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### ABSTRACT

The author reviews the key problems associated with generally accepted practices for identifying the gifted from the perspective of minority gifted students, particularly the gifted bilingual child: and presents some alternative approaches for testing. Noted among the shortcomings of testing minority students are that standardized tests are not appropriate and do not interest and motivate the examinee. Current definitions of giftedness and their utility for identification and selection are reviewed, and the contribution of Guilford's Structure of Intellect model in expanding the definition of giftedness is pointed out. Stressed is the importance of using culture based definitions of giftedness for identification and selection in a minority population. The author advocates inclusionism in identification (i.e., if a child manifests giftedness prima facie or gifted potential on one or more indicators of the trait, the child should be identified as gifted and a candidate for selection). (SB)

## SPECIAL PROBLEMS AND PROCEDURES FOR IDENTIFYING MINORITY GIFTED STUDENTS\*

by

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In the time allotted to me for this presentation I would like briefly to review the key problems associated with generally accepted practices for identifying the gifted from the perspective of minority gifted students, especially the gifted bilingual child, and to present some alternative approaches which I believe will be equitable for all students concerned.

That minority students are generally underrepresented in programs for the gifted will not be re-emphasized here. That this underrepresentation is closely (but not exclusively) linked to traditional identification processes and selection concerns should also be evident (Gallagher & Kinney, 1974). What is often not understood, however, is that these traditional practices also fail to identify and select large proportions of gifted white students—certain types of gifted students, actually. What I will propose here is a general procedure for identifying all types of gifted students by using both traditional and nontraditional measures, and I will argue that such a procedure will result in enhanced identification and participation of gifted ethnic minority students as well.

Traditional definitions of giftedness can be satisfactorily operationalized in only a few ways: by very high scores in IQ, special aptitude, or achievement tests. This leads to what Renzulli (1978) has called "restricted" definitions of giftedness by limiting the number of performance areas and specifying the degree or level which must be attained before a positive identification is made. As Radford (Note 1) commented, much of what is called identification is really selection.

As stated earlier, these traditional measures have restricted the number of minority students in gifted programs, and perhaps a word or two should be offered on this point. In order for a test to measure some ability or skill accurately—and especially if the test requires maximum performance—several



conditions must be met. First, the test must be appropriate to the individual's repertoire, maximizing the likelihood that the person will understand what is expected, minimizing the effects of extraneous factors (e.g., distracting conditions, language or dialect barriers to communication), and eliminating arbitrary or capricious methods of administering or scoring the test which have little or nothing to do with the construct being measured and which bias the results in favor of one or another cultural group which is in tune with the practice. Secondly, the test should interest and motivate the examinee to try to complete the items on the examination, to view the test as something important and to avoid excessive frustration when unable to perform satisfactorily on certain tasks. Stated another way, the readiness or test-taking skills of the examinee must match or be raised to match the demand characteristics of the examination. Only when these conditions are met can we feel that the test has a chance to measure the construct validly.

Our field experience convinces us that precious little valid testing of minority students goes on, partly because many standardized tests fail to meet or establish the conditions discussed above, partly because of the carelessness or insensitivity of educators and psychometrists (Williams, 1971). Many gifted minority and white students, lacking psychometric sophistication or sufficient command of standard English because of their socioeconomic or language backgrounds—or even because of their individual characteristics—will score below their actual achievement or aptitude levels, and thus canno: identified by traditional means early in their school careers.

To make matters worse, some schools establish successive multiple criteria by using one measure (say, a review of composite achievement test scores) as a gross screening device, selecting the high scoring children for



further testing with a group-administered IQ test, and selecting from there an even smaller group to be given an individually administered IQ test before a final determination of giftedness is made. This author's experience in the schools suggests that the greater the number of traditional, multiple criteria --or "successive hurdles," depending upon one's perspective--the fewer the percentage of minority pupils identified or selected. Those minority students who are admitted through this process tend strongly to be the most acculturated (Bernal & Reyna, 1975; Mercer, Note 2), thereby diminishing the cultural heterogeneity of such gifted programs and stigmatizing them as "the Man's game" (Passow, 1972) in the eyes of the minority students (Bernal, 1976).

