The impact of innovative whole-class language strategies on language development

Summary

'The data informed us that literacy improvement needed to be a focus across the school.'
(John Culley, Principal, Mahogany Rise Primary School)

Over the last three years, Mahogany Rise Primary School has built a strong foundation for ongoing improvement. A broad improvement agenda central to building teacher, student and community capacity has begun to deliver exciting results. The school focused on developing students' oral language skills and encouraging them to express their feelings, particularly through the Tribes social values program.

A whole-class language strategy was introduced in the first year of schooling, as many of the children starting school were identified as having language delays. The focus of the initiative was on receptive and expressive language development to support the development of foundational literacy skills. An innovative approach to the teaching and learning of these skills included using music CDs and song books in a home–school partnership; developing expressive vocabulary in narrative structures; and a focus on visualising and verbalising (using a program devised by Nancy Bell, 1991), an important skill for verbal memory, language comprehension and verbal expression.

All students participated in a whole-class language strategy, and extended intervention was provided to students with severe language delay (SLD). Students who participated in the whole-class language strategy improved significantly in all areas of language tested. All students diagnosed with speech language delays improved significantly, and half of those students are now within the normal range for all areas of language.

Target student group

Mahogany Rise Primary School is in Frankston, Victoria. This small regional public school is situated in a low socio-economic area. It has an enrolment of approximately 130 students. Ninety per cent of Prep students entering Mahogany Rise have been identified as having language delays. Note: Prep is the first year of formal schooling in Victoria.

Method

The context

Following a school review that suggested that Mahogany Rise Primary School was 'chronically depressed', the principal set about working with staff to identify what needed to be targeted to turn the school around. Staff decided that the biggest impact on students' lives could be made by focusing on their literacy abilities, especially reading.

At Mahogany Rise Primary School, approximately 95 per cent of students beginning Prep have a language delay or impairment. Using a whole-class language strategy was a logical step to target the high level of need. The staff at Mahogany Rise were aware of the negative impact of language delay on students' ability to develop literacy skills. The Prep teachers and the speech pathologist decided that they would develop and trial a language strategy in the classroom, with the teachers being trained while participating. Students with severe language difficulties would also participate in small-group therapy with the speech pathologist, practising the skills being taught in the classroom.

Elements of the strategy

The speech pathologist, Pamela Thuan, identified target areas for development and began to develop a multifaceted strategy. A CD and songbook targeting language development, entitled *We are feeling*, was produced to support elements of the language strategy. The CD was sent home with every junior student to support their language development with their families.

The strategy also focused on emotional vocabulary. This was addressed through narrative and narrative structure. This part of the strategy aimed at developing students' ability to verbally express emotions and provide logical narratives. Research indicates that narrative and literacy development is linked.

The Visualizing and Verbalizing program (Bell 1991), was adapted for use in a whole-class setting. This element of the strategy was aimed at teaching students to visualise what they hear and verbalise what they see. This is an important skill for verbal memory, language comprehension and verbal expression. Categorisation is the part of the strategy aimed at developing vocabulary links. Grammar and grammatical structures were targeted in all parts of the strategy in oral language representations in response to low grammar scores on national testing.

The strategy began with all Prep students being screened at the beginning and end of the year in the following areas of language, using standardised assessment tools:

1. Receptive language – the ability to understand verbal language (such as following directions, understanding language concepts) was assessed using the Bureau Auditory Comprehension Test. This test has norms for children aged from two to seven years old.

2. Expressive language: information – the ability to produce appropriate vocabulary and relevant information was assessed using the Renfrew Action Picture Test (RAPT). This test has norms for children aged from three to eight years old.

3. Expressive language: grammar – the ability to use correct grammatical structures was assessed using RAPT. This test has norms for children aged from three to eight years old.

4. Narrative – the ability to retell a story was assessed using the Renfrew Bus Story. This test has norms for children aged from three to eight years old.

The whole-class language strategy was run by the speech pathologist for one hour a week in each Prep classroom. The class teachers observed and participated in the strategy, then followed up the activities and goals by integrating the strategy into the curriculum. Teachers also took part in professional learning planning days and staff meetings.

For more detail about what happened in the classroom, see the section on Whole-class language strategy.

