## In Memoriam

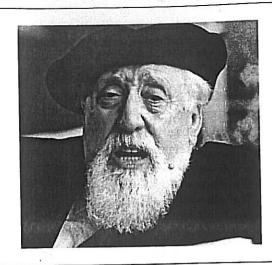
## Reuven Feuerstein: A Giant in Cognitive Psychology

Reuerstein (1921–2014) was an Israeli cognitive, clinical, and developmental psychologist and the originator of the theory of structural cognitive modifiability (SCM) and its related concept of mediated learning experience (MLE). Born and educated in Romania, he escaped Europe to Israel (British Mandate Palestine at the time) in 1944 and worked with children who had survived the Holocaust (1945–1948), eventually beginning his career studying the needs of refugee children. Feuerstein realized that standardized intelligence tests' results of these children neither could take into account the horrific experiences they had lived through nor could they reveal their true potential. When the children were assessed through a dynamic assessment procedure, they were seen to have potential that had not been apparent in the standard intelligence tests. This approach was subsequently applied with underachievers, immigrant children, and others with special needs and led to the development of the theories of SCM and MLE.

In the 1950s, he served as director of psychological services of Youth Aliyah (in-gathering of youth to Israel) and was involved in assessment and education of young immigrants and refugees coming from different countries who had also survived personal, cultural, and social deprivation and arrived—often alone—in Israel.

During the 1960s, Feuerstein studied at the University of Geneva under Jean Piaget, André Rey, Bärbel Inhelder, and Marguerite Loosli Uster and subsequently earned his PhD in developmental psychology at the Sorbonne (1970). From 1970 until 1986, Feuerstein served as professor in the School of Education at Bar-Ilan University. He was the founder and director of the Hadassah-WIZO-Canada Research Institute, in Jerusalem, which became in 1986 the International Center for the Enhancement of Learning Potential. For more than 50 years, Feuerstein's theories and applied systems have been implemented in both clinical and class-room settings in more than 80 countries.

Feuerstein is known for his groundbreaking work in cognitive modifiability. Rejecting the idea that intelligence is fixed, he espoused the principle that all children can learn how to learn. For several decades, he stood against the conventional wisdom of the times when educators and psychologists were taught that there are critical periods that limit development. The implication of the critical periods concept is that if you do not acquire certain knowledge or skill within the established critical period, that knowledge or skill will be either impossible



Prof. Reuven Feuerstein 1921–2014 (Photo kindly provided by the Feuerstein Institute)

or much more difficult to acquire later. In constructing the SCM theory, Feuerstein suggested that it is possible to overcome the traditionally considered barriers to change: critical periods, severity of condition, and causal etiology. These are no longer insurmountable barriers of change because of the linkage between neural plasticity and cognitive modifiability interventions. Feuerstein explored this idea and suggested that "intelligence is not a static structure, but an open, dynamic system that can continue to develop throughout life!" This paradigmatic shift leads to an enormous difference in how parents, teachers, and psychologists perceive the role of education. If intelligence is modifiable, and if intelligence can be taught and learned, education has a much greater role than might have been previously imagined, especially with children diagnosed as "underachieving," "with learning disability," and "with intellectual disability." Feuerstein had substantiated the plausibility of cognitive modifiability by proving that learning impairment is reversible with adequate MLEs. MLE interactions were defined as an interactional process in which parents or other adults interpose themselves between a set of stimuli and learners and modify the stimuli for the learners. Cognitive modifiability was defined as individuals' propensity to learn from new experiences and learning opportunities and to change their own cognitive structures. In MLE, the mediator modifies the stimuli by changing their frequency, order, intensity, and context by arousing in the children's curiosity, vigilance, and perceptual acuity and by trying to improve and/or create in the child the cognitive functions required for temporal, spatial, and cause-effect relationships. The MLE processes are gradually internalized by the child and become an integrated mechanism of change within the child.

In his clinical and empirical work, Feuerstein witnessed transformation of students who had been exposed to his cognitive tools—a transformation not only of their intellectual development but also of their belief in their capacity to apply their intelligence for self-actualization and personal success.

Feuerstein's theoretical development was simultaneously accompanied by development of two applicative systems: dynamic assessment of learning potential known as the learning propensity assessment device and the Feuerstein's Instrumental Enrichment program. Feuerstein's theory and programs have been used extensively throughout the world since the

1970s and have been especially powerful for the educational challenges of children with special needs; cognitive rehabilitation of individuals with brain injury; learning enhancement of immigrant and cultural minority students; enrichment programs for underachieving, typical, and gifted children; and professional training and retraining programs for business, industry, and the military.

Feuerstein was known not only for his groundbreaking psychological theory, educational philosophy, and intervention techniques but also for his great care, love, and humanity with people suffering cognitive and emotional difficulties. He had a special talent for establishing contact with others and eliciting in them learning processes and efforts to change. His ability to teach people with learning difficulties was evident as a child when he was asked to teach an older child in his native village and found more success in that effort than anyone would have predicted. The following story told by one of his coworkers (Shoshana Lefair) reflects some of his innovative and surprising approach with children:

A mother had brought her autistic daughter for evaluation and the child ran back and forth obliviously, whirling around the room, then lifted her hands threateningly at him. Feuerstein, then 80 years old, pretended to be frightened and she laughed. She did it again and he hid under the table. So did she and did it again. She ran and he ran with her. "You can lift your hands again, but first I want to give you a kiss," he said, and she let him peck her on the cheek. "Now you can lift your hands again if you kiss me," he said, and she did. Then he ran with her and told her to kiss her mother this time. She did and her mother burst into tears. That was the first kiss she had ever been given by her child.

Feuerstein and his late wife Berta Guggenheim-Feuerstein used to have receptions during the years with hundreds of children dining with them every Friday night (Sabbath) as well as with VIPs in their simple, unadorned, and warm home in Jerusalem. Friday nights would find many of them joining the family for the Sabbath meal, which included Feuerstein's explanations of Jewish tradition and the torn-off pieces of "challah" bread he passed around the table. He actually lived and practiced what he used to teach and "preach." On the one hand, he did not give anyone an easy time, insisting that they do their best, but on the other hand, he provided abundant emotional support and empathy. This included one of his grandsons who was born with Down syndrome and spoke beautifully about his grandfather at the funeral. Feuerstein's legacy lives on with the thousands of children and trainees he had during his life. May God bless his memory.

David Tzuriel School of Education, Bar-Ilan University, Israel