When schools which establish these multiple criteria decide later on to search out and include more minority students, the selection "standards" often have to be lowered. A kind of <a href="Bakke">Bakke</a>-related problem occurs to the detriment of all minority students in the gifted program, even those who would have qualified under the traditional system, because a second-class citizenship (like "second-order gifted") is recognized. Gifted minority students become "the best of the worst."

Before continuing the discussion in search of ethnically equitable and psychologically and pedagogically sound solutions, let us review the presumed efficacy of traditional means of identification. Are minority students who are "exceptionally bright" the only ones who are overlooked through these practices? Evidently not. Restricted definitions of giftedness, when operationalized for selection, exclude many if not most of the gifted from participation, especially if one considers the selection process retrospectively. Renzulli (1978) indicates that

More [numbers and percentages] creative and productive persons come from below the 95th percentile than above it, and if such cut-off scores are needed to determine entrance into special programs, we may be guilty of actually discriminating against persons who have the highest potential for high levels of accomplishment (p. 182).



Eisner (1963) points out that creativity is not a special gift possessed by a limited few. Torrance (1962) ventured that above an IQ of about 120, personality factors play a greater role in creative achievement than a higher IQ, and Stalnaker (1969) holds that IQ is overrated, regarded as iniallible and crucially significant at the expense of other characteristics which contribute to high attainment.

Having reviewed 46 studies dealing with traditional measures of college aptitude and post-college achievements in the professions, Hoyt (1965) concludes that these indicators have no more than very modest correlations with various indicators of success in the adult world. Wallach (1976) finds that test scores in the higher ranges used for selecting persons for gifted programs do not necessarily reflect the potential for creative or productive achievement. He suggests that test scores be used to screen out persons in the lower ranges and that beyond this point decisions be based on other indicators or superior performance.

Thus traditional, restricted notions of giftedness have led to restrictive and highly inaccurate procedures for identifying and selecting students for gifted programs. These procedures, especially when heaped one upon another, have positively identified and selected too few of the gifted and yielded too many "false negatives": children who indeed are gifted but whose potentials go unrecognized and uncultivated by the schools. A more comprehensive definition and operationalization of giftedness would lead us to identify more of the gifted children, including those who come from non-dominant ethnic populations.



# <u>Current Definitions of Giftedness and Their Utility for Identification and Selection</u>

"Gifted and talented children are those identified by professionally qualified persons who, by virtue of outstanding abilities, are capable of high performance." So reads the once U.S. Office of Education's (USOE) definition of gifted and talented children. It goes on to say that these abilities, either potential or manifest, include general intellectual abilities, specific academic aptitudes, creative or producting thinking, leader ship, ability in visual and performing arts, and psychomotor ability (Martinson, 1974). Under Public Law 95-561, the current definition used by the U.S. Department of Education has dispensed with "psychomotor ability."

This definition would be considered "liberal" by Renzulli (1978), in contrast to the restricted definitions discussed earlier, since it  $recognize^{S}$  many varieties and expressions of intelligence (Rubenzer, 1979) and creativity (Khatena, 1977), including the intellectual qualities and behavioral  $strat_{e^{\vee}}$  gies of minorities previously ignored (Bruch, 1971). According to Sanborn (1979), the broader definition of giftedness

is designed, in part, to encourage those who identify the gifted to include factors that are not as culturally biased as are measures of intelligence. \* \* \* Hence, we may expect to find wider variations among present groups of gifted youngsters than were found in the past (pp. 426-427).

Karnes and Collins (1978) indicate that 24 states use the "old" USOE definition, two states use the "new" definition (omit the psychomotor component), and that eight states have no definition of gifted whatsoever.

Certain aspects of this expanded definition are hard to operationalize and introduce the spectre of subjectivity (Renzulli, 1978). Whereas traditional notions of giftedness could be readily translated into identification and selection techniques via the "unchangeable" IQ (Fortna & Boston, 1976)



and any of several specific aptitude or achievement tests, which were all familiar to educators and the public, the expanded definition (while it retains these techniques) also introduces less standardized alternative methods, such as expert judgment, sociometry, observation, and self-reports.