Whole-class language strategy

Emotions and narrative

Teachers modelled a narrative structure with picture prompts that included 'when, who, where, what, feelings, problem, solution'. Each week the students focused on a new emotion. That emotion was discussed, including a description of body and facial actions that demonstrated the emotion. The children took turns to discuss times they had felt the emotion, then sat in groups of about five students and were given pictures of people feeling the discussed emotion.

The children created a narrative to tell a story about the picture, including all the elements of a narrative.

As children gained confidence in this area, they began using toys, props and dress-ups to create stories. They created performances to sing and act out to the school and parents, using the song 'Tell us a story' from *We are feeling*.

Visualising and verbalizing

The *Visualizing and verbalizing* strategy (Bell 1991) was adapted for use in a whole-class setting. The strategy is aimed at teaching students to visualise what they hear and verbalise what they see. The students practised these skills using the song 'Making a picture' from *We are feeling*

Categorisation

Students participated in a range of activities that required grouping of objects, photos and pictures. The activities became gradually more complex throughout the year. Students also practised using the song 'Look around' from *We are feeling*. Activities for working on vocabulary links through categorisation can be found in *Time for talking* (Love & Reilly 1997).

Grammar

Students made sentences to describe photos using a modelled, set grammatical structure. The main structures worked on were initial pronouns, regular past tense, irregular past tense, adjectives and conjunctions. Students practised grammatical structures using the songs 'Add one too' and 'He is, she is' from *We are feeling*.

Following directions and understanding language concepts

Students played games that required following directions and included prepositions, shapes, colours and descriptions. The directions became longer and more complex during the course of the strategy. As the directions became longer, students were encouraged to use visualisation skills to retain information. Students also practised this skill using the songs 'Over and under' and 'We reach up' from We are feeling. The songs were combined with actions, linking kinaesthetic with auditory information, helping students consolidate their understanding of language concepts.

Teacher's feedback on the whole-class strategy was extremely positive.

Results

Evaluation of the strategy was organised into two parts. Part One evaluated the improvement in language of all students in the whole-class language strategy over a one-year period. Part Two evaluated the improvement of four students diagnosed with SLD given extended intervention over 1.5 to 2 years.

Questions guiding evaluation included:

- When using standardised testing, is the improvement in the treatment group significant compared to the expected improvement for that period of time?
- Do the Preps in the treatment group improve significantly more than those in the control group?

Students in their first year of school at Mahogany Rise Primary School were compared with students in their first year of school at another school, which is also in a low socio-economic area and has a high prevalence of language delay. Student improvement was measured in months. Screenings were randomly carried out by the speech pathologist or a trained assistant. Screenings were not blind, as the control students were in a separate school. The time lapse between screenings was close to 11 months for both the treatment and control group. T-tests were performed to assess the significance of the data collected.

What happened?

In all areas of language, the treatment group (students from Mahogany Rise Primary School) improved significantly more than the expected improvement, according to the standardised test. Each area of language had an adjusted p-value of less than 0.0001. The following provides the average improvement (in months) of the treatment group for each area of language over an 11-month period:

- Expressive grammar: 28 months
- Expressive information: 25 months
- Receptive language: 19 months
- Narrative: 22 months

Overall, the treatment group demonstrated approximately two years average improvement in language in less than a one-year period, which is double the expected improvement according to standardised tests. The control group did not demonstrate significant improvement in any of the language areas assessed, and had a lower average improvement in expressive grammar than expected, according to the standardised norms.

In all areas of language, the treatment group averaged a higher improvement (in months) than the control group. In three of these areas (expressive information, expressive grammar, narrative), the treatment group demonstrated significantly greater improvement than the control group.

Although the difference in the scores for the receptive language area was not significantly different for the treatment and control groups, the treatment group's improvement was significantly higher than the expected improvement while the control group's improvement was not.

The following is evidence of particularly high results:

- Greater improvements than expected for all groups of students, according to the standards on the test, especially those students with normal language, and those with diagnosed disorders.
- The high level of improvement – an average of double the expected improvement – according to the standardised tests.
- The level of improvement for students with severe language disorders. It was hoped that the strategy would move these students' standard scores by a few points. On average, their standard scores moved by 26.5, now placing half of the students originally diagnosed with severe language disorder well within the normal range for all areas of language.

The results for both years of this strategy were similar, indicating that the strategy was sustained over the two-year period.

