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Multiple Intelligences Go to School

Educational Implications of the Theory of Multiple Intelligences

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A new approach to the conceptualization and assessment of human intelligences is described. According to Gardner's Theory of Multiple Intelligences, each human being is capable of seven relatively independent forms of information processing, with individuals differing from one another in the specific profile of intelligences that they exhibit. The range of human intelligences is best assessed through contextually based, "intelligence-fair" instruments. Three research projects growing out of the theory are described. Preliminary data secured from Project Spectrum, an application in early childhood, indicate that even 4- and 5-year-old children exhibit distinctive profiles of strength and weakness. Moreover, measures of the various intelligences are largely independent and tap abilities other than those measured by standard intelligence tests.

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Despite swings of the pendulum between theoretical and applied concerns, the concept of intelligence has remained central to the field of psychology. In the wake of the Darwinian revolution, when scientific psychology was just beginning, many scholars became interested in the development of intelligence across species. The late 19th and early 20th centuries were punctuated by volumes that delineated levels of intelligence across species and within the human species (Baldwin, 1895; Hobhouse, 1915; Romanes, 1892). Francis Galton (cousin of Charles Darwin) was perhaps the first psychologically oriented scientist to try to measure the intellect directly. Though Galton (1870) had a theoretical interest in the concept of intelligence, his work was by no means unrelated to practical issues. A committed eugenicist, he sought to measure intelligence and hoped, through proper "breeding," to increase the overall intelligence of the population.

During the following half century, many of the most gifted and influential psychologists concerned themselves with the nature of human intelligence. Although a few investigators were interested principally in theoretical issues, most seasoned their concerns with a practical orientation. Thus Binet (Binet & Simon, 1916) and Terman (1916) developed the first general-purpose intelligence tests in their respective countries; Yerkes (Yerkes, Bridges, & Hardwick, 1915) and Wechsler (1939) created their own influential instruments. Even scientists with a strong theoretical bent, like Spearman (1927) and Thurstone (1938), contributed either directly or indirectly to the devising of certain measurement techniques and the favoring of particular lines of interpretation.

By midcentury, theories of intelligence had become a staple of psychology textbooks, even as intelligence tests were taken for granted in many industrialized countries. Still, it is fair to say that, within scientific psychology, interest in issues of intelligence waned to some extent. Although psychometricians continued to perfect the instruments that purported to measure human intellect and some new tests were introduced (Guilford, 1967), for the most part, the burgeoning interest in cognitive matters bypassed the area of intelligence.

This divorce between mainstream research psychology and the "applied area" of intelligence might have continued indefinitely, but, in fact, by the late 70s, there were signs of a rewakening of interest in theoretical and research aspects of intelligence. With his focus on the information-processing aspects of items in psychological tests, Robert Sternberg (1977, 1982, 1985) was perhaps the most important catalyst for this shift, but researchers from a number of different areas of psychology have joined in this rediscovery of the centrality of intelligence (Baron, 1985; Brown & Campione, 1986; Dehn & Schank, 1982; Hunt, 1986; Jensen, 1986; Laboratory of Comparative Human Cognition, 1982; Scarr & Carter-Salzman, 1982; Snow, 1982).

The Theory of Multiple Intelligences

A decade ago Gardner found that his own research interests were leading him to a heightened concern with issues of human intelligence. This concern grew out of two disparate factors, one primarily theoretical, the other largely practical.

As a result of his own studies of the development and breakdown of cognitive and symbol-using capacities, Gardner (1975, 1979, 1982) became convinced that the Piagetian (Piaget, 1970) view of intellect was flawed. Whereas Piaget (1962) had conceptualized all

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aspects of symbol use as part of a single "semiotic function," empirical evidence was accruing that the human mind may be quite modular in design. That is, separate psychological processes appear to be involved in dealing with linguistic, numerical, pictorial, gestural, and other kinds of symbolic systems (Gardner, Howard, & Perkins, 1974; Gardner & Wolf, 1983). Individuals may be precocious with one form of symbol use, without any necessary carryover to other forms. By the same token, one form of symbol use may become seriously compromised under conditions of brain damage, without correlative depreciation of other symbolic capacities (Wapner & Gardner, 1979). Indeed, different forms of symbol use appear to be subserved by different portions of the cerebral cortex.