From a political perspective, these latter methods do not have the "prestige" of IQ tests, and are thereby harder to "sell" to school policy-makers, administrators, and teachers. Their value lies in their potential for identifying a greater number of gifted children (Gresson & Carter, 1977). That schools may have to "experiment" with these techniques in order to select or develop the ones with good validity is really no excuse not to use them, for the standardized tests, as discussed previously, are not in fact much better in terms of accuracy and themselves have to be subjected to empirical scrutiny for use in particular gifted programs.

There is, however, a major issue that has too infrequently been discussed (Bernal, 1976): the greater variability in characteristics of students eligible for gifted programs, which this expanded definition will doubtlessly bring about, may necessitate changes in a school district's gifted program. The traditional selection methods tended to bring students together who were relatively homogeneous by ethnicity and general achievement, depending upon how many successive multiple criteria were used. The injection of greater numbers of females, minorities, and persons of specialized aptitudes (e.g., students who score high in only one or two subtests of an achievement test battery) will not only introduce new skills (e.g., bilingualism) but also a greater variety in profiles of abilities, interests, and values in the student group. A program which emphasizes studying/learning (such as a simple acceleration program) to the exclusion of doing/producing/creating will either doom itself or its students...at least those



who are not bookworms. The schools can look upon the new gifted as a problem which causes change and accommodation and a lowering of standards, or as an opportunity to educate the best and the brightest from every group in a way which builds on their diversities and pluralism (Torrance, Note 3), even to the extent of having them learn from one another (Bernal, 1976).

Guilford's Structure of Intellect (SI) model (see, for example Guilford, 1972) has contributed in no small way to this expanded definition by raising the consciousness of educators to the fact that many factors (120 are possible in the SI model) are involved in "intelligence." His signal work brought into focus "divergent production" (Guilford, 1964), illuminated the role of transfer of learning in the creative process, and opened new vistas for curricular objectives and testing methods.

In addition, the SI model and Guilford's subsequent research in devising tests for these factors gave rise both to the development of new tests and to SI analyses of extant IQ instruments for the purpose of better identifying the gifted (Meeker, 1969). Predictably, these developments were also applied to the identification of minority gifted (Bruch, 1970; Meeker, 1978) and to the discovery of their special intellectual strengths (Torrance, Gowan, Wu, & Aliotti, 1970; Bruch, Note 4). As Torrance (Note 3) puts it:

It was not until I started working with disadvantaged Black children... that I began to see how important it is that we stop trying to identify a universally gifted type child and begin looking for those kinds of giftedness that are valued by the particular subculture in which a child has been reared.

Renzulli (1978) has recently synthesized much of the research which has been fragmented for years. He holds that the ingredients of giftedness include above-average ability, task commitment, and creativity, and that giftedness lies in the intersection of these factors. This tripartite model can be seen dynamically to explain many of the perplexing phenomena associated



with superior abilities. It permits one to explain, for example, why persons can take leave of their giftedness while retaining a nimble wit, why there is a certain intensity to the creative process, why there are "late bloomers" and "morning glories" (Passow, 1972), why there are high ability underachievers (Bachtold, 1969; Goldberg, 1960), why personality factors and work attitudes are crucially important in outstanding achievement (Lyon, 1974; Taft & Gilchrist, 1970; Torrance, 1962—and why gifted children cannot be left to fend for themselves in school under the assumption that giftedness will surmount all obstacles or manifest itself spontaneously (the so-called "cannonball theory"). This model can probably be elaborated to yield evaluative criteria for different aspects of gifted programs and better balanced behavioral identifiers of potentially and manifestly gifted students as well.

