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What Is This Thing Called Giftedness, and How Do We Develop It? A Twenty-Five Year Perspective[1]

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This author provides reflections on the last 25 years of his work, focusing on the evolutions of models designed to help identify and meet the needs of gifted and talented students. The cited models include the Three Ring Conception of Giftedness, the Enrichment Triad Model, and the Schoolwide Enrichment Model. Summaries focus on the rationale supporting each model, including practical applications of the model in various school situations and underlying research. Also included are insights related to potential modifications and future developments of the models.

The principal goal of education is to create men and women who are capable of doing new things, not simply repeating what other generations have done.
—Jean Piaget—

Introduction

It is always a challenge to reflect upon one's work from a perspective of more than two decades of intense involvement, especially if your reflections will be the subject of analysis by others who have also thought long and hard about the identification and development of human potential. One of the conditions for accepting this challenge of a presentation-and-critique format was that the persons whose commentary follows be asked to review the major theoretical papers that describe my thoughts about how we should identify and develop high levels of potential in young people. I made this request because I didn't want to repeat large amounts of what has been written elsewhere but, rather, to point out how and why my theories evolved, how the theories led to practical applications that have gained popularity in the field, and how research has helped point the way toward modifications in theory and practice. I also invite interested readers to share their reactions with me and to offer suggestions for possible research that might lead to modifications in the three major phases of my work, discussed below.

My approach will be to put forward three main sets of ideas that formed the rationale for my work over the past 25 years; to discuss how this rationale has led to practical applications; to analyze some of the things I would change or about which I have had second thoughts; and,

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finally, to consider some areas where I might like to make additions to the major models. Because I believe that, in the final analysis, all ideas must be subjected to rigorous research in real-world settings, I have also summarized in this article major research studies that have been carried out in schools and classrooms that have used my work.

Although I was asked by the editor of this journal to reflect on my "theoretical contributions," I have also taken the liberty of including some commentary about practical contributions. Most theorists leave practical applications to others; however, one of the characteristics of my work is that it has proceeded simultaneously along both theoretical and practical lines. For better or worse, I have never been content with developing theoretical concepts without devoting equal or even greater attention to creating instruments, procedures, staff-development strategies, or instructional materials for implementing the various concepts. This approach has both advantages and disadvantages. An eye toward implementation allows for theory testing in practical settings and the opportunity to generate research data that can lend credence to the theory, point out directions where additional work needs to be done, or both. One of the things I am proudest about is that over the years my colleagues and I have taken the time to conduct research studies about various aspects of the models I have developed. These studies have been summarized in a couple of places (Renzulli, 1988a; Renzulli & Reis, 1994), and I invite interested readers to examine this research.

A second advantage of pursuing practical as well as theoretical contributions is that it allows me to get in touch with the sights, sounds, and smells of real schools and classrooms and the practical and political challenges of people working in them. Theory in an applied field doesn't have much value if it is not compatible with practical realities, such as how schools work, teachers' ways of knowing, and the practices that can reasonably be expected to endure *beyond* the support usually accorded to pilot or experimental studies. In fact, the evolution of my work over the years leading to the present Schoolwide Enrichment Model (SEM) is a direct result of these realities: It is from direct experience that my ideas have taken new directions. A third advantage of a theory-into-practice approach is that it has afforded me the opportunity to collaborate with exceptionally talented practitioners and other researchers, many of whom have authored or coauthored research studies, assessment and evaluation instruments, and materials for teachers and students. The contributions of these persons have helped expand both the theoretical and practical dimensions of our work.

The negative side of a combined theoretical-practical approach is the vulnerability of partially or poorly implemented practices. In most cases, it is the implementation rather than the idea that is the object of scrutiny. When I visit classrooms, for example, in which every student has produced cookie-cutter copies of the same project and they claim that these projects are examples of what I have defined as *Type III Enrichment* (i.e., Individual and Small-Group Investigations of Real Problems), it reminds me of the quote about the shadow that falls between the idea and the reality. Nevertheless, even negative experiences have value. Mainly, they point out that the originator of the idea has not engineered the proper conditions for implementation, has not communicated effectively with practitioners, has overestimated what works in the real world, or all of the above!

In the sections that follow, I will report on three major phases of my work. The first two phases, the Three-Ring Conception of Giftedness and the Enrichment Triad Model, were

developed simultaneously and are meant to be interactive. Also interrelated with this phase is a procedure for regular curriculum modification called curriculum compacting. Since the Three-Ring Conception is a rationale for identification practices, and the Triad deals with programming issues, I thought it best to discuss them separately. The third phase, the Schoolwide Enrichment Model, was jointly developed with my colleague, Sally M. Reis. In some ways, I think that this model has the most interesting rationale of all!

Phase 1: The Three-Ring Conception of Giftedness

The Road Less Traveled, Circa the Late 1960s and Early 1970s

In the late 1960s, when I first began my journey on the road to giftedland, I never dreamed (a) that my work would become popular enough to warrant a special issue of this (or any other) journal and (b) that it would become the basis for a good deal of controversy in the field. In the years since I originally published the Enrichment Triad Model (Renzulli, 1977) and the Three-Ring Conception of Giftedness (Renzulli, 1978), a wide variety of reactions have appeared in the literature and on the professional conference circuit. These reactions have ranged from a highly positive article entitled "Renzulli Is Right," (Busse & Mansfield, 1980) to a scathing criticism that branded my work as "a national disease in gifted education" (Jellen, 1983). And this work seems to have generated enough controversy to cause some authors and speakers, regardless of the topic they are addressing, to weave into their work what Treffinger (1987) referred to as "cheap shots" about the ideas I have set forth.

To be certain, I was fully aware that the Triad Model and the Three-Ring Conception of Giftedness challenged the traditional orthodoxy that dominated the field at that time; but I never thought that state directors of gifted programs would prohibit me from speaking or consulting with school districts in their states or that the editors of professional journals in the field would reject my articles because, as one person put it, "I disagree philosophically with your ideas." It is interesting to note that my article on the Three-Ring Conception of Giftedness (Renzulli, 1978), which has been listed by the Social Science Citation Index as the most widely cited publication in the field, only found acceptance in a journal *outside* the field of education for the gifted.

To understand the discrepancy regarding the popularity of my work in more recent years versus the early resistance to it, it is necessary to turn back the calendar and revisit the climate of the field in the late 1960s and early 1970s. This was a time period prior to the landmark theories of Robert Sternberg and Howard Gardner and before the publication of influential research on talent development by Benjamin Bloom, Mihaly Csikszentmihalyi, Robert Albert, Dean Simonton, and others. Although some people were beginning to question the predominance of the single-criterion IQ score cutoff approach to the identification of students for special programs, state guidelines and regulations that were in existence or being enacted at that time still harkened back to the work of Lewis Terman and the belief that a certain level of traditionally measured intelligence was synonymous with giftedness. The only controversy within this very conservative conception of giftedness was how high to set the cutoff scores! Some people argued that it should be the top 1%, which was Terman's definition,[3] and others argued for a 3% or a 5% criterion. Regardless of the cutoff level, however, there was no

[3] Referenced in Renzulli, 1978, p. 180.

mistaking the absolutist belief that a person was either gifted or not gifted; and chances were that they would retain their respective designations, despite evidence to the contrary, especially if that evidence was based on information other than test scores.

It is easy to understand the wide acceptance of the cutoff score approach if we also examine historically (a) the ways in which designated students were commonly served in the early days of the movement and (b) the emergence of state guidelines and especially state-funding formulas. Most programs separated identified students into full-time special classes or part-time resource-room arrangements for preselected students. Typical school-based programs consisted mainly of accelerated content or conglomerations of unconnected enrichment activities, frequently based on individual teachers' favored topics and units of study or trendy thinking-skills activities that claimed to be based on Bloom's Taxonomy of Educational Objectives (Bloom, 1956). The advent of state funding, almost always based on a "body-count" approach to reimbursement, placed additional pressure on schools to come up with tidy lists of exactly who qualified according to state-imposed guidelines.

The Purpose of Identification and Special Programs

The Why Question

When I came on the scene in the late 1960s and early 1970s, a number of observations helped shape what eventually became the Three-Ring Conception of Giftedness and the Enrichment Triad Model. The first observation had to do with the purpose of special programs. Implicit in any effort to define and identify a targeted group is the assumption that we will make special services available that capitalize on the characteristics that brought certain young people to our attention in the first place. In other words, the why question supersedes the who and how questions.

The literature on the gifted and talented indicated that there are two generally accepted purposes for providing special education for high-potential youth. The first purpose is to provide young people with opportunities for maximum cognitive growth and self-fulfillment through the development and expression of one or a combination of performance areas where superior potential may be present. The second purpose is to increase society's reservoir of persons who will help to solve the problems of contemporary civilization by becoming producers of knowledge and art rather than mere consumers of existing information. This second purpose, sometimes referred to as the "cure-for-cancer argument," was especially useful in gaining legislative and financial support. Most people would agree that the two goals are mutually supportive of one another. In other words, the productive and creative work of scientists, authors, artists, and leaders in all walks of life provide benefits to society and also result in feelings of accomplishment, self-fulfillment, and a positive attitude about one's self. And these characteristics are, in turn, important contributors to self-efficacy (Bandura, 1982), the belief that one is capable of subsequent and usually more advanced expressions of creative productivity.

Two Types of Giftedness

Keeping the interaction of the two purposes of gifted education in mind, it is safe to conclude that special services and supplementary expenditures of public funds should be geared primarily

toward increasing society's supply of potentially creative and productive adults. This conclusion has important implications for both the who and how questions; but, most important, it led me to propose the difference between two types of giftedness—lesson-learning or "schoolhouse" giftedness on one hand and creative productive giftedness on the other.

Schoolhouse giftedness is the kind most easily measured by standardized ability tests and is, therefore, the type most conveniently used for selecting students for special programs. The competencies young people display on cognitive-ability tests are exactly the kinds of abilities most valued in traditional school learning situations, especially those situations that focus on analytic skills rather that creative or practical skills. Research has shown a high correlation between schoolhouse giftedness and the likelihood of getting high grades in school. Research has also shown that superior lesson learning and test taking remain stable over time. These results should lead us to some very obvious conclusions about schoolhouse giftedness: It exists in varying degrees; it can easily be identified through standardized and informal assessment techniques; and we should, therefore, do everything in our power to make appropriate modifications for students who have the ability to cover regular curricular material at more advanced rates and levels of understanding than their age peers. These conclusions led me to develop one aspect of our programming model known as curriculum compacting (Renzulli, Smith, &. Reis, 1982). Research on curriculum compacting (Reis et al., 1992) has shown that, with as little as three hours of systematic training, teachers can eliminate up to 50% of regular curricular material for high-achieving students without causing any declines in standardized achievement test scores.

Although schoolhouse giftedness is valued and accommodated in our work, mainly through curriculum modification and replacement techniques, a major focus of the work has been on the second type of giftedness, which I have termed creative productive giftedness. Creative productive giftedness describes those aspects of human activity and involvement where a premium is placed on the development of original ideas, products, artistic expressions, and areas of knowledge that are purposefully designed to have an impact on one or more target audiences. Learning situations that are designed to promote creative productive giftedness emphasize the use and application of knowledge and thinking processes in an integrated, inductive, and real-problem-oriented manner (Torrance, 1963). The role of the student is transformed from that of a learner of prescribed lessons and consumer of information to one in which he or she uses the modus operandi of the first-hand inquirer. I have written in some detail about this transformed role of the learner (Renzulli, 1982a) and will only say at this point that it serves as the main rationale for the Type III dimension of the Enrichment Triad Model (discussed later in this article).

