

ENVIRONMENTAL EDUCATION FOR PORT ELIZABETH SCHOOLS: THE ROLE OF THE MUSEUM

Nelia Garner

The Port Elizabeth Museum, through its education staff, has contributed to the development of environmental studies for primary schools in Port Elizabeth. At first, the Education Officer of the museum led all excursions to study sites. In order to encourage independent work by teachers, the environmental education projects were later introduced to teachers during workshops. A questionnaire was sent to 51 local primary schools of the Cape Education Department to determine how many schools regularly made use of these environmental education projects and whether teachers had any serious problems with projects. Results of this preliminary survey are reported.

The Port Elizabeth Museum has had a long-standing involvement with nature conservation and the fostering of environmental awareness. Especially because of its collections and research in the field of marine biology, the museum has become an important promoter of the idea of coastal conservation. Through the efforts of the staff of this museum, a coastal reserve was established close to the city of Port Elizabeth in 1975 (Grindley, 1975, 1987). Besides collections and research, the museum has a strong educative function in the formal sector. Lesson programmes are aimed almost exclusively at primary school children, making use of museum exhibits as well as live animals kept at the Oceanarium and Snake Park.

In 1984 a new component was added to the museum's educational activities. In response to a request by local teachers of exceptionally able pupils, an environmental study programme was developed by the Education Officer. This project was initiated for exceptionally able pupils in Std. 2 classes. The study site was Cape Recife, a nature reserve managed by the municipality of Port Elizabeth.

Over the past three years museum staff assisted with the development of environmental education programmes for higher primary standards. During the developmental phases of these programmes, museum staff collaborated with teachers and the officials of the local Teachers' Centre. A sound basis for co-operation between the museum and other interested parties was established. While the first study was intended for exceptionally able children, all later programmes were designed to suit the needs and abilities of a broader spectrum of pupils. The Regional Co-ordinator for Gifted Child Education of the Teachers' Centre took care of the compilation of most of these projects.

Each environmental study programme consists of the following components:

- guidelines for the teacher on planning and arranging visits;
- clearly defined educational aims and objectives;
- suggested pre-visit activities to prepare pupils;
- a number of alternative activities (with worksheets) for the visit to the site;
- suggested follow-up activities.

The programmes are cross-curricular exercises and incorporate as many subject areas as is practically possible and relevant. The Cape Recife study includes history, geography, science and bird studies. The programmes are also pupil-centred. Pupils and teachers can select the activities they prefer to follow through. Worksheets and follow-up activities

are designed to accommodate as far as possible the needs of three broad ability groups i.e. exceptionally able, above average and average. Activities in the field could then serve as a basis for differentiation in the follow-up phase.

Participating pupils also have an opportunity to exercise scientific skills. On the field trips especially, they have a chance to use their powers of observation and reasoning when conducting small-scale scientific investigations. Problem solving and cause-effect studies provide opportunities to use creative thought and exercise thinking skills.

Initially the museum's Education Officer was called upon to lead all field trips undertaken by teachers. This placed heavy demands on her time. Subsequently, workshops were held to introduce invited groups of teachers to the programmes so that they could continue independently. This process is not complete. A number of schools still have to be approached and motivated to participate. One problem encountered is that some schools prefer to send their pupils on long field trips to environmental education centres elsewhere, rather than utilising opportunities provided on their doorstep.

The need for museums to evaluate their work from time to time was stressed by Oberholzer (1985). Although the comment referred to museum exhibits and museum education programmes, it is logical to assume that environmental education programmes initiated or promoted by museums should be evaluated too. Unless one uses appropriate and exact tools for such evaluation, it can become a near-impossible task, especially if one considers the aims of environmental education which may also be stated as follows:

"Environmental education is aimed at producing a citizenry that is knowledgeable concerning the bio-physical environment and its associated problems, aware of how to solve these problems ... motivated to work towards their solution."
(Diepeveen, undated).

For the novice in the field of environmental education, evaluation presents a huge problem. Fortunately there are models for evaluation of environmental study programmes which could be adapted for one's own needs, but not without a great deal of careful consideration of what those needs really are.

What follows is a brief report on a preliminary survey conducted to determine, firstly, the level of participation of local schools and, secondly, possible problems teachers might have encountered with the environmental study programmes developed for their pupils.

Questionnaires were sent to 51 local schools of the Cape Education Department. Only 18 of the schools responded. Of these three reported no knowledge of the programmes, six of the schools in the sample made use of one project only during the period 1985-87, five took part in more than one project and four did not participate at all.

The second half of the questionnaire attempted to elicit the teachers' opinions of different aspects of the programmes and to determine possible problems.

Aspects touched on in the questionnaire were as follows:

- amount of theory included in each section;
- practicability of tasks, experiments;
- integration of theory and practice;
- differentiation of questions, instructions for ability groups;
- relevance to syllabus;
- objectives.

The questionnaire was a first attempt at gaining a better understanding of the teacher's viewpoint. Generally, the teachers were rather uncritical. A larger sample of teachers might have provided more evidence of problems encountered. Most of the teachers who made use of the projects (11 in the sample) were satisfied with the amount of theory included and the degree to which this was integrated with suggested activities. Two teachers experienced problems with certain activities, but did not indicate exactly what these problems were. The teachers' views of how well the projects catered for different ability groups varied: six thought that the projects catered adequately for all ability groups, while two felt that the exceptionally able child was poorly provided for. All teachers in the sample felt that syllabus-relevance was not important. Most teachers were satisfied that the objectives of the projects were realistic and adequate.

This preliminary survey seems to indicate that teachers are satisfied with at least some aspects of the programmes. However, to those who helped develop the programmes, certain shortcomings are clearly evident. Some programmes, for instance, make no provision for the affective domain - a very necessary aspect of environmental education.

On the other hand, if there is indeed reason to believe that the formula developed for these environmental study programmes is working well, it could be employed in the development of field study exercises for secondary schools, an audience hitherto un-addressed. There is also the large number of schools in other education departments to consider. All of these will require programmes suited to their own needs.

A further, more thorough evaluation will have to be performed to gain a realistic understanding of the successes and failings of the environmental study

programmes in their present form. This will be an important step towards ensuring that the Port Elizabeth Museum continues to make meaningful contributions to the future development of environmental education.

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Editor's note:

Copies of the above mentioned environmental education programmes can be obtained from the Regional Co-ordinator for Gifted Child Education, Port Elizabeth Teachers' Centre, Box 593, Port Elizabeth or The Education Officer, Port Elizabeth Museum, Box 13147, Humewood, Port Elizabeth.

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