Focusing again on the area of ability, another researcher has impacted this broader definition of giftedness, a person not directly involved with studying or educating the gifted at all, Jean Piaget. An epistemologist, Piaget has studied how children know the world, and how these different ways of knowing change as children mature intellectually. His fundamental findings have strongly influenced early childhood education and have reintroduced "the black box" of ideational processes into psychology. His theory is based on there being four stages of cognitive maturation: the sensorimotor period, pre-operational thought, concrete operations, and finally the stage of formal operations. These stages represent developmentally invariant and essentially qualitatively different ways of organizing knowing and perceiving, and each stage can be linked psychometrically to certain types of tasks which betray the child's organization of reality. Very importantly, his findings seem to hold cross-critically (Bernal, 1974; De Avila & Havassy, 1974b).

In a paper presented in 1966, Schermann (Note 5) speculated that for "young children, one form of giftedness may be an early entry into the stage



of concrete operations... or, for that matter, an older child who moves early into formal operations." Because gifted children seem to benefit from instruction using content and materials requiring "higher" levels of reasoning, Bernal (1974) included Piagetian-type tests in his study of gifted Chicano children, and a further small-sample study (Bernal & De Avila, (Note 6) found that Piagetian test scores are moderately correlated to mental age and that gifted children can be distinguished from their average counterparts through the use of such tests. Today it is recognized that "brightness as measured by psychometric testing implies developmental precocity in reasoning" (Keating, 1976), that gifted children indeed score higher on Piagetian tasks (Roeper, 1977), and even that some children evidence these higher processes only in certain domains (Feldman, 1979).

Thus Piagetian tests might be considered as useful alternatives to IQ testing for children in general since these techniques can be cast into another language or dialect, seem to be significantly less biased culturally (Bernal, 1978). Bernal and Reyna (1975) and Bernal and De Avila (Note 6) argue that minority students with comparably high performance on Piagetian measures as their gifted white counterparts should be deemed gifted.

There is some evidence in the very recent past that measures of language proficiency may also be used to identify high ability children. During the last 15 to 20 years, considerable research has accumulated to indicate that persons who acquire considerable proficiency in two or more languages either have great ability or develop it (see, for example, Lambert & Tucker, 1972). In an excellent review of this literature, Cummins (1979) explains the "developmental interdependence" of language skills in which competence in the second language is partly a function of competence in the first, and concludes that one form of bilingualism, "additive bilingualism,"



seems to produce high cognitive effects, including cognitive flexibility and high transfer of learning, phenomena which are associated (Guilford, 1964; Torrance, 1962) with creativity and general problem solving skills.

Duncan and De Avila (1979) have shown that high proficiency levels in English and Spanish are associated with differences in cognitive style and higher performance levels on the <u>Cartoon Conservation Scales</u>, a "neo-Piagetian" measure of cognitive development. The authors suggest possible giftedness for those children who score at the top of the English and Spanish proficiency categories.

More recent research using the better language proficiency instruments needs to be undertaken, but it is clear that minority children who score high on two language scales, either initially or upon retesting after a period of second language instruction, have conceptual as well as communicative advantages over their monolingual peers (Llanes, 1980). Elsewhere (Bernal, 1978) this author has recommended the <u>Language Assessment Scales</u> (see Duncan & De Avila, 1979), and the English and Spanish language production subtests of El Circo (see Bernal, 1977; Hardy, Note 8) for use in gifted programs.

# Using Culture-Based Definitions of Giftedness for Identification and Selection

The importance of recognizing cultural indicators of giftedness for minority children stems from the recognition that traditional methods of identification and selection have overlooked too many of the gifted, including a disproportionately large number of minority gifted, and a realization that no single culture can adequately reinforce and develop to a great degree all the diverse cognitive processes possible in, say, the Structure of Intellect (Bernal, 1974).



Lesser, Fifer and Clark (1965) found that members of different ethnic groups exhibit different patterns of intellectual ability and "culturally unique learning styles." Kleinfeld (1973) and others have shown how some culturally different groups outperform U.S. Whites on certain cognitive abilities. And Cazden (1968) indicates that ethnic background and social class have different effects: ethnic background affects the <u>pattern</u> of mental abilities, while social class affects the <u>level</u> of scores across the mental ability scales.