The idea for creative productive giftedness and the Three-Ring Conception of Giftedness came from the broad range of research I reviewed on the nature of human abilities (Renzulli, 1978, 1982b, 1986) as well as numerous case studies about people of unusual accomplishment (both young people and adults) who would not have been identified or served in special programs if we relied solely on cognitive-ability test scores. These observations also led me to another conclusion about the temporal and situational nature of creative productive giftedness—and especially the creativity and task-commitment components of the Three-Ring Conception (Hébert, 1993; Reis, 1981). Whereas lesson-learning giftedness, which is mainly accounted for in the above-average-ability circle of the Three-Ring Conception, tends to remain stable over time,

persons do not always display maximum creativity or task commitment. Highly creative and productive people have peaks and valleys of high-level output. Some persons have commented that the valleys are as necessary as the peaks, because they allow for reflection, regeneration, and the accumulation of input for subsequent endeavors.

Similarly, creative productive giftedness tends to be contextual or domain specific. While there certainly have been a small number of "Renaissance" men and women who have gained recognition for work in several fields, the overwhelming numbers of persons who have been recognized for their outstanding accomplishments have almost always achieved in a single field or domain.

The temporal and situational nature of creative productive giftedness has resulted in some misunderstanding and criticism about the Three-Ring Conception (Jarrell & Borland, 1990; Jellen, 1983, 1985; Kontos, Carter, Ormrod, & Cooney, 1983), and some efforts on my part to address this phenomenon (Renzulli, 1985, 1988c, 1990; Renzulli & Owen, 1983). A good deal of the misunderstanding and related controversy lies in the difficulty of defining a complex concept without creating a semantic atrocity or dwelling on banal arguments like the difference in meaning between such words as *gifted* and *talented*. In my early writing on the topic, an attempt was made to clarify the concept by adding a figural representation in the form of three intersecting circles. This Venn diagram was intended to convey figurally the dynamic properties of the concept (i.e., those properties pertaining to motion, interaction, continuous change, and energy rather than a fixed or static state). But my best efforts at both semantic and figural communication have, nevertheless, resulted in interpretations that clearly were not intended.

Consider, for example, a comment by Tannenbaum (1986) in which he states that "Renzulli does not specify that giftedness requires the interplay of all three attributes in his model" (p. 31). It was for this very reason (i.e., interaction) that I chose to present the model figurally in the form of three *overlapping* rings. The primary purpose of a Venn diagram is to portray this type of interactive relationship.

The issue of performance versus potential is probably the aspect of my work on the conception of giftedness that is most frequently discussed in the literature. As an example, let us consider a discussion of the Three-Ring Conception in a popular book for parents by Webb, Meckstroth, and Tolan (1982). But first, allow me to highlight an important phrase from the original definition: "Gifted and talented children are those possessing **or capable of developing** this composite set of traits and applying them to any potentially valuable area of human performance" [bold type not in the original, but perhaps it should have been] (Renzulli, 1978, p. 261). My intention was to convey the message that all three clusters need not be manifested by candidates for special services but, rather, that they be identified as capable of developing these characteristics. Webb et al. seem to have overlooked or chosen to ignore the words that have been highlighted above, because in their book they stated:

> Another way of stating the Renzulli model is that superior ability, itself, is not enough—there must be high motivation to use that ability, and it must be expressed in creative ways, or to an unusual degree. Because it insists on the clear expression of giftedness, use of the Renzulli model overlooks many gifted children who, for a variety of reasons, are unwilling to demonstrate their talents in the ways being measured, (p. 49)

Similar statements can be found in the textbook literature (Davis & Rimm, 1985, p. 12; Gallagher, 1985, p. 8; Maker, 1982, p. 232), and there is a general tendency to conclude that the Three-Ring Conception fails to take account of "gifted underachievers." Thus, for example, Gagné (1985) stated: "The factor that makes Renzulli's model inapplicable to underachievers is the presence of motivation as an essential component of giftedness" (p. 105); and Davis and Rimm stated: "This model excludes underachievers" (p. 16). Similar statements focus on creativity. For example VanTassel-Baska (1998) commented, "witness Renzulli's definition of giftedness, which excludes those children who do not display evidence of creativity" (p. 384).

Since, to my knowledge, none of the above commentators did any research on students or programs using the Triad Model or the Three-Ring Conception of Giftedness, I am left with the uneasy feeling that their conjecture is more journalistic than scientific. In point of fact, one of the few *intervention* studies in the research literature that shows highly favorable results for underachieving gifted students (Baum, Renzulli, & Hébert, 1995) is a study that selected participants based on the Three-Ring Conception and used the Enrichment Triad as a direct means for counteracting underachievement.

The major reason for the interpretations discussed above undoubtedly lies in the type of research that led me to the conclusions that are summarized in the research rationale for the Three-Ring Conception of Giftedness (Renzulli, 1978, 1986). Since this research dealt mainly with factors that contributed to the development of creative and productive behavior in adults, an obvious but not necessarily valid conclusion on the parts of some writers is that these same traits should be required of children in order to gain admission to programs for the gifted. It is, therefore, only a short leap in logic to the kinds of statements quoted above and the belief that young people, regardless of ability, will be overlooked if they do not display task commitment or creativity. Clearly, this is not what I intended; but to understand the rationale and the practical implications (for identification) of the Three-Ring Conception, we must examine another major concept underlying the model. This concept is the important distinction between two types of information that allow us to examine and estimate human potential.

Status and Action Information

Status information consists of test scores, previous grades or accomplishments, teacher ratings, and anything else we can "put down on paper" beforehand that tells us something about a person's traits and potentials. Status information is undoubtedly the best way for identifying students with high levels of schoolhouse giftedness, and it can also be used to identify a talent pool of above-average-ability students. But the temporal and contextual nature of creativity and task commitment required that we look for these behaviors *within* situations where such behaviors are displayed and, we hope, encouraged.

Action information, which has been described in detail elsewhere (Renzulli, Reis, & Smith, 1981), can best be defined as the type of dynamic interactions that take place when a person becomes extremely interested in or excited about a particular topic, area of study, issue, idea, or event that takes place within the school or the nonschool environment. These interactions occur when students come into contact with or are influenced by persons, concepts, or particular

pieces of knowledge.[4] They create the proverbial "ahas" that may become triggers for subsequent involvement. It is for this reason that I included Type I Enrichment (General Exploratory Experiences) and Type II Enrichment (Group Training Activities) in the Triad Model. The influence of the interaction may be relatively limited, or it may have a highly positive and extremely motivating effect on certain individuals. If the influence is strong enough and positive enough to promote further exploration and follow-up on the part of an individual or group of students with a common interest, then we may say that a dynamic interaction has taken place.

To translate the above concepts (including the Three-Ring Conception of Giftedness) into practice, my colleagues, Sally Reis and Linda Smith, and I developed the Revolving Door Identification Model (RDIM, Renzulli et al., 1981). The essence of this model is to provide a "talent pool" of above-average-ability students with a broad variety of general enrichment experiences (Types I and II in the Enrichment Triad Model) and to use the ways in which students respond to these experiences to determine who and in which areas of study students should "revolve" into Type III enrichment opportunities. In addition to the general enrichment provided in special program situations, we also trained classroom teachers to use a form called the Action Information Message they could serve as referral agents whenever students reacted in highly positive ways to regular classroom experiences.

Although this approach to identification and programming departs significantly from traditional practices, its effectiveness has been documented by a series of research studies and field tests in schools with widely varying socioeconomic levels and program organizational patterns. Using a population of 1,162 students in grades 1 through 6 in 11 school districts, Reis and Renzulli (1982) examined several variables related to the effectiveness of the Triad/RDIM. The talent pools in each school were designated (but not divided) into two groups. Group A consisted of students who scored in the top 5% on standardized tests of intelligence and achievement. Group B consisted of students who scored between 10 to 15 percentile points below the top 5%, who were rated highly by teachers using the Scales for Rating the Behavioral Characteristics of Superior Students (Renzulli, Smith, White, Callahan, &. Hartman, 1976), or both. Both groups participated equally in all program activities, and they were not aware of their group designations.

An instrument entitled the Student Product Assessment Form (SPAF, Reis &. Renzulli, 1985) was used to compare the quality of products emanating from each group. This instrument provides individual ratings for eight specific characteristics of product quality and seven factors related to overall product quality. The validity and reliability of the SPAF were established through a year-long series of studies that yielded reliability coefficients as high as 0.98. A *doubleblind* method of product coding was used so that judges did not know group membership (i.e., Group A or B) when evaluating individual products. A two-way analysis of variance indicated there were no significant differences between Group A and Group B with respect to the quality of students' products. These findings verify the Three-Ring Conception of Giftedness underlying the Triad/RDIM, clearly support the effectiveness of a model that focuses on creative

[4] In a certain sense, what I described as "action information" is not unlike the currently popular concept called performance-based assessment, although action information is for proactive decision making rather than evaluation purposes.

productivity, and justify the inclusion of students in somewhat larger proportions than the traditional top 5% approach.

Questionnaires and interviews were used to examine several other factors related to overall program effectiveness. The data indicated that feelings about the Triad/RDIM program—gathered from classroom teachers, administrators, students in the talent pools, and their parents—were generally positive. Many classroom teachers reported that their high level of involvement in the program had favorably influenced their teaching practices. Parents whose children had been placed previously in traditional programs for the gifted did not differ in their opinions about the program from parents whose children had been identified as gifted under the expanded Three-Ring Conception criteria. And resource teachers—many of whom had been involved previously in traditional programs for the gifted—overwhelmingly preferred the expanded talent pool approach to traditional reliance on test scores alone. In fact, several resource teachers in the experimental study said they would resign or request transfers to regular classrooms if their school systems reverted to traditional identification practices.

Additional research (Delisle & Renzulli, 1982) examined academic self-concept and locus of control. This study established the importance of nonintellective factors in creative production and verified earlier research related to the Three-Ring Conception of Giftedness. Using a step-wise multiple regression technique to study the correlates of creative production, Gubbins (1982) found that above-average ability is a necessary but not sufficient condition for high-level productivity. The roles of task commitment and time commitment and the importance of student interest were verified. Several factors related to improved productivity were identified. A study of student, parent, and classroom teacher attitudes toward the Triad/RDIM (Delisle, Reis, & Gubbins, 1981) revealed support for this approach and a high degree of cooperation among all persons involved in the implementation of this type of program. These studies also showed that a more flexible approach to identification helped to minimize attitudes of elitism and promoted a radiation of excellence (Ward, 1961) throughout the buildings in which the model was implemented. A detailed technical report (Renzulli, 1988a) describing studies dealing with all aspects of the Triad/RDIM system is available from the Bureau of Educational Research at the University of Connecticut.

The research summarized above and experiences growing out of widespread use of the Triad/RDIM lead to a number of conclusions. First, although the model provides special services to larger numbers of students than do traditional programs for the gifted, the greater involvement of classroom teachers (especially through curriculum compacting) and the rotation of students in and out of Type III enrichment activities actually increases, rather than decreases, the level of services to identified students.

Second, special programs that have traditionally been restricted to students who score in the top 5% on standardized tests can effectively serve other high-potential students if they (a) take action information into account when identifying candidates for service and (b) use the action information when making decisions about individual student's types of program activity. By doing so, we also minimize concerns about elitism and help to do away with the either-you-have-it-or-you-don't-have-it approach to giftedness.

Third, programs for the gifted that rely on traditional identification procedures may not be serving the wrong students; but they are certainly excluding large numbers of well-above-average pupils who, given the opportunity, resources, and encouragement, are capable of producing equally good products. High levels of productivity can only occur when above-average ability interacts with other factors, such as task commitment and creativity. It is these other factors that enable students to create products of exceptional quality.

Finally, the flexibility that characterizes the Triad/Revolving Door Identification Model can help to insure more appropriate identification of potentially creative-productive students and more appropriate programs to meet their individual needs. In a larger context, it also provides an alternative to the traditional approaches that have been the subject of so much criticism by antigrouping advocates and persons concerned about the underrepresentation of minorities and low-SES students in special programs.

