

## **Teaching and Learning within the Zone of Proximal Development: A case study why schools are failing students – Implications for Curriculum Development**

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### **1.0 Introduction**

As a result of intense public interest and controversy, the education system in Queensland exists in an era of extreme anxiety about what the future holds for Aboriginal and Torres Strait Islander students. Indigenous students in Australian schools are disadvantaged relative to other students, are more likely to get into trouble at school, and achieve at lower levels than other students. Schools are also more likely to overlook important personal and social differences in these students' backgrounds that contribute to their success or failure (Malin, 1997).

Ladies and Gentlemen, this paper will discuss issues related to Indigenous people's access to quality education; looking at examples of factors that are limiting indigenous access to education as well as best practices to overcome the existing barriers and culturally appropriate quality education. In this paper I will discuss the concept of Teaching and Learning within the Zone of Proximal Development (ZPD), in particular how teachers might use culturally appropriate scaffolds to promote learning.

Many Indigenous students are at risk although they represent just 2.4% of the entire Australian population:

- a) From the outset, many Aboriginal and Torres Strait Islander students are at-risk because of their lack of engagement in the school system, mainly in literacy and numeracy.
  - i) The average completion rate of year 12s is about 67% as against 87% with rest of Australia,
  - ii) More likely to get into trouble at school,
  - iii) Achieve at lower levels than other students.
  - iv) Schools are more likely to overlook important personal and social differences in these students' backgrounds that contribute to their success or failure
  - v) They are streamed into lower classes because they are described as mentally different and intellectually deficient, thus offered water-down curriculum
  - vi) Many of these young people find their own reasons for becoming literate. Some of these reasons go beyond reading to acquire school knowledge of

academic texts. However, these adolescents engage in multiple literacy practices: they e-mail; they instant message; they surf the Web, but they do very little reading in the traditional textbooks (Alvermann, 2001). Simply changing the kinds of tasks students are asked to do or making them more difficult is not enough to ensure higher achievement.

- b) The ‘need to include socio-cultural aspects in school curriculum’ –i.e. the development of teaching materials and teaching methodology to reflect the cultural backgrounds of students, providing learners with the opportunity to see their own experiences and understandings.
- c) Exposing Indigenous children to both western and traditional approaches in the education system will result in better outcomes, however, there is an underlying reductionist approach, suggesting that the 'two ways' education theory has produced oppressive discourses and practices, which inhibit their ability to learn and succeed.
- d) Although Aboriginal cultural customs, values and codes of behaviour are an essential part of the lives of Aboriginal people, they are obliged to send their children to mainstream schools where these customs, values and codes are usually ignored. Not only the teaching styles, but also the very cultural basis and assumptions of the schooling are often inconsistent with their cultural background (Blanchard Report, 1985). Individual creative and self-directed effort which is crucial to academic learning contradicts their worldview. So the purposeful behaviour which Anglos exhibit when manipulating their environment, and which Anglo teachers expect from students or exert on students in the classroom is seen by Aboriginals as 'pushy' and 'greedy' .
- e) They see teacher's role “to assist, clarify the unknown, and avoid disharmony. However, most non-Indigenous teachers tend to dominate classroom proceedings by controlling the level of student participation; threatening to punish them if they do not do their work; thus, silence can be interpreted as resulting from students' unfamiliarity or discomfort with classroom management practices.
- f) The nature of acquiring knowledge is considered to be a commodity, in which knowing is a privilege reserved for those with appropriate status within the community.
- g) Western type schooling is destructive; it destroys their Aboriginality or identity. Whilst Aboriginal people desire that at least some members of their communities will attain high levels of ability in the 'three Rs', they do not wish this to be at the cost of loss of Aboriginal identity.
- h) The value placed on the use of English language contradicts Aboriginal values and the sociolinguistics of the classroom context. For example, Aboriginal students can be confused by teachers who ask questions to which they (the teachers) already know the answers.