These and many related studies influenced some researchers in the field of giftedness to seek to identify the cognitive strengths of particular minority groups through the use of tests (e.g., Bruch, 1971; Meeker, 1978; Torrance, Note 3). But most important to minority students in gifted education has been the realization that giftedness is in no small part a relationship between culture and consciousness (Orange, 1977), influenced by language and world view, by conceptual style and values, and that every cultural group can and has recognized its most capable members (Bernal & Reyna, 1975; Freehill, 1975).

The assumption underlying the expanded notions of giftedness and the effort to identify culturally/behaviorally different gifted children in particular seems to be that the best and the brightest of any and all cultural groups, irrespective of their differences in cognitive profiles, can benefit from special programming because they will have much more in common than not. This assumption may be borne out only under conditions where the curriculum is made to be appealing and responsive (Passow, 1972) to both the needs and the strengths of all the groups involved (Bernal, 1976), with the understanding that the culturally different should "not be reformed to fit some previous model of competence, but... be confirmed and



encouraged in many of their natural strengths" (Grossman & Torrance, 1970). Patronizing, deficit model approaches to the education of minority gifted are not contemplated here, for <u>everyone</u> should benefit from their inclusion. The ingredients of giftedness (Renzulli, 1978) across cultural groups are not different, but their manifestations may be.

If identification techniques have discriminated against minorities, it is precisely because they were based on tests designed to measure the maximum performance of persons from a different culture, the culture of the dominant ethnic group. A similar emphasis is now being "placed on recognizing the gifted and talented in the context of their own culture using the knowledge and understanding of that culture as [the] background for [identification] ..." (Kaplan, 1974, p. 79). As Torrance (1978) states:

If educators are really interested in identifying gifted and talented students in minority groups, they will direct their searches to those characteristics that are valued by the particular minority groups (pp. 29-30).

So while the general utility of tests cannot be denied (Stanley, 1976), their use as the sole determiners for either identification or selection cannot be condoned (González, 1974), since this would require one to overlook their shortcomings (De Avila & Havassy, 1974b) or to deny their dubious appropriateness for culturally different learners (Bernal, 1975). The criticisms of standardized testing, it seems to this author, stem not so much from their short-term predictive validity as from their longer-term predictive validity, diagnostic utility (another aspect of predictive or criterion-related validity), content validity (Khatena, 1977; Stallings, Note 7), and appropriateness (Bernal, 1977; Hilliard, 1976).

### Summary and Conclusions: The Philosophy of Inclusion in Identification

Contrary to popular and some professional opinion, the state of the art in measurement does not seem to support the tacit position that traditional indicators of ability identify enough of the girted students to warrant their exclusive use. Nor, for that matter, does any one indicator reviewed (Pegnato & Birch, 1959). Thus the insistence of many schools to use only traditionally prestigious methods of testing to determine eligibility for gifted programs have caused most minority and many other gifted children to founder either on the Scylla of identification or on the Carybdis of selection, and one is left to wonder whether gifted education has not become the last bastion of segregation in the public schools. Compromise positions, such as the use of quota systems, while occasionally successful (see Lerose, 1978), risk demeaning minority students and still fail to identify those whose talents are unsatisfactorily tapped by these instruments. The use of a diverse system of identification is indicated (Robinson, Roedell & Jackson, 1979), since this increases diagnostic validity and is more likely to yield useful results, as in the identification of children with multiple talents (Rubenzer, 1979) or specialized interests. The use of multiple indicators, however, shall not be confused with establishing multiple criteria.

This author (Bernal, 1974, 1976, 1978) has advocated inclusionism in identification. That is, if a child manifests giftedness <u>prima facie</u> or gifted potential on one or more indicators of the trait, the child should be identified as gifted and a candidate for selection. Of course, selection is an example of educational decision making in the practical realm, and hence must try to optimize the match between program and student characteristics. If it turns out that the gifted program contemplated or implemented

by the school excludes some significant type of giftedness, then the results of the identification phase can serve as part of the needs assessment to plan the program's expansion. As more categories are included, so will more minority children be. This approach, the reader will note, circumvents the group parity issue while still providing for the design and redesign of programs to include and appeal to minority students—all gifted students, in fact.

