

# INDIVIDUALIZED INSTRUCTION

## - THE PROCESS OF ADJUSTING MATHEMATICS TO CHILDREN

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### 1. TASKS OF ELEMENTARY MATHEMATICS EDUCATION

- Develop mathematical concepts.
- Develop mathematical skills.
- Demonstrate the application of mathematics.
- Provide relevant mathematics activities.

### 2. INDIVIDUALIZED INSTRUCTION

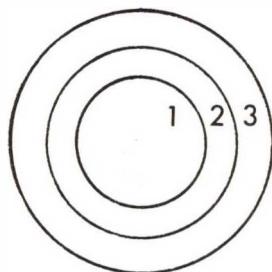
This essentially implies an attitude or point of view towards pupils and their learning.

### 3. CHARACTERISTICS OF TEACHERS WHO PROVIDE FOR INDIVIDUALIZED INSTRUCTION

- Respect and concern for pupils as individuals and learners.
- Sound knowledge of the mathematics they teach.
- A warm and accepting relationship with their students.
- Involvement of students in the process of learning ideas.

### 4. TECHNIQUES OF INDIVIDUALIZING INSTRUCTION

In this section, each of three rings represents a different level of individualizing instruction.



Level 1. The group-developmental approach is effective for the initial development of ideas and skills. This approach is a guided discussion, involving materials, questions, and teacher-pupil dialogue. In this approach, opportunities to provide for individual differences may be given as follows:

- Actively involve students in materials.
- Use directed, probing-type questions.
- Use open-ended questions; encourage diversity in response.

- Leave questions for individual exploration.
- Provide further activities; these activities can represent an extension of the lesson or general enrichment of various types.
- Assist students in written work.

Level 2 represents ways in which whole-group instructions may be modified. These ways are listed below:

(a) Independent Progress - provision should be made for individual conferences to discuss the pupil's progress and determine understanding of concepts and underlying relationships.

(b) Ability Grouping - attention must be given to the quality of experiences provided for slower learners.

(c) Flexible Grouping - allows for the separation of classes into smaller groups for short periods of time on specific content. This approach appears to be effective in skill areas where wide divergence in achievement is present.

Level 3 represents modifying whole-group instruction to include independent self-selected activities. These may be

- laboratory oriented,
- enrichment activities,
- general-interest topics.

## The Next Decade in Mathematics Education

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(keynote speaker)

Reported by *Wayne J.P. Turley*, Calgary

The next decade in mathematics education will abound in four themes: individualism, getting priorities straight, return to modern mathematics, and educational research.

The old notion of individualization which concerns itself with the needs and abilities of individual students is not as important as the assumption of a child's own rate of learning. This assumption is a fraud until the mode of instruction is specified; otherwise the educational implications of that assumption are horrendous. One implication is that each child would have his own correspondence course; another is that education be approached from a psychological, rather than a sociological, point of view.