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Giftedness as Potential for Creative Productivity: Transcending IQ Scores

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Radical changes in our approach to identification and programming are essential for the survival of gifted education in a new climate which emphasizes excellence and improvements in the entire process of schooling. Traditional approaches and policies are not effective in taking into account current research-based knowledge regarding the nature of human abilities, components of effective instruction, or programming for the development of gifted behaviors. Reasons for the inadequacy of IQ test cutoff scores in identifying giftedness are presented, and recommendations are made for necessary improvements in local, state, or national guidelines, policies, and procedures.

Lightbulb Politics:

“Gains in (technology) are never registered automatically in society: they require equally adroit inventions and adaptations in politics... Lacking a cooperative social intelligence and good-will, our most refined technics promises no more for society’s improvement than an electric bulb would promise to a monkey in the midst of a jungle.”

— Lewis Mumford
Technics and Civilization (1934)

During the past several years, each of us separately has focused a major amount of our professional energy on the need for developing some radically new concepts for serving high potential youth. Our focus has been in two general areas. The first dealt with the nature, definition, and procedures for identifying and encouraging the development of giftedness or gifted behaviors in young people; the second has addressed programmatic services that can capitalize on new and emerging knowledge regarding the nature of human abilities (e.g., Renzulli, 1978, 1982; Renzulli and Reis, 1985; Renzulli, Reis & Smith, 1981; Treffinger, 1981, 1982, 1985, 1986). In accepting the assignment to prepare this paper jointly, we saw the opportunity to express, as concisely as possible, the basic concepts of our common view. We hold this view to be imperative for stimulating genuine excellence in education and essential to the survival of gifted education in a new era of concern for improvement in the entire process of schooling.

We believe that the common concerns expressed in this paper are also consistent with current theory and research in educational and psychological science. In our view, there is an urgent need for a new, “second generation” approach to gifted programming. This new generation of programming should draw from contemporary scholarship in several areas. Many contributions to such fields as learning styles, individualization of instruction, research on effective schools and teaching, developmental psychology, and educational and psychological measurement should be investigated for guidance for gifted education. In addition, we consider

definition, identification, and programming to be interlocking concerns, so it is not possible to consider new developments in one area without recognizing the consequences for the others.

A new generation of programming cannot emerge successfully without an equally active and viable new generation of leadership at the state and local levels as well as in theory or research and development. Present day policies and practices (based on what we already know from the above-mentioned disciplines) are so outdated that persons attempting to serve high potential youth are constantly frustrated, and therefore must operate their programs either in ways they consider inconsistent with current knowledge or out-of-compliance with local or state guidelines. For these reasons, we will include in this article several suggestions that attempt to reflect “state-of-the-art” knowledge about human development and educational service delivery systems.

The Present Condition and Why It Has Failed Us

It has often been said that in most disciplines there is a significant lag between what is known and what is commonly practiced. Probably no area in education would illustrate the truth of this adage more profoundly than gifted education, especially in matters pertaining to definition and identification. In our experience, the majority of law, policy, and practical procedures lag at least ten to fifteen years behind current research-based knowledge. Since the pioneering work of Guilford, Torrance, C. W. Taylor and others in the 1950s and early 1960s, our understanding of the nature of human ability and talent has grown rapidly and substantially. Our view of “intelligence” today is about as dissimilar to that of the researcher of the first half of the 20th Century as the word processor and laser printer are to the Monk’s quill pen! The extensive progress that has helped to reshape and broaden our conception of the development of talent and human ability is illustrated in Figure 1.

Despite these changes, however, practice in the schools (to continue the earlier metaphor, at the risk of abusing it) has just discovered the manual typewriter and the ditto machine. Consider the following examples:

1. An individual’s ability cannot be represented by a single score, but common practice continues to use such scores as the major criterion for including or excluding students from access to special services. In spite of the many “little games” that we play, and constant references to multiple talents and multiple criteria, the “bottom line” for entrance into most special programs continues to be based on test score information.
2. Many independent human talents exist, but common practice continues to view giftedness as a generic and absolute concept and to emphasize primarily traditional areas of academic proficiency.
3. The strengths or talent potentials of students can be nurtured and cultivated, but common practice continues to treat giftedness as a fixed or permanent status which all individuals either possess or lack.
4. Many students can benefit from instruction in a variety of thinking processes at varied levels of complexity, yet common practice continues to treat such skills as the exclusive province of an extremely small proportion of the total student population.

