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The school structure is a kaleidoscope in which facets of varying intensity - teachers' skills and attitudes, children's responses, parents' participation - converge and separate with remarkable rapidity. What appears as an organized and efficient pattern of timetables and class order is no more than a grotesque distortion of all that is natural and human and true.

The present project is an attempt to develop from these ever-moving parts a pattern which provides greater justice and better educational opportunity for the Aboriginal child.

PROJECT



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We decided to institute our Project Program because :

1. a considerable number of our pupils both in the upper Primary and lower Secondary schools have had a record of failure for most of their school career, and
2. the results of both aptitude and attainment tests indicated that the existing school programs were unsuccessful in alleviating this pattern of failure.

In all, twelve children were involved from Grades 7 and 8 for fifteen - thirty-five minute periods per week. The group was made up of white children and children of Aboriginal descent and had equal representation of boys and girls. Pupils then returned to their normal class where they took part in the lower stream. The pupils involved would obviously terminate their studies in Grade 10, since they were already eighteen months to two years behind their peers in grade status.

Our feeling was that they should at least be given some skills which would allow them to become useful members of society in some context. Our broad aims then were two-fold; they were firstly, to provide some motivation for students to attend school by providing activities of a practical bias at which they could succeed. Secondly, these activities would, by their practical bias, provide some pre-vocational experience. Due to the low achievement level of its personnel, the course had to be restricted to basic skills with the stress on their practicability.

To enable our course to maintain coherence, it was decided to have a practical theme for each semester unit. Last semester, our theme was vegetable gardening. Other units envisaged include the Motor Vehicle, Mineralogy, Shopping and Allied Services and The Cottage. Areas dealt with within each theme were described as Communication; Applied Science; Practical Handwork; Practical Mathematics and Social Studies. For each theme, the emphasis placed on each subject area would vary with its applicability. The divisions were artificial, and served mainly to indicate separate areas for individual specializations by individual teachers. Fortnightly co-operative planning sessions helped to maintain the course as a coherent whole, and allowed for a great degree of integration. These sessions also helped the spontaneity of the program.

The educational objectives of the *Applied Science* component of this particular course lay in two major areas. Firstly, there were specific objectives concerning the content of this particular unit. For example, at the end of this unit it was expected that students would be able to identify different soil types and different seeds; demonstrate knowledge of plant parts, and understand the use of fertilizers, soil conservation and so on. These objectives were fairly easily testable by the use of objective answer questions, practical tests and check lists.

Secondly, there were more general objectives which might be collectively titled Scientific Interest and Awareness. These objectives weren't specifically concerned with the science of gardening, but with the scientific method and study of science. They included: students displaying an awareness that scientific knowledge depended upon inquiry and investigation; that it is based on scientific evidence and not personal opinions, and that although science is an advancing collection of theory and knowledge, it is incomplete and can be wrong and inaccurate and therefore is changing. Other objectives in this category included an awareness of the inter-relationships of so-called scientific disciplines, together with other facets of daily life. These two major

objective areas were further sub-divided into cognitive, affective and psycho-motor domains. It is possible that the greatest benefit for our students will come from the latter two, that is, they will become much more interested and motivated to be involved in school programs, and will actually be able to do things.

MATHS has never been a particularly interesting subject. Our project students had poor maths reasoning abilities and were poor in working the four operations. Knowledge of number facts was also poor. A practical maths course then, was designed to capitalize on certain mathematical activities associated with gardening. These activities and maths skills included - counting, addition, subtraction, multiplication and division which were all required in planting, costing and determining yields. Measuring lengths, weights and volumes came into building fences and borders, applying fertilizers and determining yields. Decimals, ratios and percentages came into fertilizer application, money sums, determining yields and determining profit margins. Plan drawings and graphs needed an understanding of scale and an ability to measure accurately. The use of thermometers and rulers showed the use of number lines in every day life and required an understanding of scales, divisions, fractions and decimals. The objectives then, of the practical maths component of the project were for our students to display the arithmetic skills which they will need for life. It will be realized that mathematical concepts and skills were built into and used in other project components. For example, practical work, social studies and so on. This was desirable to enable the students to perceive the relevance and usefulness of these skills as they pertain to life generally and not to maths specifically.

