Oral language and beginning reading: Exploring connections and disconnections

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ABSTRACT

The purpose of this study was to explore the connections between young children's oral language vocabulary and children's reading of written language in beginning reading books. Oral language has been viewed as the foundation for emergent reading development as it provides the semantic base, syntactic base and phonological base for successfully moving from oral to written language. In fact in the years before school the development of children's oral language in the home environment is viewed as an important factor for early reading success.

The research reported in this study involved children in their first year of school in a socioeconomically diverse community. The findings revealed disconnections between children's receptive oral language vocabulary and early reading. Children with English as a Second Language scored low on oral language vocabulary but high on reading levelled texts. Children with high scores on oral vocabulary scored low on reading levelled texts and a small group of Aboriginal children scored low on both oral and written measures. This study raises questions about the view that oral language neatly underpins reading development and suggests that learning to read is akin to learning a second language for all children.

And when he came to the place where the wild things are
they roared their terrible roars and gnashed their terrible teeth
and rolled their terrible eyes …
Where the wild things are (Sendak 1963).

Introduction

Oral language has long been regarded as the foundation for beginning reading as children draw on the meaning, syntax and the phonology of spoken language as a bridge to emergent literacy. However, many teachers have commented on the vast diversity in the oral language capabilities of children starting school. In this case study of children in a small metropolitan school in Adelaide the teachers were concerned that some children were beginning school with relatively small vocabularies and some used forms of nonstandard oral language. The teachers thought that children with nonstandard forms of English syntax may have difficulty using the syntax of books or book language to aid their beginning reading. Also many schools have increasing numbers of children with English as an additional language as well as children who speak languages which have not been recorded in written form. The concern of these teachers led to a series of questions which are explored further through a review of literature and several case studies involving young children who are beginning to read emergent texts in their first year of school.

Oral language as a predictor of early reading

The importance of oral language as a predictor of future literacy achievement is supported by research across a number of oral language domains. Young children need to have control over several aspects of oral language prior to starting the beginning to read process—

phonology, vocabulary, syntax, discourse and pragmatics (Snow, Burns and Griffin 1998). Research has shown that the size of children's vocabulary at age 3 is strongly associated with learning to read and reading comprehension at the end of third grade (Hart and Risley 2003). Dickinson and Tabors (2002) found the scores that kindergarteners achieved on measures (receptive vocabulary, narrative production, and emergent literacy) were highly predictive of their scores on reading comprehension and receptive vocabulary in fourth and seventh grade. There are several characteristics of oral language: word meanings (semantics), sentence structure (syntax), the architecture of words and word parts (morphology) and sounds (phonology) (Richgels 2004). The particular characteristics of oral language phonology, vocabulary and syntax will be explored and compared to written language.

Oral language and written language

Oral language is all around us and we take it for granted, unaware of the choices we make or the form of language we use. However, when writing, written language demands that there is conscious attention to form and this involves choices to do with semantics, syntax and phonology. For example, a four year old beginning invented speller who wants to write 'I have a chair' has to consider word order and meanings and when writing the word 'chair' the child needs to pay attention to phonemes in a way that they never had to when learning to speak (Richgels 2004). The importance of phonological awareness cannot be underestimated and Richgels (2004) points out that children are born able to perceive phonemes for example from birth they can perceive the difference between /s/ and /z/. Richgels (2004) also writes that in the study of oral language the greatest attention in research has been on phonology, and even then, mostly on a subset of phonological knowledge; the awareness of phonemes.

The syntax of oral language has been identified as important for beginning reading. It is argued that children with a high competence in oral language sentence construction bring rich language to the new task of reading and writing. The Record of Oral Language (ROL), (Clay et al. 2007) was developed to measure children's syntax. However many of the sentences in the ROL have a structure similar to written language which uses more complex embedded syntax structures. In contrast to written language the syntactic structure of oral language is more likely to be fragmented with clauses and phrases strung together, false starts and repetitions and abandoned intonation units (Purcell-Gates 2001). For example it is obvious there is a difference between oral and written language syntax when comparing an oral speech with a written statement which is read aloud.

