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ABSTRACT

Described are the accomplishments of Project Agam during its first 6 months of operation. Discussion focuses on curriculum materials project staffing, program implementation, related research and evaluation plans, and teacher training. An outline of the projected work plan, including a pilot study and restricted and larger-scale experimental runs, is provided. (RH)

# The Agam Project: Progress Report No. 1 (June - December 1983)

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During the first half year, Project Agam developed from a mere plan into a fully-fledged research and curriculum development project.

## Curriculum materials

Twenty four booklets of the 36 that form Yaacov Agam's *Method of Visual Education* were received between April and August 1983. Eight of these booklets have thus far been translated from the original French into Hebrew. Four have completed a comprehensive process of editorial review by the scientific staff of the project and the scientific consultant.

A new and more economical format has been given to the booklets, in which the pictorial material and the text that accompanies it are given on the same page, thereby reducing the size of the booklets by 50%.

A limited number of copies of the first booklets - *Circle, Square* and *Ornaments* - have been prepared; the copies used by the preschool teachers were colored by hand. Booklet 4 - *Circle and Square* - is currently being prepared. Booklets 5 - 8 have already been translated and are now being reviewed and prepared.

Materials to accompany booklets 1 through 4, such as geometrical shapes, transparencies, paper sheets and strips, wooden rods, etc., have been prepared. The selection of these materials usually required testing of several production alternatives before the final choice was made.





## Staff

The staff of the project includes

- the project director, Dr. Bat-Sheva Eylon, a Senior Researcher at Weizmann Institute, with 11 years experience of research and curriculum development in science and mathematics education.
- Dr. Micha Razel, formerly an Assistant Professor at Haifa University School of Education with 7 years experience of running an experimental nursery school, who specialises in early childhood psychology and curricula.

- Mrs. Adina Ben Dov, with 22 years of experience as a nursery teacher and 8 years as an Inspector in the preschools. Adina does the initial implementation of the curriculum and gives guidance to the other teachers who participate in the program's implementation.
- Typical of the enthusiasm and interest in the program is the fact that two experienced primary school teachers, Mrs. Maya Ben Tal and Mrs. Donya Avidor, joined the regular project staff as volunteers. Each of them has been helping with the research and evaluation of the program for two days a week on a regular basis. With the needs for testing growing, Donya was willing to increase her involvement and was hired to join the staff on a part-time basis. Another experienced teacher, Mrs. Esther Gendelman, was also employed on a part-time basis to assist with the administration of tests.
- The translation is being done by Mrs. Rica Zilber, a teacher herself for 14 years. In addition, the staff is supported by a graphic artist and a secretary.

In addition to these nine staff members, Mrs. Rina Hershkowitz, for 16 years a senior member of the Mathematics Curriculum Group at the Weizmann Institute, was asked to be a scientific consultant; in particular, to review the geometrical terminology in each unit.

Implementation

Three nursery schools in Rehovot (one of which is used by Adina Ben Dov for the initial implementation) and two in Yavne were selected for an experimental implementation of the program. The number of children in each nursery school (numbered 1 to 5) and their age distribution is given in Table 1.

The implementation consists of a two-stage trial. Each booklet of the program is first tried by Adina Ben Dov who visits one of the experimental nursery schools several times a week to work with the children on Agam's method. Following this, she gives preliminary guidance to four other nursery teachers. These teachers then try the materials in their classes.

Most of the first booklet was tried by Adina during October 1983. The four other teachers started this unit at the beginning of November and finished it at the beginning of January 1984. The second booklet was started in December 1983. The time taken over the first unit is probably inflated by lack of experience with the program. It is to be expected that, as the teachers and children get more used to the Agam method, the learning rate will increase.

Research and Evaluation

The experimental implementation stage is accompanied by an extensive research project. Its first objective is formative, i.e., to investigate if the curriculum needs any adaption to the Israeli setting. Such changes, if any, will be based on children's reactions to the program's diverse activities, teachers' comments and expert review of the curriculum and class observations. The second objective is summative: Does the Agam method achieve its professed goals? There are three declared goals:

(a) To improve the visual abilities of the child in the perceptual, memory and reproductive domains;

(b) To enhance the child's non-verbal, and perhaps also verbal, intelligence;

(c) To favorably affect the child's creativity.

