

THE ROLE AND NATURE OF
THEORY IN THE
EDUCATION OF THE GIFTED

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Reprinted from Educational Theory, Vol. X, No. 3, July, 1960

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INTRODUCTION: THE UNFORTUNATE DICHOTOMY BETWEEN THEORY AND PRACTICE ON

ALMOST EVERY HAND IN THE PANORAMA OF AMERICAN CULTURE A REGRETTABLE DICHOTOMY IS OBSERVED BETWEEN TWO BROAD MODES OF THOUGHT AND INQUIRY, BOTH OF WHICH ARE ESSENTIAL TO THE ADVANCEMENT OF KNOWLEDGE AND HUMAN WELFARE. We refer to the systems of thought or behavior known as "rational," or speculative, on the one hand, and on the other "empirical," or more narrowly, "experimental." Not since Bacon in the Novum Organum explained how either of what he termed the "sophistic or theoretic school" or the "empiric school" of inquiry could, in isolation from the other, "corrupt natural philosophy," have these techniques of inquiry been held in proper relationship to each other.

It is known that science, by which term we mean the continuous unfolding of reliable information concerning the elements and processes of nature, moves forward through deliberate transactions between reason and deliberation on the one hand, and on the other, precise sensory observations, measurement, and careful relating of antecedent and consequent conditions in the search for cause and effect. We believe that in American science, research, whether of the "basic" or "applied" nature, has suffered from the neglect of deliberative, speculative, and critical play of intellect over its diverse enterprises.

Theory goes begging in the academic setting as well. This unfortunate dichotomy between the rational and the empirical is expressed in the production of dissertations in universities across the nation. Experimental designs, which by their nature are mere instruments of inquiry, often receive a degree of meticulous attention not similarly afforded the idea of the problem into which inquiry is pressed. To render his statistics fool-proof, and to look carefully to the role of what Sorokin calls "calculating machinery," is expected of the student in far too many institutions, with insufficient regard for the significance of the proposed problem in terms of the existing structure of science. And at the level of the education of teachers, or lawyers for that matter, what university man has not felt the impact of registration-day inquiries - sometimes timid, sometimes bold - as to whether an anticipated course will for the student be "just more theory" or "something practical and useful."

Now the power of theory to direct the practical activities of scientists, and moralists, and technologists can be experienced merely by invoking such names as Dewey in the progressive education movement, Thorndike in the psychology of learning, Freud in the study of personality, and collectively, Copernicus, Darwin, and Einstein in the pursuit of the natural sciences. Indeed, the writer has never been able to escape the wisdom of Dewey's observation that theory is in the end the most practical of all things because of its widening range of attention beyond nearby purpose and desire" (Sources of a Science of Education, 1929, p. 17).

THE STATUS OF THEORY IN THE EDUCATION OF THE GIFTED

But our concern here is with the status of theory, not in American science or education at large, but in the particular matter of education for the gifted. We have endeavored to analyze this movement with respect to those

phases in which some guiding theories appear to have emerged, and those phases which appear still to function largely in accord with arbitrary judgment, local expediencies, or simple, unexamined predilections. We submit forthwith that theory exists which is sufficient for the guidance of practical endeavors in two phases of this work: i.e., in the logical justification of special education for the gifted as grounded in the basic idea of differential education for differential abilities; and in the area of definition and identification. To get the contrasting picture before us immediately, we submit that in two other phases of the enterprise, there is a dearth of theory and a consequent senseless diversity (if not chaos) at the level of practice. These areas are: educational programming, and curriculum development.

The very earliest thought in the education of exceptional children spelled out a logic for special education sufficient to embrace all classes of significantly deviant children. The idea that in the differential abilities of children, there exists a demarcation point at which experiences most appropriate for the person of "normal" ability become unsuited for the exceptional child is an adequate notion to support the search for improved experiences both for the mentally handicapped and the mentally gifted.