On a more practical level, Gardner was disturbed by the nearly exclusive stress in school on two forms of symbol use: linguistic symbolization and logical-mathematical symbolization. Although these two forms are obviously important in a scholastic setting, other varieties of symbol use also figure prominently in human cognitive activity within and especially outside of school. Moreover, the emphasis on linguistic and logical capacities was overwhelming in the construction of items on intelligence, aptitude, and achievement tests. If different kinds of items were used, or different kinds of assessment instruments devised, a quite different view of the human intellect might issue forth.

These and other factors led Gardner to a conceptualization of human intellect that was more capacious. This took into account a wide variety of human cognitive capacities, entailed many kinds of symbol systems, and incorporated as well the skills valued in a variety of cultural and historical settings. Realizing that he was stretching the word *intelligence* beyond its customary application in educational psychology, Gardner proposed the existence of a number of relatively autonomous *human intelligences*. He defined intelligence as the capacity to solve problems or to fashion products that are valued in one or more cultural settings and detailed a set of criteria for what counts as a human intelligence.

Gardner's definition and his criteria deviated significantly from established practices in the field of intelligence (however, see Guilford, 1967; Thurstone, 1938). Most definitions of intelligence focus on the capacities that are important for success in school. Problem solving is recognized as a crucial component, but the ability to fashion a product—to write a symphony, execute a painting, stage a play, build up and manage an organization, carry out an experiment—is not included, presumably because the aforementioned capacities cannot be probed adequately in short-answer tests. Moreover, on the canonical account, intelligence is presumed to be a universal, probably innate, capacity, and so the diverse kinds of roles valued in different cultures are not considered germane to a study of "raw intellect."

For the most part, definitions and tests of intelligence are empirically determined. Investigators search for items that predict who will succeed in school, even as they drop items that fail to predict scholastic success. New tests are determined in part by the degree of correlation with older, already accepted instruments. In sharp contrast, existing psychometric instruments play no role in Gardner's formulation. Rather, a candidate ability emerges as an intelligence to the extent that it has recurred as an identifiable entity in a number of different lines of study of human cognition.

To arrive at his list of intelligences, Gardner and his colleagues examined the literature in several areas: the development of cognitive capacities in normal individuals; the breakdown of cognitive capacities under various kinds of organic pathology; the existence of abilities in "special populations," such as prodigies, autistic individuals, idiots savants, and learning-disabled children; forms of intellect that exist in different species; forms of intellect valued in different cultures; the evolution of cognition across the millennia; and two forms of psychological evidence—the results of factor-analytic studies of human cognitive capacities and the outcome of studies of transfer and generalization. Candidate capacities that turned up repeatedly in these disparate literatures made up a provisional list of human intelligences, whereas abilities that appeared only once or twice or were reconfigured differently in diverse sources were abandoned from consideration.

The methods and the results of this massive survey are reported in detail in *Frames of Mind* (Gardner, 1983) and summarized in several other publications (Gardner, 1987a, 1987b; Walters & Gardner, 1985). Gardner's provisional list includes seven intelligences, each with its own component processes and subtypes (see Table 1). It is claimed that, as a species, human beings have evolved over the millennia to carry out at least these seven forms of thinking. In a biological metaphor, these may be thought of as different mental "organs" (Chomsky, 1980); in a computational metaphor, these may be construed as separate information-processing devices (Fodor, 1983). Although all humans exhibit the range of intelligences, individuals differ—presumably for both hereditary and environmental reasons—in their current profile of intelligences. Moreover, there is no necessary correlation between any two intelligences, and they may indeed entail quite distinct forms of perception, memory, and other psychological processes.

Although few occupations rely entirely on a single intelligence, different roles typify the "endstates" of each intelligence. For example, the "linguistic" sensitivity to the sounds and construction of language is exemplified by the poet, whereas the interpersonal ability to discern and respond to the moods and motivations of other people is represented in the therapist. Other occupations more clearly illustrate the need for a blend of intelligences. For instance, surgeons require both the acuity of spatial intelligence to guide the scalpel and the dexterity of the bodily-kinesthetic intelligence to handle it. Similarly, scientists often have to depend on their linguistic intelligence to describe and explain the discoveries made using their logical-mathematic intelligence, and they must employ interpersonal intelligence in interacting with colleagues and in maintaining a productive and smoothly functioning laboratory.

