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The Schoolwide Enrichment Model: A Focus on Student Strengths & Interests

Sally M. Reis & Joseph S. Renzulli

How can we develop the potential of children? What services should be provided to students who are identified for gifted and talented programs, as opposed to those that should be given to all students? Can enrichment and gifted programs help to develop academic gifts and talents? Can creative productivity be enhanced when students participate in enrichment or gifted programs? How can we help children learn to think creatively, and value opportunities for creative, self-selected work? The Schoolwide Enrichment Model (SEM) was developed to encourage and develop creative productivity in young people. In this chapter, a chronology of how the SEM model was developed, a description of the original Enrichment Triad Model, and a summary of pertinent research highlights are presented (Renzulli & Reis, 1994). A description of the model is followed by an explanation of a new SEM service delivery resource that uses a computer generated profile of each student's academic strengths, interests, learning styles, and preferred modes of expression. After this strength-based profile is completed, a highly sophisticated search engine matches carefully selected internet resources with each student's profile. This breakthrough in technology enables teachers to provide true differentiated instruction and enrichment and saves thousands of hours of teachers' time in implementing the SEM.

The SEM promotes engagement through the use of three types of enrichment experiences that are enjoyable, challenging, and interest-based. Separate studies on the SEM have demonstrated its effectiveness in schools with widely differing socioeconomic levels and program organization patterns (Olenchak, 1988; Olenchak & Renzulli, 1989). The SEM developed using Renzulli's Enrichment Triad (Renzulli, 1977; Renzulli & Reis, 1985, 1997) as a core. It has been implemented in over 2,000 schools across the country (Burns, 1998) and interest in this approach has continued to expand internationally. The effectiveness of the SEM has been studied in over 30 years of research and field-tests, suggesting that the model is effective at serving high-ability students and providing enrichment in a variety of educational settings, including schools serving culturally diverse and low socioeconomic populations.

A Brief History of the SEM

The original Enrichment Triad Model (Renzulli, 1976), the curriculum core of the SEM, was developed in the mid-1970s and initially implemented as a gifted and talented programming model in school districts in Connecticut and the northeast of the United

States. The model, initially field tested in several districts, proved to be quite popular and requests from all over the country for visitations to schools using the model and for information about how to implement the model increased. A book about the Enrichment Triad Model (Renzulli, 1977) was published, and increasing numbers of districts began implementing this approach. It was at this point that a clear need was established for research about the effectiveness of the model and for other vehicles that could provide technical assistance for interested educators to help develop programs in their schools. Different types of programs based on The Enrichment Triad were designed and implemented by classroom, gifted education, and enrichment teachers. In some of these programs, the focus was on many different types of introductory enrichment, such as speakers, presentations, films and other Type I exposure opportunities. In others, the process was on Type II process skills, such as problem solving and critical and creative problem solving. In some Triad programs, high levels of student creative productivity occurred, while in others, *few* students engaged in this type of work. In some programs, enrichment opportunities were offered to students not formally identified for the enrichment program, while in others only identified "gifted" students had any access to enrichment experiences. Some teachers and coordinators were extremely successful in implementing the model, while others were not. Certain professional development opportunities and resources proved to be extremely helpful in enabling some teachers to better implement the program, and we wondered how we could make these more readily available to larger numbers of teachers and students. And, of course, we became increasingly interested in why the model was working and how we could further expand the research base of this approach. Thus began almost 30 years of field-testing, research, and dissemination.

Theoretical Underpinning of the SEM: The Dual Goal of Developing Academic Giftedness and Creative Productivity

Present efforts to develop giftedness are based on a long history of previous theoretical or research studies dealing with human abilities (Sternberg, 1984, 1988, 1990; Sternberg & Davidson, 1986; Thorndike, 1921) and a few general conclusions from the most current research on giftedness (Sternberg & Davidson, 2005) provide a critical background for this discussion of the SEM. The first is that giftedness is not a unitary concept, but there are many manifestations of gifts and talents and therefore single definitions cannot adequately explain this multifaceted phenomenon. The confusion about present theories of giftedness has led many researchers to develop new models for explaining this complicated concept, but most agree that giftedness is developed over time and that culture, abilities, environment, gender, opportunities, and chance contribute to the development of gifts and talents (Sternberg & Davidson, 2005).

