

Receptivity of teachers to implementing new strategies for literacy teaching

Part of the Symposium *Researching teacher change and literacy development for Indigenous students: Risks and dilemmas*

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Abstract

The teaching strategies that work with Anglo-Australian children in urban settings are not appropriate for all children. Indigenous children, in particular, are less amenable to the kinds of instruction used with other children. As a result, Indigenous children are more likely to demonstrate lower levels of learning and less commitment to school than other children. In rural and remote areas, these features are particularly noticeable. While part of the explanation for the failure of the usual range of strategies lies with the social and cultural characteristics of the students — particularly when there are language differences — the inability to achieve change among teachers is a significant contributing factor. Adaptation of teaching strategies to the particular needs of Indigenous students is more likely to bring about change in student learning and retention than attempting to change the students' culture and social backgrounds.

In this paper, a project designed to improve literacy acquisition among Indigenous students with conductive hearing loss is described. The professional development program used with teachers to get them to implement the appropriate strategies is outlined and the continuing impediments to effective utilisation of the strategies are discussed.

Introduction

The National Indigenous English Literacy and Numeracy Strategy is based on the national goal, agreed by the State and federal Ministers of Education, “that every child leaving primary school should be numerate, and able to read, write and spell at an appropriate level” (Department of Education Training and Youth Affairs 2000, p. 2). For many years, Indigenous students have exhibited lower educational outcomes than the rest of the student population and this has been a grave concern of successive government inquiries and studies (Schools Commission 1975; House of Representative Select Committee on Aboriginal Education 1985; Royal Commission

into Aboriginal Deaths in Custody 1991; Department of Employment Education and Training 1994; Ministerial Council on Education Employment Training and Youth Affairs 1995; Education Department of Western Australia 1998; MCEETYA Taskforce on Indigenous Education 1999; Department of Education Training and Youth Affairs 2000). Despite massive funding, the low attainment levels of Indigenous students relative to the rest of the school population continues.

Plans for changing this state of affairs have become increasingly sophisticated (Partington 2002). Most recently, the National Indigenous English Literacy and Numeracy Strategy has envisaged a comprehensive assault on Indigenous literacy and numeracy issues and has implemented a program of initiatives to address a range of specific contributing factors at the one time (Department of Education Training and Youth Affairs 2000, p. 2). One of these initiatives involved approaches to overcome the learning difficulties arising from the incidence of conductive hearing loss among Indigenous students and the present project was designed to implement this initiative in selected schools in the Swan, Kalgoorlie and Kimberley districts in Western Australia.

The project was based on an understanding of the effect of conductive hearing loss on children's acquisition of literacy (Yonowitz, Yonowitz et al. 1995; Higgins 1997). Previously, a team of specialists produced a CD for the Education Department entitled *Do you hear what I hear* (Education Department of Western Australia 1999). The strategies on the CD were revised prior to the commencement of the current project by a group of people, including Anna Sinclair, Ann Jacobs, Leith Hogan and colleagues. The present project was established to investigate the efficacy of the strategies outlined in that CD and to study the effectiveness of the implementation of those strategies in schools. Also, the project was to identify further strategies that teachers could use to improve the literacy acquisition of Indigenous students who have suffered from conductive hearing loss.

The principal understanding underlying the direction of the project was that children who had multiple episode of otitis media (middle ear infection)—the cause of conductive hearing loss in the years preceding school—would experience restricted language development. Because of their hearing impairment during episodes of otitis media, children are more likely to experience communication and auditory processing difficulties (Lowell 1993). Walker and Wiggleworth (2001, p.47) reported that

children with documented OME (otitis media with effusion) and associated hearing loss are disadvantaged on all measures of phonological awareness, reading and spelling compared to their OME negative peers. Although the results should not be generalised to a larger population, they add support to other studies which suggest that OME and associated hearing loss may have deleterious effects on children's academic performance.

Because the ability to read is a function of the ability to relate the graphic representations of sounds and meanings to the words and phrases that children know, when their language development is impeded, children are less likely to learn to read as well as other children who have not suffered from conductive hearing loss. In order to improve reading, it is necessary to

ensure that children who have had conductive hearing loss acquire the language skills they have missed. This is the basis of the present project.

