"Just a Minute — Let Me Think!"

This the slogan of Instrumental Enrichment (IE) a "thinking skills" programme which claims that intelligence can be modified. Since September 1986 it is being implemented by special education teachers in Ireland.

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Instrumental Enrichment is based on the theory of structural cognitive modifiability. It is an intervention programme to modify the cognitive structures of persons with learning difficulty and to enhance the capacity to learn from direct exposure in formal and informal situations. Instrumental Enrichment — or IE as it is called — is the lifework of Professor Reuven Feurstein, an Israeli clinical psychologist.

Feuerstein pursued graduate studies under Andrey Rey at the University of Geneva and the same time began to work with Youth Aliyah, the agency responsible for the ingathering and integration of Jewish children into the new state of Israel. Between 1950 and 1954 he and his colleagues examined large numbers of adolescents in transit camps in Morocco and Southern France. The young people came from many cultures, some quite primitive, in Asia, Africa and Europe. They had to be received, settled, classified and schooled for citizenship in a new country with a unique and modern technological culture.

Writing about the North African adolescent, Feurstein says: "the majority of them not only demonstrated initially low-level scholastic achievement, with many of them being illiterate or semi-illiterate, but also disclosed a developmental gap ranging from four to six years in a wide variety of competitive areas." There were other problems too such as the high incidence of emotional problems and personality disturbances. What was to be done? How were the young people to overcome their background of disadvantages and find roles in the emerging society? Many programmes were developed to meet their various needs. Tests were given as a basis for planning their education after immigration. All tests proved inadequate because they showed only what the children had learned, or more accurately had failed to learn, not what they could learn i.e. learning potential.

Clearly, alternative forms of assessment were needed. The task was taken up by Feurstein who produced a viable assessment technique that led on to a programme of enrichment designed to improve the individual's learning skills and level of mental functioning. Feurstein notes: "Our clinical observations strongly suggested that a substantial reservoir of abilities was being left untapped by the measuring instruments we had employed." Inspired by "our two great masters of the Genevan

School, Piaget and Rey" Feurstein started work leading to "a radical shift from a static to a dynamic approach in which the test was transformed into a learning situation for the child."

M.J. Begab in his presidential address to Frontiers of Knowledge in Mental Retardation states: "The notion that intellectual performance can be altered even as late as adolescence, has enormous implications for the preservation of our human resources." More recent support for this concept comes from research in Israel (Rand at al., 1977). Through ingenious methods of testing, it has been possible to assess learning potential untapped by standard psychological tests and then help the individual realise his potential through an innovative series of increasingly complex cognitive exercises (Feurstein, 1979).

The kernel of the programme is a three year series of problem solving tasks and exercises which are grouped in the areas of specific cognitive development. The goal of these exercises is not the acquisition of information but the development, refinement and crystallisation of those factors required for effective thinking. In terms of behaviour, the aim of the IE programme is to transform the retarded performer and alter his characteristically passive and dependent cognitive style to that of an active self-motivated and independent thinker — a creative user of information.

These exercises are referred to not as lessons but as instruments because in themselves they are virtually free of subject matter. Their purpose is to serve as the means or the vehicle of cognitive oriented interaction between teacher and student. Feurstein designed a three year course consisting of paper and pencil exercises using a coherent theory of learning which he developed during his clinical work with culturally deprived immigrant teenagers.

The premise on which the whole programme is based is that intelligence is not a static finite entity but dynamic and capable of change and development. Feurstein's theory states that retarded performances often occur because the child has never been taught how to focus his attention on significant events and ideas in his environment. The IE programme provides a step-by-step mediated learning experience intended to directly modify the child's cognitive abilities. It is designed to supplement and enrich the regular classroom programme and has already been implemented as a middle-school curriculum in several American and U.K. school districts. It has particular implications for the education of slow learning children in the special class and the special school.

Since September 1986, the IE programme has been introduced and implemented in three schools in Ireland. These are: Scoil Seosamh Mhuire, Ballyfermot, Dublin, which has two special class teachers trained in the IE method; St. Mark's Special School, Newbridge and St. Paul's Community College, Waterford. The teachers concerned have undergone a mandatory training course in Chester. It is hoped in the future to make such training courses available in Ireland.

Cognitive modifiability and mediated learning are the key concepts of the theory and IE is the means of invigorating and motivating the latent mental functions of the low performing adolescent. The completion of the programme requires about 300 classroom hours normally distributed over two years. It is supplementary to the regular curriculum.

One of the significant aspects of the approach is the explicit focus on the adolescent. Compensatory programmes designed to combat deprivation and disadvantage have tended to focus on younger children. Some argue that any useful intervention must be made at pre-school age. Feurstein takes issue with this on theoretical and practical ground. The practical context is easy to appreciate. Deprivation is rampant and sheer humanity demands that we attempt to ameliorate it at whatever age it manifests itself. Feurstein insists that except in the most severe instances of genetic and organic impairment the human organism is open to modification at all ages and stages of development. Such a fundamental reconstruction of the nature of intelligence should make us re-examine our current expectations of the learning disabled child in the special class and the special school. Feurstein's approach urges a structured challenge to the child to achieve his full potential — a potential rarely realised through current approaches.

Feurstein, R. (1979). Dynamic Assessment of Retarded Performance. Baltimore, USA: University Park Press.

Feurstein, R. (1980). Instrumental Enrichment. Baltimore: University Park Press.

THE SIX MAJOR GOALS OF INSTRUMENTAL ENRICHMENT (IE)

- 1. To correct deficient thinking skills.
- 2. To teach concepts, operations and vocabularies necessary for IE and other problem solving situations.
- 3. To develop motivation to work on a task because of the nature of the task and its mastery.
- 4. To produce insight and understanding of one's own thought processes and the underlying reasons for successes and failures. Insight should also lead to generalisation and transfer.
- 5. To create both an intrinsic need system and proper work habits so that the use of acquired operations, techniques, strategies and processes will be spontaneous and automatic.
- 6. To help the slow performer change his attitude towards himself as a passive recipient and reproducer to that of an active generator of information with the ability to infer and reach proper conclusions.