The Education and Assessment of Intelligences

Until this point, we have been reviewing the history of intelligence research, admittedly from the perspective of the Theory of Multiple Intelligences (hereafter MI Theory). Since the publication of *Frames of Mind* (Gardner, 1983), we and our colleagues have been involved in investigating its implications. On the one hand, we seek to determine the scientific adequacy of the theory (for a

TABLE 1

The Seven Intelligences

Intelligence	End-States	Core Components
Logical-mathematical	Scientist Mathematician	Sensitivity to, and capacity to discern, logical or numerical patterns; ability to handle long chains of reasoning.
Linguistic	Poet Journalist	Sensitivity to the sounds, rhythms, and meanings of words; sensitivity to the different functions of language.
Musical	Composer Violinist	Abilities to produce and appreciate rhythm, pitch, and timbre; appreciation of the forms of musical expressiveness.
Spatial	Navigator Sculptor	Capacities to perceive the visual-spatial world accurately and to perform transformations on one's initial perceptions.
Bodily-kinesthetic	Dancer Athlete	Abilities to control one's body movements and to handle objects skillfully.
Interpersonal	Therapist Salesman	Capacities to discern and respond appropriately to the moods, temperaments, motivations, and desires of other people.
Intrapersonal	Person with detailed, accurate self-knowledge	Access to one's own feelings and the ability to discriminate among them and draw upon them to guide behavior; knowledge of one's own strengths, weaknesses, desires, and intelligences.

discussion of some of the scientific questions raised by the theory, see Gardner, 1983, chapter 11, and Walters & Gardner, 1986). On the other hand, in our view, a principal value of the multiple intelligence perspective—be it a theory or a "mere" framework—lies in its potential contributions to educational reform. In both cases, progress seems to revolve around assessment. To demonstrate that the intelligences are relatively independent of one another and that individuals have distinct profiles of intelligences, assessments of each intelligence have to be developed. To take advantage of students' multiple intelligences, there must be some way to identify their strengths and weaknesses reliably.

Yet MI Theory grows out of a conviction that standardized tests, with their almost exclusive stress on linguistic and logical skills, are limited. As a result, the further development of MI Theory requires a fresh approach to assessment, an approach consistent with the view that there are a number of intelligences that are developed—and can best be detected—in culturally meaningful activities (Gardner, in press-a). In the remainder of the paper, we describe our approach to assessment and broadly survey our efforts to assess individual intelligences at different age levels. In addition, we report some preliminary findings from one of our projects and their implications for the confirmation (or disconfirmation) of MI Theory.

If, as argued, each intelligence displays a characteristic set of psychological processes, it is important that these processes be assessed in an "intelligence-fair" manner. In contrast to traditional paper-and-pencil tests, with their inherent bias toward linguistic and logical skills, intelligence-fair measures seek to respect the different modes of thinking and performance that distinguish each intelligence. Although spatial problems can be approached to some degree through linguistic media (like verbal directions or word problems), intelligence-fair methods place a premium on the abilities to perceive and manipulate visual-spatial information in a direct manner. For example, the spatial intelligence of children can be assessed through a mechanical activity in which they are asked to take apart and reassemble a meat grinder. The activity requires them to "puzzle out" the structure of the object and then to discern or remember the spatial information that will allow reassembly of the pieces. Although linguistically inclined children may produce a running report about the actions they are taking, little verbal skill is necessary (or helpful) for successful performance on such a task.

Whereas most standard approaches treat intelligence in isolation from the activities of a particular culture, MI theory takes a sharply contrasting tack. Intelligences are always conceptualized and assessed in terms of their cultural manifestation in specific domains of endeavor and with reference to particular adult "end states." Thus, even at the preschool level, language capacity is not assessed in terms of vocabulary, definitions, or similarities, but rather as manifest in story telling (the novelist) and reporting (the journalist). Instead of attempting to assess spatial skills in isolation, we observe children as they are drawing (the artist) or taking apart and putting together objects (the mechanic).