One of the goals of the present study, and the focus of this paper, was to examine the effectiveness of the approaches to teacher change so that they effectively implemented a range of recommended strategies. There are many reasons why teachers do not take up changes (Fullan 1993; 2001) and these relate to the process of implementation and receptivity to change. These may be affected by a range of personal, conceptual, cultural and workplace influences including understanding the change, the perception of rewards for change, time required to implement change, competing priorities and leadership influences.

Fullan (1993; 1999) considered that specific strategies will not work unless teachers understand clearly the context within which the changes are being implemented. Furthermore, teachers need to know the kinds of cognitive and emotional states that participants in change experience. This has implications for change at multiple sites: each site must be treated as unique and teachers at those sites build a body of knowledge and skills relevant to the local physical, social and intellectual context. If systemwide change is envisaged, it will occur most effectively if attention is paid to the participants at the local level.

For Indigenous students, the specific context of their learning is often influenced by issues of racism, oppression, alienation, language difference and poverty. Teachers need to be aware of these issues when working with them. As Partington et al (2001, p.7) noted,

Any change strategy must be accompanied by changes in the way teachers interact with and relate to students in and out of the classroom. The discourse of the classroom, oppressive and dominating for Indigenous students, has to reflect the identities and self-respect of students if they are to participate fully in the culture of the classroom.

The present study endeavoured to incorporate these change imperatives in the implementation of the present study. The study has involved government, Catholic and independent schools in Western Australia. At present, 16 schools are participating in the study in the Perth metropolitan area, in Kalgoorlie and in the Kimberley district. These schools ranged from large urban primary schools with a mixed Indigenous/non-Indigenous student population to small remote Independent schools with Indigenous students who came to school speaking Indigenous languages.

The program commenced with Preprimary to Year 2 students in 2002 and moved to Year 1 to Year 3 in 2003, following the students as they progressed. In 2002, 49 classroom teachers commenced in the study and this reduced to 37 in 2003 as a consequence of teacher turnover and transfer of Indigenous students. Because of the shift of students up a Year level in 2003, 17 new classes and their teachers commenced the program in 2003. Some teachers moved up with their students but seven teachers discontinued the program because they remained teaching the pre-primary students. These teachers have expressed disappointment at not being involved in the program.

Following identification of schools by the respective systems and the agreement of the schools to participate in the study, a number of steps have been taken:

- Information on students' ear health (hearing, perforations, etc.) was obtained. This has been done by school nurses or other health professionals such as Aboriginal health workers and Department of Health nurses;
- Students' levels of achievement, attendance and behaviour were obtained. This was done in conjunction with the schools. To measure achievement in literacy, the Performance Indicators for Primary Students assessment was used. This computer based assessment was popular with all students;
- Inservice education was provided for teachers. This focused on strategies that would counteract the deleterious effects of conductive hearing loss on language development of children;
- Teachers implemented the target strategies with their students. The researchers gathered data on implementation and provided feedback on use of the strategies.
- A subsequent measure of the students' achievement to see if there is an improvement is planned later this term.

The researchers worked with teachers in the pre-primary to Year 3 classes to implement instruction that would enrich children's language in ways that is consistent with the approach espoused above.

Initially, for purposes of expediency, in the metropolitan area we used a large group session to induct teachers into the program and provide them with an understanding of the processes and the teaching methods that were necessary for children to learn more effectively. Subsequently, the research team was to visit the teachers in their classrooms to observe the extent to which they were implementing the teaching methods. In the first round of visits to schools where the above implementation process had been employed, it was obvious that this approach was a failure. None of the teachers was using the strategies. In fact, most of them had put the materials provided at the teacher inservice session to one side and had not looked at them again. As one teacher stated on our first visit, "Because you were coming I thought I better read through this." If we had not turned up, the teacher would not have used the materials.

It was decided that an alternative, person oriented approach should be implemented for more effective implementation. Instead of bringing the teachers together in large groups to undergo a formal professional development (PD) activity, we began to work individually or with small groups of teachers and Indigenous teacher aides. This change was introduced in order to develop a more personal relationship with the teachers and gain a greater commitment to change. Teachers who were introduced to the strategies in this way were more familiar with them, more comfortable with the research team members when we visited them subsequent to the PD session, and more willing to implement the changes identified. It was our assumption that the teachers were experts in teaching literacy and our goal was to get them to direct their energies to implementing existing and new activities in ways that supported the students who had literacy problems as a consequence of conductive hearing loss.

