## A STUDY

## TO IDENTIFY EFFECTIVE USES OF INFORMAL METHODS OF ASSESSMENT

BY THE TEACHER IN PRIMARY CLASSES (Grade one and Two)
IN THE PROCESS OF TEACHING MATHEMATICS



## E. L. SURANIMALA

M. PHIL (1986) B. Ed. (SECOND CLASS) 1976 UNIVERSITY OF COLOMBO

Submitted for the degree of Doctor of Philosophy in Education
The University of Colombo

Colombo



## **Abstract**

There is a great emphasis around the world on redefining assessment and evaluation systems to improve the effectiveness of the teaching - learning process. Especially, teachers in grades one and two need a constant flow of information about each student's progress to guide them towards the expected levels of learning. Informal assessment methods have been introduced in many countries as a panacea for many problems in their education systems but educationists in these countries are cautious about the effectiveness of these methods. Therefore, this study was conducted to identify the effective and efficient ways of using informal assessment methods in grades one and two.

In the first chapter, the background to the present study is explained and its significance to the Sri Lankan education system is discussed. The definitions of the key terms are explained in relation to the context of the present study.

In the second chapter, the main focus is on analyzing the research literature available on informal assessment in primary grades. Three conceptual models analyzed in this section provided the theoretical basis for the present study. Research related to the use of informal assessment techniques in local and foreign classrooms including professional judgement of teachers and teachers' images provided an insight into existing practice.

The study adopted a qualitative research design in which the researcher performing the role of a participant observer. Regular visits to 12 classrooms in the 6 selected schools from Colombo and Nuwaraeliya districts with at least one research assistant facilitated the data collection process. A pilot study was conducted to facilitate the identification of the specific objectives and appropriate research methodologies for the main study. Multiple methods used by the researcher facilitated the collection of more credible data and consequently significant outcomes from the

study. Further, the methodologies that used for data collection in the main study were also explored. The third chapter presents the research design and the methodology used in this research.

Fourth chapter presents and analyzes the data collected in the pilot study in accordance with the objectives of the study. The main objective in conducting a pilot study was to narrow down the research problem and aims of the study and to identify the specific research objectives for the main study. Further, the methodologies that may be used for data collection in the main study were also explored. In order to familiarize with the existing use of the informal assessment methods the researcher with the help of research assistants collected data from 12 teachers in six schools in the two selected districts.

In the main study, data were collected using observations, interviews and focus group discussions in twelve primary classrooms by the researcher and three research assistants. As a part of the main study, 12 lessons were video taped and analyzed using an observation schedule prepared by the researcher. Content analysis and categorical methods were used in data analysis in accordance with the objectives formulated. The data collected from multiple methods have been triangulated and presented in narrative form to the extent possible in the fifth chapter to support the arguments of the researcher.

The study has revealed that crafting effective questions is an art that each teacher should develop throughout one's professional career. A three-dimensional model that includes crafting, presenting and responding questions is discussed. Question clusters also emerged as one of the most effective ways of using questioning in the classroom setting. There were a number of interesting findings related to the best uses of observations and discussions in the teaching -learning process. It further revealed that teachers' images and teachers' judgements can be used to improve reliability and validity of data collected through the informal assessment methods. The procedures for improving consistency

of teachers' professional judgements are also highlighted in the sixth chapter.

Instructional package for teachers on the effective uses of informal assessment methods in primary classrooms was presented in the seventh chapter. They include the guidelines for effective questioning, conducting discussions and informal observations in classrooms for assessment using professional judgement and teachers' images.

The conclusions are presented in the final chapter in relation to the four objectives of the study. The main recommendations of the study were to move towards a formative form of informal assessment culture and to provide continuous training and monitoring for teachers and principals. The need to increase the awareness of the general public and parents on the use of informal assessment methods in the primary classrooms is also stressed.