Ideally, one might wish to assess an intelligence in a culture-independent way, but this goal has proved to be elusive and perhaps impossible to achieve. Cross-cultural research and studies of cognition in the course of ordinary activities (Brown, Collins, & Duguid, 1989; Laboratory of Comparative Human Cognition, 1982; Lave, 1988; Rogoff, 1982; Scribner, 1986) have demonstrated that performances are inevitably dependent on a person's familiarity and experience with the materials and demands of the assessments. In our own work, it rapidly became clear that meaningful assessment of an intelligence was not possible if students had little or no experience with a particular subject matter or type of material. For example, our examination of bodily-kinesthetic abilities in a movement assessment for preschoolers was confounded by the fact that some 4-year-olds had already been to ballet classes, whereas others had never been asked to move their bodies expressively or in rhythm. This recognition reinforced the notion that bodily-kinesthetic intelligence cannot be assessed outside of a specific medium or without reference to a history of prior experiences.

Together, these demands for assessments that are intelligence fair, are based on culturally valued activities, and take place within a familiar context naturally lead to an approach that blurs the distinctions between curriculum and assessment. Drawing information from the regular curriculum ensures that the activities are familiar; introducing activities in a wide range of areas makes it possible to challenge and examine each intelligence in an appropriate manner. Tying the activities to inviting pursuits enables students to discover and develop abilities that in turn increase their chances of experiencing a sense of engagement and of achieving some success in their society.

Putting Theory Into Practice

In the past 5 years, this approach to assessment has been explored in projects at several different levels of schooling. At the junior and senior high school level, Arts PROPEL, a collaborative project with the Educational Testing Service and the Pittsburgh Public School System, seeks to assess growth and learning in areas like music, imaginative writing, and visual arts, which are neglected by most standard measures (for further details, see Gardner, in press-b; Wolf, 1989; Zessoules, Wolf, & Gardner, 1988). Arts PROPEL has developed a series of modules, or "domain projects," that serve the goals of both curriculum and assessment. These projects feature sets of exercises and curriculum activities organized around a concept central to a specific artistic domain—such as notation in music, character and dialogue in play writing, and graphic composition in the visual arts. The drafts, sketches, and final products generated by these and other curriculum activities are collected in portfolios (sometimes termed "process-folios"), which serve as a basis for assessment of growth by both the teacher and the student. Although the emphasis thus far has fallen on local classroom assessments, efforts are also under way to develop criteria whereby student accomplishment can be evaluated by external examiners.

At the elementary level, Patricia Bolaños and her colleagues have used MI theory to design an entire public school in downtown Indianapolis (Olson, 1988). Through a variety of special classes (e.g., computing, bodily-kinesthetic activities) and enrichment activities (a "flow" center and apprentice-like "pods"), all children in the Key School are given the opportunity to discover their areas of strength and to develop the full range of intelligences. In addition, over the course of a year, each child executes a number of projects based on schoolwide themes such as "Man and His Environment" or "Changes in Time and Space." These projects are presented and videotaped for subsequent study and analysis. A team of researchers from Harvard Project Zero is now engaged in developing a set of criteria whereby these videotaped projects can be assessed. Among the dimensions under consideration are project conceptualization, effectiveness of presentation, technical quality of project, and originality, as well as evidence for cooperative efforts and distinctive individual features.

A third effort, Project Spectrum, co-directed by David Feldman of Tufts University, has developed a number of curriculum activities and assessment options suited to the "child-centered" structure of many preschools and kindergartens (for details, see Hatch & Gardner, 1986; Krechevsky & Gardner, in press; Malkus, Feldman, & Gardner, 1988; Ramos-Ford & Gardner, in press; Wexler-Sherman, Feldman, & Gardner, 1988). At present, there are 15 different activities, each of which taps a particular intelligence or set of intelligences. Throughout the year, a Spectrum classroom is equipped with "intelligence-fair" materials. Miniature replicas and props invite children to deploy linguistic intelligence within the context of story telling; household objects that children can take apart and reassemble challenge children's spatial intelligence in a mechanical task; a "discovery" area including natural objects like rocks, bones, and shells enables children to use their logical abilities to conduct small "experiments," comparisons, and classifications; and group activities such as a biweekly creative movement session can be employed to give children the opportunity to exercise their bodily-kinesthetic intelligence on a regular basis.