The process of change was assisted by providing rewards for participating teachers. Initially, they were given a package of materials that would assist them in using appropriate strategies. This package included Dr Seuss books, magnetic letters and sorting cards. Also, when interviews were scheduled with teachers, we employed a teacher to take care of their classes rather than expecting them to give up their non-teaching time.

In the professional development process we endeavoured to develop a collegial relationship with the teachers so that they came to own the strategies and build on them from their own knowledge. We expected to gather the strategies they used to share among the participating teachers and others as a group effort to identify learning materials that were effective in overcoming the consequences of conductive hearing loss. If we could get teachers to identify children with evidence of conductive hearing loss or its consequences, take into account cultural differences, utilise strategies in appropriate ways, and keep records of their implementation, we considered the implementation of change would be successful. The key to success lay in getting the teachers to integrate the new material into their pedagogical content knowledge (Grossman 1990) along with a knowledge of the students and their language and social backgrounds.

In addition, we asked teachers to keep a journal of their practice so that strategies used in between our visits could be discussed.

Was the Professional Development successful?

Did the Teachers Change?

Information on the nature, causes, incidence and consequences of conductive hearing loss was outlined to teachers in the first meeting with them. It was important for the project that teachers were conscious of instances of the problem with their students. This required an awareness of the current ear health of the students as well as a knowledge of the results of ear testing by the nurses. Many teachers, particularly those in rural and remote areas, were already familiar with the affliction and needed little instruction, although the relationship to language development was often new to them.

Among some students, the visual signs of otitis media were clearly visible and the teachers were able to take steps to assist them. In cases where the disease was not visible, however, teachers tended to be less discerning of the effects it may have. A good relationship between the teacher and the students may have been a positive factor in assisting students, as the following example illustrates:

I think he's really not feeling - I mean he came in and as soon as I walked in, came and gave me a cuddle and hug and said straight away, "Mrs O'Hare, my ear's hurting". But then we did BBC and he blew his nose and he said, my ear's not hurting now! So I said well, that's good isn't it? But he was afraid to actually blow his nose because it must hurt him to try and clear that passage.

BBC (Breathe, blow, cough) in the above example refers to a common health practice, useful for children with otitis media, that teachers employ in school. At least once per day teachers will have the students breathe deeply, blow their noses and cough, in order to clear their nasal

passages and Eustachian tubes. In the above case, it cleared the child's tubes and eliminated the earache.

One element of the professional development program was the examination of consequences of conducting hearing loss. A significant consequence is changed behaviour which, if the teacher didn't know, would be regarded as intentional misbehaviour. One teacher observed that some students were inattentive and apparently misbehaving:

I: Any other comments or thoughts at this stage?

T: I don't think so. I must admit since you've been coming in, I'm now more aware of kids who I'd just assumed to be disruptive, I'm now finding that if I call their name and their head is not facing me, they don't often hear me. I think there's about two or three that I'm a bit - I'm not sure about. It has made me more aware. Rather than just jumping to the conclusion of they just don't want to listen to me, I think there's lots of things going on and why would they single out my horrible high-pitched voice over all the murmurs and things that are going on around them. I think it's just made me more aware now rather than jumping to conclusions.

Not all teachers attended to the issue of parallels between conductive hearing loss behaviours and deliberate misbehaviour in class. Many teachers commented on the difficulty of ensuring compliant behaviour among the students. However, few related the behaviour to the possibility of conductive hearing loss as a cause (Howard 1994). One teacher, on our first visit to her class following the professional development session, was surprised to discover that conductive hearing loss could influence behaviour:

T: Walton just ... He needs that attention.

I: Right.

T: And the same with Carmody, that's why they're so loud.

I: Yes, yes. Yet I wondered whether ...

T: Whether it's hearing?

I: ... hearing problems because ...

T: Is that why he's so loud.

I: Yes, because that's not the only cause, but the sort of behaviours - the hyperactivity um, yes, very loud speech and also calling out at inappropriate times are consistent behaviours with ...

T: With hearing.

I: ... hearing problems, but even they could be indicative of other things.