5. Broadened conceptions of giftedness lead to recognizing and nurturing the strengths and potentials of many students, yet common practice continues to restrict services to arbitrarily-defined and chosen small percentages of students.

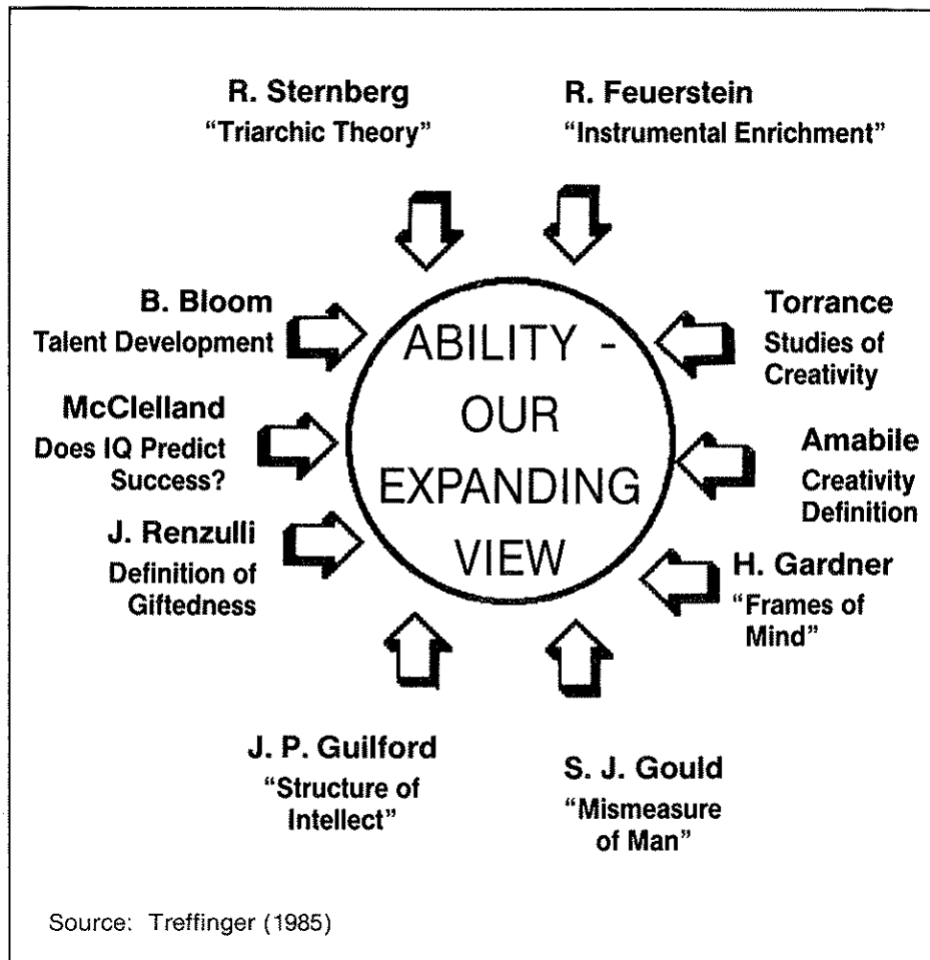


Figure 1. Ability—Our Expanding View

Categorical definitions of giftedness, such as the 1972 United States Office of Education definition, now stated directly or paraphrased in many states, were an early albeit greatly limited effort to “stretch” the definition of giftedness in a way that would be tolerable to legislatures and school boards or administrators. The categories are frequently ambiguous, undefinable, or overlapping, and are frequently adopted without regard for their actual implications for identification or programming. Nevertheless, after thirteen years of continuous progress and expansion of our understanding of human abilities, these definitions continue to be the norm.

It is scarcely surprising that programming practices lag behind in similar manner. The norm continues to be to identify a single, fixed group of students to participate in uniform or fixed programs, usually delivered in the same prescribed manner that we have so frequently criticized when talking about the regular curriculum. We believe that, in view of contemporary theory and research on the nature of human abilities and talents, the following three major

conclusions are no longer debatable, but are “waiting” to be put into practice through the adoption of more flexible guidelines and regulations.

Giftedness should be considered dynamic, not static

The goals of special programs should not be to “certify” who is or is not “gifted,” but rather to develop giftedness or gifted behaviors in those students and at those times when there is clear evidence that special programming efforts are warranted. (The word “gifted” is better used as an adjective than as a noun.)