Now we have suggested further, possibly evoking a marked negative reaction in many thoughtful readers, the adequacy of theory in the problem of definition and identification. But we did not suggest this idly. Throughout the history of this development, and in all the diverse contemporary approaches, essentially two threads of thought prevail. The historically older position, assumed by both Terman and Hollingworth, is that giftedness is a matter of intellectual superiority; the newer position - and one with which the writer takes serious issue - suggests a broader definition, to include specific talents and aptitudes as well as high general intellect. Now all the controversy for and against either of these positions, and all the efforts toward screening and identifying children for differential educational experience, are geared toward one or the other of these theoretical conceptions. This is what we mean by saying that this area of the problem is guided by theory. It does not mean that we think the best of these theories prevails, nor that the best of them is supported by adequate instruments for screening and identifying children. Our point is simply the existence of focal ideas which discipline and lend meaning to practical efforts at the identification of gifted pupils.

In contrast, let us reflect upon the problem of educational programming, the structuring of the daily, weekly, and yearly sequences in subject matter and personal activities so that the child's most excellent total development may occur. The so-called administrative provisions, as the reader may know, usually take such forms as ability grouping, acceleration of the pupil through the grades, or lowering certain subjects within the graded structure. Now we recognize that any of these procedures singly is perhaps intrinsically good, and we are happy, of course, that they are widely practiced. But we submit that the absence of theory is manifest in that schools usually settle upon one or another of these discrete practices and utilize it to the exclusion of the others, For example, the school that

practices ability grouping, will most likely not engage in acceleration, but will rather purport that enrichment takes care of subject matter. On the other hand, one hears school after school suggest to its public that they do have a program for the gifted, they are cooperating in Advanced Placement. Now in spite of all its merits, the Advanced Placement program is merely a form of acceleration, with proper regard to articulation of subject matter. It does not comprise a whole program of special education for the gifted. These various administrative devices are not best utilized in isolation. Various patterns among them should be worked out so that children could, according to their individual needs, benefit from several of these arrangements in combination, as from both moderate acceleration in grade placement and earlier access to individual subjects like Algebra or a foreign language.

We submit as further evidence of the absence of theory in educational programming, the awkward fact that special provisions for the gifted most often have to begin as "extras," external attachments to the required school program, rather than an integral part of it. The gifted student will thus be invited (almost under the discouraging attitude "all right, if you must; but you can't do it on school time") to study the Russian language after school, and on a non-credit basis. In a similar way, "Saturday art classes," and evening seminars on the "Great Books," are sometimes provided. A sound theory of program would arrange for the elevated experiential capacity of the intellectually superior child to exercise itself in a balanced fashion, entirely within the bounds of the normal requirements in time and place, and above all, for full credit.

But possibly the worst consequence of absence of sound perspective is the frequent substitution of what are sheerly administrative re-arrangements of a standard curriculum, for a truly unique program of experience that parallels both the child's superior learning capacity and society's need that he exercise these capacities in appropriate directions and levels. We sincerely hope, for instance, that the emphasis upon "five tough subjects" which the National Education Association and James B. Conant are stressing for the "Academically Talented" pupil will not be translated into an adequate whole program of education for the gifted. A really appropriate paralleling of the child's abilities with the broad range of man's knowledge in a culture in which both science and technology are explosively expanding, and in which problems of the human career are of unsurpassed complexity, simply cannot be arranged out of the traditional content of the American school curriculum. Imaginative and even radical departures will be essential if we attain in this important connection what Lippman has asked for in general as a "breakthrough" in educational thought. But this criticism of the dearth of theory in curriculum development leads naturally to the inquiry as to the nature of such theory. This is the principal focus of this presentation.

TOWARD A SYSTEMATIC THEORY OF THE CURRICULUM FOR THE SUPERIOR LEARNER

What should be the nature of the educative experience that qualifies as unique, in that it satisfies both the distinguishing capacities and personal needs of the intellectually superior individual, and the social problem of his

most proper education for service to mankind? We shall for this occasion, refer to three points in the systematic theory embodied in a larger work,¹ in which there have been developed some twelve major "Propositions," and approximately twice as many "Corollaries," which principles we believe to pertain with relative uniqueness to the education of the gifted. We shall think of the three principles just now as involving "reversed ratios," in the sense that each of them suggests a type of reverse emphasis from the usual practice in education. In each case, the extraordinary usage is held to involve the superior abilities of the gifted person, and to provide more appropriately for the range of experiences and responsibilities likely to be assumed or thrust upon him in his life career.

