Practical Partnerships

HPP – Linking Oral Language and Literacy Using Picture Books

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This paper details the results for the Otago Hei Awhiawhi Tamariki ki te Panui Pukapuka (HPP) Projects and how they have changed many lives – those of children, adult volunteers, and educators. It also explains some of the key strategies involved in an HPP session and gives some of the theoretical background to HPP. HPP is an oral language programme that reinforces the underlying skills for literacy development. It uses adult volunteer tutors to take three half-hour sessions each week for each child. HPP has a definite structure that promotes vocabulary extension, pragmatic skills and phonological awareness. HPP has been overwhelmingly successful in achieving these goals.

Introduction

Hei Awhiawhi Tamariki ki te Panui Pukapuka (HPP) translates from Maori to *"helping children embrace literacy through story book reading"*. It is an oral language programme based around carefully chosen, structured picture books where adult volunteer tutors discuss, then read stories in a planned way, one-to-one with identified students (Atvars, Pinfold, & Stock, 1999). HPP focuses on children who are reading at less than 7 years reading age level and who have identified deficits in their oral language prerequisites for literacy acquisition and learning to read.

Literature review

There has been considerable research into the relationship between oral language and literacy skills (Dickson, Anastasopoulos, McCabe, Peisner-Feinberg, & Poe, 2003; Dipardo & Schnack, 2004; Hattie, 2002; Justice & Kaderavek, 2002; Justice & Pullen, 2003; Rebello-Britto, 2001; Wasik & Bond, 2001; Whitehurst, Arnold, Angell, Smith, & Fischel, 1984). A "variety of oral-language skills are critical in emergent literacy and continue to play vital roles in subsequent reading achievement" (Dickson et al., 2003, p. 465). Children need exposure to, and experiences of, physical and cognitive processes in order to develop language. A sound understanding and innate ability to confidently utilize all aspects of oral language underpin both literacy and numeracy. This includes such skills as being able to process spoken language, retrieve and articulate vocabulary, and sequence events in a logical and meaningful way.

Different interventions target children's needs at different levels within the development hierarchy. Implicit in this statement is the fact that children's development is hierarchical, and there is little point in them going into "reading recovery" (for example) if they have difficulties with vocabulary, phonological awareness, or sequencing – which come lower

down the developmental hierarchy. In the experience of the authors this is what has often led to children "failing" in these programmes. This is one of the major issues that HPP seeks to address.

The research of Wasik and Bond (2001) suggests that children from lower social-economic homes have less exposure to books and lower expressive vocabularies than children from middle and upper socio-economic homes. Hattie's (2002) meta-analysis presented at the New Zealand Reading Association Conference gave evidence that the factors most positively correlated with reading achievement are socio-economic status, phonological awareness and vocabulary enrichment programmes. Phonological awareness and vocabulary enrichment are the prime foci of HPP.

With repeated and routine interventions, adults can support and encourage familiar routines, the learning of concepts, verbal participation, and through careful questioning engage and ensure children's understanding, thereby helping them to construct meaning (Crain-Thoreson & Dale, 1999). Storybook reading is a fundamental way for young children to acquire the vocabulary and social skills (turn-taking, using language to clarify concepts, etc.) that underpin literacy learning (Dipardo & Schnack, 2004; Hargrave & Senechal, 2002; Rebello-Britto, 2001; Whitehurst et al., 1994). Children's author Mem Fox maintains that children need to have at least 1000 picture books read to them before they will be ready to learn to read.

Children who are able to interact beyond just the reading of the text have been shown to peeform better on vocabulary tests (de Temple & Snow, cited in Wasik & Bond, 2001; Crain-Thoreson & Dale, 1999; Senechal, cited in Wasik & Bond, 2001; Whitehurst et al., 1994). This suggests that children who have the opportunity to discuss and seek clarification with another person and then interpret and store the vocabulary at a deeper level can then use it in more situations than if they were not given this opportunity. The "One Hand" technique used as a core component of HPP (see Appendix) is similar to "dialogic reading" (Whitehurst et al., 1984) because the adult uses many different questions to help the child form links with known vocabulary. Crain and Thoreson (1999) suggest that if questions are restricted to mainly "who/what", the result is less sophisticated child language (which is the anecdotal observation of Atvars et al. (1999) that led to the initial development of HPP). The One Hand technique allows the children to "hear" new vocabulary several different ways before they are expected to use it in retelling the story.