Nurturing potential is more important than labelling status

We must redirect our efforts towards labelling the service rather than the students. We must also make it patently clear to parents, students, educators, and legislators that there is a distinct difference between “being gifted,” on the one hand, and developing gifted behaviors or nurturing giftedness and talents, on the other.

A variety of alternatives or options for meeting the needs of many students should be available in an effective school program

We can no longer exclude the classroom teacher from the service delivery system, nor can we persist in the belief that merely altering the rate of learning represents a truly qualitative difference in the ways we are dealing with superior abilities and interests. Similarly, we must recognize that administrative arrangements or organizational patterns (e.g., grouping, acceleration, magnet schools, etc.) do not in and of themselves guarantee qualitative differences in instruction or the learning environment (Renzulli, 1982; Treffinger, 1985).

What’s Wrong With the IQ Test Criterion of Giftedness?

We believe that there are several important reasons for gifted education to recognize that it is time to move away from the IQ Test “cutoff” or test score criterion as a method of identification.

First, intelligence is an abstract concept, not a physical entity. We must avoid the tendency to reify it (Gould, 1981) and we must keep in mind that intelligence must be considered within the context of many important cultural and situational factors. Indeed, some of the most recent examinations have concluded that “the concept of intelligence cannot be explicitly defined, not only because of the nature of intelligence but also because of the nature of concepts (Neisser, 1979, p. 179).”

Second, intelligence is dynamic and multi-faceted, and the tendency to quantify intellectual ability (especially in the form of a single score) is misleading and highly likely to underestimate the potential of the individual. Any given IQ score represents a limited and unrepresentative sample of the universe of “intelligent” behavior (Gardner, 1983; Guilford, 1977; Sternberg, 1981). Using an IQ score to form a cutoff point for selection for a program asks the wrong questions. The educator should be concerned with the use of test data for improving instruction, not merely with scores as a basis for including or excluding students from opportunities, resources, and services.

The third reason for questioning the overpowering influence of intelligence test scores is that the designation of an individual as “gifted” is essentially an historical phenomenon. After observing the person’s life, activities, or accomplishments over a reasonable period of time (usually two or more decades), one might begin to have enough data to refer to her or him as “gifted.” But even in these historically documented situations, the word is more appropriately used as an adjective—a gifted writer, a gifted leader, etc. Applied as a label for students, the term is premature and quite probably presumptuous. It is as potentially harmful to those who are labelled as to those who are not.

Another reason for caution is that IQ scores emphasize “school house” giftedness rather than creative, productive giftedness. Test scores tell us some important things about potential, but they fail to tell us many other important things, such as creativity, task commitment, or leadership potential. Perhaps most importantly, test scores fail to tell us the ways in which these potentials and traits will interact with each other and be put to use (both in lesson-learning and in more realistic problem-finding and problem-solving situations). The use of IQ scores as a primary or exclusive criterion in identification leaves little or no room for the creative spirit which, in any discipline, separates the productive contributor from the pedant, or the fertile mind from the sterile. As Gowan (1978, p. 1) observed:

Neither the area of the gifted ... nor of creativity can well be understood if they are thought of as separate and independent disciplines. In a similar fashion, emphasis on IQ scores leads to the omission of dynamic and motivational dimensions of intellectual productivity, and most important, the ways in which we can develop these creative and dynamic potentials in young people (c.f., Bloom, 1985).

Next, much research clearly indicates that each of these dimensions (intelligences, creativity, task commitment) can be developed (e.g., Feuerstein, 1979; Sternberg, 1984; Whimbey & Lochhead, 1984). No matter where one stands on the issue of the proportion of genetic versus environmental contributions, the latter are sufficiently great as to have significant impact on the person’s performance and eventual success.

Guidelines for the Next Generation of Programming

Our guidelines will fall into two general areas: identification and programming. We emphasize, however, that identification of gifted behaviors, as we will use the term, does not propose a new brand or method of labelling.