In order to investigate the program's achievement of its aims, two control groups were formed. The same-age group consisted of four-year olds in five preschools matched with the experimental classes (see Table 1). The same-class control group included the five-year olds who were in the same class as the experimental children but were not trained in Agam's method. Test instruments that measure visual skills as related to the contents of each booklet were created and are administered to experimental and control children before and after each unit. Tests that measure intelligence, Raven's Coloured Progressive Matrices - a nonverbal test - and Wechsler's WPPSI - with verbal and non-verbal

sub-tests - were given to experimental and control children at the beginning of the program's implementation. The same children will receive these tests again at the end of the school year and their progress will be compared. Several measures were taken and others are being planned, to provide information about the program's effect on creativity. Finally, measures are being taken concerning the attitudes of the children towards the program, i.e., the extent to which they find it interesting and like to participate in its activities.

Teacher Training

With the possibility of having to provide teachers with training in the Agam method, a half-hour video movie in color was produced. The movie features a representative sample of activities from the first booklet - *Circle* - and a short theoretical introduction. The movie was produced with the help of the Photographic Services Department at the Weizmann Institute. It is currently also being used to present the program to the many interested visitors.

Outline of Projected Work Plan

The evaluation and implementation of the Agam method will be carried out in several stages - the schedule is tentative and subject to change in the light of experience.

Stage 1: Pilot Study (school years 1983-84 and 1984-85)

a. Translation of the curriculum into Hebrew and preparation of all 36 booklets will be continued and completed.
b. Learning materials to accompany all the booklets will be prepared.
c. A group of about 80 four-year olds in five preschools will be given two years of Agam's visual education. These children will be compared to controls on various indices.
d. A preliminary report on the program's effects will be issued after the end of the first school year.

e. Materials and methods will be prepared for teacher training in Agam's method.

f. In-service training sessions will be held for teachers who will participate in Stage 2 of the implementation and evaluation of Agam's method.

g. A final report on the evaluation and implementation of the program will be produced at the end of school year 1984-85.

Stage 2: Restricted Experimental Run (school years 1985-86 and 1986-87).

a. The Agam method will be tried on an experimental basis in 10-20 nursery schools.

b. Formative and summative evaluation of the program will be continued.

c. Conclusions will be drawn based on the results of the evaluation research.

d. Materials will be prepared for Stage 3.

e. Teacher training for Stage 3 will be developed and implemented.

Stage 3: Larger Scale Experimental Run (school years 1987-88 and 1988-89)

Agam's method of visual education will be tried in 30 preschools.

Table 1

Number of Children and their Ages in the Experimental and Control Preschools

| | No. of nursery schools | Location of pre-school | Sector | Name of teacher | No. of children in class | No. of 3 year olds | No. of 4 year olds | No. of 5 year olds |
|---|---|---|---|---|---|---|---|---|
| Experimental preschools | 1 | Rehovot | Religious | Nechama | 32 | - | 12 | 20 |
| | 2 | Rehovot | State | Hanna | 21 | - | 21 | - |
| | 3 | Yavne | Religious | Georgette | 33 | - | 19 | 14 |
| | 4 | Yavne | State | Shula | 33 | - | 23 | 10 |
| | 5 | Rehovot | State | Dina | 24 | - | 8 | 16 |
| | | | | Total | 143 | | 83 | 60 |
| Control preschools | 6 | Rehovot | Religious | Rachel | 35 | - | 15 | 20 |
| | 7 | Rehovot | State | Shmira | 27 | - | 9 | 18 |
| | 8 | Yavne | Religious | Ricki | 35 | - | 5 | 30 |
| | 9 | Yavne | State | Ruthi | 25 | 15 | 10 | - |
| | 10 | Rehovot | State | Dvora | 24 | - | 10 | 14 |
| | | | | Total | 146 | 15 | 49 | 82 |