- i) Indigenous people long to control their own destiny and would like to see a physical separation from the Western education domination. They want to see a system designed and taught by Aboriginal people, using Aboriginal criteria for choosing teachers, and Aboriginal criteria for what constitutes satisfactory learning, and for what constitutes an Aboriginal administration style. The purposes, functions, contexts, ways of doing things and reasons for doing things would need to be Aboriginal.
- j) Australian Indigenous people are a small minority in danger of being overwhelmed by a pervasive dominant culture. The use of western forms of teaching and learning strategies to advance the educational goals of the dominant culture is therefore exploitive and morally questionable. Educational goals such as individual academic achievement are value laden; values and other internalised features of a dominant culture “offer the most enduring resistance to cultural disintegration”. When these are stripped away, people lose their identity and self-determination becomes impossible.
- k) The differences between formal and informal learning systems some argue have created learning difficulties in the classroom where different learning strategies are required in the classroom for Indigenous students. The most significant difference between Aboriginal and classroom learning strategies is that the former uses very little verbal instructions, and relies heavily on context specific observation, imitation, and personal trial and error, whereas classroom learning is decontextualised and employs a high level of verbal interaction. In order to improve learning outcomes for Indigenous students some argue that :
  - i) We must be involved in ridding students of their 'primitive' ideas and replacing them with 'modern' ones. This perspective is particularly prevalent in the African and Australian Aboriginal literature.
  - ii) Improve classroom management, teaching methodologies and communication patterns to make them more compatible with those found in the home culture. This perspective is prevalent amongst educationists working in Australian Aboriginal, Polynesian, and to Native American contexts.

Indigenous leaders and Indigenous people are not happy with current educational provisions. As O'Donoghue (1995: 6) notes;

.. In the popular imagination, there are two basic images of Indigenous Australians: one I would term a 'cultural' image that accepts us for our uniqueness, our 'Australianness'; the other image is the ramshackle world of poverty, deprivation and hopelessness. Aboriginal and Torres Strait Islander people are the most disadvantaged group in the country. Whatever social indicator you use - health status, education, employment, and contact with the law - we are at the bottom of the heap. This is such a

commonplace statement of fact that it is in danger of becoming a piece of empty rhetoric.

Not so long ago, the Centre for Independent Studies issued a seminal paper referring to ‘A New Deal’ for Aborigines and Torres Strait Islanders in remote communities. The article was quite explicit and I Quote:

It makes out a compelling case that the existing deal is a disaster and that the main beneficiaries of the present arrangements are a parasitic and incompetent class of whites in the so-called caring professions’, end of quote. (Courier Mail, 2005)

Aborigines are as over-represented in the National Rugby League and Australian Football League as they are at the wrong end of every health, mortality, education and imprisonment table. We need role models like Queensland hero Mat Bowen (Noel Person, Courier Mail, June 4-5, 2005, p.56).

The underlying concern is a distinct sense of unease and uncertainty about an educational system that is meant to provide the necessary skills and qualifications to Indigenous students.

## **2.0 Teaching and Learning within the “Zone of Proximal Development” (ZPD) – Moving Towards a New Concept of Education for Curriculum Development**

To improve schooling outcomes for Indigenous children, I believe Vygotsky's work can be of significant value in suggesting directions in which to proceed. His sociocultural theory of cognitive development offers an alternative explanation for teaching and learning, specifically within the Zone of Proximal Development (ZPD). In simple terms, the ZPD defines levels of development within which students can solve a problem that is beyond their capabilities, with the aid of adults or more "competent peers" (Vygotsky, 1978). Such interactions and activities that occur within (or slightly beyond) the ZPD are proposed to foster development (Vygotsky, 1978). Largely inspired by the seminal works of Vygotsky, sociocultural theory can be characterised by its central claim that children's minds develop as a result of constant interactions with the social world - the world of people who do things with and for each other, learn from each other and use the experiences of previous generations to successfully meet the demands of modern life.