Guidelines for Identifying “Gifted Behaviors”

1. An adequate identification plan requires the use of a variety of techniques over a long period of time. It is important for educators to be alert for clear evidence of the need for special services on an ongoing basis. There are many ways in which gifted behaviors may be expressed, and these behaviors may emerge at certain times and under certain circumstances.
2. Identification of gifted behaviors involves decision making and instructional planning based on knowledge of the individual, the cultural and experiential context, and the fields of activity in which the person performs. At least some methods of identification should be

individualized and yield case study data which are unlikely to be obtained by dependence on standardized test methods. Identification techniques should be locally developed, with methods that are appropriate to the particular student population and the types of services to be provided. Identification of gifted behaviors should include systematic involvement of those persons who are acquainted with students through direct observation and involvement in a variety of performance situations, especially those situations likely to promote creative and productive responses. Identification of gifted behaviors should involve those persons best qualified to judge the quality of processes, performances, or products (especially in areas such as visual and performing arts).

3. Gifted behaviors should be examined in self-chosen areas as well as required areas of performance. A considerable amount of freedom of expression should be a major ingredient in determining the need for advanced level opportunities, resources, or services for individual students.

4. Identification should be used to guide effective instructional planning. Behaviors observed in the types of situations described above should serve as the primary basis for planning and organizing advanced programming experiences and opportunities, although the appropriateness of the regular instructional program should also be examined carefully to insure challenging, stimulating learning opportunities for the students.

5. All persons involved in programming, including students and parents, should have a thorough orientation to the concepts underlying this approach. "Hard core labelling" should be avoided at all costs. The focus on recognizing and responding to students' needs is emphatically more important than finding ways to exclude students from instructional opportunities!

Guidelines for Developing Gifted Behaviors

1. Every effort should be made to make the technical knowledge of gifted program specialists available to the school faculty at large. The roles and responsibilities of classroom teachers should be clearly specified in developing comprehensive service delivery systems. It is illogical to assume that students who display gifted behaviors can only engage in advanced opportunities during the few hours a week during which they might be participating in a special program. A youngster with extremely high mathematical reasoning ability, for example, is likely to display this strength during his or her regularly-scheduled math class. Although special programming might well be warranted, it would be nothing short of foolish to ignore the advanced ability in the student's regular mathematics class!

2. All teachers should be involved in staff development activities that are designed to identify various types of potential. They should be trained in the use of process skills such as the development of creativity, task commitment, learning-to-skills, and individualized programming.

3. Organized plans and models for maximum interaction between gifted program specialists and the general faculty should be examined, and every effort should be made to facilitate an exchange of talents between and among the specialists and the general faculty. The education of any given student should not depend on the "luck of the draw" when he or she is assigned to a classroom or teacher.

4. A variety of organizational plans or models can and should be used to develop gifted behaviors. However, within any given pattern or model, equal attention should be given to both the effective development of traditional skills or instructional outcomes and the development of creative and productive behaviors.

5. A plan for continuous, ongoing evaluation should parallel the development of the service delivery system. This plan must take into account the most appropriate means for assessing the effectiveness of the programming. High levels of creative productivity cannot be evaluated through the use of standardized achievement tests. We would not ask accomplished writers or poets to use their expertise to evaluate students' growth in a basic reading skill assignment; neither should we ask a basic reading skills test to judge the effectiveness of learning experiences concerned with the production of high levels of creative writing. Although both quantitative and qualitative evaluation techniques should be used, all persons involved in special programming must understand that, in the assessment of more complex learning outcomes, qualitative approaches are likely to be more appropriated than scores derived from normative objective instruments.

Lightbulb Politics

Perhaps the best way to summarize our concern for a new generation of programming and leadership is to refer to the quotation from Lewis Mumford that was presented at the beginning of the article. Our present policies and guidelines oftentimes hinder rather than facilitate effective services. They lag so far behind current technology that even the "tidy" appearances gained by cutoff scores and head count funding formulas may be more a disadvantage than an asset. Undoubtedly, we are recommending new steps in identification and programming that seem bold and will be dismissed without due consideration by some as being "impractical," but we believe that they are clearly warranted in view of our present knowledge about human abilities and the technology of teaching. Furthermore, we believe that these guidelines are sufficiently flexible to remain open to modifications based on new or emerging technology, and, of course, we believe that the guidelines themselves should be subject to periodic review and revision. Perhaps the most important suggestion we can make is that every effort must be made at the state level to separate funding from "head counts." It has been this archaic practice that has constantly pushed us backwards to the cutoff score approach, and not allowed us to obtain the flexibility and local decision making that are needed for diverse and comprehensive programming. Whenever state reimbursement monies are available, decisions about funding should be made on total school enrollments, regardless of the portions of students targeted for special services. This would guarantee funding bodies an upper limit on the commitment of state monies and at the same time allow enough flexibility at the local level to accommodate diverse needs, populations, and decisions concerning the best use of resources to develop gifted behaviors. This approach would also provide a measure of equity for those districts with large numbers of traditionally "bright" students or those which serve large numbers of culturally different students.