The importance of phonological awareness for emerging literacy has been well documented (Dickson et al., 2003; Gillon, 2000; Smith, 2001). Children who have difficulty developing phonological awareness often fail to develop awareness of the subtle structural and sub-lexical aspects of spoken language. This in turn impairs their ability to make sense of the alphabetic principle, and consequently of formal reading instruction (Justice & Pullen, 2003). Many children develop phonological awareness skills intuitively and therefore never need overt instruction. However, for those with literacy difficulties it is often their poor phonological awareness that is a major contributing factor (Gillon, 2000).

Storybooks provide both social and contextual support for the development of language (Vygotsky, 1962, 1978, cited in Crain-Thoreson & Dale, 1999). An integral rationale behind HPP is that the tutor is to provide "fun" activities which increase the child's "ability to enter more intensive levels of participation" and engagement (Dipardo & Schnack, 2004, p. 18).

Method

The Dunedin HPP projects were not envisioned as a clinical study, so the methodology was established purely to implement the programme in the project schools and not for the purpose of gathering research data. Also, this "study" provides an analysis and discussion of our results and data rather than formal statistical analysis.

Structure

Schools participating in the HPP Dunedin Projects were clustered based on location and school size. A coordinator was appointed per cluster, and coordinators were released from their school for the duration of the project. Their role involved helping liaison teachers establish HPP in their school, developing additional resources as required (e.g. a Tutor Manual), and providing information at meetings for teachers and parents.

Liaison teachers were appointed from within each school. Their role included identifying and testing children; recruiting, training and monitoring tutors; and gaining permission from the children's caregivers for them to participate. Liaison teachers often already had a senior role within the junior department of their school.

Teacher and tutor training
The particular focus of the training of the liaison teachers was those aspects of language acquisition and phonological awareness that had previously been identified as professional development needs. In particular, the focus was on speech development – voiced versus unvoiced phonemes, blends versus digraphs, and the correct pronunciation of phonemes, e.g. "fff" rather than "fah". The phonological awareness discussion focused on levels of phonological awareness and the normal developmental process for most children. Rhyme was identified as a pre-phonological awareness skill that helped children to "tune in to" both sounds and word families. The teachers spent considerable time discussing and practising both questioning and the use of the One Hand technique. One Hand gives a structure for oral language input based literally on the hand: four statements (four fingers) and then a question (thumb). Teachers were taken through question development: the use of closed or open-ended questions, inferential questioning, and the implications for children with language delays of the use of the various types of question. Teachers were also taught the unfamiliar parts of the testing regime and reminded about the parts with which they should already have been familiar to ensure testing consistency. One interesting issue that came up repeatedly was the lack of understanding in many teachers of the inextricability of meaning and decoding when examining at reading.

Subject selection
Schools were allocated places in the oroject based on their March 1 roll returns. Selection of children was primarily the individual school's decision, with the only project criterion being that the child's reading age was less than 7 years on a running record. Most schools initially gave priority to older children (over 7 years of age). Other bases form selection included being identified as reluctant to interact with others, showing lack of confidence participating in groups, and having difficulties with vocabulary and phonological awareness.

Children were included in the programme for 10 or 20 weeks, depending on their individual needs and their progress. Testing was repeated at the end of each 10 week block and served as mid- or post-testing, depending on whether the child was continuing in HPP. The only children specifically excluded from the HPP programme were those already receiving speech-

language therapy or some other form of additional special needs funding (Ongoing Reviewable Resources Scheme, Reading Recovery, etc). This was considered "double dipping", but more significantly it would have resulted in too much time out of classrooms for the children, reducing the effectiveness of both interventions and potentially creating other academic issues for them later.

Testing
Four tests were selected for pre- and post-testing as shown in Figure 1. All tests were developed in New Zealand. None was unique to HPP and some were adaptations of existing tests, applied beyond their developers' intended use – see discussion below.