Provision of this variety of "high-affordance" materials allows children to gain experiences that engage their several intelligences, even as teachers have the chance unobtrusively to observe and assess children's strengths, interests, and proclivities. More formal assessment of intelligences is also possible. Researchers can administer specific games to children and apply detailed scoring systems that have been developed for research purposes. For instance, in the bus game, children's ability to organize numerical information is scored by noting the extent to which they can keep track of the number of adults and children getting on and off a bus. Adults and children and on and off constitute two different dimensions. Thus, a child can receive one of the following scores: 0—no dimensions recorded; 1—disorganized recording of one dimension (either adults and children or on and off); 2—labeled, accurate recording of one dimension; 3—disorganized recording of two dimensions; 4—disorganized recording of one dimension and labeled, accurate recording of one dimension; or 5—labeled, accurate recording of two dimensions (for further information, see Krechevsky, Feldman, & Gardner, in press).

We have also created a related instrument, the Modified Spectrum Field Inventory, that samples several intelligences in the course of two 1-hour sessions. Although this inventory does not draw directly from the curriculum, it is based on the kinds of materials and activities that are common in many preschools. In addition, related materials from the Spectrum curriculum can be implemented in the classroom to ensure that the children will be familiar with the kinds of tasks and materials used in the inventory.

Preliminary Results From Project Spectrum

Although none of these programs is in final form, and thus any evaluation must be considered preliminary and tentative, the results so far at the pilot sites seem promising. The value of rich and evocative materials has been amply documented. In the classrooms in Pittsburgh, Indianapolis, and Boston, teachers report heightened motivation on the part of the students, even as students themselves appreciate the opportunity to reflect on their own growth and development. Moreover, our programs with both older and younger children confirm that a consideration of a broader range of talents brings to the fore individuals who previously had been considered unexceptional or even at risk for school failure.

As for the assessment instruments under development, only those of Project Spectrum have been field tested in classrooms. In 1987–1989, we used these instruments in two different settings to investigate the hypothesis that the intelligences are largely independent of one another. To examine this hypothesis, we sought to determine (a) whether young children exhibit distinct profiles of intellectual strengths and weaknesses and (b) whether or not performances on activities designed to tap different intelligences are significantly correlated. In the 1987–1988 academic year, 20 children from a primarily White upper middle-income population took part in a yearlong Spectrum program. In the 1988–1989 academic year, the Modified Spectrum Field Inventory was piloted with 15 children in a combined kindergarten and first-grade classroom. This classroom was in a public school in a low-to-middle-income school district.

In the preschool study, children were assessed on 10 different activities (story telling, drawing, singing, music perception, creative movement, social analysis, hypothesis testing, assembly, calculation and counting, and number and notational logic) as well as the Stanford-Binet Intelligence Scale, Fourth Edition. To compare children's performances across each of the activities, standard deviations were calculated for each activity. Children who scored one or more standard deviations above the mean were judged to have a strength on that activity; those who scored one or more standard deviations below the mean were considered to have a weakness on that activity. This analysis revealed that these children did not perform at the same level across activities and suggested that they do have distinct intellectual profiles. Of the 20 children, 15 demonstrated a strength on at least one activity, and 12 children showed a weakness on one or more activities. In contrast, only one child was identified as having no strengths or weaknesses, and her scores ranged from $-.98$ to $+.87$ standard deviations from the mean.

These results were reinforced by the fact that, for the most part, children's performances on the activities were independent. Using Spearman rank-order correlations, only the number activities, both requiring logical-mathematical intelligence, proved significantly correlated with one another ($r = .78$, $p < .01$). In the other areas, music and science, where there were two assessments, there were no significant correlations. Conceivably, this result can be attributed to the fact that the number activities, both of which involved calculation, shared more features than the music activities (singing and music perception) or the science activities (hypothesis-testing and mechanical skill). Of course, the small sample size also may have contributed to the absence of powerful correlations among measures.