The SEM focuses on the development of both academic and creative-productive giftedness. Creative-productive giftedness describes those aspects of human activity and involvement where a premium is placed on the development of original material and products that are purposefully designed to have an impact on one or more target audiences. Learning situations designed to promote creative-productive giftedness emphasize the use and application of information (content) and thinking skills in an integrated, inductive, and real-problem-oriented manner. In the SEM, traditional

academic gifts are developed using curriculum compacting, acceleration, differentiated instruction and various forms of academic enrichment. Our focus on creative productivity complements our efforts to increase academic challenge when we attempt to transform the role of the student from that of a learner of lessons to one of a firsthand inquirer who can experience the joys and frustrations of creative productivity (Renzulli, 1977). This approach is quite different from the development of giftedness that tends to emphasize deductive learning, advanced content and problem solving, and the acquisition, storage, and retrieval of information. In other words, creative-productive giftedness enables children to work on issues and areas of study that have personal relevance to the student and can be escalated to appropriately challenging levels of investigative activity.

Why is creative-productive giftedness important enough to question the traditional approach that been used to select students for gifted programs on the basis of test scores? Why do some people want to rock the boat by challenging a conception of giftedness that can be numerically defined by simply giving a test? The answers to these questions are simple and yet compelling. A review of research literature (Neisser, 1979; Reis & Renzulli, 1982; Renzulli, 1978, 1986, 2005) tells us that there is much more to identifying human potential than the abilities revealed on traditional tests of intelligence, aptitude, and achievement. Furthermore, history tells us it has been the creative and productive people of the world, the producers rather than consumers of knowledge who have been recognized in history as “truly gifted” individuals. Accordingly, the SEM integrates both opportunities for academic giftedness, as well as creative productive giftedness.

Three Ring Conception of Giftedness

The SEM is based on Renzulli’s (1978) “three ring” conception of giftedness, which defines gifted behaviors rather than gifted individuals. This conception encompasses three interrelated components (see Figure 1) and is described as follows:

> *Gifted behavior consists of behaviors that reflect an interaction among three basic clusters of human traits—above average ability, high levels of task commitment, and high levels of creativity. Individuals capable of developing gifted behavior are those possessing or capable of developing this composite set of traits and applying them to any potentially valuable area of human performance. Persons who manifest or are capable of developing an interaction among the three clusters require a wide variety of educational opportunities and services that are not ordinarily provided through regular instructional programs.* (Renzulli & Reis, 1997, p. 8)