In order for this to happen, the emphasis falls heavily on instruction and, in particular, on its role in relation to the development of those higher mental functions that are characterised by conscious awareness and volition. In this context, the significance of the ZPD is that it determines the lower and upper bounds of the zone within which instruction should be pitched. Instruction is only useful when it moves ahead of development, leading the child to carry out activities that force him/her to rise above

her/himself. The teacher, working with the school child on a given question, explains, informs, inquires, corrects, and forces the child him/herself to explain.

Viewed from the perspective of education, teaching and learning within the ZPD challenges much of the current practice in schools today. Instead of understanding the mind according to how it changes, school emphasises a static, assessment-driven curriculum. Instead of seeing development originating in the social plane, schools systematically deter social interaction. The discourse of schooling represents objects and sign systems as immutable, instead of stressing their sociocultural formation. Furthermore, schools canonise individuals learning on their own, while the ZPD holds out the promise of cognitive development through the joint construction of knowledge (Vygotsky, 1978).

The most salient features in this expanded interpretation of the ZPD are:

- Rather than being a “fixed” attribute of the learner, the ZPD constitutes a potential for learning that is created in the interaction between participants as they engage in a particular activity together;
- The ZPD may apply in any situation in which, while participating in an activity, individuals are in the process of developing mastery of a practice or understanding of a topic.
- The ZPD is not a context-independent attribute of an individual; rather it is constructed in the interaction between participants in the course of their joint engagement in a particular activity.
- To teach in the ZPD is to be responsive to the learner's current goals and stage of development and to provide guidance and assistance that enables him/her to achieve those goals and, at the same time, to increase his/her potential for future participation.
- To learn in the ZPD does not require that there be a designated teacher; whenever people collaborate in an activity, each can assist the others, and each can learn from the contributions of the others.
- Increased understanding among educators that teaching involves much more than appropriately selecting and delivering a standardised curriculum and assessing the extent to which it has been correctly received.
- Learning in the ZPD involves all aspects of the learner and leads to the development of identity as well as of skills and knowledge. For this reason, the affective quality of the interaction between the participants is critical. Learning will be most successful when it is mediated by interaction that expresses mutual respect, trust and concern.

- Learning in the ZPD involves multiple transformations: of the participants' potential for future action and of the cognitive structures in terms of which it is organized; of the tools and practices that mediate the activity; and of the social world in which that activity takes place.

Teaching and learning with the ZPD allows students to undertake new and difficult tasks they could not have completed without some assistance. Assistance is provided through the scaffolding process:

- i. through help and discussion, direct teaching, hinting, prompting, and modelling in the course of their own assisted performances, students become aware of how and why the strategies work and how to engage them on their own.
- ii. It offers students culturally appropriate social, metacognitive and metalinguistic strategies and models for undertaking new and more difficult tasks. In completing tasks that are appropriately scaffolded (through carefully constructed materials and activities as well as through interactions with teachers and peers), the needed knowledge, skills and strategies are eventually internalised in useful ways, providing students with the resources to eventually take on similar and even more difficult tasks on their own.
- iii. Scaffolding also provides students with skills to interact, (such as turn-taking, agreeing, disagreeing, elaborating on each others' ideas; the others help them to hone their thinking (by helping them to focus, sharpen their ideas, analyse, and provide evidence for their growing understandings). In such classrooms, the multiple perspectives of peers, teachers, and authors are used as a spur to motivate students to further explain, examine, argue, justify, challenge, and consider. Diversity becomes an asset that spurs thinking; and participants become part of a learning community with high expectations about both the content and communication that are part of higher literacy in English. Through their participation in that learning community the students are provided with specific ways to participate effectively (Langer, 1995).
- iv. Instructional scaffolding helps clarify the ways in which individuals gain access to the store of cultural knowledge; develop skills through the social process of interaction; engaging in activities within specific fields, and making that knowledge and those enabling skills their own
- v. The teacher-student interactions and the relationships that are fostered through the social nature of learning play an especially vital role in student achievement.
- vi. Instruction is only useful when it moves ahead of development" (p.212), "The teacher, working with the school child on a given question, explains, informs, inquires, corrects, and forces the child himself to explain. All this work on

concepts, the entire process of their formation, is worked out by the child in collaboration with the adult in instruction.