At this point we would be in a position to apply Witty's (1978) strategy for providing equal educational opportunity to gifted minority children: (1) early identification and selection, (2) careful programming to build upon minorities' intellectual strengths and appeal to their learning styles, (3) intelligent and caring teaching, (4) training of educators and parents in anticipation of both unrealistic notions of giftedness and "limiting expectations," and (5) providing parental support services and facilitating their contacts with school personnel. To these might be added the runn of periodic reassessment of students not previously selected. Such eviews need not be dramatic or costly, especially if one utilizes the data which are routinely collected by the schools (achievement test scores, grades) and are sensitive to "news" about children in and out of the school setting.

Gifted programs should, from the start, try to provide for as many categories of giftedness as possible. If resources limit the number of students who can be served by the program, then only the most gifted <u>in each of the categories</u> should be selected, else the program may devolve into a single category program, and this will likely be a category thich historically has limited the selection of specialists and minorities.

The education of gifted minority students is not a compensatory program.

Instead, the integration of ethnically dominant and non-dominant populations

into one program is an opportunity to develop new educational themes or objectives for quality education. For example, this year a few public schools have begun ethnically and linguistically integrated bilingual education programs for the gifted, designed to develop a range of academic competencies in two languages over many years.

Broadly defined gifted programs provide opportunities for all students to explore wider interests, develop other abilities, and learn firsthand the inter-ethnic respect and understanding necessary for intelligent participation in the American way of life.

### REFERENCES NOTES

- 1. Radford, R. A. <u>The gifted and disadvantaged</u>. Paper presented for the Work Conference on the Culturally Different Gifted Child, Rougemont NC, September 1973.
- 2. Mercer, J. R. <u>Identifying the gifted Chicano child</u>. Paper presented at the First Symposium on Chicano Psychology, Irvin CA, May 1976.
- 3. Torrance, E. P. Emergent concepts concerning culturally different gifted children. Paper prepared for the Work Conference on the Culturally Difference Gifted Child, Rougemont NC, September 1973.
  - Bruch, C. B. The ABDA: Making the Stanford Binet biased for disadvantaged Black children. Unpublished manuscript, University of Georgia, 1972.
- 5. Schermann, A. A. A research institute's approach to giftedness. In E. P. Vhilenberg (chair), <u>Special education: Strategies for educational progress</u>. Symposium presented at the meeting of the Council for Exceptional Children, Toronto, April 1956.
- 6. Bernal, E. M., & De Avila, E. A. <u>Assessing gifted and average children</u> with the <u>Cartoon Conservation Scales</u>. Paper presented at the annual meeting of the National Association for Bilingual Education, San Antonio TX, May 1976.
- 7. Stallings, C. J. <u>Gifted disadvantaged children</u>. Technical paper, University of Connecticut, 1972.
- 8. Hardy, R. Should José be tested in Spanish? A validation study for the El Circo test series. Paper presented at the annual meeting of the National Council on Measurement in Education, April 1977.

### REFERENCES

- Bachtold, L. M. Personality differences among high ability underachievers.