The present day lag between theory or research and state or local guidelines and regulations is an historic fact we cannot ignore. It is not the "fault" of any individual or group, and we are not pointing a finger of blame. But in a certain sense, we are all responsible if we do

not take active steps to bring policies into line with new technologies. State and local leaders, researchers and scholars, professional organizations, and special program personnel who labor under restrictive guidelines are duty bound to provide instruction for policy-makers and constructive leadership for the field for reform and for the development of flexible policies and guidelines that will facilitate progress toward a new and lasting generation of services.

References

- Amabile, T. M. (1983). *The social psychology of creativity*. New York: Springer-Verlag.
- Bloom, B. S. (Ed.) (1985). *Developing talent in young people*. New York: Ballantine.
- Feuerstein, R. (1979). *Instrumental enrichment*. Baltimore, MD: University Park Press.
- Gardner, H. (1983). *Frames of mind: The theory of multiple intelligences*. New York: Basic Books.
- Gould, S. J. (1981). *The mismeasure of man*. New York: W.W. Norton.
- Gowan, J. C. (1978). Creativity and the gifted child movement. *Journal of Creative Behavior*, 12(1), 1–13. <https://onlinelibrary.wiley.com/doi/pdf/10.1002/j.2162-6057.1978.tb00154.x>
- Guilford, J. P. (1977). *Way beyond the IQ*. Buffalo, NY: Bearly Limited.
- McClelland, D. C. (1973). Testing for competence rather than for “intelligence. *American Psychologist*, 28(1), 1–14. <https://doi.org/10.1037/h0034092>
- Neisser, U. (1979). The concept of intelligence. In: R. J. Sternberg & D. K. Detterman (Eds.), *Human intelligence* (pp. 179–189). Norwood, NJ: Ablex Publishing.
- Renzulli, J. S. (1978). What makes giftedness? Re-examining a definition. *Phi Delta Kappan*, 60(3), 180–184, 261. <https://www.jstor.org/stable/20299281>
- Renzulli, J. S. (1982). What makes a problem real? Stalking the elusive meaning of qualitative differences in gifted education. *Gifted Child Quarterly*, 26(4), 147–156. <https://doi.org/10.1177/001698628202600401>
- Renzulli, J. S. & Reis, S. M. (1985). *The Schoolwide Enrichment Model: A comprehensive plan for educational excellence*. Mansfield Center, CT: Creative Learning Press.
- Renzulli, J. S., Reis, S. M. & Smith, L. H. (1981). *The revolving door identification model*. Mansfield Center, CT: Creative Learning Press.
- Sternberg, R. J. (1981). A componential theory of intellectual giftedness. *Gifted Child Quarterly*, 25(2), 86–93. <https://journals.sagepub.com/doi/pdf/10.1177/001698628102500208>
- Sternberg, R. J. (1984). How can we teach intelligence? *Educational Leadership*, 42(1), 38–48.
- Taylor, C. W. (1978). How many types of giftedness can your program tolerate? *Journal of Creative Behavior*, 12(1), 39–51. <https://doi.org/10.1002/j.2162-6057.1978.tb00158.x>
- Torrance, E. P. (1979). *The search for Satori and creativity*. Buffalo, NY: Bearly Limited.
- Treffinger, D. J. (1981). *Blending gifted education with the total school program*. Honeoye, NY: Center for Creative Learning.
- Treffinger, D. J. (1982). Demythologizing gifted education: An editorial essay. *Gifted Child Quarterly*, 26(1), 3–8. <https://doi.org/10.1177/001698628202600101>
- Treffinger, D. J. (1985). *Blending gifted education with the total school program* (2nd ed.). East Aurora, NY: DOK.
- Treffinger, D. J. (1986). Fostering effective, independent learning through individualized programming. In J. S. Renzulli (Ed.), *Systems and models for developing programs for the gifted and talented* (pp. 126–152). Mansfield Center, CT: Creative Learning Press.
- Whimbey, A., & Lochhead, J. (1984). *Problem solving and comprehension: a short course in analytical reasoning*. Philadelphia, PA: Franklin Institute Press.

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