Contents

Section 1

Multiple Intelligences and Assessment: The View from Project Zero

The first section provides an overview of MI and describes research projects conducted at Project Zero on alternative assessments in variety of settings. Hatch and Gardner set the stage by describing and critiquing the traditional model of intelligence, paying particular attention to the de-contextualised assessment procedures spawned by that model. The authors introduce two research projects conducted at Project Zero. They start with Arts PROPEL, which focused on alternative assessments in three art forms (imaginative writing, music and visual arts) at primary and secondary levels (Gardner, 1989; Zessoules, Wolf and Gardner, 1988). The authors then outline Project Spectrum, which focused on diversifying assessment practices in preschool and primary settings (Krechevsky and Gardner, 1990).

Project Spectrum receives detailed treatment in the chapter by Chen and Gardner. The authors make the case for alternative assessments that capture the intellectual competences in a wide range of domains, employ media appropriate to the domain, engage the learner in meaningful activities and involve assessment that is ongoing (as opposed to the 'one-shot' variety).

The chapter by Hatch points the way from educational theory and research to classroom change. He discusses two Project Zero research efforts in this direction, beginning with the Mather Project, which investigated alternative assessments in an after-school program. Hatch then presents the ATLAS project, an educational reform effort conducted collaboratively by Gardner and colleagues at Project Zero, Ted Sizer and colleagues at the Coalition for Essential Schools, James Comer and colleagues at the School Development Program, and researchers at the Education Development Center. ATLAS is an acronym for Alternative Teaching, Learning and Assessment for Schools (see *Educational*

If Binet Had Looked Beyond the Classroom: The Assessment of Multiple Intelligences

by Thomas Hatch and Howard Gardner

Introduction

If some of the great figures of the modern era were gathered together, we would find among them Albert Einstein, Virginia Woolf, Martha Graham, Mahatma Gandhi, Pablo Picasso, Sigmund Freud and Igor Stravinsky. We also might discover Alfred Binet, the originator of perhaps the first intelligence tests and a major influence on psychology and education today. Armed with his test, Binet might be trying to predict which of his colleagues would achieve success in school. This is similar, in fact, to the task that was set for him by the Parisian government at the turn of the century. If, however, Binet was instructed to try to predict who would achieve success in fields ranging from painting to politics, it is not clear how he would proceed. How would he assess skills? Would he choose to focus all, or even the majority, of his resources on standardised tests? Would psychologists who analysed performances on the these tests conclude that thinking was essentially a process of 'general' problem solving?

In this chapter, we will present a new approach to educational curriculum and assessment which may help us to address these questions. This approach, based on the Theory of Multiple Intelligences (Gardner, 1983), suggests that we need to take a broader view of thinking processes and human achievement as they are realised in different domains of accomplishment. In order to take this broader perspective, we need to construct contextualised assessments which engage the distinct abilities of a number of intelligences. Through this process, we seek to make assessment a regular part of learning, to recognise abilities not covered on standardised tests, and to give teachers a greater role in the assessment process. Such an approach can shift the focus from ranking students to helping them build on their own intellectual capacities and take optimal advantage of the educational resources around them.

From *International Journal of Educational Research,* 14(5), pp.415–29.

Background

In the past 20 years, traditional notions of intelligence and standardised tests like the IQ have been scrutinised from a number of perspectives (see for example Block and Dworkin, 1976; Ceci and Liker, 1987; Gould, 1981; Sternberg, 1985). Gardner (1983) has drawn on findings in the fields of developmental psychology and neuropsychology to call into question the narrow focus on linguistic and logical-mathematic skills in traditional tests and theories of intelligence.

The Breakdown of the Universal View of Development

In the 1960s a certain synthesis in developmental psychology, due primarily to the pathbreaking work of Piaget, held sway. According to this view of 'universal development', all normal children passed through stages of development at the same pace in all domains. By the 1970s, Piaget's version of universal development was being questioned by many in the field. Numerous studies found that a child's level of development in one domain failed to predict that child's level of development in other domains (see Gelman, 1978 for a useful summary). At Project Zero, Gardner and a number of colleagues in the Piagetian tradition focused on development in a number of artistic domains. Those domains included music, drawing, expressive language and three-dimensional representation. They found that, with age controlled, the achievement of developmental milestones in one domain was largely independent of development in the other domains (Gardner and Wolf, 1983).

In addition to this line of psychological investigation, research on the abilities of people who had suffered damage to the brain also contradicted Piaget's basic intuition. Studies indicated that functioning in the domain of language, for example, could be severely impaired while functioning in other areas remained largely unaffected (Gardner, 1975). These selective deficits indicated that different parts of the brain subserve different functions—this finding, in turn, supported the notion that these functions could develop independently.

As the universal account of development began to unravel, investigations of development in individual domains became more crucial. As long as it was believed that ability was the same across domains, it did not matter greatly which domain was chosen for measurement. Assessing ability in language or math should yield similar results to assessments in other domains. However, for those, like Gardner, who came to believe that abilities functioned and developed independently, focusing on a restricted set of domains resulted in a severely distorted view of an individual's competence.

The Theory of Multiple Intelligences

These theoretical and practical concerns contributed to the positing of a more pluralistic view of intellect. In the book *Frames of Mind* (1983), Gardner defined a human intelligence as 'the capacity to solve problems or fashion products which are valued in one or more cultural settings'. From this Multiple