Several studies have been carried out in this area but I would like to highlight two in particular. In a study carried out in the United States Lee proved that the use of appropriate scaffolding helped diverse students to undertake new and more difficult tasks. Lee's Cultural Modelling Project (Lee, 1997, 2000, 2001), was situated in Vygotsky's (1986) notion of the Zone of Proximal Development, in which a more knowledgeable other (in this case, the teacher) guided and supported learners by modelling or scaffolding a particular process before expecting the learners to apply it. She used a form of talk widely practiced within that community to teach her ninth graders how to comprehend the canon. The talk form is known as 'signifying', and involves innuendo, double entendre, satire, and irony, and is dense in figurative language (Pearce, 1999). It often involves forms of ritual insult but is not limited to insult. An example of signifying might be, "Yo mama so skinny she can do the hula hoop in a cheerio" (Lee, 2001: 122).

Lee used a special form of language play as a means of scaffolding her ninth graders' literary responses to books in the canon that had previously been thought to be too difficult for them to read. Under her guidance and support, this group of underachieving students began to hypothesize the meanings of various tropes, ironies, and satires found in the canon. In effect, they were transferring what they knew about signifying to interpret the discourse of difficult canonical texts and to change their interpretation when the evidence warranted such action (Lee, 2000, 2001).

There are several important aspects we must note:

- i) Lee connected classroom activities and cultural knowledge to deliver her lesson;
- ii) She used classroom tools in making meaning from literature and to connect those tools to what students knew and did in their lives outside school.
- iii) Culture is viewed through the lens of language, ethnicity, profession, gender, or age;
- iv) Culture becomes the centre of instruction in a number of dimensions; what students believe and do outside of school (their cultural funds of knowledge); the subject matter as a cultural practice (the way experts in the domain think and act); and the classroom as a culture (the routine practices within the class) (Lee, 2000, 2001).

We should ask ourselves this question:

Is there any place within the children's experiences of school where they are engaging in something that bears some relationship to this thing that I want them to do in school? (Lee, 2000, 2001).

In another study, Ballenger (1997) taught a multigrade (grades five through eight) Haitian bilingual science classroom. Ballenger was knowledgeable about certain features in the students' everyday discourse that could be helpful to them as they learned to comprehend a more formal style of reading and talking about science. He used the Haitian style of argumentative discussion and scaffolded students' participation in the scientific discourse of the classroom.

- i) Using the argumentative discussion reflected in the adults' animated debates about politics, sports, and religion purely-for-entertainment purposes children were encouraged to express themselves in both Creole and English using culturally familiar speech patterns to present their arguments and defend their personal opinions about things they observed in science class (such as the conditions necessary for mould to grow).

In both cases, Lee and Ballenger took steps to:

- i) (re)mediate traditional instruction in their respective content areas so that it made use of and supported the language and everyday cultural practices of their students.
- ii) They scaffolded complex processes and academic tasks that were less familiar to students by drawing on highly motivating and familiar language patterns in the students' speech communities.
- iii) In doing this, they were able to provide new learning opportunities in ways that engaged the learners and facilitated a sense of self-efficacy (Ballenger, 1997).

### **3.0 Conclusions**

At this time when confidence in public schooling is at a low ebb, there is both a need and an opportunity to make radical changes in the way in which it is organized. In this context, as increasing numbers of educators are recognizing, Vygotsky's genetic theory of learning and development can provide a starting point for rethinking the principles on which education should be based. And in that rethinking, the concept of the zone of proximal development has a central role to play. Far from being simply a new and better pedagogical method, the ZPD offers an insightful and theoretically coherent way of thinking about the complex nature of the transformations that are involved in learning and of the multiple ways in which learning can be assisted.

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