Phase I: Regrets . . . I've Had a Few

In the original work on the Three-Ring Conception of Giftedness, I figurally embedded the three rings in a houndstooth background.[5] The interactive, two-toned background represented personality and environmental influences that contributed to the manifestation of the three rings. Although I listed several factors in each category, I regret that more time wasn't spent examining the research underlying these personality and environmental influences. Such an investigation could have led to another ring that might reflect a cluster of affective traits not unlike Gardner's (1983) inter- and intrapersonal intelligences or Goleman's (1995) emotional intelligence. When I review the work of researchers, such as Albert (1975), Albert and Runco (1986), Simonton (1978), and Sternberg (1984, 1985), to name just a few, I realize that we are dealing with an almost infinite number of interactions in the making of giftedness.

I was aware of this extended complexity, but being a pragmatic as well as a theoretical person, I felt the need to concentrate on building practical identification and programming procedures. We certainly need more research that deals with the traits that contribute to both schoolhouse and creative productive giftedness; the interaction between the two; and, perhaps even more important, that elusive and inexplicable "thing" that is left over in human productivity after everything else has been explained! But we also need to explore new research paradigms that focus on the intensive study of young people at work in demanding learning situations that place a premium on creative productivity. I have written elsewhere about the dimensions that such research might take (Renzulli, 1992). Suffice it to say at this time that I believe the intensive study of young people at work holds the highest promise for adding major new dimensions to the Three-Ring Conception. At this point in time, I am confident enough with the three rings to go ahead in more practical directions and leave further contributions to trait theory to others.

[5] I first used a checkerboard design, but I switched to a houndstooth background because it seemed to be more representative of the interaction between personality and environment.

Phase 2: The Enrichment Triad Model

A Little More Historical Background

Gifted education emerged in a big way in the United States in the late 1960s, mainly as a result of Sputnik and the very influential Marland Report (1972), which became a rallying point for interested educators and policy makers. As the movement grew in size and influence, the gifted education community engaged in an almost desperate quest to establish an identity that would show how gifted education differed from general education. Indeed, the term *qualitative differentiation* emerged as one of the field's major and longest lasting catch phrases. This quest for identity continues to this day, as it should; and I still hold firmly to the challenge set forth in the preface of the original book on the Triad:

> There are, quite obviously, many different ideas about what is necessary to achieve qualitative differentiation. What is equally obvious is that before the concept can take on any true meaning, a great in-house dialogue will have to take place, and advocates of special programs will have to become as confident about practices that they support as they are about practices that they are against. (Renzulli, 1977, p. ii)

It was about this time that I began work on a programming model that paralleled the conclusions reached from work on the Three-Ring Conception of Giftedness and especially the distinction I made between schoolhouse and creative productive giftedness. This second major focus of my work, the Enrichment Triad Model, also emerged from my own research on the evaluation of programs for the gifted and from observations of educational practices that were used in programs for the gifted in the 1960s and 1970s. These observations included reflections on my own experience in starting a gifted program in the post-Sputnik era. My doctoral dissertation dealt with program evaluation (Renzulli, 1967); and, as part of that work, I had the opportunity to visit and to examine from an *evaluative* perspective numerous programs for gifted and talented students.

The two types of pedagogical (as opposed to organizational) practices that characterized the field before the Triad were (a) advanced or accelerated content and (b) a conglomeration of process-oriented enrichment activities based on the thinking-skills models of Bloom (1956) and Guilford (1967). Sometimes included in this second category were affective-domain activities based on the work of writers, such as Krathwohl, Bloom, and Masia (1964) and Kohlberg and Mayer (1972). Although I believed, and still believe, that both of these approaches play an important role in the development of potential in young people, I also had serious reservations about whether or not they could serve as a defensible rationale for *qualitatively* differentiated programs. I will discuss these two categories of practice in reverse order.

The Process-Oriented Activities. The first reservation, which was put forth in my early writing on the Triad, was about the conglomeration of kits, games, puzzles, and disjointed enrichment activities that were usually found in resource rooms and pull-out programs. Although these process-oriented activities were both enjoyable and challenging, I raised two questions about their potential to serve as a rationale for qualitative differentiation. Granted, the gifted community was the first group of educators to "discover" the process models and to implement practical applications of them into special program experiences. I argued, however, that these

experiences were appropriate for all students. I further argued that they should be blended into general education because they represent a form of cognitive development that has higher transfer value than the traditional content-based curriculum. The fact that general education did not make much use of the process models at that time was not a sufficient rationale for arguing that they were only good for the gifted. When I recommended their use for all students, I was severely criticized by the gifted education establishment, which viewed me as someone who was "giving away the family jewels!" In this case, history has been on my side. The major thrust in general education over the past two decades has been a momentous investment in the development of thinking skills for all students.

My second reservation about the process models has to do with the ways in which they typically are taught. Since this reservation is the same as my concern about the accelerated-content approach, I will cover this topic in the section that follows. I want to emphasize at this point that I am not criticizing the pedagogy of the process models; rather, I am arguing that they cannot serve as a rationale for qualitative differentiation because they represent the same pedagogy as that which is predominant in general education.

The Accelerated-Content Approach. The accelerated-content approach usually consisted of providing identified students with above-grade-level material or additional "challenge activities" that were tacked onto regular curricular units (the problems or challenge questions often listed at the bottom of the page). The accelerated curriculum approach also included specially designed curricular units that were prepared by teachers or teams of teachers and subject-area specialists (Renzulli & Nearine, 1968).

Although the accelerated-content or advanced-curricular-unit approaches certainly have value in advancing what I have described above as lesson-learning giftedness, I view them as examples of quantitative rather than qualitative differentiation. In order to understand what is meant by quantitative differentiation, I need to draw a comparison between this approach and regular curricular experiences, which are the mainstay of general education. Before elaborating on this difference, however, I need to say a few words about Type III Enrichment (Individual and Small-Group Investigations of Real Problems). I have attempted to define real problems elsewhere and pointed out in that article (Renzulli, 1982b) why I believe Type III Enrichment is a bona fide rationale for the development of creative productive giftedness. The core argument in this rationale is derived from the Three-Ring Conception of Giftedness and from the belief that qualitatively different learning experiences should approximate the modus operandi of creative and productive individuals. This modus operandi obviously includes acquisition of advanced content (you can't be creative with an empty brain); but it is only those persons who go beyond the acquisition of present knowledge whom society eventually designates as gifted artists, scientists, authors, or inventors. (Note: I prefer to use the *g* word as an adjective.) In other words, if we want to produce more of these kinds of persons, then we should look to the make-up of individuals and the styles of their work that resulted in notable accomplishment.

Although I am not against lesson-learning giftedness or the roles that advanced content and process play in the development of both kinds of giftedness, I do argue for a different kind of pedagogy for producing creative productive giftedness. This pedagogy, which is summarized in the following section, is, for better or worse, what I consider to be the major contribution of my work to the field.

The Learning Theory Rationale for Type III Enrichment

Two-Model Learning Theory

More books, articles, and papers have been written about the process of learning than perhaps any other topic in education and psychology. And when we add the vast amount of material that has been written about models of teaching and theories of instruction, the sheer volume of literature is nothing short of mind-boggling! It is not my intention to review this multitudinous literature as background for the discussion on Type III Enrichment that follows, nor will I argue about the number of unique theories that actually exist or the advantages and disadvantages of various paradigms for guiding the learning process. I will argue, however, that, in spite of all that has been written, every theory of teaching, learning, and instruction can be classified into one of two general models. There are, obviously, occasions when a particular approach transcends both models; however, for purposes of clarifying the main features of Type III Enrichment, I will treat the two main models as polar opposites. Both models of learning and teaching are valuable in the overall process of schooling, and a well-balanced school program must make use of both of these general approaches to learning and teaching.

Although many names have been used to describe the two models that will be discussed, I will simply refer to them by their classical names, the *deductive model* and the *inductive model*. The deductive model is the one with which most educators are familiar and the one that has guided the overwhelming majority of what takes place in classrooms and other places where formal learning is pursued. Simply stated, the deductive model is the one in which the goal of learning is to place into students' repertoires the content and skills that are almost always delivered through the use of prescribed, presented lessons with predetermined pathways for arriving at what students typically perceive as being the right answer. Lists of behavioral objectives and standards-based approaches to curriculum are applied examples of the deductive model.

The inductive model, on the other hand, represents the kinds of learning that take place outside of formal learning or traditional classroom situations but that can be integrated into school learning with the proper engineering. A good way to understand the difference between these two types of learning is to compare how learning takes place in a typical classroom with how someone might learn new material or skills in real-world situations. Classrooms are characterized by relatively fixed time schedules, segmented subjects or topics, predetermined sets of information and activity, tests and grades to determine progress, and a pattern of organization that is largely driven by the need to acquire and assimilate information and skills imposed by curriculum guides; by lists of standards or behavioral objectives; or, indirectly, by statewide testing programs. The major assumption in the deductive model is that current learning will have transfer value for some future problem, course, occupational pursuit, or life activity.

Contrast this type of learning with the more natural chain of events that takes place in inductive situations, such as a research laboratory, business office, or film studio. The goal in these situations is to produce a product or service. All resources, information, schedules, and sequences of events are directed toward this goal, and evaluation (rather than grading) is a function of the quality of the product or service as viewed through the eyes of a client or consumer. Everything that results in learning in a research laboratory, for example, is for present

use; therefore, looking up new information, conducting an experiment, analyzing results, or preparing a report is focused primarily on product delivery rather than some amorphous future situation. Even the amount of time devoted to a particular project cannot be determined in advance because the nature of the problem and the unknown obstacles that might be encountered as the problem unfolds prevent us from prescribing rigid schedules.

Qualitative Differentiation

Type III Enrichment is essentially an inductive approach to learning; and, as such, I argue that it is qualitatively different from most learning experiences provided in most school situations. My argument is not an indictment of deductive learning. Indeed, high levels of creative productivity require large amounts of knowledge and the use of process skills that are almost universally taught through deductive methods. Rather, I simply argue that we need to achieve balance between the two major approaches.

I have elaborated on two-model learning theory and the differences between deductive and inductive learning elsewhere (Renzulli, 1982b, 1994, pp. 197–232). A good way to summarize these differences is to examine the major features of each model on a continuum that portrays the teacher's role, the curriculum, classroom organization and management, and the resultant role of the student (see Figure 1). There is, obviously, a middle ground for each continuum; and I do not believe that all learning should favor the right side of each continuum presented in Figure 1. Some learning situations are undoubtedly more efficient when carried out in structured settings, and even drill and worksheets have value in accomplishing certain goals of basic skill learning. Because I believe that schools are first and foremost places for talent development, there are times within the overall process of schooling when we can and should make a conscious commitment to apply Type III learning strategies to selected aspects of schooling.

Key Features Underlying Type III Enrichment

Type III Enrichment is based on the ideas of a small number of philosophers, theorists, and researchers.[6] The work of these persons, coupled with the research and program development activities of my colleagues and myself, has given rise to the approach to learning that I call Type III Enrichment. Underlying this approach are a number of key features that characterize this type of enrichment.

[6] These persons include William James, John Dewey, Alfred North Whitehead, Maria Montessori, Jean Piaget, Jerome Bruner, Philip Phénix, Virgil Ward, E. Paul Torrance, and Albert Bandura. The influences of these persons have been described elsewhere (Renzulli, 1994).