A comparison of the Spectrum and Stanford-Binet assessments revealed a limited relationship between children's performances on these different instruments. Spearman rank-order correlations showed that only performances on the number activities were significantly correlated with IQ (dinosaur game, $r = .69$, $p < .003$; bus game, $r = .51$, $p < .04$). With its concentration on logical-mathematic and linguistic skills, one might have expected a significant correlation with the Spectrum language activity as well. Conceivably, there was no significant correlation because the Stanford-Binet measures children's vocabulary and comprehension, whereas Spectrum measures how children *use* language within a story-telling task.

In the second study, eight kindergartners (four boys and four girls) and seven first graders (five girls and two boys) were assessed on the seven activities of the Modified Spectrum Field Inventory (MSPFI). This inventory, based on the activities developed for the yearlong Spectrum assessments of preschoolers, consists of activities in the areas of language (storyboard), numbers and logic (bus game), mechanics (assembly), art (drawing), music (xylophone games), social analysis (classroom model), and movement (creative movement). These assessments were administered in two 1-hour sessions. Each activity was videotaped, and children were scored by two independent observers. Spearman rank-order correlations between the scores of the two observers ranged from .88 (language) to .97 (art) and demonstrated the interrater reliability of these scores.

As in the first study, strengths and weaknesses were estimated using standard deviations. Unlike the findings from the earlier study, however, these results revealed that some children performed quite well and others performed quite poorly across many of the activities. It appears that the small sample size and wide age ranges may have contributed to this result. Of the five first-grade girls, none demonstrated a weakness in any area; all showed at least one strength, with one girl having strengths in six of the seven areas. The two first-grade boys showed no strengths, and both demonstrated weaknesses in three areas. Of the kindergartners, only two showed any strengths, with all but one of the other children showing at least one weakness. Quite possibly, these results reflect differences in developmental level, and perhaps gender differences as well, that did not obtain in the preschool sample and that may have overpowered certain individual differences. It is also conceivable that a more extended exposure to, and greater familiarity with, the Spectrum materials and activities, as in the yearlong Spectrum program, may have made the individual differences among younger children more visible.

Nonetheless, an examination of children's ranks on each of the activities revealed a more complex picture. Although the first-grade girls dominated the rankings, all but two children in the sample were ranked among the top five on at least one occasion. All but one child also scored in the bottom five on at least one activity. Considered in this way, children did exhibit relative strengths and weaknesses across the seven activities.

To determine whether or not performance on one activity was independent of performance on the other activities, we standardized each of the scores with a mean = 0 and standard deviation = 1 (Sattler, 1988) and performed Spearman rank-order correlations. Because of the superior performance of the first-grade girls, the performances of kindergartners and first graders were computed separately. Consideration of the kindergartners alone revealed only one correlation, between art and social analysis, that approached significance ($r = .66$, $p < .071$). For the sample of first graders, including the "high"-scoring girls, there were a number of significant correlations: language and assembly ($r = .77$, $p < .04$), language and numbers ($r = .81$, $p < .027$), movement and social analysis ($r = .77$, $p < .04$), and assembly and numbers ($r = .79$, $p < .034$).

With the exception of the performance of the first graders in the second study, these results are reasonably consistent with the claims of MI Theory. For younger children, performances on the Spectrum activities were largely independent, relative strengths and weaknesses were uncovered, and there was a significant correlation between preschoolers' performances on the

Spectrum activities and the Stanford-Binet in one of the two areas where it would be expected. Further investigations need to be conducted to establish norms, to identify strengths and weaknesses consistently, and to examine fully the effects of age and gender on the Spectrum activities.

Conclusion

In this essay, we have sketched the background and the major claims of a new approach to the conceptualization and assessment of human intelligence. Put forth in 1983, the theory of multiple intelligences has inspired a number of research-and-development projects that are taking place in schools ranging from preschool through high school. Until now, our focus has fallen largely on the development of instruments that can assess strengths and weaknesses in an "intelligence-fair" way. This research-and-development process has proved time consuming and costly. The measures must involve materials that are appealing and familiar to children; there is little precedent for developing scoring systems that go beyond linguistic and logical criteria; and materials appropriate for one age group, gender, or social class may not be appropriate for others. Of course, it should be recalled that huge amounts of time and money have already been invested in standard psychometric instruments, whose limitations have become increasingly evident in recent years.

