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WHY THE ABORIGINAL CHILD SUCCEEDS AT THE COMPUTER.

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Brother R.R. O'Donoghue

Recently, I asked a young teacher who made much use of the computer in her classroom, "Why do Aboriginal children succeed at the computer?".

She gave these reasons:

1. Racial differences go out the window.
2. Ability groups do not matter - all are happily involved.
3. Concepts, e.g. direction, come early.
4. Hastens sight-word recognition.
5. Adult helpers are well employed.

While this is the experience of only one keen, dynamic teacher, the points made indicate some of the findings I have made in my work as Resource Colleague for seven Aboriginal schools in the East Kimberley in the past four years.

The schools I attend stretch over 700 km from St Joseph's Wyndham in the north to John Pujajangka Piyirn at Lake Gregory in the south. The other schools are at Kununurra, Warmun, Billiluna, Ringer Soak and Hall's Creek. Enrolment ranges from 50 to 150 students. With the exception of Kununurra, where 25% of the children are white, all the students are Aboriginal.

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HARDWARE AND SOFTWARE

Primary classes use BBC computers while the Secondary pupils have IBM compatibles. The software for the BBC's is that found in city schools - very British and western in culture. This is not to say that it is not worthwhile; the strongly realistic educational approach of the BBC software gives these programs a universal appeal that all children respond to. "Podd" is loved by all; "Albert's House" is understood and enjoyed by children who live in shanty huts and "Zoopak" brings cheers when Petra is found or the giraffe is put together again. To date, the same cannot be said for the IBM software for secondary students.

As in all schools, word processing is common. "Edword", the "Wordsmith" and "Prompt/Writer" are the most popular. Children write in English and Teaching Assistants put their hand to translating their stories into Kukatja and Walmajarri (Lake Gregory) or Kija (Warmun).

The drill and practice software which generally call on strength in language and numeracy occupies a minor role. Children who have the greatest difficulty with reading find "Zap the Numbers" a good distraction. Boys, particularly, are quite happy to Time-zone their way through these programs over and over again. I have seen children succeed with "Number Painter" just by remembering what they did last time - there is no need to know the tables of addition and subtraction when visual memory can do it.

The most used software is the adventure/simulation type-

"Wizard's Revenge"

"Dread Dragon Droom"

"Dinosaur Discovery"

"Goldfields"

"Animal Rescue"

It is most absorbing to take a group of Aboriginal children through "Space Mission Mada," working together to make our way through the puzzles. Aboriginal children are used to co-operative enjoyment and all, weak and strong, are brought into the exercise.

GAMES VERSUS THINKING

One interesting issue is whether or not to use arcade games like "Pacman". After some trials and observing the disturbing effects on learning, motivation, peace in the classroom and care of equipment, all teachers soon had to withdraw the programs. It seems to me that games soon become the boy's territory. They take to them more quickly and assert their physical and vocal strength to get ownership of the keyboard. Girls tend to back off under the pressure and lose interest.

On the other hand, it is my experience with Aboriginal children that the girls are able to make the most of the ordinary programs. I put this down to:

- a. Girls tend to have a greater affinity for language; their reading habits are better developed.
- b. There seems to be a greater appeal for girls in the programs that call for some analytical thinking about character and plot.

LITERACY AND NUMERACY

We must remember that English is a second language for most of the Aboriginal children. How would white children manage "Granny's Garden" in German or Japanese? The children up north lack the semantic and syntactic skills that these programs assume are in everyday use.

Some exercises are quite threatening. Children who have little use for pronouns, conjunctions etc. must be sorely tried by our compound sentences, subordinate clauses and the other complexities of our language. Most of the text used by the children, even in their writing, is narrative or recounting; expository text creates many problems.

Numeracy causes even greater worries. Tables have little relevance and addition and subtraction are rather meaningless to Aboriginal children. "Zap the Numbers" is very reliant on memory and boys succeed here fairly well.

SOME REASONS FOR SUCCESS

One thing is evident in using computers with children computers mesmerise and challenge them. I offer some ideas why:

1. Computers are friendly, they encourage rather than chide.
2. Computers offer colourful graphics and quick dynamic action. Aboriginal children have strong visual/spatial memory skills.
3. There are many programs which do not depend on reading skills; the children can exploit their learning style of "learning from watching".
4. The absence of the spoken word removes one of the greatest difficulties for the Aboriginal child - the difficulty in listening to and understanding what is being said, especially by a white teacher.

This aspect of the situation seems very obvious to me. Most of these children speak either one or two of the following languages: Kukatja, Jaru, Walmajarri, Kija, Kriol. Their spoken and written English is practised almost entirely in school which, for some, could be less than 50% of the school year. What a relief it must be for these children to give their whole attention to the visual thrills without having to translate what is almost a foreign language and, after all, it is the language of the conqueror.

In the development of literacy and numeracy skills, the computer seems to be a great motivator. If student application and concentration are any guide, then they are making progress. But, if we watch children playing Nintendo making progress, we see the same strengths - but what sort of progress is being made? It is quite common to see even Secondary school children continue playing basic addition games for a whole year with no wish to move to subtraction etc. Leaving children at the computer to do what they like is no way to success.

THREE PRINCIPLES

I think that it is important to keep in mind the following when we want to get the most out of the use of the computer:

1. The most important element in the successful use of computers in schools is the competent, encouraging teacher.
2. The proper use of the computer will allow the student to make mistakes and learn from them.
3. The four language modes - speaking, listening, reading and writing can be practised at the computer.

SUMMARY

The main reasons that I see as contributing to Aboriginal children's success at the computer are:

1. Computers appeal to the Aboriginal strengths in visual/spatial memory skills.
2. They release the child from what is sometimes a negative influence of a white teacher speaking high level English, particularly where the children have glue ears or punctured ear drums.
3. Tactile skills are exploited.
4. The computer is a most patient medium and allows many mistakes and the freedom to "try anything".
5. There are instant results and pleasure. Compare process writing per the pencil and using the keyboard.
6. Programs are full of fun; many are simulations and employ gentle, exciting and happy sequences.

This is only part of the story. We must look more closely at the nature and quality of the success we think the children have achieved.