Figure 1. The Dimensions of Two-Model Learning Theory

The Deductive Model (Prescribed, Presented Instruction)	The Inductive Model (Type III Enrichment)
The Teacher's Role . . .	**The Teacher's Role . . .**
Teachers initiate, determine, control, and micromanage learning Teachers provide feedback in the form of grades based on normative criteria Teachers as instructors (disseminators of knowledge) Teachers view content as objective, impersonal, and value-free	Students play a leading role in topic/problem selection and pacing Teachers and students are partners in formative evaluation based on progress toward goals Teachers as coaches, patrons, resource procurers, probers, editors, ombudsmen, and colleagues Teachers personalize, criticize, and emphasize the value-laden character of content (artistic modification)
Plus the Curriculum . . .	**Plus the Curriculum . . .**
Predetermined by textbooks or courses of study Content driven Problems are prescribed, presented, and usually previously solved Information is presented for (possible) future use Knowledge is presented as factual material	Derived as a result of individual or small-group student interests Process- and product-driven Self-selected, open-ended, real-world problems Information is sought only when needed to help solve a present problem Knowledge serves as a vehicle for confrontation with events, issues, ideas, and beliefs
Plus Classroom Organization and Management . . .	**Plus Classroom Organization and Management . . .**
Predetermined daily time blocks and the weekly allocation of time are determined on the size of units of instruction Whole-group activities Age/grade grouping Predetermined and usually fixed classroom arrangements Classrooms are the places where learning takes place	Time is determined by the evolving nature of the task, project, or end product Individual and small group activities Interest, problem, and common-task grouping Classrooms are arranged to facilitate the accomplishment of the task or the completion of products Learning takes place wherever relevant information is gathered or experiences are pursued
Equals the Student's Role	**Equals the Student's Role**
Students as lesson learners and consumers of knowledge Students accumulate and store knowledge for possible future use Students pursue common tasks and activities Students use knowledge to study about problems Students passively accept knowledge as objective, factual, and correct	Students as first-hand inquirers and producers of knowledge Students confront and construct knowledge for present use Students' tasks and activities are based on divisions of labor Students use knowledge to find and focus problems and to act on problems Students personalize, interpret, criticize, and dissect knowledge

1. *Uniqueness of the Learner.* Each learner is unique. Therefore, Type III learning experiences must be engineered in ways that take into account the abilities, interests, and learning styles of the individual. Learning styles include preferences for various instructional techniques, learning-environment preferences, thinking-style preferences, and expression-style preferences. (Note: Over the years, my colleagues and I have developed and collected a broad array of instruments to assess interests and various stylistic preferences. Summaries of these instruments can be found in Renzulli, 1994.)
2. *The Role of Enjoyment.* Learning is more effective when students enjoy what they are doing. Therefore, Type III experiences should be constructed and assessed with as much concern for enjoyment as for cognitive-growth goals.
3. *Personalization of Learning.* Learning is more meaningful and enjoyable when content (i.e., knowledge) and process (i.e., thinking skills, methods of inquiry) are learned within the context of a real and present problem. Attention should, therefore, be given to opportunities for personalizing student choice in problem selection, the relevance of the problem for individuals or groups, and strategies for assisting students in personalizing problems they might choose to study. Some formal instruction may be used in Type III Enrichment, but a major goal of this approach is to enhance students' development of and affection for investigative strategies.
4. *Methodological Resources.* The use of authentic methods of professional investigators, even when used at a junior level or in connection with investigations that are replications of already conducted work, are nevertheless the *sine qua non* of creative-productive (as opposed to lesson-learning) giftedness. Therefore, the major role of the teacher in Type III Enrichment is to assist young people in locating, understanding, and using methodological resources. Included in this role is the essential process of helping young people find and focus authentic problems. This role may require obtaining advice, direct involvement from persons with specialized knowledge or talent, or both.
5. *Focus on Products and Services.* Creative and productive individuals almost always pursue their work because they hope to have an impact on a particular audience. It is, in fact, this expectation that I believe brings energy, task commitment, and even passion to their work. I view the development of products in Type III learning contexts to be "the assembly plants of mind." Everything that one has learned—from basic skills to advanced levels of information, cognitive processing, and even interpersonal and intrapersonal skills—"comes together" in the development of a product or service that the producer hopes will inform, persuade, entertain, or cause others to believe or behave differently. It is interesting to note that when I first wrote about the important role products played in qualitative differentiation, other writers accused me of "exploiting" gifted students. I am pleased to report that many other writers in the field have now included a product dimension to their work.

By way of summary, the ultimate goal of Type III Enrichment and the key features that underlie it is to replace dependence and passive learning with independence and engaged learning. Although all but the most conservative educators will agree with these key features, much controversy exists about how these (or similar) features may be applied in everyday school situations. A danger also exists that these key features might be viewed as yet another idealized list of glittering generalities that cannot easily be manifested in schools that are overwhelmed by

the deductive model of learning and the standards-based and test-driven curricula. Developing a school program based on this approach to learning is not an easy task. Over the years, however, we have achieved a fair amount of success by gaining faculty, administrative, and parental consensus on a small number of easy-to-understand concepts and related services and by providing resources and training related to each concept and service-delivery procedure. On a personal note, I am especially proud of our annual summer Confratute Program, which, over the past 20 years has trained thousands of educators from around the world in practical ways to apply this pedagogy. When I open my mail and see yet another example of an outstanding product by a young person, I feel that my efforts—and those of my colleagues—have been worthwhile!

Phase 2: Regrets .. . I've Had a Few

I have been asked on several occasions where affective development or social and emotional development fit into the Three-Ring Conception of Giftedness and the Enrichment Triad Model. These aspects of overall development are obviously very important, although I must admit that my writing has not focused on them. Nor have I joined the coterie of speakers who argue that social and emotional development should be "the heart and soul" of the gifted student movement. I do believe, however, that my work has dealt with noncognitive development in two ways. The Type II dimension of the Triad model is a recommended vehicle for providing young people with process activities that deal with important issues, such as self-concept; interpersonal relations; and the development of feelings, attitudes, and values. At the same time, however, I believe that *canned* affective activities do not have as much potential for developing real affect as do experiences that cause young people to become personally involved in something that is affectively as well as substantively meaningful to them. In this regard, Type III Enrichment is a more important vehicle for promoting genuine affect and helping young people to explore dimensions of their social and emotional development. Thus, for example, we noted remarkable changes in attitude and commitment toward disabled persons when a group of middle school students developed a personal library of original, large-print stories for a partially sighted schoolmate. In another Type III investigation, a fifth-grade boy developed an original computer program to study the time, location, and frequency of arrests associated with drunk driving in his community. His work resulted in increased police patrols in high-incidence locations and a subsequent decline in drunk-driving incidents. He also started the first local chapter of Students Against Driving Drunk. A group of elementary students conducted a comprehensive study of the benefits of and procedures for composting household garbage. They prepared manuals for distribution to local citizens and mounted a vigorous public-awareness campaign. Their work was so successful that a grant was obtained to purchase a commercial composting unit for their school, and now all cafeteria waste is recycled by students to produce enriched soil.

These examples point out what I believe to be the most important part of the Three-Ring Conception and the Triad model—that is, encouraging talented young people to apply their abilities, creativity, and task commitment to solve personally meaningful problems they encounter in their schools and communities. It has long been my belief that the encouragement of these kinds of involvement will result in the development of values that focus on using one's gifts and talents to improve our world. These types of involvement also provide opportunities for real cooperativeness (as opposed to assigned cooperative activities), a better understanding of one's ability to make a difference, and the opportunity to experience and deal with real feelings.

A number of people have suggested that the Enrichment Triad Model has potential applications beyond those for which it was originally intended. One of these suggestions (by Donald Treffinger) led to a discussion of the model as a paradigm for creative productivity (Renzulli & Reis, 1993). Others have suggested that it has applications as a curriculum development model. We have, in fact, described a plan for using the Triad as a curricular organization plan within secondary subject matter classes (Reis & Renzulli, 1985); and I have incorporated many of the principles underlying the Triad in a curriculum theory entitled The Multiple Menu Model for Developing Differentiated Curriculum (Renzulli, 1988b). More recently, a book by Margaret Beecher (1995) has used the Triad model as a guide for developing curricular activities across all grade levels and subject matter areas. These initiatives notwithstanding, I regret that further thought and research were not devoted to the full ramifications of a complete curriculum development strategy based on the Triad model. I have taken a rather uncommon approach toward the coverage of regular curricular material and the development of special curricular units for high-achieving students. The reasons for this attitude are threefold. First, forces that are far more powerful than the gifted community have (and probably always will) determine the content of the regular curriculum. For this reason, I have simply argued for curricular modification (e.g., compacting) and other forms of differentiation according to individual rates and levels of performance and the replacement of already mastered material with enrichment activities, acceleration activities, or both. This approach does not solve the problem of an unchallenging curriculum, but it does offer a form of "damage control" so far as rapid learners are concerned. Second, accelerated content, either in the form of above-grade-level material or specially developed units "for the gifted," almost always follows the didactic pedagogy (i.e., prescribed, presented instruction) that dominates general education. This is frequently true even in cases where unusual or exotic topics of study are selected, where the focus is on broad themes or interdisciplinary topics, or when the writers of such materials claim to challenge the higher mental processes. Third, the developers of special units have not reported research in refereed journals that verifies the benefits for identified students *only*. Their claims are based mainly on an appeal to face validity, a concept that has generally been abandoned by modern theorists and researchers. Without more rigorous research, we are still left with the haunting question: Why don't we use these units with all students?

Another regret related to the Triad is that, despite my best efforts, persons using the model frequently focus on the individual cells rather than the interconnections that are portrayed by the arrows in the diagram. Each type of enrichment is intended to serve as leverage for the other types. All in all, however, I still stand solidly behind the Triad and believe that when used in combination with compacting and various acceleration options, it is a viable plan for developing both schoolhouse and creative productive giftedness.

The last regret related to the Triad is more nearly a challenge to myself—or any interested persons who might like to take on what could prove to be a very valuable endeavor. It was my hope when I developed the Triad and trained teachers in the use of the model that they would become proficient in locating Type II Enrichment materials and integrating them with various topics in the regular curriculum. Demands on teachers' time, however, have largely prevented this kind of undertaking. Nevertheless, there are hundreds, if not thousands, of excellent Type II enrichment materials available from dozens of publishers and noncommercial sources. Although these materials do not have a strong research base, it would be worthwhile to systematically gather information about user satisfaction based on the opinions of practitioner

experts (i.e., classroom teachers who have used the materials and who have some background in enrichment learning and teaching). If I had the time and resources, I would love to examine the quality of these materials and perhaps even do some controlled research on those that are widely used. But gathering and evaluating materials is only half the job! If we expect them to be used in more than a haphazard manner, someone will need to examine which junctures within the regular curriculum these materials can provide the most relevant extensions and enrichment. This project would, in effect, provide the field with an integrated scope and sequence framework of process-related materials.

Phase 3: The Schoolwide Enrichment Model

Special programs for the gifted reached their zenith in the United States in the early 1980s. But another force began to emerge in general education as the result of a federal report entitled A Nation At Risk (National Commission on Excellence in Education, 1983) that was to have an extremely unfavorable impact on the gifted education movement. This force was the powerful equity-in-education movement and a host of related school reform initiatives that sought to improve what was viewed as a declining education system. The inability of the education establishment to make any significant improvements in schooling for at-risk students, even after decades of federal and state expenditures in the billions of dollars, caused educational leaders and policy makers to seek nothing short of desperate solutions for school improvement.[7] One of these solutions was the elimination of grouping, and part and parcel of this thrust was doing away with special programs for the gifted. Political correctness fanned the flames of criticism about elitism, favoritism, disproportionate allocations of resources, the severe underrepresentation of minorities, and the "condition of separateness" that often existed between special and regular programs. Many gifted programs were eliminated or severely curtailed, funding in some states was decreased or withdrawn altogether, and leadership personnel in many state departments of education were dismissed. This criticism, not all of which was unjustified, opened the door for the first time to what Feldman (1992) called a true paradigm shift in the ways in which we view identification and programming for gifted and talented students. As a leading liberal in the field, this paradigm shift gave my work an opportunity for consideration that clearly did not exist under a conservative-dominated field.