A nearby school trialled the strategy with a different speech pathologist, and demonstrated similar results. All student groups improved more than expected (including students with no language difficulties, students with diagnosed disorders, students with English as a second language and students with language difficulties and no diagnosed disorder), indicating that the strategy is relevant for all students.

Lessons learned

A series of factors contributed to the success of the innovative whole-class language approach. The flexibility of the principal in allowing staff to develop something new began a learning journey for the school and staff. The structure of this strategy had not been trialled in Australia before.

The speech pathologist's experience and knowledge were instrumental in producing a language strategy that worked. Her years of experience of working in schools, and her extensive knowledge of language development and current and effective language strategies, made a significant difference.

The respectful professional relationship between the speech pathologist, the teachers and the volunteers provided a foundation of trust that was instrumental in building confidence

in the provided strategy. To sustain the strategy in best practice form, it is important that the speech pathologist:

- continue to drive the strategy
- further teachers' knowledge of language development.

Clear training and modelling formed the basis of the strategy. The speech pathologist modelled the implementation of the language strategy in the classroom. Each teacher then practised using the strategy with the speech pathologist. The teachers were provided with guidance and examples of how to use the strategy in a way that targeted a range of language abilities.

Weekly follow-up with the teachers was instrumental in the success of the strategy. The teachers integrated the language strategy into the everyday curriculum, following up on students' language goals throughout the week. In essence, they provided the students with language therapy every school day.

Strategies targeted a range of student abilities, which supported differentiation and improvement for all. Each part of the strategy had layered steps. It was structured so that each step could be targeted at the same time while running the strategy with the whole class. Each part of the strategy was produced from evidence-based research or adapted from evidence-based programs. This gave the speech pathologist and the teachers confidence in the ability of the strategy to produce the desired results.

Data were continually used to inform the strategy. The assessments highlighted the areas of greatest need for each class and each student. In this way, the strategy was tailored to best meet the needs of each individual class and student. The excellent results shown in the data also provided justification for allocation of funding to expand the strategy into other classrooms. The principal chose to use money allocated to the school to increase the number of days the speech pathologist worked at the school.

Next steps

Speech Pathologist Pamela Thuan and other members of Mahogany Rise Primary School staff have spoken about the successes of this strategy and shared their experiences in a number of forums in Victoria, including the 2010 Innovations Showcase in Melbourne. As a National Partnership school, they have shared their experiences and successes for others to learn and benefit from. The success of the whole-class language strategy has been recognised throughout Mahogany Rise Primary School.

The year 5 and 6 teachers have expressed interest in implementing a similar strategy.

'We raised the bar for teachers, and we raised the bar for students and we raised the bar for the parents.'
(John Culley, Principal, Mahogany Rise Primary School)

Research base

Previous data suggests that providing speech and language services in the classroom can be effective (McGinty & Justice 2007). The convergent findings from Throneburg et al (2000) and Wilcox et al (1991) suggested an advantage for classroom-based team-teaching models over pull-out intervention, at least in the domain of vocabulary. However, the results, have not been consistent across all studies.

Elements of the program that the school constructed are well-supported by research:

- Using music in language therapy is widely accepted and involves the whole child through rhythm, movement and speech (Zoller 1991, Peter 2000).
- Narrative and literacy development is linked (Fein et al 2000).
- Visualising and verbalising is an important skill for verbal memory, language comprehension and verbal expression (Bell 1991).
- Categorisation is the part of the program aimed at developing vocabulary links (Love & Reilly 1997).
- Following directions and understanding language concepts forms part of a program aimed at developing receptive language skills (Love et al 1997).

The principal and the speech pathologist collected their own data to assure themselves that the whole-class programs and interventions were working and effective for all groups of children in the school.

Further reading and links

Bell, N 1991, *Visualizing and verbalizing: for language comprehension and thinking*, Gander Publishing, CA.

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McGinty, A & Justice, L 2007, *Classroom-based versus pull-out interventions: a review of the experimental evidence*, American Speech and Language Association.

Peters, J 2000, *Music therapy: an introduction*, Charles C Thomas Publishers, Springfield, IL.

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Zoller, M 1991, 'Use of music activities in speech-language therapy', *Language, Speech, and Hearing Services in Schools*, 22, pp 272–276.

Contacts

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