Language development, both oral and written, was the aim of COMMUNICATION SKILLS. It was hoped that students would become more competent in the fields of speaking, listening, reading and writing. In pursuit of our broad vocational aim, the students attended to all ordering and community contact such as writing letters, sending telegrams and making telephone calls. Stimulus from other branches of the course provided the basis for daily class discussion and log writing, and in turn, the reports of individual students provided critical listening for their class mates. What began as a fairly narrow technical vocabulary, broadened to take in many dual-purpose words new to the students. Plenty of exercises and word games provided the sort of practice these students needed in all skills. Ample material for reading and comprehension was obtained from magazines, newspapers, and even seed packets. Some creative writing has also been attempted. Sitting in the sun at the garden site provided an ideal setting for a "see, hear, feel" theme.

In PRACTICAL WORK, we endeavoured to introduce new tools and materials, and to instruct in the correct use of both these and familiar tools. Because of the types of jobs these children will be taking when they leave school, we concentrated on manual skills. The use of improvised tools for measuring lengths without a rule and tape, and construction of a right angle, are examples. Other school building activities included mixing cement, laying bricks, laying out, setting out and measuring. These should help the pre-vocational aspect of our program. This particular speciality was not greatly involved in this project theme, but will come more to the fore in themes such as the Motor Vehicle. The children in the project group had short attention spans, and did not have a very pleasant association with the classroom atmosphere. Both these factors made practical handwork most popular, and every effort was made to maintain a high percentage of practical work in each lesson.

In SOCIAL STUDIES, the main strategies employed were researching information, recording and sorting information and making generalizations. To relate to the gardening project, we studied the horticulture of different countries, concentrating on South East Asia, as an over-crowded area, where vegetables are widely grown. This led to the students becoming familiar with a wide range of unusual vegetables. They also learnt basic nutrition. The practical aspect of this section was cooking. Here, we felt, pupils gained in skills of social interaction. They set up the tables and all sat together to eat the meals they had cooked. They also did on-the-spot research in the local supermarket into methods of vegetable processing and preservation. Later they will go on to study production chains to familiarize themselves with the steps in vegetable processing.

At present, only teachers have been used in the program, but there is scope for the introduction of resource personnel from the community next semester.

EVALUATION. Overall impressions are that it has fulfilled its two broad aims, namely, increased motivation and provision for pre-vocational training. Several aspects stand out above these impressions, some of which were anticipated, and some of which came as pleasant surprises.

It is difficult to attribute gains in achievement by involved students to any one factor. There has been increased motivation to learn and to attend school. Beside the fact that classes were not particularly "class room" based, some of their attraction lay in the

novelty and variety in the type of lessons. Teachers acting either singly or in concert were able to, and were required to, exercise their ingenuity to its utmost. This was rewarded by success.

Added to this must be the individual attention accorded to children in the group where one teacher was involved with no more than sixteen pupils at one time. Problems of all pupils in the group were more easily identified and remedied immediately.

Students in the group also have had a constant record of failure. Classes in this course, however, were not designed to provide comparisons of achievement levels between the students. Hence the pupils were no longer dogged by failure. Successes were recognized and reinforced by both teacher comment, and group comment, and by the very nature of the task. Because of the attention being focussed on them by groups outside the "project class", great prestige became attached to each member, thus aiding self-identification.

Some resentment was recognized amongst non-participating students in the Secondary School. This lessened considerably when association with the garden itself was extended to the Grade 8 Science class and Home Economics students.

'New things' learned and noted, included what vegetables look like, the actual work done to convert raw beetroot to canned beetroot, the use of a modern kitchen and such basic instruments as an automatic can opener. Improvement in social attitudes was observed in the greater ease with which members were able to communicate with teachers, fellow pupils and visitors. Generally there has been a considerable widening of horizons. Mainly the attitude of the on-going Grade 8 class is that they are "too good" for this course next year, a feeling which is echoed by their teachers.

One factor contributing greatly to the success of our Project was the system of group planning which enabled as much integration as possible. All teachers involved found this system most suitable, and the degree to which this became more informal than formal is a great credit to them.

Finally, a major point leading to success was the full commitment and dedication of all the teachers involved. All successes must be attributed to this factor.

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Editorial Note : We would be pleased to hear from any teachers working with Project Classes in Western Australia.