A child's oral vocabulary development is one of the most visible and important aspects of language acquisition in children (Richgels 2004). The number of words in a child's vocabulary is an indicator of his or her linguistic health and a factor in his or her ability to use language in varied contexts and for multiple purposes. The everyday spoken language that children hear has fewer rare words compared to the rare words that occur in books read aloud. Hayes and Ahrens (1988) state that the lexical input from conversations are a limited source of learning new words outside of the 5,000 most common terms. To develop lexical knowledge requires extensive reading across a broad range of subjects. Young children's oral language vocabulary, when enhanced through the shared reading of picture books either in English or their primary language, has been shown to strengthen the vocabulary acquisition of English-language learners (Roberts 2008). The development of children's vocabulary and syntax are related to either hearing books read aloud and from independent reading.

Purcell-Gates (2001) argues that oral language is not directly relevant to the study of emergent literacy because oral language, including its vocabulary, syntax and conventions

differs in significant ways to written language. She writes that concerns about children's home language environments and preschool experiences are only relevant to the degree that they affect written language knowledge. In other words reading and writing should be concerned with the conceptual and procedural knowledge of how written language works and not with how standard or non-standard oral language constitutes the base upon which literacy develops. Compared to spoken language, the act of writing takes more time. As well as being more time consuming the syntax of written text is embedded with more adjectival and adverbial sentence clauses whereas spoken language consists of more fragments, repetitions and false starts. The vocabulary of written language reflects a greater range of vocabulary choice perhaps because there is more time to choose words than when engaged in a spontaneous conversation.

With oral language vocabulary noted as an important link in learning to read it was assumed in this research that a child's vocabulary would neatly link to their reading proficiency. The children who had a rich vocabulary were assumed to be the more effective readers

Method

The study took place in a school in metropolitan Adelaide where the students come from a diverse range of cultural backgrounds. Many cultures were represented including many recently arrived immigrants from Iraq, Afghanistan, Serbia, Sudan and other African countries as well as a small cohort of Aboriginal students. The school has a high proportion of low income families with 60-65% of families eligible for School Card. The high level of complexity and diversity among the school population is considered a strength. The challenge is to develop relevant, explicit and challenging learning and teaching programs and practices that support a diverse range of learning needs and abilities.

The teachers in the early years of school identified oral language as an area of concern and had researched a range of oral language assessment tools to identify the children's strengths and intervene where possible. The joint focus of the teachers and the researcher provided an opportunity for collaborative research on real issues and concerns.

The methodology followed the formative and design methodology of Reinking and Bradley (2007). Formative and design methodology takes place in authentic environments and is grounded in developing understanding by seeking to accomplish practical and useful educational goals. In this case the research explored the connection between five year old children's oral language and emergent literacy texts with the expected goal of developing an intervention program to improve children's oral language.

The formative design methodology is suited to literacy research in classrooms and employs multiple theoretical and methodological perspectives. This involved data collection from a teacher-developed screening tool on phonological awareness, a standardized test of receptive vocabulary, reading levels based on levels of text difficulty as well as observation and interviews. The hope was that the research would be useful to teachers working in similar contexts with children from a range of diverse experiences.

The teacher-researcher paired with a university-researcher in weekly visits over twelve months of the school year. The visits included discussions about a range of different forms of oral language assessment, then assessing children's oral language vocabulary, phonology and reading based on Reading Recovery book levels (Clay 2002).

The research questions guiding this study were:

- In what ways do five year old children's use of oral language, vocabulary and phonology connect to children's beginning language?
- In what ways do different oral language assessment tools provide information about early literacy development?

Teachers and the university researcher assessed the children's oral language, vocabulary, phonology and book levels of 23 children in the first year of school using *Peabody Picture Vocabulary Test-4* (Dunn and Dunn 2007), the *Blair Athol Primary School Phonological Awareness Screening Tool* (2006), *Junior Oral Language Screening Tool (J.O.S.T. 2009)* and reading accuracy of 90-95% on reading levels with benchmark books. The data collection on children's oral language syntax using *The Record of Oral Language* (Clay et al. 2007) was not undertaken because the researchers decided the complex embedded syntactic structures represented written language syntax.