The first of the experiential ratios which we submit must be inverted involves the role of the intellectually superior student in his own education. In the usual instance, educational planning seems to be centered in objective means for engendering within the pupil attitudes and tendencies toward action, and in devices external-to-the-individual for accomplishing the learning act. In planning the curriculum, in discussing methods, and in establishing requirements, the governing assumption seems to be that in the individual himself there resides no power which can be utilized, but rather that anything accomplished must take place by means of some device struck upon to "cause" the educative experience to be effective.

Typically, the gifted child is interested in school and in learning. Where developmental circumstances or health factors have been conducive to optimum maturity, the intellectual capacity, plus the intrinsic motivation which generally characterized the gifted individual, provide a combination of psychological qualities that can be utilized in numbers of ways to further his education. Destined to assume social roles in which the continued apprehension of facts, and reflective thinking thereupon, will be urged, the concept of education as "learning how to learn" becomes especially significant for the gifted, and practices which conduce straightforwardly toward increased self-sufficiency in planning and continuing self-education take on added importance.

Teachers serve the individual who can acquire for himself the basic facts and principles of an academic discipline, not by teaching this content per se, but rather by indicating the problems likely to be encountered in learning it. Subsequent to individual learning, the class hour would be given to discussions of the uses and the significance of the ideas involved. In such discussions, if they are handled appropriately, the nature of the problems, insights, and concerns to emerge in a special class of gifted children will be radically different from a discussion of subject matter in the usual class. Now this heavier dependence upon the learner for learning without immediate instruction, and the reservation of the class hour for engagement in the complex and elusive subtleties lying in the richest instance just beyond the individual's present unaided grasp, comprise an alteration of usual school practices which we suggest to reverse the ratio of teaching to learning, and of learning to thinking within the class hour.

¹Virgil S. Ward, Principles of Education for Intellectually Superior Individuals. Unpublished doctoral dissertation, University of North Carolina, 1952. Theory further developed in a forthcoming publication by Charles E. Merrill Books, Inc.

The second extraordinary process which we extend for consideration involves the treatment of knowledge within the curriculum. Again, in the usual instance the regular school curriculum is shaped through a process that tacitly recognizes a series of maxims such as these: 'Knowledge exists; the direct transmission of knowledge is good; all knowledge cannot possibly be taught; hence a selection must be made of the more reliable and useful details that are to be transmitted.' This transmission is in the order of a one-to-one relationship, i.e., the knowledge that is deemed worthy is passed on in concrete detail to the learner. What is known becomes what is learned.

Now this treatment of knowledge is not the only possible manner of educating youth in necessary skills and understandings. The rapidity of change in culture, as well as the idiosyncrasy of personality suggests the appropriateness of comprehensive exploratory investigations into practically the whole of existing knowledge, sacrificing the particulars of static, accomplished fact (which is available to any upon inquiry) for an introduction to all fields of knowledge in the manner of methodology, problems, applications, limitations, and interrelationships that pertain to each. The school's chief responsibility would thus lie not in transmitting subject matter per se, as at present, but rather in the artful and adequate introduction to fields of knowledge and the laying upon them of a perspective useful throughout the life span. Through such perspectives-knowledge about knowledge, as it were--the individual's judgment concerning what knowledge were necessary in succeeding problems, and how to acquire such knowledge as were immediately and temporarily essential would be facilitated.

Accordingly, electives from the usual array of courses would be eliminated in general education, in the interest of pursuing in the manner indicated all major fields of knowledge. In practical application, the gifted youth would, instead of selecting Biology, or Chemistry, or Physics or Geology would be required to understand the nature of all these disciplines at the level, not of existing fact destined so rapidly to become outmoded, but in terms of inherent characteristics of the fields themselves. And his tedious, utterly laborious pursuit of a single foreign language through the artificial instruction of artificially learned teachers would give way to equivalent time in the study of linguistic phenomena, so as to bring within reach of individual mastery the particular forms and uses of any language across the face of the universe, when the exigencies of adult responsibility and opportunity might so indicate.