Figure 1. Testing regime for HPP

Junior Oral Language Screening Test (1998) (JOST), including a language sample analysis which was not part of the original publication). The JOST gives an indication of a child's understanding and use of irregular and regular past tense, vocabulary, prepositions, regular and irregular plurals, and pragmatic behaviour. The JOST has a total raw score of 58 and the language sample analysis has 6 broad levels.
Running record: to assess a child's reading age (at 97% accuracy and 3/5 correctly answered comprehension questions).
Letter sound knowledge, using Marie Clay's Letter/Sound Knowledge test to show grapho-phonic knowledge. Scored out of 26.
The phonological awareness screening assessment was adapted from the "Communicate to Participate" (1998) resource folder to allow for more in-depth evaluation of the child's letter /sound knowledge, rhyme recognition and rhyme creation. Scored out of 35.

HPP in action
After being trained the teachers returned to their schools and recruited adult volunteers. These adult volunteers were then trained over two sessions in the *One Hand* (especially on how to be effective questioners); rhyme recognition, rhyme creation, and onset and rime; and pragmatic skills. This enabled them to run the three half-hour HPP sessions each week. The sessions were one-to-one with the child and adult, in a quiet space and withdrawn from the classroom.

Figure 2. Outline of a 30-minute HPP session

Step 1 (approx 5 mins): Mihimihi/Greeting – Greet each other warmly
    Start a conversation
    Respond to child's conversation
Step 2 (approx 10 minutes): Introduction of book
    Title, author, characters, place names, events.
    One Hand approach (for each page)
Step 3 (approx 5 minutes): Read text
Step 4 (approx 5-10 minutes): Review
    Retell
    Rhyme recognition *or* Rhyme creation *or* Onset and Rime
Step 5: Conclusion
    Stickers
    Farewell
    Complete student monitoring sheet

(Adapted from Dunedin HPP Training Manual 2003-2005)

Figure 2 shows that during a 30-minute session the child had many opportunities to begin, continue and end conversations (within a safe relationship) with the adult. Within the session the child is exposed to new vocabulary several times and in different ways, during the introduction of the book, the use of the One Hand, and finally when the book was read to the child. During Step 4 the child was encouraged to retell the story (initially with the pictures to provide visual prompts and later without them) and prompted to use new and/or specific vocabulary. Tutors were encouraged to make the sessions a "fun" and positive experience with lots of verbal praise and stickers used as reinforcement.

Results

Demographic information
Approximately 440 school aged children (children were counted as two if they had two 10-week blocks) were included in the Dunedin HPP projects over the initial 2 years. Sixty-one percent of the children entering the programme were boys. This is consistent with the New Zealand-wide trend of more boys being at risk of literacy difficulties than girls (Prochnow, Tumner, Chapman, & Greaney, 2001). The ethnic composition of the children was overwhelmingly European (77%). A further 11% were Maori and 7% were Polynesian. Maori and Polynesian children were slightly under-represented compared with their overall percentage in the overall population of Otago. Approximately 80% of the children entered the programme in their first 2 years of schooling. Anecdotal evidence would also suggest that the success of HPP decreases as the children get older. Teachers also commented that it was harder to find books that were at an appropriate interest level for older children. Only 13% of the children who entered HPP had no preschool experience; this is consistent with the general Otago primary school population. Of those who attended preschool nearly three quarters attended kindergarten.

Achievement data
Children made the most gains in the first block of 10 weeks (see Figure 3). The second 10-week block made a positive difference but the difference was not as great (i.e., not double the test results) as the first 10-week block. However, all the children benefited from this extra time. The children who were in the programme for longer were those with the highest needs and it should be remembered that the "easiest" gains are made first.

Figure 3. Improvements in raw scores of all participants in Dunedin HPP projects
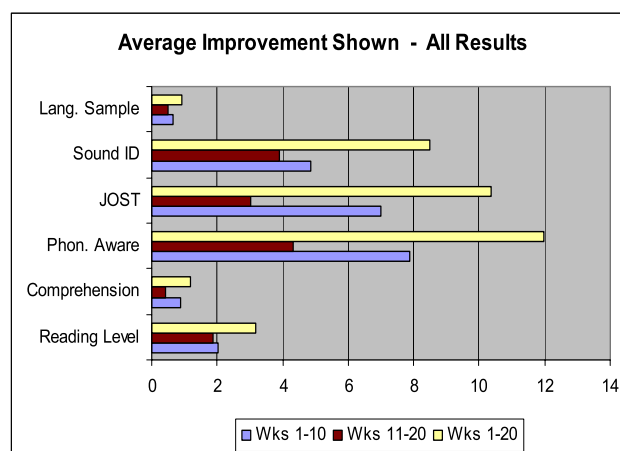
The JOST improvements were usually lower in the first 10 weeks (12% improvement