Peabody Picture Vocabulary Test-4: In this test the children point to one of four pictures on a page after the researcher says the target vocabulary word. For example the pictures may consists of such a red, yellow, blue and grey circle, and the researcher says the word 'red' and the child points to the red circle. Words were presented in 12-word sets. A ceiling was reached when 8 or more items were missed in a 12-item set. This was a standardized test with a national United States norming sample.

Phonological Awareness Screening: The Blair Athol Primary School Phonological Awareness Screening Tool is based on Gillon (2004). It covers phonological awareness skills including: segmenting sentences into words, rhyming words. blending syllables, reproducing a sound sequence, identifying the first sound, blending sounds, producing multisyllabic words, repairing sentences (silly sentences), letter recognition, matching beginning sounds, isolating the end sound and matching the end sound. A pre-test was administered early in the school year and a post-test was administered after students have been on the program for 15 weeks.

Junior Oral Language Screening Tool (J.O.S.T.): The J.O.S.T. covers three sections: vocabulary, pragmatics (social language) and grammar and was administered early in the school year. The data from early in the school year indicated a trend in some children towards grammatical processing issues, including: pronouns, plurals, negatives and tenses. It also indicated a trend towards limited knowledge in the area of pragmatics, including: word choice in context, social skills and questions.

Book Level: This is an assessment of children's early reading development where the child reads aloud a beginning reading text which has been classified by level of difficulty. Scores of 90-95% accuracy are viewed as an instructional reading level and appropriate for learning.

Play program for oral language intervention

After analysing the phonological data and the oral language data from the J.O.S.T., the teachers decided that a play program would be a developmentally appropriate and intrinsically motivating approach for children to experiment with oral language and get immediate feedback. Play-based activities also involved sustained symbolic thinking, use of narrative and a range of other vital pre-literate skills (Dickinson, Darrow and Tinubu 2008; Stagnitti and Jellie 2006). It was thought that the use of language in context would lead to purposeful talk, allow for the development of vocabulary in rich contexts and this was to be

supported by authentic and relevant picture books. Oral language development in context rather than isolated vocabulary drills was thought to produce robust vocabulary learning.

Play program development

The teachers created fifteen themed play boxes with sets of levelled questions for teachers/adults to use to stimulate oral language. Each box contained books both fiction and non-fiction based around each theme together with materials/resources related to the theme. Oral language development was to be facilitated through structured and pretend play based scenarios, levels of questioning to extend oral language and reading stories related to the play scenarios. The teachers organised a combination of pretend play and organised play activities in the belief that pretend play is of particular importance to the development of higher-order skills, linguistic development and academic success. There were four junior primary classes participating in the program and the students were in mixed groups according to age/grade/oral language skills.

The use of narrative was encouraged in each play session with adults assisting students to formulate stories based around their play experiences. The adults worked with students to use the narrative genre framework to formulate characters, setting complications, events, resolutions, endings and to make predictions about what will happen next. This essentially built on children's oral language skills, presenting them with different syntactic structures to everyday oral language and works to scaffold children's learning for writing. The teachers recorded the play sessions via photographs of the student's stories and then students recorded their narratives using Photo Story software.

The play program was modified and improved as it went along. Based on the oral language assessment data the teachers decided to include more in the small group work to develop listening skills, promote auditory memory, expand conceptual knowledge and vocabulary, plus teach phonological awareness and grammar. The teachers then added resources such as language games and activities.

Data analysis and discussion

The data from the assessments of oral language and reading were collated and analysed after the play program had been in operation for several months. It was predicted that here would be a strong relationship between oral language and reading. This was not the case.