Now, the full application of this principle, again, bespeaks a very radical departure from pedagogical conceptions as they are, the distinctiveness of the capacity level of the superior learner and his anticipated roles on the frontiers of culture indicating the changed procedure. This form of "preparation for life" is both as possible and as pertinent for the gifted, as it is impracticable and unrealistic in the education of the generality.

The third and final reversal in experiential ration which we submit as appropriate for the gifted concerns the degree of abstraction

involved in the instructional process. The role of direct experience is well recognized in modern educational practices in general. The sand table, the field trip, the school laboratory all testify to an imbedded respect for the inductive mode. "Learning by doing" is truly a foundation stone for modern school instruction.

However, the necessary ratio of concrete experience to the intellectual ramification of that experience in the development of generalizations is a variable factor in learning. A rough negative correlation is indicated between the intelligence of the individual and the amount of concrete experience essential to the understanding of a concept. Therefore, it is suggested that at all points in the educative process where the concrete can be abbreviated for gifted youth, in recognition of its diminished necessity, that this be accomplished.

The presentation of curricular material in text and in lecture should be couched at a level of generalization that recognizes the amount of direct experience that the gifted individual will have undergone in formal school and informal environment, and tend to bring to the learning situation. Textbooks written at advanced levels, encyclopedic articles on specific problems (these being noted for compactness and comprehensiveness), and original writings by critics, historians, and scientists on the level of the academic and professional world, as distinct from the standard textual presentation--all these are indicated as more likely to approximate a convenient ratio between the concrete and the abstract than does the text and lesson presentation, at normal grade levels, through which the generality are schooled.

In the education of the gifted, we further note that "ideas" should receive central emphasis. Instruction in ideas as such, and in their relative magnitudes; and curricular traffic in literature conceived at generic levels of ideational structure - these are the zestful educational ingredients for able youngsters. Thus the idea of psychological measurement is likely to be attractive, in addition to the study and application of instruments of measurement; the idea of electricity as a controlled natural energy, in addition to the mechanics of control; the idea of social security, and so on, ad infinitum. Such ideas exist in every subject area. They are found in the history of the subject, from which history "creative moments" may be selected for particular examination. The isolation of "great experiments" in Psychology or in Physics contains the same potentiality. Reflection upon major and minor discoveries in the development of man's complex technology, upon "accidents that have influenced history," are further indications of the educational potential in the selection for study of ideas per se.

It follows finally that the re-presentation of knowledge acquired by the gifted youth should take the more general and the more abstract form. Expectations by the teacher that classroom contributions and individual reports reflect the higher intellectual process are appropriate; merely average quality in thought and performance are not

appropriate, and should not be acceptable. In like fashion, teacher-made tests should contain exercises which tap the superiority of the gifted through discussions which demand greater precision in significant fact, more elaborate cognizance of the related variables in a problem, more penetrating inference beyond fact, and more responsible judgment. Without such advanced expectations at all levels in the educative process, the education of the gifted falls short of evoking his finest potential, and school experiences, rather, conduce toward his mediocrity.

CONCLUSION

Now, what have we been saying? A regrettable dichotomy between the empirical and the rational in American culture and science, appears to have manifestations in the field of special education for the gifted. The greatest theoretical vacua appear to be in the areas of programming the special provisions, and in curricular theory. The special curricula being devised so numerous across the nation are far too inadequately buttressed and disciplined by a clear logic, and far too largely the result of spontaneous, unsystematic thought, and immediate exigencies. An intermediate body of principles standing between psychological and sociological fact on the one hand, and school programs on the other - a differential theory of experience to guide the establishment of school practices - may have been the major default of the educator. This presentation comprises certain of the author's attempts at this type of essentially rational endeavor.