T: Yeah. I tend to take it more as attention seeking rather than hearing, but you might be right with Carmody.

Researchers regularly informed the teachers of the existence of hearing test results but this proved to be one of the more resistant obstacles we experienced. Despite knowing the nurse had tested hearing and that it was possible to view the results, few teachers made use of this resource:

R: Um, I don't know, I haven't seen results of the test but when you guys - who did test them? They did get their hearing tested didn't they?

Even so, most teachers were aware of the more serious symptoms of ear disease and were able to identify specific students who were suffering from it. However, an examination of the hearing records, particularly tympanometry results, would have assisted in planning appropriate ways of working with these students: Current incidence of conductive hearing loss requires different classroom practices than past occurrences that result in language difficulties.

Knowledge of the Strategies

Because the strategies were adaptations of existing material and so similar to a range of other activities teachers employed for language development, many teachers had no difficulty with implementing them from the start and were comfortable with what we were advocating. While their use was often familiar, the purpose that they were used for was new to them. Some teachers, particularly in pre-primary and Year 1, were already working on content that fitted in well with the strategies recommended in our program. The major requirement with these teachers was the use of physical strategies such as location of students close to the teacher so they could hear more clearly, the reduction of excessive noise and awareness of hearing problems among students. The following exchange between the interviewer and the teacher illustrates this new knowledge:

T: And what about the hearing? Like I'm conscious of the conductive hearing loss thing, so ... and when I listen to the tape ...that brought it very much to my mind how much some children may not be hearing in certain points in the classroom. And so I thought, but my ... I mean I don't notice if my voice is not as loud as maybe it should be sometimes, because like I think that I might be speaking at the same like volume all the time, but when I listened on the tape ... it fluctuates. And I know you do that deliberately sometimes. But sometimes you don't. I'm not conscious of it. So if I'm reading a story I may be very conscious of that, but if I'm not, if I'm just giving instructions, I might be thinking about the instructions and what we're doing rather than the volume of my voice.

Teachers became more conscious of the need to develop phonological awareness and worked to identify CHL-related issues in learning. One teacher commenced testing students' discrimination, with the result that she found some Indigenous children were unable to hear differences in some sounds.

I also did another little test with them - assessment - and they weren't hearing the vowel sound. So they were writing 'lip' and they were writing 'li', but there was no 'p'. They could do it when I said it, but they weren't doing it when they were writing as an independent activity. So I chose that activity today to try and point out there is a difference between 'e' and 'i'. So that's why I did like a word family.

It was apparent that teachers were reflecting on the relationship between what was going on in the classroom and what they were learning in their interactions with the researchers. Among the materials that teachers found particularly useful was a data map that they completed in

conjunction with the researchers. This indicated the work they had covered with the students and demonstrated the range of potential issues that may affect children's learning. Teachers commented on the usefulness of this. A potentially threatening exercise, data mapping was completed with teachers on the last school visit for the year by researchers. By this time, rapport had been established and the teachers saw the mapping as a collegial exercise rather than a judgment on their work.

Teachers actively sought materials, games and activities that contributed to the achievement of positive outcomes for students who had experienced conductive hearing loss. One teacher reported on her adaptation of a bingo game:

T: A couple of games that have been really effective particularly these children, has been anything in a bingo format

I: Ok yep

T: Definitely and that covers you know all of those areas you know like rhyming words, single sounds, things that you know the end sounds things that are similar because it is quick and they don't have to wait a long time, that don't have to wait for somebody else in a circle, they are hearing things all the time there is not and also a game that I've made is a sound domino kind of game so that the kids had to actually had to colour in their pictures, cut them out and make the dominoes so

There was evidence of the success of the strategies in terms of student outcomes by teachers.

T: So but their progress you know has been just amazing and I really do think that if I had to put my finger on one particular thing as far as how the program itself is working for those kids, that strong emphasis on phonetic awareness stuff because I think that a lot of children and just not the Aboriginal kids miss out on that oral emphasis to start off. It (the usual program) jumps straight into the text sort of level and they are suppose to make sense of all the things that.

Barriers to effective implementation of strategies

The interviews with teachers revealed a number of factors that inhibited implementation of the strategies. These factors related to the teachers' prior knowledge and to the characteristics of the students.

