

## The Regional Centre for Education in Science and Mathematics — RECSAM

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Rencana ini mengemukakan alasan dan tujuan penubuhan RECSAM sebagai sebuah pusat yang tunggal bagi peajaran sains dan matematika di Asia Tenggara. Ia juga mengemukakan kursus-kursus dan dua daripada projek-projek RECSAM yang bertajuk, 'SEASAME' serta 'Concept Learning' dengan ringkasnya.

RECSAM, the Regional Centre for Education in Science and Mathematics, was established by the Southeast Asian Ministers of Education Organisation (SEAMEO) in May 1967 to help improve the teaching of science and mathematics, and thus to lay a firm foundation for meeting the scientific and technical manpower needs of Southeast Asian countries in the future (RECSAM, 1978).

### Activities and Courses

To achieve this aim, RECSAM has undertaken the following activities:

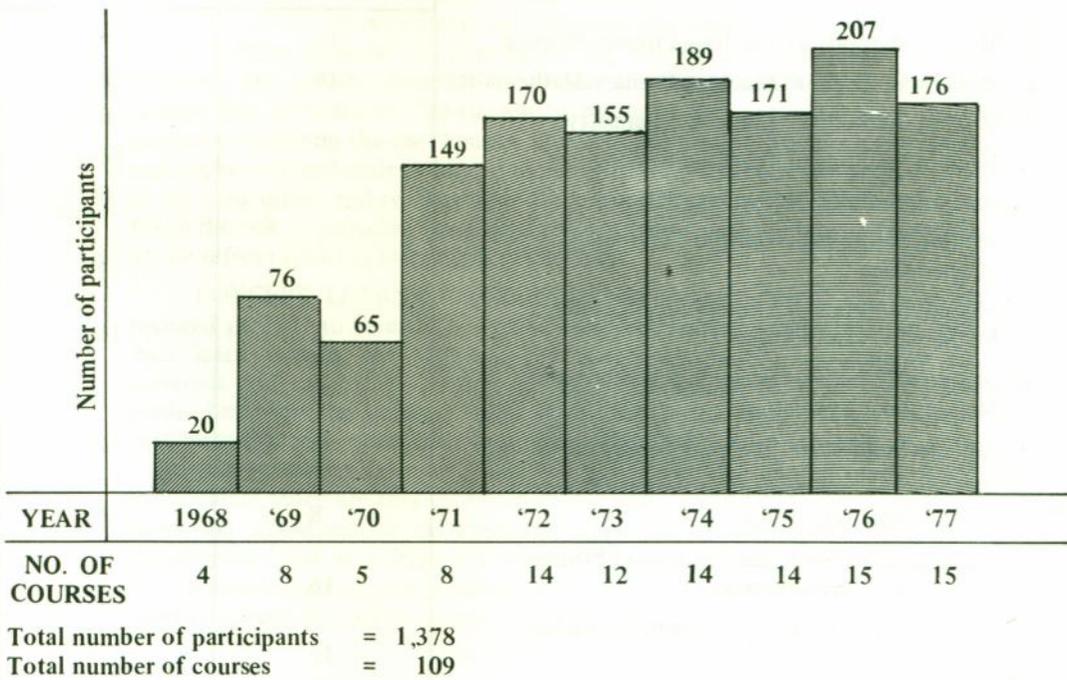
1. Training programmes for key educators in modern methods of teaching science and mathematics.
2. Development of specific studies and instructional materials to be carried out as pilot projects.
3. Development of simple techniques in apparatus-making using low-cost materials.
4. Development of action-research techniques.
5. Gathering of information and acting as a clearing house for science and mathematics education in the region.
6. Critical study of selected curriculum project materials.
7. Critical examination of research on curricular materials and methodology.
8. Organisation and conduct of professional seminars and workshops for educators in the region.
9. Promotion of indigenous efforts in curriculum development.
10. Consultation and special services for member countries.

These activities have been carried out through the implementation of the following eight different types of courses:

1. In-service Techniques (Primary and Secondary Education)
2. Concept Learning Project
3. Sesame Project
4. Integrated Science (Development and Training Course)
5. Methods of Science and Mathematics Teaching
6. Methods of Vocational Science and Mathematics Teaching
7. Apparatus Improvisation
8. Methods of Science and Mathematics Evaluation.