Once adequate materials have been developed, it becomes possible to begin to address some of the theoretical claims that grow out of MI Theory. We have presented here some preliminary findings from one of our current projects. These results give some support to the major claims of the theory, inasmuch as children ranging in age from 3 to 7 do exhibit profiles of relative strength and weakness. At the same time, even these preliminary data indicate that the final story on Multiple Intelligences may turn out to be more complex than we envisioned. Thus, the rather different profile of results obtained with our two young populations indicates that, in future research, we must pay closer attention to three factors: (a) the developmental appropriateness of the materials; (b) the social class background, which may well exert an influence on a child's ability and willingness to engage with diverse materials; and (c) the exact deployment of the Spectrum materials and assessment instruments in the classroom.

Some critics have suggested that MI Theory cannot be disconfirmed. The preliminary results presented here indicate some of the ways in which its central claims can indeed be challenged. If future assessments do not reveal strengths and weaknesses within a population, if performances on different activities prove to be systematically correlated, and if constructs (and instruments) like the IQ explain the preponderance of the variance on activities configured to tap specific intelligences, then MI Theory will have to be revamped. Even so, the goal of detecting distinctive human strengths, and using them as a basis for engagement and learning, may prove to be worthwhile, irrespective of the scientific fate of the theory.

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CALLS FOR NOMINATIONS

For the Editorship of *Educational Evaluation and Policy Analysis* Vols. 14–16

To ensure that the search for a new editor will be open, the Publications Committee is publishing this call for nominations prior to recommending candidates to the AERA President (whose role it is to appoint the editor).

Nominations are being sought for the 1992–1994 editorship of *Educational Evaluation and Policy Analysis (EEPA).* The journal focuses on educational evaluation and educational policy analysis (emphasizing practical as well as theoretical and methodological issues) and examines the relationship between these two activities.

Responsibilities and duties include ultimate responsibility for accepting and rejecting manuscripts on the basis of the quality of the research presented and the suitability of the subject matter for *EEPA*, guiding manuscripts through the review process, overseeing revisions, planning issues, and writing occasional editorials.

The Association provides the editor with a $10,000 discretionary grant. Additionally, there is reimbursement for direct costs, such as postage, telephone, and photocopying.

Nominees should be recognized scholars with background and interest appropriate for *EEPA*. Nominees also should possess managerial and organizational skills and be interested in the maintenance and development of the high-quality scholarship within the journal. The editor should plan to begin receiving manuscripts in the fall of 1990.

Send letter of nomination (both nominations of others and self-nominations are welcome) to Publications Committee, *EEPA* Nomination, AERA, 1230 17th Street, NW, Washington, DC 20036-3078. The deadline for submissions is **December 15, 1989.**

For the Editorship of the *Review of Research in Education* Vols. 19–21

To ensure that the search for a new editor will be open, the Publications Committee is publishing this call for nominations prior to recommending candidates to the AERA President (whose role it is to appoint the editor).

Nominations are being sought for the 1993–1995 editorship of the *Review of Research in Education (RRE). RRE* provides an overview and descriptive analysis of selected areas of relevant research through critical and synthesizing essays.

The editor of *RRE,* in close consultation with the Editorial Board, plays a critical role in reviewing and defining the current state of knowledge in the field. Nominees should be recognized scholars in the field of education. They also should possess managerial and organizational skills and be interested in the maintenance and development of the high-quality scholarship within the journal. The editor should plan to begin work during the summer of 1990.

The Association provides the editor with a modest, discretionary grant in addition to reimbursement for direct costs, such as postage, telephone use, and photocopying.

Send letter of nomination (both the nominations of others and self-nominations are welcome) to Publications Committee, *RRE* Nomination, AERA, 1230 17th Street, NW, Washington, DC 20036-3078. The deadline for submission is **December 15, 1989.**

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