

## REFLECTIONS FROM TWO-DAYS SEMINAR/WORKSHOP ON USING CALCULATORS IN TEACHING OF ELEMENTARY SCHOOL MATHEMATICS

Hulya Gur, Gozde Comlekoglu, Yasar Ersoy

The result of many studies point out that the hand-held personal technology such as calculators are the cognitive tools that must be used in mathematics classes. To have the widespread use of technology and effective mathematics learning, the teachers should be aware of the recent development, e.g. I<sup>4</sup> (introduction, integration, implementation and issues on using information and communication technology) in mathematics education (Ersoy, 1997). Therefore, a two-day teacher training seminar and workshop for pre-service and in-service teachers were organised with the participation of various groups of people at Balikesir University in Turkey. This activity is, in fact, a part of an ongoing project, which was conducted and coordinated by the director of the project, and namely Technology Supported Mathematics Teaching, and by local Directory of Ministry of Education.

In the present study, a group of teachers' and teacher trainees' perceptions of using calculators in mathematics instruction is searched, and their views were reflected to some extent. The planned activities were programmed and scheduled as seminar and workshop for the participation to teachers of maths. In the seminar part, information on the integration of calculators in mathematics instruction and the recent developments in the implementation were summarised and discussed. After the seminar, workshops on elementary school level mathematics were organised, and various topics in four sessions studied and discussed. At the end of the workshop a questionnaire about the use of calculators and teaching/learning mathematics was conducted by the sample of 90 teachers and 120 teacher trainees. Then a panel was organised in which the teacher and teacher trainees reflected their ideas, beliefs about calculators, mathematics education and the main issues.

The statistical analysis of the designed questionnaire is in the process, and some results have been obtained. The first result shows that although the teachers and teacher trainees had negative opinions about the use of calculators in mathematics instruction and student-centred activities at the beginning of the seminar and workshop, their attitudes and beliefs were changed towards positive at the end. The detail of two-days seminar and workshop will be reported, and teachers' and teacher trainees' perception and views will be reflected in presentation of the paper.