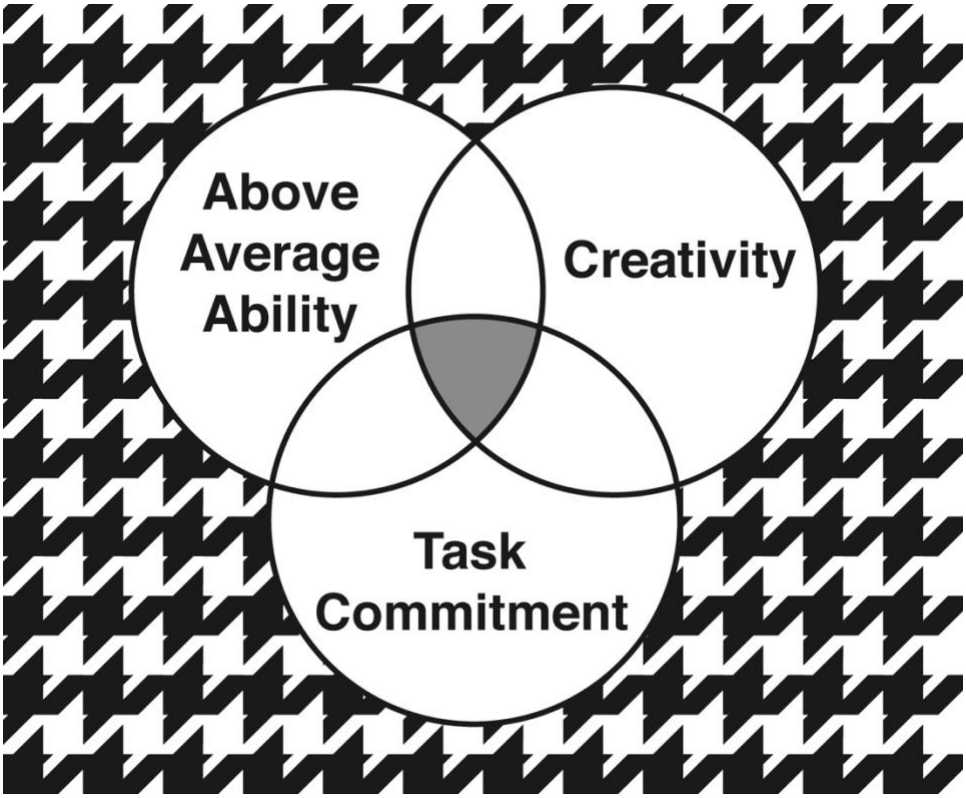

Figure 1. Three ring conception of giftedness.
(Note: The houndstooth background reflects the interactive influences of personality and environment.)

Longitudinal research supports this distinction between academic giftedness and creative/productive giftedness. Perleth, Sierwald, and Heller (1993) found differences between students who demonstrated creative/productive as opposed to traditional academic giftedness. Most of the confusion and controversy surrounding the definitions of giftedness can be placed into perspective if we examine a few key questions. Is giftedness or creativity an absolute or a relative concept (Amabile, 1983)? That is, is a person either gifted or not gifted (the absolute view), or can varying degrees of gifted behaviors be developed In Certain People, At Certain Times, and Under Certain Circumstances (the relative view)? (See Figure 2, the "Atom Diagram.") Is giftedness or creativity a static concept (i.e., you have or you don't have it) or is it a dynamic concept (i.e., it varies within persons, cultures, and among learning/performance situations)?

These questions have led us to advocate a fundamental change in the ways we believe that the concept of giftedness should be viewed. For 30 years, we have advocated *labeling the services students receive rather than labeling the students*, for we believe that a shift should occur from an emphasis on the traditional concept of "being gifted" (or not being gifted) to a concern about the *development of gifted and creative behaviors* in students who have high potential for benefiting from special educational opportunities, as well as the provision of some types of enrichment for all students. This change in terminology may also provide the flexibility in both identification and programming endeavors that encourages the inclusion of at-risk and underachieving students in our programs. Our ultimate goal is the development of a

total school enrichment program that benefits all students and concentrates on *making schools places for talent development for all young people.*

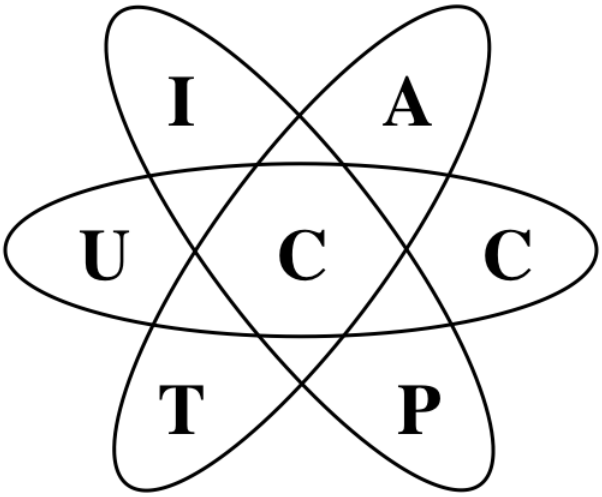

Figure 2. The “atom” diagram.

The Enrichment Triad Model

The Triad Model (Renzulli, 1977), the curricular basis of the SEM, was originally designed as a gifted program model to encourage creative productivity on the parts of young people by exposing them to various topics, areas of interest, and fields of study; and to further train them to *apply* advanced content, process-training skills, and methodology training to self-selected areas of interest using three types of enrichment. The original Triad Model with three types of enrichment (See Figure 3) was originally implemented in programs designed for academically talented and gifted students.

In the Enrichment Triad Model, Type I enrichment is designed to expose students to a wide variety of disciplines, topics, occupations, hobbies, persons, places, and events that would not ordinarily be covered in the regular curriculum. In schools using this approach, an enrichment team of parents, teachers, and students often organizes and plans Type I experiences by contacting speakers, arranging minicourses, conducting overviews of enrichment clusters, demonstrations, performances, using Internet resources, or by ordering and distributing films, slides, CD’s and DVD’s videotapes, or other print or non-print media. Type I enrichment is mainly designed to stimulate new interests leading to Type II or III follow-up on the parts of students who become motivated by Type I experiences. Type I enrichment can be provided by Type I experiences. Type I enrichment can be provided for general groups, or for students who have already expressed an interest in the topic area.

