicum was not well suited for its intended purpose and that structured opportunities for qualitative feedback and self-reflection are more helpful for students and teachers in particular.

Conclusions

This study explored the perceptions and experiences of teachers, SLT students and tutors involved in transdisciplinary collaboration to provide intervention for literacy difficulties. The findings show that all role-players found the collaboration to be a valuable learning experience in that it had enhanced their self-awareness of their own role and given them greater

insight into the potential contribution of each member of the transdisciplinary team. A degree of role confusion still exists between the different groups, in particular with regard to maintaining discipline in the classroom. Because teachers and SLTs have a shared responsibility toward preventing literacy difficulties in young learners, a degree of role confusion is to be expected, especially in the first phases of a service learning partnership (Dorado & Giles 2004). The students who took part in this study were exposed to transdisciplinary collaboration relatively early in their careers, which could have meant that they were not yet well grounded in a specific discipline (Nash 2008) or fully appreciated their professional role as SLTs in order to contribute as a member of the team (Baxter 2004). A possible advantage, however, is that students were likely more accepting of different disciplinary approaches and could learn to form concepts across different theoretical perspectives before being shaped by their scientific, discipline-specific experience (Nash 2008). Although students found it challenging to negotiate outcomes and professional roles between themselves and the teachers, the tutors were all of the opinion that the practicum provided well-structured opportunities for students and teachers to have these discussions and also made students aware that working with other professionals sometimes required a degree of compromise.

Even though early literacy intervention is a shared goal of both professions, teachers seemed to differ somewhat from SLT students and tutors in the way they approached intervention for early literacy development. This proved challenging for students but at the same time provided them with a valuable opportunity to negotiate their outcomes and responsibilities as future SLTs with another professional person. A goal of future practicums could be to provide more structured opportunities for feedback between role-players. The collaboration reported on in this study can be categorised as reaching the tentative purpose stage of team development, which is characterised by a renegotiation of roles, awareness of a shared purpose and responsibility, although group decisions and conflicts are avoided (Peña & Quinn 2003:54).

In general, the findings indicate that undergraduate student training provides a valuable opportunity to facilitate effective communication between different role-players in a transdisciplinary team. The unequal power balance between pre-professional SLT students and already-qualified teachers could be addressed in future studies by including student teachers, instead of qualified teachers, in the transdisciplinary team. This might reduce the somewhat problematic role of the tutor as intermediary and possibly enhance students' sense of shared decision making. In conclusion, it is clear that the practicum had enhanced self-awareness of the different role-players regarding their role in joint early literacy intervention and at the same time resulted in an increased awareness of others' unique contributions, an important factor in increasing collaboration between different professionals (Muñoz & Giles 2005). The information from the study can be used to inform and improve future practicums.

Authors' contributions

H.O. (Stellenbosch University), D.K. (Stellenbosch University) and M.V. (Stellenbosch University) contributed equally to the writing of this article.

References

American Speech and Hearing Association (ASHA), 2001, *Roles and responsibilities of speech-language pathologists with respect to reading and writing in children and adolescents*, [Guidelines]. viewed n.d., from http://www.asha.org/policy

Baxter, S., 2004, 'Perspectives and practice: Speech and language therapy student views of an interprofessional learning experience', *Learning in Health and Social Care* 3(2), 102–110.

Baxter, S., Brookes, C., Bianchi, K., Rashid, K. & Hay, F., 2009, 'Speech and language therapists and teachers working together: Exploring the issues', *Child Language Teaching and Therapy* 25, 215–234.

Creaghead, N., 1992, 'Collaboration as a service delivery model', in ASHA Transcript Series, *Focus on school issues: Classroom integration and collaborative consultation as service delivery models,* pp. 6–19. Rockville, MD: American Speech-Language Hearing Association.

Cunningham, A., Zibulsky, J. & Callahan, M., 2009, 'Starting small: Building preschool teacher knowledge that supports early literacy development', *Reading and Writing* 22, 487–510.

De Witt, C., Baldwin, Jr. & Baldwin, M., 2007, 'Interdisciplinary education and health team training: A model for learning and service', *Journal of Interdisciplinary Care* 21(Suppl. 1), 52–69.

Dickinson, D. & Caswell, L., 2007, 'Building support for language and early literacy in preschool classrooms through in-service professional development: Effects of the Literacy Environment Enrichment Program (LEEP)', *Early Childhood Research Quarterly* 22(2), 243–260.

Dorado, S. & Giles, D., 2004, 'Service-learning partnerships: Paths of engagement', *Michigan Journal of Community Service Learning* 25–37.