Table 1. Summary of oral language and reading assessment scores

Children	Country/culture of origin	Months at school	Child's age	PPVT 4th ed age equivalency	Book Level	PA/ 50
Child 1	Aust	13	6.2	6.9	2	39
Child 2	Aboriginal	8	6.1	6.7	2	25
Child 3	Aboriginal	10	6.0	3.9	1	22
Child 4	Aust	10	5.11	6.7	1	9*
Child 5	Aust	8	5.11	absent	absent	16
Child 6	Aust	10	5.11	6.6	2	45
Child 7	India	8	5.11	5.3	10	48
Child 8	Aboriginal	10	5.11	5.11	2	43
Child 9	Sudan	10	5.10	4.3	1	27
Child 10	India	8	5.10	4.9	10	43
Child 11	India	8	5.9	4.4	4	40
Child 12	India	4	5.9	4.3	10	51
Child 13	Vietnam	8	5.7	6.2	13	51
Child 14	Aust	8	5.7	6.11	5	42
Child 15	India	4	5.6	3.8	2	46
Child 16	Aust	4	5.5	7.8	1	41
Child 17	Aust	4	5.4	5.4	1	34
Child 18	Lebanon	13	6.3	6.7	8	55
Child 19	Aboriginal	13	6.5	5.7	3	48
Child 20	Aboriginal	10	6.11	absent	absent	56
Child 22	Africa	1	5.3	4.0	1	25
Child 23	Aust	1	5.3	5.1	1	55
Child 24	Aust	1	5.2	8.0	2	51

Note, the school has 5th birthday admission to school at the beginning of each school term

The raw data on phonological awareness, vocabulary, book levels and the children was puzzling. There puzzling was not a neat connection between children's oral language and reading achievement and further statistical analysis was undertaken to look for patterns or correlation between these factors.

Table 2. The relationships between vocabulary, reading and phonological awareness

		age	PPVT	Book level	Phoneme
age	Pearson Correlation	1	.111	.031	.198
	Sig. (2-tailed)		.660	.904	.432
	N	19	18	18	18
PPVT	Pearson Correlation	.111	1	-.077	.187
	Sig. (2-tailed)	.660		.762	.472
	N	18	18	18	17
Booklevel	Pearson Correlation	.031	-.077	1	.640(**)
	Sig. (2-tailed)	.904	.762		.006
	N	18	18	18	17
Phoneme	Pearson Correlation	.198	.187	.640(**)	1
	Sig. (2-tailed)	.432	.472	.006	
	N	18	17	17	18

Correlations

** Correlation is significant at the 0.01 level (2-tailed).

The statistical analysis of the relationship between vocabulary, reading achievement and phonological awareness revealed a very strong relationship between reading and phonological awareness. There was not a strong relationship between oral vocabulary and reading achievement. The relationship between phonology and reading was highly significant and the children with high reading also scored high in phonology even when their vocabulary score was low.

Some children scored low on receptive vocabulary and high on reading. The children who fitted this pattern were children with English as an additional language and spoke a dialect of English or Hindi at home. Another group of children scored high on receptive vocabulary and low on reading and it had been expected that oral language and reading would have been more closely linked. Another group scored low on both oral language vocabulary and reading. A statistical analysis showed that the relationship between receptive oral language and reading was not significant.

The links between oral language vocabulary, phonology and reading demanded further analysis as there appeared to be three groups of children with different oral language and reading patterns. Brief case studies of these groups will be discussed.

Analysis

When the data from the assessments tools for oral language and reading were analysed there was not a neat connection between receptive vocabulary and reading emergent and early level texts. Some children scored low on receptive vocabulary and high on reading. The children who fitted this pattern were children with English as a second language and spoke a dialect of English or Hindi at home. Another group of children scored high on receptive vocabulary and low on reading and it had been expected that oral language and reading would have been

more closely linked. Another group scored low on both oral language vocabulary and reading. A statistical analysis showed that the relationship between receptive oral language and reading was not significant.

An analysis of the relationship between phonology and reading was however found to be significant. The children with high reading also scored high in phonology even when their vocabulary score was low. Children with low reading scores and low phonology showed a clear relationship.

The links between oral language vocabulary, phonology and reading demand further analysis as there appeared to be three groups of children with different oral language and reading patterns. Case studies of these groups will be discussed.

Case study: High reading low vocabulary children

The children who scored high on reading based on text levels were children with English as a Second Language who spoke Hindi at home. An example is a boy named Dharvil, from India who had been at school for 4 months and was aged 5.9 years and had a vocabulary score of 4.3 years and was reading at level 10. He had a phonological awareness score of 51/55.