  <u>Journal of Educational Research</u>, 1969, 63, 16-18.
- Bernal, E. M., Jr. Gifted Mexican American children: An ethno-scientific perspective. <u>California Journal of Educational Research</u>, 1974, <u>25</u>, 261-273.
- Bernal, E. M., Jr A response to "educational uses of tests with disadvantaged subjects." American Psychologist, 1975, 30, 93-95.
- Bernal, E. M. Gifted programs for the culturally different. <u>NASSP Bulletin</u>, March 1976, pp. 67-76.
- Bernal, E. M., Jr. Assessment procedures for Chicano children: The sad state of the art. Aztlan, 1977, 8, 69-81.
- Bernal, E. M., Jr. The identification of gifted Chicano children. In A. Y. Baldwin, G. H. Gear, and L. J. Lucito (Eds.), Educational planning for the gifted: Overcoming cultural, geographic, and socioeconomic barriers. Reston VA: Council for Exceptional Children, 1978.
- Bernal, E. M., Jr., & Reyna, J. Analysis and identification of giftedness in Mexican American children: A pilot study. In B. O. Boston (Ed.), A resource manual of information on educating the gifted and talented. Reston VA: Council for Exceptional Children, 1975.
- Bruch, C. B. A proposed rationale for the identification and development of the gifted disadvantaged. Gifted Children Newsletter, 1970, pp. 40-49.
- Bruch, C. B. Modification of procedures for identification of the gifted. <u>Gifted Child Quarterly</u>, 1971, <u>15</u>, 267-272.
- Cazden, C. B. Subcultural differences in child language: An interdisciplinary review. In J. Hellmuth (Ed.), <u>Disadvantaged child</u> (Vol. 1), <u>Head Start and early intervention</u>. New York: Brunner/Mazel, 1968.
- Cummins, J. Linguistic interdependence and the educational development of bilingual children. Review of Educational Research, 1979, 49, 222-251.
- De Avila, E. A., & Havassy, B. <u>IQ tests and minority children</u>. Austin: Dissemination Center for Bilingual Bicultural Education, 1974(a).
- De Avila, E. A., & Havassy, B. The testing of minority children--A neo-Piagetian approach. <u>Today's Education</u>, November-December 1974(b).
- Duncan, S. E., & De Avila, E. A. Relative linguistic proficiency and field dependence/independence: Some findings on the linguistic heterogeneity and cognitive style of bilingual children. Larkspur CA: De Avila, Duncan, & Associates, 1979.



- Feldman, D. The mysterious case of extreme giftedness. In A. H. Passow (Ed.), The gifted and he talented: Their education and development. The seventy-eighth yearbook of the National Society for the Study of Education (Part I). Chicago: University of Chicago Press, 1979.
- Fortna, R. D., & Boston, B. O. Testing the gifted child: An interpretation in lay language. Reston VA: ERIC Clearinghouse on Handicapped and Gifted Children, 1976.
- Freehill, M. F. Teachers for the gifted. In B. O. Boston (Ed.), A resource manual of information on educating the gifted and talented. Reston VA: Council for Exceptional Children, 1975.
- Gallagher, J. J., & Kinney, L. (Eds.). <u>Talent delayed--talent denied: The culturally different gifted child</u>, <u>a conference report</u>. Reston VA: Foundation for Exceptional Children, 1974.
- Goldberg, M. L. Studies in underachievement among the academically talented. In A. Frazier (Ed.), <u>Freeing capacity to learn</u>. Washington DC: ASCD, 1960, 56-73.
- González, G. Language, culture, and exceptional children. Exceptional Children, 1974, 40, 565-570.
- Gresson, A. D., & Carter, D. G., Sr. In search of the potentially gifted: Suggestions for the school administrator. <u>Clearing House</u>, 1977, <u>50</u>, 369-371.
- Grossman, M., & Torrance, E. P. A creativity workshop for disadvantaged children. <u>Art Education</u>, 1970, <u>23</u>, 33.
- Guilford, J. P. Creative thinking and problem solving. <u>California Teachers</u>
  <u>Association Journal</u>, January 1964, 9-10.
- Guilford, J. P. Intellect and the gifted. Gifted Child Quarterly, 1972, 16, 175-184 ff.
- Hilliard, A. G., III. Alternative to IQ testing: An approach to the identification of gifted "minority" children. San Francisco Ca: San Francisco State University, 1976. (ERIC Document Reproduction Services No. ED 147 009).
- Kaplan, S. N. <u>Providing programs for the gifted and talented: A handbook</u>. Ventura CA: Office of the Ventura County Superintendent of Schools, 1974.
- Karnes, F. A., & Collins, E. C. State definitions on the gifted and talented:
  A report and analysis. <u>Journal for the Education of the Gifted</u>, 1978,
  1, 44-62.
- Keating, D. P. Piagetian approach to intellectual precocity. In D. P. Keating (Ed.), <u>Intellectual talent: Research and development</u>, Baltimore MD: Johns Hopkins University Press, 1976.