Type II enrichment includes materials and methods designed to promote the development of thinking and feeling processes. Some Type II enrichment is general, and usually provided to groups of students in their classrooms or in enrichment programs. This general Type II training includes the development of (a) creative thinking

and problem solving, critical thinking, and affective processes; (b) a wide variety of specific learning how-to-learn skills; (c) skills in the appropriate use of advanced-level reference materials; and (d) written, oral, and visual communication skills. Other Type II enrichment is specific, as it cannot be planned in advance and usually involves advanced instruction in an interest area selected by the student. For example, students who become interested in botany after a Type I on this topic would pursue advanced training in this area by reading advanced content in botany; compiling, planning and carrying out plant experiments; and more advanced methods training for those who want to go further and pursue a Type III in that area (Renzulli, 1982).

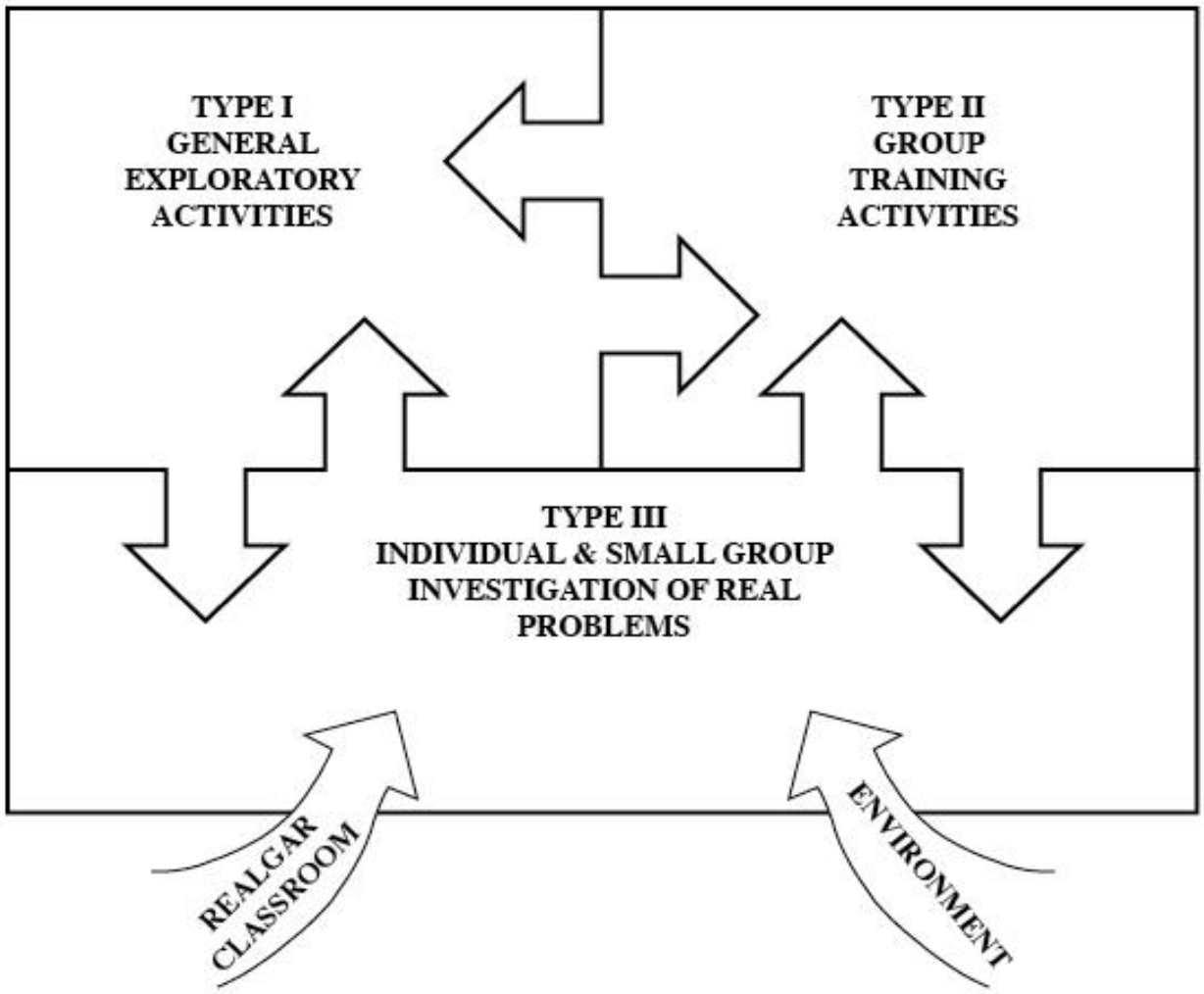

Figure 3. The Enrichment Triad Model.