In the mid-1980s, Sally Reis and I began experimenting with the feasibility of a plan that would incorporate the development of talents in all students (Olenchak & Renzulli, 1989). Our work in several school districts led us to understand that when excellent gifted programs were in place, benefits were clearly demonstrated for other students, as well. We believed that a broad-based approach to differentiation (i.e., not just for "the gifted") and respect for the abilities, interests, and learning styles of all students would (a) guard against charges of elitism and undemocratic practice, (b) provide a flexible vehicle for developing the talents of students who might otherwise go unrecognized, and (c) allow us to continue to serve our highest achieving students. In other words, a consistent, democratic philosophy of education for all students legitimizes differentiation for all students.

[7] In most cases, the myriad of school reform proposals had no basis in research; and, in many cases, they were blatant examples of political correctness. For an analysis of the impact of the reform movement and what we called "the quiet crisis in gifted education," see Renzulli and Reis, 1991.

These beliefs led to the development of the Schoolwide Enrichment Model (Renzulli & Reis, 1985, 1997), which will be described in the sections that follow. The direction we would take in this new work grew out of a number of concerns and experiences gained from our research on the Triad/Revolving Door Identification Model. As indicated in the section above on the Triad, I always believed that general enrichment (i.e., Types I and II) was good for all students as long as it was viewed as an invitation or stepping stone to higher levels of follow-up and if we provided the opportunities, resources, and encouragement for such follow-up.

We found in our research that when enrichment was viewed as a schoolwide goal and responsibility, a number of good things started to happen for all of the major participants (identified students, nonidentified students, special program teachers, and regular classroom teachers). First and foremost, the *us-and-them* barriers started to disappear between both identified and nonidentified students and between regular and special program teachers. Classroom teachers were more willing to carry out curriculum compacting for their highest achieving students. This service, in and of itself, dramatically increased the amount of differentiation for high-achieving students. Classroom teachers also became more skillful at spotting high levels of interest and submitting Action Information Messages[8] to resource teachers, and the majority of classroom teachers participated more eagerly in planning and carrying out Types I and II Enrichment. Many teachers who had previously felt "left out" and even insulted because identified students went to "the gifted teacher" now felt that their strengths and contributions were recognized and that they had a part to play in developing high levels of student performance.

Resource teachers' attitudes also changed. Rather than feeling isolated and sometimes even alienated from other teachers, they began to feel more like members of a team with a common, talent-development mission. They experienced satisfaction as a result of sharing some of their general enrichment know-how with classroom teachers, and they were able to concentrate their efforts with targeted students on Type III Enrichment. This concentration gave the resource teachers stronger feelings of specialization, especially in view of the fact that so much of their previous focus on thinking skills was now being assimilated into the regular curriculum. Changes in attitude were also observed among identified and nonidentified students; however, these impressions from informal observation now pointed to the need for some systematic research. Before summarizing this research, a brief overview of the model will be presented.

A Bird's Eye View of The Schoolwide Enrichment Model

The Schoolwide Enrichment Model is a detailed blueprint for total school improvement that is flexible enough to allow each school to develop its own unique program based on local resources, student populations, school leadership dynamics, and faculty strengths and creativity. Although this research-supported model is based on highly successful practices that had their origins in special programs for gifted and talented students, its major goal is to promote both challenging and enjoyable *high-end learning* across the full range of school types, levels, and demographic differences. The model is not intended to replace or minimize existing services to

[8] An Action Information Message is a form that is used to document and refer a student for additional services in areas of advanced ability, high levels of interest, or unusual expressions of creativity.

high-achieving students. Rather, its purpose is to integrate these services into *a-rising-tide-lifts-all-ships* approach to school improvement and to expand the role of enrichment specialists by having these persons infuse specific practices for high-end learning into the total school program. The SEM provides educators with the means to

- **Develop** the talent potentials of young people by systematically assessing their strengths; by providing enrichment opportunities, resources, and services to develop the strengths; and by using a flexible approach to curricular differentiation and the use of school time.
- **Improve** the academic performance of all students in all areas of the regular curriculum and to blend standard curriculum activities with meaningful enrichment learning.
- **Promote** continuous, reflective, growth-oriented professionalism of school personnel to such an extent that many faculty members emerge as leaders in curriculum and staff development, program planning, and so forth.
- **Create** a learning community that honors ethnic, gender, and cultural diversity and promotes mutual respect, democratic principles, and the preservation of the Earth's resources.
- **Implement** a collaborative school culture that includes appropriate decision-making opportunities for students, parents, teachers, and administrators.

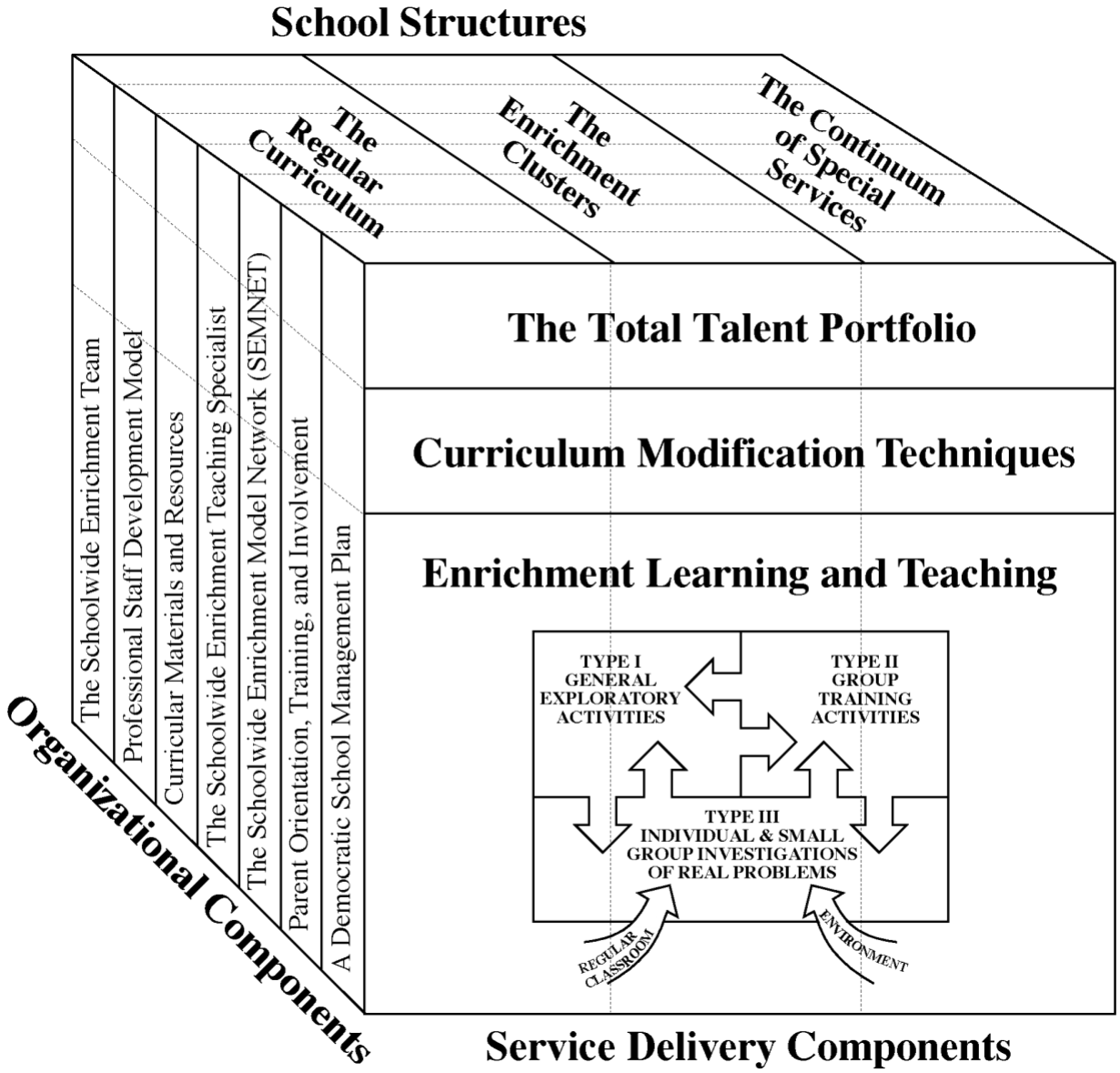
The Schoolwide Enrichment Model consists of three interacting dimensions (see Figure 2). Two dimensions, called the *organizational components* and the *service delivery components*, are brought to bear on a third dimension that represents such various school structures as the regular curriculum; a variety of enrichment situations; and a continuum of services that ranges from enrichment in the regular classroom to special projects, internship opportunities, various grouping arrangements (including special classes and special schools), and a broad array of out-of-school enrichment opportunities.[9] The organizational components are resources used to support program development, such as staff training materials, an enrichment materials database, procedures for staff teaming and interaction, and vehicles for promoting parent and community involvement. These components are cross-referenced with the following three service delivery components, which are direct services to students and form the centerpiece of the model.

The Total Talent Portfolio (TTP)

The Total Talent Portfolio is a component of the model that is used for systematically gathering and recording information about students' abilities, interests, and learning-styles preferences. Best-case samples of students' work as well as information resulting from interest and learning-styles assessment scales and expression-styles preference scales (Kettle, Renzulli, &. Rizza, 1998) are reviewed and analyzed cooperatively by students and teachers in order to make meaningful decisions about necessary curricular modifications and enrichment opportunities that capitalize on students' strengths and interests. The major dimensions of the portfolio and the specific items that guide data gathering within each dimension are presented in Figure 3. The major purposes of the Total Talent Portfolio are

[9] For a detailed description of the continuum of special services, see Renzulli, 1994, pp. 76–80.

Figure 2. The Schoolwide Enrichment Model



- To **collect** several different types of information that portray a student's strength areas and to regularly update this information;
- To **classify** this information into the general categories of abilities, interests, and learning styles and related markers of successful learning, such as organizational skills, content area preferences, personal and social skills, preferences for creative productivity, and learning-how-to-learn skills;

Figure 3. The Dimensions of the Total Talent Portfolio

Abilities	*Interests*	*Style Preferences*	*Style Preferences*	*Style Preferences*	*Style Preferences*
Maximum Performance Indicators	**Interest Areas**	**Instructional Styles Preferences**	**Learning Environment Preferences**	**Thinking Style Preferences**	**Expression Style Preferences**
Tests • Standardized • Teacher-Made Course Grades Teacher Ratings Product Evaluation • Written • Oral • Visual • Musical • Constructed (Note differences between assigned and self-selected products) Level of Participation in Learning Activities Degree of Interaction With Others Ref: General Tests and Measurements Literature	Fine Arts Crafts Literary Historical Mathematical/ Logical Physical Sciences Life Sciences Political/ Judicial Athletic/ Recreation Marketing/ Business Drama/Dance Musical Performance Musical Composition Managerial/ Business Photography Film/Video Computers Others (Specify) Ref: Renzulli, 1977b	Recitation & Drill Peer Tutoring Lecture Lecture/ Discussion Discussion Guided Independent Study* Learning/ Interest Center Simulation, Role Playing, Dramatization, Guided Fantasy Learning Games Replicative Reports or Projects* Investigative Reports or Projects* Unguided Independent Study* Internship* Apprenticeship* * With or without a mentor Ref: Renzulli & Smith, 1978b	Inter/Intra Personal • Self-Oriented • Peer-Oriented • Adult-Oriented • Combined Physical • Sound • Heat • Light • Design • Mobility • Time of Day • Food Intake • Seating Ref: Amiable, 1983; Dunn, Dunn, & Price, 1977; Gardner, 1983	Analytic (School Smart) Synthetic/ Creative (Creative, Inventive) Practical/ Contextual (Street Smart) Legislative Executive Judicial Ref: Sternberg, 1984, 1988	Written Oral Manipulative Discussion Display Dramatization Artistic Graphic Commercial Service Ref: Renzulli & Reis, 1985; Kettle, Renzulli, & Rizza, 1998

- To periodically **review and analyze** the information in order to make purposeful decisions about providing opportunities for enrichment experiences in the regular curriculum, the enrichment clusters, and the continuum of special services;
- To **negotiate** various acceleration and enrichment learning options and opportunities between teacher and student through participation in a shared decision-making process;
- To **use the information** as a vehicle for educational, personal, and career counseling and for communicating with parents about the school's talent-development opportunities and their child's involvement in them.