- Khatena, J. The gifted child in the United States and abroad. Gifted Child Quarterly, 1977, 21, 372-387.
- Kleinfeld, J. S. Intellectual strengths in culturally different groups: An Eskimo example. Review of Educational Research, 1973, 43, 341-359.
- Lambert, W. E., & Tucker, G. R. <u>Bilingual education of children: The St. Lambert experiment</u>. Rowley MA: Newbury House Publishers, 1972.
- Lerose, B. A quota system for gifted minority children: A viable solution. Gifted Child Quarterly, 1978, 22, 394-403.
- Lesser, G. S., Fifer, G., & Clark, D. H. Mental abilities of children from different social class and cultural groups. Monograph of the Society for Research in Child Development, 1965, 30 (Serial No. 102).
- February-March 1980, pp. 11-12.
- Lyon, H. C., Jr. Exploring the future. The Christian Science Monitor, July 15, 1974.
- Meeker, M. The structure of intellect: Its uses and interpretation. Columbus OH: Charles Merrill, 1969.
- Meeker, M. Nondiscriminatory testing procedures to assess giftedness in Black, Chicano, Navajo, and Anglos. In A. Y. Baldwin, G. H. Gear, and L. J. Lucito (Eds.), Educational planning for the gifted: Overcoming cultural, geographic, and socioeconomic barriers. Reston VA: Council for Exceptional Children, 1978.
- Orange, C. L. Educational implications of an extended definition of gifted ability for modifications in the learning environment of young minority children. Doctoral dissertation, University of Michigan, 1977.

  <u>University Microfilms International</u>, 1977. (University Microfilms No. 77-18, 088)
- Passow, A. H. The gifted and the disadvantaged. <u>National Elementary</u> <u>Principal</u>, February 1972, pp. 24-31.
- Pegnato, C. W., & Birch, J. W. Locating gifted children in junior high schools: A comparison of methods. <u>Exceptional Children</u>, 1959, <u>25</u>, 300-304.
- Renzulli, J. S. What makes giftedness? <u>Phi Delta Kappan</u>, November 1978, 180-184, 261.
- Robinson, H. B., Roedell, W. C., & Jackson, N. E. Early identification and intervention. In A. H. Passow (Ed.), The gifted and the talented:

  Their education and development. The seventy-eighth yearbook of the National Society for the Study of Education (Part I). Chicago:
  University of Chicago Press, 1979.

- Roeper, A. Some thoughts about Piaget and the young gifted child. Roeper City and Country School, November 1977, pp. 1-3.
- Rubenzer, R. Identification and evaluation procedures for gifted and talented programs. <u>Gifted Child Quarterly</u>, 1979, 23, 304-316.
- Sandborn, M. P. Counseling and guidance needs of the gifted and talented. In A. H. Passow (Ed.), The gifted and the talented: Their education and development. The seventy-eighth yearbook of the National Society for the Study of Education (Part I). Chicago: University of Chicago Press, 1979.
- Stanley, J. C. Use of tests to discover talent. In D. P. Keating (Ed.), Intellectual talent: Research and Development. Baltimore MD: Johns Hopkins University Press, 1976.
- Taft, R., & Gilchrist, M. B. Creative attitudes and creative productivity: A comparison of two aspects of creativity among students. <u>Journal of Educational Psychology</u>, 1970, 61, 136-143.
- Torrance, E. P. <u>Guiding creative talent</u>. Englewood Cliffs NJ: Prentice-Hall, 1962.
- Torrance, E. P. Ways of discovering gifted Black children. In A. Y. Baldwin, G. H. Gear, and L. J. Lucito (Eds.), Educational planning for the gifted:

  Overcoming cultural, geographic and socioeconomic barriers. Reston VA:

  Council for Exceptional Children, 1978.
- Torrance, E. P., Gowan, J. C., Wu, J-J, & Aliotti, N. C. Creative functioning of monolingual and bilingual children in Singapore. <u>Journal of Educational Psychology</u>, 1970, 61, 72-75.
- Witty, E. P. Equal educational opportunity for gifted minority group children: Promise or possibility? <u>Gifted Child Quarterly</u>, 1978, <u>22</u>, 344-352.
- Williams, R. Danger: Testing and dehumanizing Black children. School Psychologist, 1971, 25, 11-13