Type III enrichment involves students who become interested in pursuing a self-selected area and are willing to commit the time necessary for advanced content acquisition and process training in which they assume the role of a first-hand inquirer. The goals of Type III enrichment are:

- providing opportunities for applying interests, knowledge, creative ideas and task commitment to a self-selected problem or area of study;
- acquiring advanced level understanding of the knowledge (content) and methodology (process) that are used within particular disciplines, artistic areas of expression and interdisciplinary studies;
- developing authentic products that are primarily directed toward bringing about a desired impact upon a specified audience;
- developing self-directed learning skills in the areas of planning, organization, resource utilization, time management, decision making and self-evaluation, and,
- the development of task commitment, self-confidence, and feelings of creative accomplishment.

Type III products can be completed by individual or small groups of students and are always based on students' interests. A book written by a fifth grade student named Gretchen from Haynes School in Sudbury, MA, provides one example of a Type III study. Gretchen had two passionate interests as a fifth grader: the literature of Louisa May Alcott and cooking. Gretchen had read all of Louisa May Alcott's books and identified in each book, any specific food mentioned. She researched the recipes of the time that would have been used to make the food (such as buckwheat cakes), field-tested each recipe (including making substitutions for ingredients no longer available), and created an original cookbook. Gretchen spent a year and a half working on a cookbook that combined vignettes of scenes from *Little Women* and *Little Men* with many authentic 19th century recipes for making the foods described in the novels. *The Louisa May Alcott Cookbook* was accepted and became the first book contracted by Little Brown with a child author. In Gretchen's Type III, both the process she used and the final product involved high levels of creative engagement and clear evidence of creative work.

During the time that we were experimenting with and watching the success of many gifted and enrichment programs based on the Enrichment Triad Model, we were also working on methods for differentiating curriculum (Curriculum Compacting) and in matching the needs of academically talented students with appropriate levels of challenge and interest-based materials. The development of individual educational plans for academically gifted and talented students became a priority in our research and a guidebook that recommended interest and learning styles analyses of students, coupled with curriculum compacting and modification was published (Renzulli & Smith, 1978). It was during this time that we became increasingly interested in identification procedures that would include more academically talented and creative students who could excel and would benefit from participating in Enrichment Triad Programs.

The Revolving Door Identification Model

As our experience increased with Triad Programs, so did our concern about students who were *not* being identified to participate in these programs. These students were often excluded from enrichment programs because they did not score in the top 1–

3% of the population in achievement or intelligence tests, but whose teachers believed they would excel when they had the opportunity to become involved in high levels of creative productive work. We also found students who were reading and doing mathematics at an accelerated level who were missing the cut-off scores for inclusion in the gifted program by a point or two. Earlier research by Torrance (1962, 1974) demonstrated that students who excelled on creativity measures achieved well in school and on achievement tests, but were not selected for gifted programs because their aptitude scores were below the cutoff for admission. Research by Reis (1981) found that when a broader pool of students (15% of the general population identified as the talent pool) participated in Types I and II enrichment experiences, they completed Type III products that were of equal or higher quality than students who were traditionally identified as "gifted" because they scored in the top 3–5% in aptitude. This research led to field tests and trials with the Revolving Door Identification Model (RDIM) (Renzulli, Reis, & Smith, 1981) in which a talent pool (10–15%) of students receive regular enrichment experiences and the opportunity to "revolve into" Type III creative productive experiences. In the RDIM, students were selected for participation in the talent pool on the basis of multiple criteria that included achievement scores, teacher nomination, creativity and other locally selected indicators. Once identified and placed in the talent pool through the use of multiple criteria, such as test scores, teacher, parent, or self-nomination, examples of creative potential or productivity, students were observed in classrooms and enrichment experiences for signs of advanced interests, creativity, or task commitment. This part of the identification process, called "action information," was found to be an instrumental part of the identification process in assessing students' interest and motivating them to become involved in Type III creative products. In the RDIM, students did not revolve in and out of the gifted program, but rather revolved in and out of various levels of enrichment. Further support for this approach was contributed by Kirschenbaum (1983) and Kirschenbaum and Siegle (1993) who demonstrated that students who are rated highly on measures of creativity tend to do well in school and on measures of achievement. The development of the expanded identification on the RDIM led to the need for new guidelines about how the components of the previous Triad and the RDIM could be implemented. The resulting work was entitled The Schoolwide Enrichment Model (SEM) (Renzulli & Reis, 1985; 1997).