Our experience has shown that students achieve autonomy and ownership of the TTP by assuming major responsibility in the selection of items to be included, maintaining and regularly updating the portfolio, and setting personal goals by making decisions about items they would like to include in the portfolio. Although the teacher should serve as a guide in the portfolio review process, the ultimate goal is to create autonomy in students by turning control for the management of the portfolio over to them.

Curriculum-Modification Techniques

The second service delivery component of the Schoolwide Enrichment Model consists of a series of techniques that are designed to (a) assess each student's mastery level of regular auricular material; (b) adjust the pace and level of required material to accommodate variations in learning; and (c) provide enrichment and acceleration alternatives for students who have, or can, easily master regular material at a more rapid pace. The first curriculum-modification procedure is carried out for individuals—and for small groups of students working at approximately the same level—through a systematic process called curriculum compacting. This three-step process consists of defining the goals and outcomes of a particular unit of study, determining and documenting which students have already mastered most or all of a specified set of learning outcomes (or which students are capable of mastery at an accelerated pace), and providing replacement activities that are pursued during the time gained by compacting the regular curriculum. These options include content acceleration, self-selected individual or group research projects, peer teaching, and a variety of out-of-class or nonschool activities. Research on curriculum compacting has shown that this process can easily be learned and implemented by teachers at all levels and that students using this process benefit academically.

A second procedure for making adjustments in regular curriculum on a more widespread basis is the examination of textbooks and workbooks to determine which parts can be economized upon through the *surgical* removal of excessive practice material. Based on the belief that *less is better* when it comes to promoting greater depth in learning, this process also includes replacement activities in the form of direct teaching of thinking skills and curriculum development options for high-end learning based on the Multiple Menu Model (Renzulli, 1988b). This model for curriculum differentiation focuses on using representative concepts, themes, patterns, organizing structures, and investigative methodologies to capture the essence of a topic both within traditional domains of knowledge and in interdisciplinary studies. In-depth learning also requires increasingly complex information that moves up the hierarchy of knowledge: from facts to principles, generalizations, and theories. These skills, plus the use of

advanced-level knowledge, form the cognitive structures and problem-solving strategies that endure long after students have forgotten the factual material that is the focus of so much traditional learning. The surgical removal of repetitive practice material provides the time for the types of experiences described in the section that follows.

Enrichment Learning and Teaching

Enrichment learning and teaching is a systematic set of strategies designed to promote active engagement in learning on the parts of both teachers and students. In a certain sense, the approach strives to do everything the opposite from traditional, didactic teaching; and it draws upon both the rationale and the methodology of Type III Enrichment.

Although enrichment learning and teaching can be used in all school structures (e.g., regular curriculum, special groupings, internships), we have found that creating a special *place* in the schedule is the best way to guarantee that every student will have an opportunity to participate in this different approach to learning. This special place is called enrichment clusters, and the major pedagogical method used in the clusters is an inductive approach to learning based on the Enrichment Triad Model. Our experience has shown that implementing these clusters provides immediate visibility to the schoolwide improvement process and a remarkable amount of enthusiasm on the parts of students, teachers, and parents. The clusters have also served another important purpose for highly able and motivated students, especially in those schools that have minimized or eliminated grouping and in schools that have moved from pull-out models to consulting-teacher models. This purpose can best be described as performance-based identification followed by supplementary services. We have had numerous examples of students who got started on a project in a cluster and then went on to do a long and very intensive follow-up study under the direction of a resource teacher, a mentor from the community, or an interested member of the general school faculty. I sometimes refer to this arrangement as a *spin-out* rather than a pull-out approach. That is, interest and momentum are gained in a cluster, after which the student spins out to a more advanced and focused learning situation.

Enrichment clusters are nongraded groups of students who share common interests and who come together to pursue these interests during specially designated time blocks usually consisting of one-half day per week. There is one "golden rule" for enrichment clusters: *Everything students do in the cluster is directed toward producing a product or delivering a service for a real-world audience.* This rule forces the issue of learning only relevant content and using only authentic processes within the context of student-selected product or service-development activities. All teachers (including music, art, physical education, and so forth) are involved in facilitating the clusters, and numerous schools using this vehicle have also involved parents and other community resource persons. Adult involvement in any particular cluster should be based on the same type of interest assessment that is used for students in selecting clusters of choice.

Like extracurricular activities and such programs as 4-H and Junior Achievement, the clusters meet at designated times and operate on the assumption that students and teachers (or community resource people) want to be there. The clusters place a premium on the development of higher order thinking skills and the creative and productive application of these skills to real-world situations. Common goals make *real* cooperativeness a necessity; and divisions of labor

within the clusters allow for differentiated levels of expertise and involvement, varying levels of challenge, and opportunities for different types of leadership to emerge on the parts of students. This type of learning environment is highly supportive of individual differences. Therefore, it promotes the development of self-concept, self-efficacy, and positive feelings that result from being a member of a goal-oriented team. To put it another way: *Every child is special if we create conditions in which that child can be a specialist within a specialized group.*

Enrichment clusters revolve around major disciplines, interdisciplinary themes, or cross-disciplinary topics. A theatrical-television production group, for example, might include actors, writers, technical specialists, and costume designers. Clearly, the clusters deal with how-to knowledge, authentic problem-solving strategies, and interpersonal relations that are typically used in studios, laboratories, businesses, and other places where work is directed toward producing a product or service. Instead of lesson plans or unit plans, three key questions guide the type of learning that is the goal of enrichment clusters:

- What do people with an interest in this area—for example, filmmaking—do?
- What knowledge, materials, and other resources do we need to authentically complete activities in this area?
- In what ways can we use the product or service to have an impact on the intended audience?

Clusters are offered for an extended time block—usually one-half day per week—and they sometimes continue over several semesters (or even years) if interest remains high and there is a continuous escalation of student engagement and product quality. Students enter a cluster based on interests and other information gleaned from the Total Talent Portfolio. Students who develop a high degree of expertise in a particular area are sometimes asked to serve as an assistant or a facilitator of their own cluster (usually with younger students). Clusters also serve as vehicles for identifying which students might want to revolve into an intensive Type III Enrichment situation that is carried out under the direction of a resource teacher or another adult mentor from within or outside the school.

Research on the Schoolwide Enrichment Model

Over the years, we have conducted a wide variety of research studies to examine the effectiveness of various components of the Schoolwide Enrichment Model (Renzulli & Reis, 1994). These studies generally fall into the following categories: the effects of the SEM as perceived by teachers, administrators, parents and students; the creativity and the quality of student products; the effects of staff development on students' creative productivity; personal and social development and social acceptability of students in SEM programs; the effects of SEM participation on underachievers, learning-disabled students, and vocational-technical school students; the effects of the SEM on self-efficacy and learning styles; and the effects of enrichment clusters on a broad range of student-, teacher-, and school-improvement variables. The details of this research are beyond the scope of this paper. However, an appendix to this article includes the references, populations studied, and the major findings of each study. Studies related to the Revolving Door Identification Model and curriculum compacting have been cited earlier in this article.

Because the SEM is the newest aspect of our work and because each school is encouraged to implement the model in ways that respect local beliefs, resources, demographics, state guidelines, and local politics, we will continue to conduct new research on the model in the future. This research will undoubtedly result in modifications to both the theory underlying the model and to the practical procedures necessary for implementing the model. When it comes to the most theoretically sound and fundamentally feasible ways to develop the potentials of young people, our work is never complete!

The Relationship Between Gifted Programs and Providing High-End Learning Opportunities for All Students

The overall mission of the SEM is to escalate the level and quality of learning experiences for any and all students capable of manifesting high levels of performance in any and all areas of the curriculum. This plan is not intended to replace existing services to students who are identified as gifted according to various state or local criteria. Rather, the model should be viewed as an umbrella under which many different types of enrichment and acceleration services are made available to targeted groups of students as well as all students within a given school, grade level, or classroom. The center piece of the model is the development of *differentiated* learning experiences that take into consideration each student's abilities, interests, and learning styles. As part of this mission, the model provides guidance for the development of challenging and appropriate educational opportunities for all young people, regardless of differences in demographic and economic backgrounds or differences in the rates, styles, and levels at which they learn. I believe that true equity can only be achieved when we acknowledge individual differences in the students we serve and when we recognize that high-achieving students have as much right to accommodations in their schooling as do students who are experiencing learning difficulties. I also believe that equity is not the product of identical learning experiences for all students. Rather, it is the product of a broad range of differentiated experiences that are delivered through a diversified continuum of services. In the SEM, this continuum ranges from general enrichment for all students to highly specialized grouping arrangements, advanced courses, supplementary programs in and out of school, and even special schools and summer programs on college campuses. These specified activities take place within regular classrooms on an individual or small-group basis in grouping arrangements that are purposefully formed because of advanced achievement levels, high levels of interest in particular subjects or problems, or strong motivation to pursue the development of a common product or service. Advanced opportunities can also take place outside the school in special internship or mentorship situations, in magnet schools or special theme high schools, at cultural institutions, in summer programs or programs offered by colleges or universities, or anywhere else where highly capable and motivated youth can gain knowledge and experience that are not ordinarily available in the regular school program. And once again, it is important to point out that a major substructure of the model is that all regular curricular material should be subject to modification according to the learning rates and learning styles of individual students.

The SEM is based on the broadened conception of giftedness discussed above. This definition focuses on the many kinds of aptitudes, talents, and potentials for advanced learning and creative productivity that exist in all school populations. The goal is not to certify some students as gifted and others as nongifted, but, rather, to provide every student with the opportunities, resources, and encouragement necessary to achieve his or her maximum potential.

In the SEM, the "language" of the model is that of *labeling the services, not the student.* Examples of labeled services include a special minicourse for all fourth graders in how to access the Internet, an advanced-placement course in chemistry, a multiage cluster group in mathematics for high-achieving students, a special enrichment cluster for all students interested in filmmaking, assigned time in a resource room to work on a research project, and curriculum compacting for students who have already mastered the material to be covered in an upcoming unit of study.

Young people display or have the potential to display their individuality and uniqueness in many ways. Some students learn at faster rates and higher levels of comprehension than others. Sometimes, this learning may be in one or two content areas, and in other cases it may be across the entire curriculum. Similarly, some students are more creative or artistic than others; and still others may demonstrate potentials for excellence in leadership, organizational skills, or interpersonal relations.

A total talent-development model should give special consideration to schools that serve young people who may be at risk because of limited English proficiency, economically limited circumstances, or because they attend poor-quality schools. I believe it is in these schools and among these student populations that extraordinary, indeed heroic, efforts should be made to identify and cultivate the high-level talents of young people, talents that historically have gone unrecognized and underdeveloped.

Finally, I want to emphasize that if this model is to be effective, it must have task-specific personnel. Resource teachers are crucial for providing the face-to-face services to identified students and for infusing a broad array of enrichment services into the general education program. Without such personnel, the best intentions will quickly melt away into the frequently amorphous and sometimes unwieldy mass of general education.

