



NIE (NTU) – SISIR JOINT PROJECT AGREEMENT ON THE LETTUCE RESEARCH PROJECT

On 29 November '91, NIE signed a Joint Project Agreement with the Singapore Institute of Standards and Industrial Research (SISIR) to undertake a research project on the growing of lettuce using aeroponic techniques. This project marked the start of another project on Agrotechnology which NIE is undertaking in collaboration with industry. Earlier in July '91, NIE had signed a joint research collaboration on Anthuriums with the Jurong Bird Park and Ngee Ann Polytechnic.



Prof Gloria Lim and Mr Liew Mun Leong signing the joint project agreement on the lettuce research project.

The need for the Lettuce Research Project was spelt out by Professor Gloria Lim, the Director of NIE, in her remarks during the signing ceremony: "There is a high demand for head lettuces in Singapore. This demand is presently being met by large imports from overseas. Fastfood restaurants such as

McDonald's are presently importing head lettuces from Australia and the United States. While this is a commercially

viable practice, one is constantly faced with the problems of relatively high wastage due to shortened shelf life and abrasion of the leaves of these imported vegetables. Hence if we can develop the technology to grow these head lettuces inexpensively in Singapore, we can help to resolve some of these problems".



Guests at the rooftop greenhouse where the head lettuces are grown.

Prof Lim further added that applied research projects such as this would allow NIE to embark on related academic research. She said, "We can undertake research studies to answer questions as to why plants such as lettuces respond to various treatments the way they do, like forming heads when the rootzone

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THE SATURDAY MORNING ART (S.M.ART) PROGRAMME

As part of the programme for the Diploma in Education Art Specialist students at the National Institute of Education, the Saturday Morning Art (S.M.ART) project was developed. It is a research and development project for Primary Level children working with two art lecturers and the art specialist students in a team teaching situation. The programme aims to:

- * Extend children's abilities to make art works and to develop their understanding of art, and
- * Provide a focus for the professional development of students.

For the children, the S.M.ART project has been designed to enrich their experience in art knowledge and activities. The art processes covered by the programme have included drawing and painting, clay and other three-dimensional work and computer graphics. Using computers to create art works has been a component of the Diploma Programme for the trainee art teachers and is one focus for research within the S.M.ART programme.

The S.M.ART programme has been developed from the viewpoint that children with initial interest and motivation can excel to a high level of achievement in art if the appropriate stimulus, support and facilities are available. It is also based on current research in art education relating to personal and creative development suggesting that growth in creative and expressive skills is enhanced through access to knowledge, skill development and experience.

The programme is designed to diagnose children's individual interests and aptitude levels in a range of practical and theoretical areas, and to offer some extension work in one particular area. It is recognized that the identification of areas of talent should occur within a programme which enable the talented traits to manifest themselves.

All the children should benefit from the programme because of the planned focus on their strengths and needs, the support of the monitoring students, and the benefit of working within a smaller group of interested peers.

For the Art Specialist students, their involvement in the S.M.ART programme will:

- * Extend their knowledge and skills about the teaching learning process;
- * Explore ways of monitoring children's development;
- * Enable them to explore some of the techniques of research which can then be applied in the classroom situation;
- * Engage them in joint planning, implementation and evaluation of a programme.

Each student works with a pair of children, one girl and one boy, and the data collected is analysed. This data will eventually be presented in the form of case studies and

become a component for assessment within the Diploma in Education Art Specialist programme.

The results of the S.M.ART Programme were displayed at the NIE Artsfest exhibition in November '91 and it provided an opportunity for parents, teachers and all those interested in art education to see what can be achieved with primary level children given a supportive and structured learning environment.



Using computer to create art works during the S.M.ART Programme.

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is cooled to a certain temperature and what is the molecular trigger for this response. This will no doubt be a contribution to scientific knowledge and a better understanding of plants and plant behaviour".

At the signing ceremony, Mr Liew Mun Leong, the Chief Executive of SISIR, remarked that the collaboration between NIE and SISIR would enable the strengths of the two organisations to be fully capitalised upon. Mr Liew also mentioned that the success of the Lettuce Research Project will certainly help to enhance the supply of good quality head lettuces for customers in Singapore.

The joint project will take 1 year to complete. It is undertaken by a project team comprising members from the two organisations and led by Dr Lee Sing Kong from the School of Science, NIE. Presently the head lettuces are being grown in a rooftop greenhouse at NIE.