compared with 18% improvement) than if the child continued for a second 10-week block. It appeared that children consolidated the gains made in the first block and were much more confident with their oral language by the end of the second block. The language sample results were similar, with children making more gains on average in the second 10 weeks (17% compared with 10%). However, the language sample bands were very broad and children could make significant gains within a level without making progress on the formal testing. For the Running Record the results ranged from no improvement to 10 Ready To Read levels (with at least three out of five comprehension questions answered correctly). The average improvement was just over 2.4 Ready To Read levels. Almost 40% of the children continued for the second block of 10 weeks, completing 20 weeks of the programme.

Positive outcomes for liaison teachers and tutors as well as for the children were reported by the teachers and the tutors themselves. Many liaison teachers mentioned the positive impact the training had on their classroom practice, particularly in the area of phonological awareness and articulation/sound acquisition. Many tutors commented on the improvements in their confidence and skills working with children and other adults, and many sought further training or went into paid employment (for example as a teacher's aide) as a result of the skills gained in HPP.

Discussion

Although HPP was very successful there are many issues, particularly concerning the testing assessments, that need to be addressed. The JOST was not designed specifically for use as part of the HPP project, and as such had major limitations for our purposes. The original test was not intended to be scored in the way it was, or to be used as a pre- and post-test tool (particularly over such a short time-frame). However it did provide basic information for the area/s in which a child may be having specific difficulty, for the HPP tutor and classroom teacher to target.

The language sample had inherent difficulties, particularly with the marking formula, making it difficult to interpret for many of the teachers involved. The language marking formula was not developed at the same time as the JOST itself, beinf one of the few things developed uniquely as part of HPP. Because it was only a six-step scale, children were able to make improvement in their ability without it being reflected in the results. With comprehension scores, too, the children sometimes improved in their reading while achieving a lower (but still acceptable) comprehension score. Teachers reported that the JOST and Phonological Awareness Tests (in particular) gave them a clearer understanding of each child's strengths and weaknesses, and were at a lower level than they would have traditionally targeted their assessments. They were also able to make more informed decisions about when it was appropriate to refer a child to specialist services, and often included more in-depth referral information. Some teachers suggested that HPP improved Reading Recovery programme outcomes because children were going into the programme with improved pre-literacy skills and then spending less time actually in the programme than would have been anticipated without time in HPP. Many teachers reported using the *One Hand* in classroom and small group situations, e.g. with shared "Big Books". Schools were encouraged to write some of the children's success stories, particularly those who may not have shown formal progress but where anecdotal evidence suggested otherwise. There were some very powerful, and at times moving stories.

Tutor retention was a major issue, particularly for some schools. Within Otago, HPP tutors are sought after as teacher's aides as they have demonstrated skills working with individual children, ability to follow a set programme, management, record-keeping and planning, ability to work without close supervision, etc.

Conclusion

HPP is a successful oral language intervention programme that we have demonstrated can be transferred from a very different setting in the predominantly Maori central North Island to a mainly European population in the South Island, and with very similar results.

The results summaries above speak for themselves as to the positive outcomes for the children. It is pleasing for us that the phonological awareness understandings and skills upon which HPP is based are now becoming an integral part of good classroom practice across the province, primarily because of the success of the Dunedin HPP Projects. HPP continues in the majority of the 26 original schools, demonstrating the value that individual schools place on the programme by paying for its continued implementation out of their own funds. In future it would be worthwhile to evaluate HPP in a more scientifically based research project with a matched control group.

The HPP journey continues …

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Appendix. The *One Hand* approach

❖ Use your **fingers** … and provide information:

Provide information about:				
Name	*Size*	*Colour*	*Shape*	*Function*

Then

❖ Use your **thumb** … and ask a question:
- Ask open questions, as these require a full language response.
- Try to avoid closed questions. These can be answered with *yes* or *no* or *I don't know*! If you do ask and the child responds by answering *yes* or *no*, follow up by asking, *How…? Why…? What….?* This allows the child to respond using a full language statement.
- If the child says *I don't know*, follow up with a forced alternative question. For example: *Did the boys reach the top of the mountain on a truck or did they walk?*
- Remember to use lots of different sorts of questions.