Phase 3: Concerns and Concluding Thoughts

My concern about the Schoolwide Enrichment Model is more nearly a fear than a regret. The SEM is intended to be an umbrella under which a broad array of challenging and enjoyable enrichment practices can be made available to all students who vary in abilities, interests, and learning styles. Equity for all means that we must respect all three of these differences and that we must be committed enough and clever enough to find ways to respect them. I would be extremely disappointed if someone said, "We don't have a gifted program because we use Schoolwide Enrichment." Our intention in developing the SEM was never to replace special programs. Rather, it is our hope that by applying good learning principles to all students, we will diffuse traditional criticisms of gifted programs and make schools places where scholarship, creativity, and enthusiasm for learning are honored and respected. Our highest achieving students will fare far better in an atmosphere where all learners and teachers place a premium on these attributes; and they will, in turn, contribute to a radiation of excellence that is the hallmark of a good school. If we expect services to our most able students to transcend the on-again, off-again history that has characterized the gifted student movement, advocates must once and for all realize that the best and most enduring programs can only prosper in generally good schools. *A rising tide lifts all ships.* As an advocate of special services for gifted programs, I realized years ago that I am morally and educationally responsible for devoting whatever contributions I might

make to the difficult—but not impossible—task of insuring the best possible education for each and every student that comes through the schoolhouse door. The gifted education community has played a pioneering role in developing some of the best strategies available for challenging the abilities of bright young people. The larger and, I believe, more noble challenge before us is to examine the extent to which our small but dedicated field can have a major impact on general education.

Finally, when all is said and done, I believe that my work is nothing more than organized common sense. Although it is frequently referred to as a "theory" of gifted education, I have tried to make all of my work as practical as possible. The best theories are of little value in an applied field of knowledge if they do not make sense by providing specific strategies and guidance to practitioners, the persons we hope will use them in the best interests of young people. In rethinking the many different things I have done over the past quarter century, it occurred to me that the theoretical aspects were certainly challenging; but it was the practical aspects that made it fun.

References

Albert, R. S. (1975). Toward a behavioral definition of genius. *American Psychologist, 30*(2), 140–151. https://doi.org/10.1037/h0076861

Albert, R. S., & Runco, M. A. (1986). The achievement of eminence: A model based on a longitudinal study of exceptionally gifted boys and their families. In R. J. Sternberg & J. E. Davidson (Eds.), *Conceptions of giftedness* (pp. 332–357). New York: Cambridge University Press.

Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist, 37*(2), 122–147. https://doi.org/10.1037/0003-066X.37.2.122

Baum, S. M. (1985). *Learning disabled students with superior cognitive abilities: A validation study of descriptive behavior.* Unpublished doctoral dissertation, The University of Connecticut, Storrs.

Baum, S. M. (1988). An enrichment program for gifted learning disabled students. *Gifted Child Quarterly, 32*(1), 226–230. https://doi.org/10.1177/001698628803200108

Baum, S. M., Renzulli, J. S., & Hébert, T. P. (1995). Reversing underachievement: Creative productivity as a systematic intervention. *Gifted Child Quarterly, 39*(4), 224–235. https://doi.org/10.1177/001698629503900406

Beecher, M. (1995). *Developing the gifts and talents of all students in the regular classroom.* Mansfield Center, CT: Creative Learning Press.

Bloom, B. S. (Ed.). (1956). Taxonomy of educational objectives handbook 1: Cognitive domain. New York: David McKay Company.

Burns, D. E. (1987). *The effects of group training activities on student's creative productivity.* Unpublished doctoral dissertation, The University of Connecticut, Storrs.

Busse, T. V., & Mansfield, R. S. (1980). Renzulli is right. *Gifted Child Quarterly, 24*(3), 132. https://doi.org/10.1177/001698628002400308

Cooper, C. R. (1983). *Administrator's attitudes towards gifted programs based on the enrichment triad/revolving door identification model: Case studies in decision making.* Unpublished doctoral dissertation, The University of Connecticut, Storrs.

Davis, G. A., & Rimm, S. B. (1985). *Education of the gifted and talented.* Englewood Cliffs, NJ: Prentice Hall.

Delcourt, M. A. B. (1988). *Characteristics related to high levels of creative/productive behavior in secondary school students: A multi-case study.* Unpublished doctoral dissertation, The University of Connecticut, Storrs.

Delcourt, M. A. B. (1993). Creative productivity among secondary school students: Combining energy, interest and imagination. *Gifted Child Quarterly, 37*(1), 23–31. https://doi.org/10.1177/001698629303700104

Delisle, J. R., Reis, S. M., & Gubbins, E. J. (1981). The revolving door identification and programming model: Some preliminary findings. *Exceptional Children, 48*(2), 152–156. https://doi.org/10.1177%2F001440298104800209

Delisle, J. R., & Renzulli, J. S. (1982). The revolving door identification and programming model: Correlates of creative production. *Gifted Child Quarterly, 26*(2), 89–95. https://doi.org/10.1177/001698628202600209

Dunn, R., Dunn, K., & Price, G. E. (1977). Diagnosing learning styles: Avoiding malpractice suits. *Phi Delta Kappan, 58*(5), 418–420. https://www.jstor.org/stable/20298612

Emerick, L. J. (1988). *Academic under achievement among the gifted: Students' perceptions of factors relating to the reversal of the academic underachievement pattern.* Unpublished doctoral dissertation, The University of Connecticut, Storrs.

Feldman, D. H. (1992). Has there been a paradigm shift in gifted education? In N. Colangelo, S. G. Assouline, & D. L. Ambroson (Eds.), *Talent development: Proceedings from the 1991 Henry B. and Jocelyn Wallace National Research Symposium on Talent Development* (pp. 89–94). Unionville, NY: Trillium Press.

Gagné, F. (1985). Giftedness and talent: Reexamining a reexamination of definitions. *Gifted Child Quarterly, 29*(3), 103–112. https://doi.org/10.1177/001698628502900302

Gallagher, J. J. (1985). *Teaching the gifted child* (3rd ed.). Boston: Allyn & Bacon.

Gardner, H. (1983). *Frames of mind: The theory of multiple intelligences.* New York: Basic Books.

Goleman, D. (1995). *Emotional intelligence: Why it can matter more than IQ.* New York: Bantam Books.

Gubbins, E. J. (1982). *Revolving door identification model: Characteristics of talent pool students.* Unpublished doctoral dissertation, The University of Connecticut, Storrs.

Guilford, J. P. (1967). *The nature of human intelligence.* New York: McGraw-Hill.

Heal, M. M. (1989). *Student perceptions of labeling the gifted: A comparative case study analysis.* Unpublished doctoral dissertation, The University of Connecticut, Storrs.

Hébert, T. P. (1993). Reflections at graduation: The long-term impact of elementary school experiences in creative productivity. *Roeper Review, 16*(1), 22–28. https://doi.org/10.1080/02783199309553529

Imbeau, M. B. (1991). *Teachers' attitudes toward curriculum compacting: A comparison of different inservice strategies.* Unpublished doctoral dissertation, The University of Connecticut, Storrs.

Jarrell, R. H., & Borland, J. H. (1990). The research base for Renzulli's three-ring conception of giftedness. *Journal for the Education of the Gifted, 13*(4), 288–308. https://doi.org/10.1177/016235329001300402

Jellen, H. G. (1983, November 14). *Renzulli-itis: A national disease in gifted education.* Paper presented at the Illinois State Conference on the Gifted, Peoria, IL.

Jellen, H. G. (1985). Renzulli's enrichment scheme for the gifted: Educational accommodation of the gifted in the American context. *Gifted Education International, 3*(1), 12–17. https://doi.org/10.1177/026142948500300103

Karafelis, P. (1986). *The effects of the tri-art drama curriculum on the reading comprehension of students with varying levels of cognitive ability.* Unpublished doctoral dissertation, The University of Connecticut, Storrs.

Kettle, K. E., Renzulli, J. S., & Rizza, M. G. (1998). Products of mind: Exploring student preferences for product development using My Way … An Expression Style Instrument. *Gifted Child Quarterly, 42*(1), 49–60. https://doi.org/10.1177/001698629804200106

Kohlberg, L., & Mayer, R. (1972). Development as the aim of education. *Harvard Education Review, 42*(4), 449–496. https://psycnet.apa.org/doi/10.17763/haer.42.4.kj6q8743r3j00j60

Kontos, S., Carter, K. R., Ormrod, J. E., & Cooney, J. B. (1983). Reversing the revolving door: A strict interpretation of Renzulli's definition of giftedness. *Roeper Review, 6*(1), 35–39. https://doi.org/10.1080/02783198309552743

Krathwohl, D. R., Bloom, B. S., & Masia, B. B. (1964). *Taxonomy of educational objectives, handbook 2: Affective domain.* New York: David McKay.

Maker, C. J. (1982). *Teaching models in education of the gifted.* Rockville, MD: Aspen.

Marland, S. P. (1972). *Education of the gifted and talented: Report to the Congress of the United States by the U.S. Commissioner of Education.* Washington, DC: U.S. Government Printing Office.

National Commission on Excellence in Education. (1983). *A nation at risk: The imperative of educational reform. Report to the Nation and the Secretary of Education.* Washington, DC: U.S. Government Printing Office. https://files.eric.ed.gov/fulltext/ED226006.pdf

Olenchak, F. R. (1988). The schoolwide enrichment model in the elementary schools: A study of implementation stages and effects on educational excellence. In J. S. Renzulli (Ed.), *Technical report on research studies relating to the revolving door identification model* (2nd ed., pp. 201–247). Storrs: Bureau of Educational Research, The University of Connecticut.

Olenchak, F. R. (1990). School change through gifted education: Effects on elementary students' attitudes toward learning. *Journal for the Education of the Gifted, 14*(1), 66–78. https://doi.org/10.1177/016235329001400108

Olenchak, F. R., & Renzulli, J. S. (1989). The effectiveness of the Schoolwide Enrichment Model on selected aspects of elementary school change. *Gifted Child Quarterly, 33*(1), 36–46. https://doi.org/10.1177/001698628903300106

Reis, S. M., Gentry, M., & Park, S. (1995). *Extending the pedagogy of gifted education to all students* (Research Monograph 95118). Storrs: University of Connecticut, The National Research Center on the Gifted and Talented.

Reis, S. M., & Renzulli, J. S. (1982). A case for the broadened conception of giftedness. *Phi Delta Kappan, 63*(9), 619–620. https://www.jstor.org/stable/20386477

Reis, S. M., & Renzulli, J. S. (1985). The secondary level enrichment triad model: Excellence without elitism. *NASSP Bulletin, 69*(482), 31–38. https://doi.org/10.1177/019263658506948205

Reis, S. M., Westberg, K. L., Kulikowich, J., Caillard, F., Hébert, T., Plucker, J., Purcell, J. H., Rogers, J. B., & Smist, J. M. (1993). *Why not let high ability students start school in January? The curriculum compacting study* (Research Monograph 93106). Storrs: University of Connecticut, The National Research Center on the Gifted and Talented.

Reis, S. M., Westberg, K. L., Kulikowich, J. M., & Purcell, J. H. (1998). Curriculum compacting and achievement test scores: What does the research say? *Gifted Child Quarterly, 42*(2), 123–127. https://doi.org/10.1177/001698629804200206

Renzulli, J. S. (1967). The evaluation of programs of differential education for the gifted. *University of Virginia Education Review, 5,* 45–48.

Renzulli, J. S. (1977). *The Enrichment Triad Model: A guide for developing defensible programs for the gifted and talented.* Mansfield Center, CT: Creative Learning Press.

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. (1982a). Dear Mr. and Mrs. Copernicus: We regret to inform you... *Gifted Child Quarterly, 26*(1), 11–14. https://doi.org/10.1177/001698628202600103

Renzulli, J. S. (1982b). What makes a problem real: Stalking the illusive meaning of qualitative differences in gifted education. *Gifted Child Quarterly, 26*(4), 147–156. https://doi.org/10.1177/001698628202600401

Renzulli, J. S. (1985). A bull's-eye on my back: The perils and pitfalls of trying to bring about educational change. *Gifted Education International, 3*(1), 18–23. https://doi.org/10.1177/026142948500300104

Renzulli, J. S. (1986). The three-ring conception of giftedness: A developmental model for creative productivity. In R. J. Sternberg & J. E. Davidson (Eds.), *Conceptions of giftedness* (pp. 53–92). New York: Cambridge University Press.