These courses thus far have trained a total number of 1,378 key education personnel, educators, and senior teachers of Southeast Asian countries. The graph which follows shows the number of participants trained and courses conducted from 1968 to 1977.

Number of courses conducted and participant trained at RECSAM up to December 1977.



### Course Participation

Six months prior to the commencement of each course, letters of invitation with full description of the nature of the course for participation in the course are sent out to the education ministries of the Southeast Asian countries concerned. The respective ministries will in turn nominate their candidates for the approval of the Centre Director at RECSAM. The successful candidates will be notified and they will be provided with free air passage. At RECSAM, the participants will be given free food and lodging and daily allowances.

Table I below indicates the courses to be offered and the number of participants to be accepted for these courses from 1978 to 1980.

**TABLE I**  
**Courses and Number of Participants for 1978-80**

COURSES	NUMBER OF PARTICIPANTS	
	1978-79	1979-80
1. Modern Methods of Teaching Primary Science	16	16
2. Modern Methods of Teaching Primary Mathematics	16	16
3. Modern Methods of Teaching Chemistry		16
4. Modern Methods of Teaching Biology		16
5. Modern Methods of Teaching Physics		8
6. Modern Methods of Teaching Secondary Mathematics		8
7. Modern Methods of Primary Science and Mathematics Evaluation	8	16
8. Modern Methods of Secondary Science and Mathematics Evaluation	8	
9. Modern Methods of Teaching Integrated Science		16
10. Training in Development of Primary Science/Mathematics Apparatus	8	8
11. Techniques in In-service Training in Primary Science and Mathematics	16	
12. Techniques in In-service Training Secondary Science	16	
13. Techniques in In-service Training in Secondary Mathematics	16	
14. Development of Teaching Modules for SEASAME Project	16	16
15. Development of Secondary Science/Mathematics Apparatus	16	16

COURSES	NUMBER OF PARTICIPANTS	
	1978-79	1979-80
16. Development of Teaching Units in Integrated Science	8	
17. Development of Mathematics Teaching Units for Secondary Students	16	
18. Studies in Concept Learning – Primary Science	8	8
19. Studies in Concept Learning – Primary Mathematics	8	8
<b>TOTAL</b>	176	176

### Major Projects

At present, RECSAM is sponsoring two major regional pilot projects:

**SEASAME:** The Southeast Asian Science and Mathematics Experiment, started in 1973, is an innovative attempt in indigenous curriculum development and evaluation using “system concept” as a principle for organising instructional and evaluation materials for primary/elementary science and mathematics. It is a research-based project that provides an “on-the-job” training to key personnel from the SEAMEO countries attending the two courses linked to the project. The prototype instructional and evaluation materials produced at RECSAM are tried out and evaluated every year in selected urban and rural schools of the member countries. The project has undertaken the task of providing the region with an opportunity to increase the effectiveness of the reform effort in indigenous curriculum.

**CONCEPT LEARNING PROJECT:** The project, started in 1973, has a two-pronged goal (1) to investigate how primary/elementary school children in Southeast Asia learn science and mathematical concepts, and (2) to sequence curriculum materials and experiences in science and mathematics for the primary/elementary grades based on the thinking levels of children in the region. It is a research project that provides key personnel from the SEAMEO countries with an “on-the-job” training in investigating concept learning, using modified clinical method and Piaget’s experiments which are adapted to Southeast Asia conditions. In 1977, the use of group tasks was introduced as an alternative approach to investigate children’s cognitive development and as a basis for curriculum analysis and development. Field work is conducted yearly in the member countries to ascertain children’s cognitive development in science and mathematics.

### Further Information

For more and detailed information of the activities and courses of RECSAM, readers are welcome to write to the Assistant Director (Information), RECSAM, Bukit Glugor, Pulau Pinang.

### References

- RECSAM. *The First Ten Years: 1967 – 76*. Penang: RECSAM, 1978.  
 RECSAM. *Journal of Southeast Asia Science and Mathematics Education*, Vol. 1, July, 1978.