The parents of children in this group spent a great deal of time on homework which included drill and practice of reading high frequency words and teaching letters and sounds. The children knew the alphabet letter names when they began school and scored high on the phonological awareness screening tool developed by the school. The views and practices of Asian Indian culture have implications for Australian teachers in that Indian children typically wait for directions, value the views of teachers and are familiar with homework where they practice learning the alphabet, and a great deal of time reading and writing at home (Joshi 2005). The parents of the children asked why the children's bags were so light to carry home from school as they expected the children to bring home a school bag of textbooks for homework. The Australian teachers in the school commented that they favoured inquiry based learning that fostered creativity, problem solving and innovation and not rote learning. They stated that the children in this particular group who may read well early on can become less motivated to continue reading as they have learned to focus on decoding and do not have the vocabulary to comprehend more complex texts.

Case study: High vocabulary lower reading

Some children in the study had relatively high vocabulary scores and much lower reading scores. An example is a girl named Linda aged 5.5 years who spoke English at home and had been at school for 4 months. Her vocabulary score was 7.8 and she was just beginning to read at level 1. Her phonological awareness score was 41/55.

These children had high scores on phonological awareness but were not yet thriving with reading. Teachers commented that the parents were highly literate, high income earners who made sure there were books at home and they read aloud to the children and spent a lot of time providing rich language experiences for example trips, outings and holidays. To the teachers this group of children were not putting it all together and did not see learning to read to be as important as their other social activities. These children catch up in time and bring a great deal of background knowledge to their reading.

Case study: Low vocabulary and low reading

The children who scored low on vocabulary and low on reading also scored low on phonological awareness. An example is Penny an Australian child who was aged 6.0 years and scored 3.9 years on vocabulary and was reading at level 1 with a phonological awareness score of 22/55. This group of children included children from low income families, children who were refugees from Africa and a large proportion of Aboriginal children. There were some gaps in the data collected due to low attendance rates of the children.

The teachers commented that the children in this group did not have parental support at home. They also pointed out that the children who scored low on phonological awareness and reading often could not achieve the more difficult tasks to do with segmenting words, for example 'What sounds can you hear in the word "cat"?' where the correct response would be '/c/ /a/ /t/'. These children also had difficulties with blending words for example 'Can you tell me what this word is /m/ /a/ /t/', where the correct answer would be 'mat'.

Discussion: Disconnections between oral language and learning to read

This small study of a group of twenty-three children beginning school reveals that the steps from oral language to early reading is not a neat hierarchical step-by-step process for many children. The study raises many questions. How is it that children with low scores on oral language receptive vocabulary can be relatively advanced readers in the first year of school? Why are children who have high oral language scores not also advanced readers? Why are some children low on all counts of oral language and reading?

One explanation for this is that oral language is not the same as written language. Oral and written language have different vocabulary, syntax and mechanics of representation. The vocabulary, syntax and mechanics of representation in oral language and written language will now be contrasted.

Figure 1 oral language and written language vocabulary

Oral language vocabulary	Written language vocabulary
Sit over there….	*Tom sat on the chair*
Oral language is contextual and relies on gestures and is often a sentence fragment. In written language the subject and object are identified	

In oral language meanings can be expressed through gesture, facial expressions and intonations and the articulation of nouns may not be essential. However in written language meanings must be accomplished through the use of explicit language and the grammatical use of the subject and object occurs in sentences. In oral language a sentence fragment may be 'Sit over there.' with a gesture. In the written language sentence "Tom sat on the chair.', the subject 'Tom' is identified as well as the object 'chair'. Purcell-Gates (2001) explains that oral language can have exo*phoric* external references to meanings outside of the text but written language must have *endophoric* or within-text references.

Regarding vocabulary there are more rare words in written language than spoken language. As an example, the picture book *Where the wild things* contains rare words such as 'gnashing teeth' and 'terrible roars' which may not occur in everyday conversation. In an analysis of a range of spoken and written texts, Hayes and Ahrens (1988) revealed the amount of rare words used in everyday speech to be 17.3 in one thousand words whereas in children's books there were 30.9 rare words per one thousand words- nearly double the amount in everyday speech. It is probable that children who experience being read to before school will be exposed to more rare words and increase their vocabulary more so than children who do not experience shared book reading at home. Regarding the issue of whether oral language is mapped to written language it is more likely that written language provides models of syntax and vocabulary which then become used in oral language.