Teachers' Year Level Programming

Prior experience was not always a blessing, however, because some teachers, particularly in Year 2 and 3, continued to emphasise reading activities despite students needing continued attention to their phonological development. The instruction required the continuation of phonemic awareness strategies well beyond the initial grades, on the basis that conductive hearing loss in the early years delayed or minimised acquisition of appropriate knowledge of phonemes. By Year Two, teachers were well into reading instruction with students and most tended not to utilise the strategies they perceived to be more appropriate for Year One students:

I think that in schools we get too caught up in this is what a typical Year One should be doing, Year Two—the labels of what grade they are at — instead of removing that thinking and looking at the developmental level of the kids. That is a trap I think.

Contextual Issues

Fullan (1993, 1999) noted the importance of context in ensuring successful change. In the present study, the principal contextual factor was the indigeneity of the students. However, this was not a basis for common treatment. There was great diversity among the students' backgrounds, so that an understanding of the local context was necessary if change was to be effective. Some of the issues that became evident, however, were attendance, culturally different behaviours in the classroom,

Despite sound knowledge of the usefulness of the strategies, some teachers experienced difficulties achieving improvements for extraneous reasons. For example, non-attendance was extensive among Indigenous students in many of the schools. Intermittent learning was no substitute for regular lessons for these students and they didn't progress in their language development.

She is still not attending school very regularly anymore. She's still probably only doing one or two days out a week so really in terms of her knowledge, she is still way back

A similar situation was reported by another teacher:

T: Um, he was away for that. He was one of the ones who's struggling. He's just been away for three weeks. And I sent work home with his mum for his rhyming, and his rhyming has picked up ... has improved a lot.

Spread of Ability

Other factors contributed to the difficulties teachers experienced in developing literacy skills. For example, the spread of student ability in many classrooms was a challenge.

T: it's quite difficult because I have some kids who are still learning the alphabet and are really still focused on each letter but then I have some that can - they can look at say butter-fly and put it together as in that's "butterfly", not just look at the first letter so I try and focus them on - the weaker ones are the first letter and as I've got a group that can look at the first and the last letter and then those that can look at little words inside the big words and then those that can look at ... You've got such a range so it goes back to - with the reading, those kids that are still looking at the picture, to be able to read any of the words and making up a story to those that are actually reading the words and knowing some sight words and ...

Indigenous cultural characteristics also influenced the teacher's perception of the quality of work being done by students. Although a factor for all the Indigenous students, this influence varied depending upon the location of the school, with schools in Kalgoorlie and the Kimberley district

reporting this more frequently. One characteristic was noted by one teacher in the metropolitan area:

T: They're more interested in fiddling. One of them also is a slightly bigger child and I've noticed that he's always ... just can't get himself comfy on the mat, you know. He's always on the move. Um, He's got quite a few cousins and whether they're really cousins - cause they often call them sisters - or they're just really close friends, in the same room. They're fussing about what they're doing. Brandon, for instance, has just has his cousin join our room - the last three weeks, he's probably been there - and he is constantly checking out what she's doing all the time, rather than worrying about himself.

This caring behaviour for relatives was reported in her research by Malin (1989) as a characteristic of Indigenous students of a similar age. Malin argued that it is a sign of social maturity and should be fostered by the teacher. Typically, however, mainstream teachers, as in the case above, tend to see it as a disruption to the order of the classroom.

Conclusion

In general, teachers were supportive of the conductive hearing loss project and participated enthusiastically in implementing the strategies. The researchers were able to form excellent mentoring relationships with nearly all the teachers who participated and this contributed to the effective implementation of the strategies. As the interaction between teachers and researchers proceeded, the opportunity for the researchers to explain student behaviours, such as cultural behaviours, as normal, contributed to the teachers' greater acceptance of such behaviours and they were able to channel their energies in more productive directions than expending effort on control.

The collegial model of curriculum change appears to have been successful in this case. However, it is ongoing and student outcomes in relation to literacy development have not yet been measured. In subsequent visits, the researchers need to concentrate on those areas that teachers are not focusing on: accessing records of hearing loss, relating Indigenous cultural characteristics to classroom contexts and encouraging teachers to explore the possibility that certain apparently negative behaviours may be a consequence of conductive hearing loss.

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