Renzulli, J. S. (Ed.). (1988a). *Technical report on research studies related to the revolving door identification model.* Storrs: The University of Connecticut, Bureau of Educational Research.

Renzulli, J. S. (1988b). The Multiple Menu Model for developing differentiated curriculum for the gifted and talented. *Gifted Child Quarterly, 32*(3), 298–309. https://doi.org/10.1177/001698628803200302

Renzulli, J. S. (1988c). A decade of dialogue on the three-ring conception of giftedness. *Roeper Review, 11*(1), 18–24. https://doi.org/10.1080/02783198809553154

Renzulli, J. S. (1990). Torturing the data until they confess: An analysis of the analysis of the three ring conception of giftedness. *Journal of Education for the Gifted, 13*(4), 309–331. https://doi.org/10.1177/016235329001300403

Renzulli, J. S. (1992). A general theory for the development of creative productivity in young people. In F. J. Monks, W. A. M. Peters (Eds.), *Talent for the future: Social and personality development of gifted children* (pp. 51–72). Proceedings of the Ninth World Conference on Gifted and Talented Children. Assen/Maastricht, The Netherlands: Van Gorcum.

Renzulli, J. S. (1994). *Schools for talent development: A practical plan for total school improvement.* Mansfield Center, CT: Creative Learning Press.

Renzulli, J. S., & Nearine, R. (1968). A curriculum development project for academically gifted students. *Accent on Talent (NEA), 2,* 9–12.

Renzulli, J. S., & Owen, S. V. (1983). The Revolving Door Identification Model: If it ain't busted don't fix it, if you don't understand it, don't nix it. *Roeper Review, 6*(1), 39–41. https://doi.org/10.1080/02783198309552744

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. (1991). The reform movement and the quiet crisis in gifted education. *Gifted Child Quarterly, 35*(1), 26–35. https://doi.org/10.1177/001698629103500104

Renzulli, J. S., & Reis, S. M. (1993). Developing creative productivity through the enrichment triad model. In S. G. Isaksen, M. C. Murdock, R. L. Firestien, & D. J. Treffinger (Eds.), *Nurturing and developing creativity: The emergence of a discipline* (pp. 70-99). Norwood, NJ: Ablex.

Renzulli, J. S., & Reis, S. M. (1994). Research related to the Schoolwide Enrichment Triad Model. *Gifted Child Quarterly, 38*(1), 7–20. https://doi.org/10.1177/001698629403800102

Renzulli, J. S., & Reis, S. M. (1997). *The Schoolwide Enrichment Model: A how-to guide for educational excellence* (2nd ed.). 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.

Renzulli, J. S., Smith, L. H., & Reis, S. M. (1982). Curriculum compacting: An essential strategy for working with gifted students. *The Elementary School Journal, 82*(3), 185–194. https://www.jstor.org/stable/1001569

Renzulli, J. S., Smith, L. H., White, A. J., Callahan, C. M., & Hartman, R. K. (1976). *Scales for rating the behavioral characteristics of superior students.* Mansfield Center, CT: Creative Learning Press.

Schack, G. D. (1986). *Creative productivity and self-efficacy in children.* Unpublished doctoral dissertation, The University of Connecticut, Storrs.

Simonton, D. K. (1978). The eminent genius in history: The critical role of creative development. *Gifted Child Quarterly, 22*(2), 187–195. https://doi.org/10.1177/001698627802200212

Skaught, B. J. (1987). *The social acceptability of talent pool students in an elementary school using the schoolwide enrichment model.* Unpublished doctoral dissertation, The University of Connecticut, Storrs.

Starko, A. J. (1986). *The effects of the revolving door identification model on creative productivity and self-efficacy.* Unpublished doctoral dissertation, The University of Connecticut, Storrs.

Sternberg, R. J. (1984). Toward a triarchic theory of human intelligence. *Behavioral and Brain Sciences, 7*(2), 269–287. https://psycnet.apa.org/doi/10.1017/S0140525X00044629

Sternberg, R. J. (1985). A componential theory of intellectual giftedness. *Gifted Child Quarterly, 25*(2), 86–93. https://doi.org/10.1177/001698628102500208

Sternberg, R. J. (1988). Mental self-government: A theory of intellectual styles and their development. *Human Development, 31*(4), 197–221. https://psycnet.apa.org/doi/10.1159/000116587

Tannenbaum, A. J. (1986). Giftedness: A psychosocial approach. In R. J. Sternberg & J. E. Davidson (Eds.), *Conceptions of giftedness* (pp. 21–52). New York: Cambridge University Press.

Torrance, E. P. (1963). *Education and the creative potential.* Minneapolis: The University of Minnesota Press.

Treffinger, D. J. (1987). Book review: Critical issues in gifted education: Defensible Programs for the Gifted. *Journal for the Education of the Gifted, 10*(4), 324–331. https://doi.org/10.1177/016235328701000409a

VanTassel-Baska, J. (1998). *Excellence in educating gifted and talented learners.* Denver, CO: Love Publishing.
Ward, V. S. (1961). *Educating the gifted: An axiomatic approach.* Columbus, OH: Merrill.
Webb, J. T., Meckstroth, E. A., & Tolan, S. S. (1982). *Guiding the gifted child.* Columbus, OH: Ohio Psychology Publishing Company.

Appendix A

Research Related to the Schoolwide Enrichment Model

Author & Date	Title of study	Samples*	Major finding
Cooper, 1983	Administrator's attitudes toward gifted programs based on the Enrichment Triad/Revolving Door Identification Model: Case studies in decision making	8 districts *n* = 32	• Administrator perceptions regarding the model included: greater staff participation in education of high-ability students, more positive staff attitudes toward the program, fewer concerns about identification, positive changes in how the guidance department worked with students, more incentives for students to work toward higher goals. • Administrator found SEM to have significant impact on all students.
Baum, 1985	Learning-disabled students with superior cognitive abilities: A validation study of descriptive behaviors	E *n* = 112	• SEM recommended as one vehicle to meet the unique needs of gifted students with learning disabilities because of the emphasis on strengths, interests, and learning styles.
Karafelis, 1986	The effects of the tri-art drama curriculum on the reading comprehension of students with varying levels of cognitive ability.	E, M *n* = 80	• Students receiving experimental treatment did equally well on achievement tests as the control group.
Schack, 1986	Creative productivity and self-efficacy in children	E, M *n* = 294	• Self-efficacy was a significant predictor of initiation of an independent investigation, and self-efficacy at the end of treatment was higher in students who participated in Type III projects.

Author & Date	Title of study	Samples*	Major finding
Starko, 1986	The effects of the Revolving Door Identification Model on creative productivity and self-efficacy	E *n* = 103	• Students who became involved with self-selected independent studies in SEM programs initiated their own creative products both inside and outside school more often than students who qualified for the program but did not receive services. • Students in the enrichment group reported over twice as many creative projects per student (3.37) as the comparison group (.50) and showed greater diversity and sophistication in projects. • The number of creative products completed in school (Type IIIs) was a highly significant predictor of self-efficacy.
Burns, 1987	The effects of group training activities on students' creative productivity	E *n* = 515	• Students receiving process skill training were 64% more likely to initiate self-selected projects (Type IIIs) than the students who did not receive the training.
Skaught, 1987	The social acceptability of talent-pool students in an elementary school using the Schoolwide Enrichment Model	E	• Students identified as above average for a SEM program were positively accepted by their peers. • In schools where SEM had been implemented, a "condition of separateness" did not exist for students in the program.
Baum, 1988	An enrichment program for gifted, learning-disabled students	E *n* = 7	• The Type III independent study, when used as an intervention with high-ability, learning-disabled students, was associated with improvement in the students' behavior, specifically the ability to self-regulate time on task; improvement in self-esteem; and the development of specific instructional strategies to enhance the potential of high-potential, learning-disabled students.

Author & Date	Title of study	Samples*	Major finding
Delcourt, 1988	Characteristics related to high levels of creative/productive behavior in secondary school students: A multicase study	S *n* = 18	• Students completing self-selected investigation (Type IIIs) displayed positive changes in the following: personal skills required for project completion (e.g., writing), personal characteristics (e.g., increased patience), and decisions related to career choices.
Emerick, 1988	Academic underachievement among the gifted: Students' perceptions of factors related to the reversal of academic underachievement patterns	H+ *n* = 10	• Reversal of academic underachievement through use of various components of SEM including: curriculum compacting, exposure to Type I experiences, opportunities to be involved in Type III studies, and an appropriate assessment of learning styles to provide a match between students and teachers.
Olenchak, 1988	The Schoolwide Enrichment Model in elementary schools: A study of implementation stages and effects on educational excellence	P, E *n* = 236 teachers *n* = 1,698 students	• SEM contributed to improved teachers', parents', and administrators' attitudes toward education for high-ability students.
Heal, 1989	Student perceptions of labeling the gifted: A comparative case study analysis	E *n* = 149	• SEM was associated with a reduction in the negative effects of labeling.
Olenchak, 1990	School change through gifted education: Effects on elementary students' attitudes toward learning	P, E *n* = 1,935	• Positive changes in student attitudes toward learning as well as toward gifted education and school in general.
Imbeau, 1991	Teachers' attitudes toward curriculum compacting with regard to the implementation of the procedure	P, E, M, S *n* = 166	• Group membership (peer coaching) was significant predictor of posttest teachers' attitudes.
Newman, 1991	The effects of the Talents Unlimited Model on students' creative productivity	E *n* = 147	• Students with training in the Talents Unlimited Model were more likely to complete independent investigation (Type IIIs) than the students who did not receive the training.

Author & Date	Title of study	Samples*	Major finding
Olenchak, 1991	Assessing program effects for gifted/learning-disabled students	P, E *n* = 108	• Supported use of SEM as a means of meeting educational needs of a wide variety of high-ability students. • SEM, when used as an intervention, was associated with improved attitudes toward learning among elementary, high-ability students with learning disabilities. Furthermore, the same students, who completed a high percentage of Type III project, made positive gains with respect to self-concept.
Taylor, 1992	The effects of the Secondary Enrichment Triad Model on the career development of vocational-technical school students	S	• Involvement in Type III studies substantially increased post-secondary education plans of students (from attending 2.6 years to attending 4.0 years).
Delcourt, 1993	Creative productivity among secondary school students: Combining energy, interest, and imagination	S *n* = 18 (longitudinal)	• Students who participated in Type III projects, both in and out of school, maintained interests in college and career aspirations that were similar to those manifested during their public school years as opposed to previous reports of little or no relation between personally initiated and assigned school projects. • Supports the concept that adolescents and young adults can be producers of information—as well as consumers.
Hébert, 1993	Reflections at graduation: The long-term impact of elementary school experiences in creative productivity	S *n* = 9 (longitudinal)	• Five major findings: Type III interests of students affect postsecondary plans, creative outlets are needed in high school, a decrease in creative Type III productivity occurs during the junior high experience, the Type III process serves as important training for later productivity, and nonintellectual characteristics with students remain consistent.

Author & Date	Title of study	Samples*	Major finding
Kettle, Renzulli, & Rizza, 1997	Products of mind: Exploring student preferences for product development using *My Way. . . An Expression Style Instrument*	E, M *n* = 3,532	• Students' preferences for creating potential products were explored through the use of an expression style inventory. Factor analytic procedures yielded the following 11 factors: computer, service, dramatization, artistic, audio/visual, written, commercial, oral, manipulative, musical, and vocal.
Reis, Westberg, Kulikowich, & Purcell, 1998	Curriculum compacting and achievement test scores: What does the research say?	K, E, M *n* = 336	• Using curriculum compacting to eliminate 40%–50% of curricula for students with demonstrated advanced content knowledge and superior ability resulted in no decline in achievement test scores.

*P = Primary grades, K-2; E - Elementary grades, 3-5; M - Middle grades, 6-8; S - Secondary grades, 9-12.