Figure 2 oral language and written language sentence structures

Oral language	Written language
We walked for charity on Sunday	*The Charity Walk will raise money on Sunday.*
Nominalisation occurs where a verb is changed to a noun	
We hid the book	*The book was hidden.*
Objects are placed first in a sentence in written language.	
That cat chased a bird.	*The cat from next door was chasing a bird.*
In written language there is an increased number of lexical items such as nouns, adjectives, verbs and adverbs in a sentence	

The syntax of written language is different from oral language. For example in the book *Where the wild things are* we read about Max who 'sailed off through night and day and in and out of weeks' which is a lyrical use of language with many lexical items. The syntax of written language contains more embedded clauses, direct speech, saying verbs and in the following example the subject Max, occurs part way through the sentence 'And now,' cried Max, 'let the wild rumpus start!'

In the example above 'The cat from next door was chasing a bird' is from the *Record of oral language* (Clay et al. 2007) and it is an example of more complex sentences more similar to written language syntax than the syntax of spoken language.

Figure 3 Oral language and written language reference conventions or mechanics

Oral language	Written language
sounds	letters
intonation, stress, pitch	punctuation and capital letters, underline and bold font
expressions to indicate topic changes, 'now, right, right then'	headings, new pages, paragraphs, sections or chapters, words like first, second, summary.

Written language contains letters to represent sounds, punctuation and various font styles to represent intonation, stress and pitch. The sections or new ideas are represented in written language with headings, paragraphs and words to show the sequence of ideas, for example first, second, last and summary.

Limitations

This small study employed the use of several diverse assessment tools with a small group of 23 children. It raises a number of questions about assessing the different aspects or characteristics of oral language. One limitation of the study may be the use of the standardized Peabody Picture Vocabulary test which may be viewed as words out of context however the child was asked to look at the pictures and point to the one picture articulated by the researcher. However the pictures were in similar groups for example a set of four colours, four vegetables or four animals. Another limitation may be the use of a teacher developed non standardized phonological awareness tool however this did reveal the strengths and weaknesses of children's development in this area.

Summary

This study began with the assumption that there would be a close relationship between oral language vocabulary and emergent reading however no significant relationship between oral language vocabulary and reading was found. There was a strong relationship between reading and phonology and this may be highly predictive of future reading achievement. On the other hand perhaps the relationship between phonological awareness and reading is 'chicken and an egg' argument as learning to read influences phonological development. Learning to read and write works hand in hand with phonology as both inform and interact with each other.

Children's vocabulary development is also more likely to benefit from exposure to written language as Hayes and Ahrens suggest, children are exposed to more rare words in written text than in spoken language. Exposure to books read aloud and story telling has the potential to not only increase vocabulary but also to enhance phonology and syntax.

The study presents an argument that written and oral language have different features and learning to read is more like learning a second language or a secondary discourse for all

children (Gee 1996). Spoken language does not provide a neat, sequential base which can be easily mapped to written language. This does not mean that oral language is not very important to beginning reading as the teacher's and child's talk about how written text works is pivotal in learning to read.

The idea that oral language has different features from written language is very important for children who are dependent on school for learning how to read. Many children who grow up exposed to nonstandard forms of English are often poor and from minority groups. If educators tie children's home oral language to success in school with written language this implies that whole groups of children and home environments need to change. Viewing learning to read the same as learning a secondary discourse for all children enables teachers to introduce a wide range of written language forms to explore how written language works.

This research raised questions about why it is that some children have the foundations in place for reading such as high vocabulary and high phonological awareness yet low levels of reading. It appears that for some children the components for early reading are in place and they are not being yet being used or orchestrated.

Finally, more research is needed on school based interventions like the play program as discussed here. The play program provided opportunities for children to understand that language whether written, spoken, visual or multimodal is an object which can be explored within a particular situation and context. For example, in dramatic play children often take on the roles of talking like a baby, talking like a teacher or being a wild monster in a far away place. Once children see that language itself can be explored and this idea is taken on board then all kinds of language can be investigated and language itself can be treated as an 'object of contemplation' not just a tool for communication. Interestingly perhaps the children who speak several languages may already view language as 'an object of contemplation', however this also maybe a topic for further research.

The author wishes to thank the teachers and children at Blair Athol Primary School, the South Australian Department of Education and Children Services and the University of South Australia.

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Published by the Forum on Public Policy