Harn, W., Bradshaw, M. & Ogletree, B., 1999, 'The speech-language pathologist in the schools: Changing roles', *Intervention in School and Clinic* 34, 163–169.

Justice, L. & Kaderavek, J., 2004, 'Embedded–Explicit Emergent Literacy Intervention I: Background and description of approach', *Language, Speech and Hearing Services in Schools* 35, 201–211.

Kitzinger, J., 2006, 'Focus groups', in K. Pope & N. Mays (eds.), *Qualitative research in healthcare, 3rd edn.,* pp. 21–31, Blackwell Publishing Inc, Malden.

Lacey, P. & Lomas, J., 1993, *Support services and the curriculum: A practical guide to collaboration*, David Fulton Publishers, London.

Law, J., Lindsay, G., Peacey, N., Gascoigne, M., Soloff, N., Radford, J. & Band, S., 2002, 'Consultation as a model for providing speech and language therapy in schools: A panacea or one step too far?' *Child Language Teaching and Therapy* 18(2), 145–163.

Miller, C., Freeman, M. & Ross, N., 2001, *Interprofessional practice in health and social care: Challenging the shared learning agenda*, Arnold, London.

Moonsamy, S., 2015, 'Classroom-based speech-language services: Collaborative practice between speech-language therapists and teachers', in S. Moonsamy & H. Kathard (eds.), *Speech-language therapy in a school context,* pp. 119–139, Van Schaik, Pretoria.

Mullis, I., Martin, M., Foy, P. & Drucker, K., 2012, *PIRLS 2011 international results in reading*. TIMSS & PIRLS International Study Center, Chestnut Hill.

Mullis, I., Martin, M., Kennedy, A. & Foy, P., 2007, *PIRLS 2006 international report: IEA's progress in international reading literacy study in primary school in 40 countries*, TIMSS & PIRLS International Study Center, Boston College, Chestnut Hill.

Muñoz, K. & Jeris, L., 2005, 'Learning to be interdisciplinary: An action research approach to boundary spanning', *Health Education Journal* 64(1), 5.

Muñoz & Giles, 2005.

Nash, J.M., 2008, 'Transdisciplinary training: Key components and prerequisites for success', *American Journal of Preventative Medicine* 32(Suppl. 2), S133–S140.

National Education Evaluation and Development Unit (NEEDU), 2013, *National report 2012: The state of teaching and learning in the foundation phase*, NEEDU, Pretoria.

National Education Evaluation and Development Unit (NEEDU), 2014, *NEEDU reading study 2013: The state of reading in grade 5 in selected rural primary schools,* NEEDU, Pretoria.

Pascoe, M., Harty, M. & Le Roux, J., 2015, 'Language, literacy and learning in the classroom', in S. Moonsamy & H. Kathard (eds.), *Speech-language therapy in a school context,* pp. 175–195, Van Schaik, Pretoria.

Peña, E. & Quinn, R., 2003, 'Developing effective collaboration teams in speech-language pathology: A case study', *Communication Disorders Quarterly* 24(2), 53–63.

Prelock, P., Miller, B. & Reed, N., 1995, 'Collaborative partnerships in a language in the classroom program', *Language, Speech, Hearing Services in Schools* 26, 286–292.

Sanger, D., Hux, K. & Griess, K., 1995, 'Educators' opinions about speech-language pathology services in schools', *Language, Speech, and Hearing Services in Schools* 1, 75–86.

Silliman, E., Ford, C., Beasman, J. & Evans, D., 1999, 'An inclusion model for children with language learning disabilities: Building classroom partnerships', *Topics in Language Disorders* 19(3), 1–18.

Silverman, D., 2006, *Interpreting qualitative data: Methods for analyzing talk, text and interaction,* 3rd edn., Sage, London.

Spencer, E., Schuele, C., Guillot, K. & Lee, M., 2008, 'Phonemic awareness skill of Speech-Language pathologists and other educators', *Language, Speech and Hearing Services in Schools* 39, 512–520.

South Africa. Department of Basic Education (DBE), 2011, *Report on the Annual National Assessments of 2011*. Government Printers, Pretoria, viewed n.d., from http://www.education.gov.za

Terre Blanche, M., Durrheim, K. & Painter, D., 2006, *Research in practice: Applied methods for the social sciences*, UCT Press, Cape Town.

Wium, A-M., 2015, 'Supporting teachers in emergent literacy', in S. Moonsamy & H. Kathard (eds.), *Speech-Language therapy in a school context,* pp. 145–173, Van Schaik, Pretoria.