The Schoolwide Enrichment Model (SEM)

The Enrichment Triad Model serves as the theoretical and curricular basis for the SEM that is currently implemented in a variety of settings, including gifted programs, enrichment programs, magnet and charter schools and theme schools. In the SEM, a talent pool of approximately 10–15% of above average ability/high potential students is identified through a variety of measures including: achievement tests, teacher nominations, assessment of potential for creativity and task commitment, as well as alternative pathways of entrance (self-nomination, parent nomination, etc.). High achievement tests and/or IQ test scores automatically include a student in the talent pool, enabling those students who are underachieving in their academic schoolwork to be included.

Once students are identified for the talent pool, they are eligible for several kinds of services. First, interest and learning styles assessments are used with talent pool students, in the development of a Total Talent Portfolio for each student. Informal and formal methods are used to identify and assess students' interests and to encourage students to further develop and pursue these interests in various ways. Learning style preferences include: projects, independent study, teaching games, simulations, peer teaching, computer-assisted instruction, lecture, drill and recitation, and discussion. Second, curriculum compacting and other forms of differentiation and curricular modification are provided to all eligible students when the regular curriculum is adjusted. This elimination or streamlining of curriculum enables above average students to avoid repetition of previously mastered work and guarantees mastery while simultaneously finding time for more appropriately challenging activities (Reis, Burns, & Renzulli, 1992; Renzulli, Smith, & Reis, 1982). A form, entitled the Compactor, (Renzulli & Smith, 1978) is used to document which content areas have been compacted and what alternative work has been substituted. Third, a series of enrichment opportunities organized around the Enrichment Triad Model offers three types of enrichment experiences through various forms of delivery, including enrichment clusters. Type I, II, and III Enrichment are offered to all students; however, Type III enrichment is usually more appropriate for students of higher levels of ability, interest, and task commitment.

The SEM (1997) has three major goals that are designed to challenge and meet the needs of high potential, high ability and gifted students, and at the same time, provide challenging learning experiences for all students. These goals are: (a) to maintain and expand a continuum of special services that will challenge students with demonstrated superior performance or the potential for superior performance in any and all aspects of the school and extracurricular program; (b) to infuse into the general education program a broad range of activities for high-end learning that will challenge all students to perform at advanced levels, and allow teachers to determine which students should be given extended opportunities, resources, and encouragement in particular areas where superior interest and performance are demonstrated; (c) to preserve and protect the positions of gifted education specialists and any other specialized personnel necessary for carrying out these goals.

The SEM, outlined in Figure 4, has three service delivery components that provide services to students, including the Total Talent Portfolio, Curriculum Modification and Differentiation, and Enrichment. These three services are delivered to the regular curriculum, a continuum of special services, and a series of enrichment clusters.

The Total Talent Portfolio

In the SEM, teachers help students better understand three dimensions of their learning, their abilities, interests, and learning styles. This information, focusing on their strengths rather than deficits, is compiled in a management form called the "Total Talent Portfolio" that can be subsequently used to make decisions about talent development opportunities in general education classes, enrichment clusters, and/or in the continuum of special services. The major purposes of the Total Talent Portfolio are: (a) to collect

information about students' strengths on a regular basis; (b) to *classify* this information into the general categories of abilities, interests, and learning styles; (c) to periodically *review and analyze* the information in order to make decisions about providing opportunities for enrichment experiences in the general education classroom, the enrichment clusters, and the continuum of special services; and (d) to use this information to make decisions about acceleration and enrichment in school and in later educational, personal and career decisions. This expanded approach to identifying talent potentials is essential if we are to make genuine efforts to include a broader, more diverse group of students in enrichment programs. This approach is also consistent with the more flexible conception of *developing* gifts and talents that has been a cornerstone of the SEM, addressing concerns for promoting more equity in special programs.

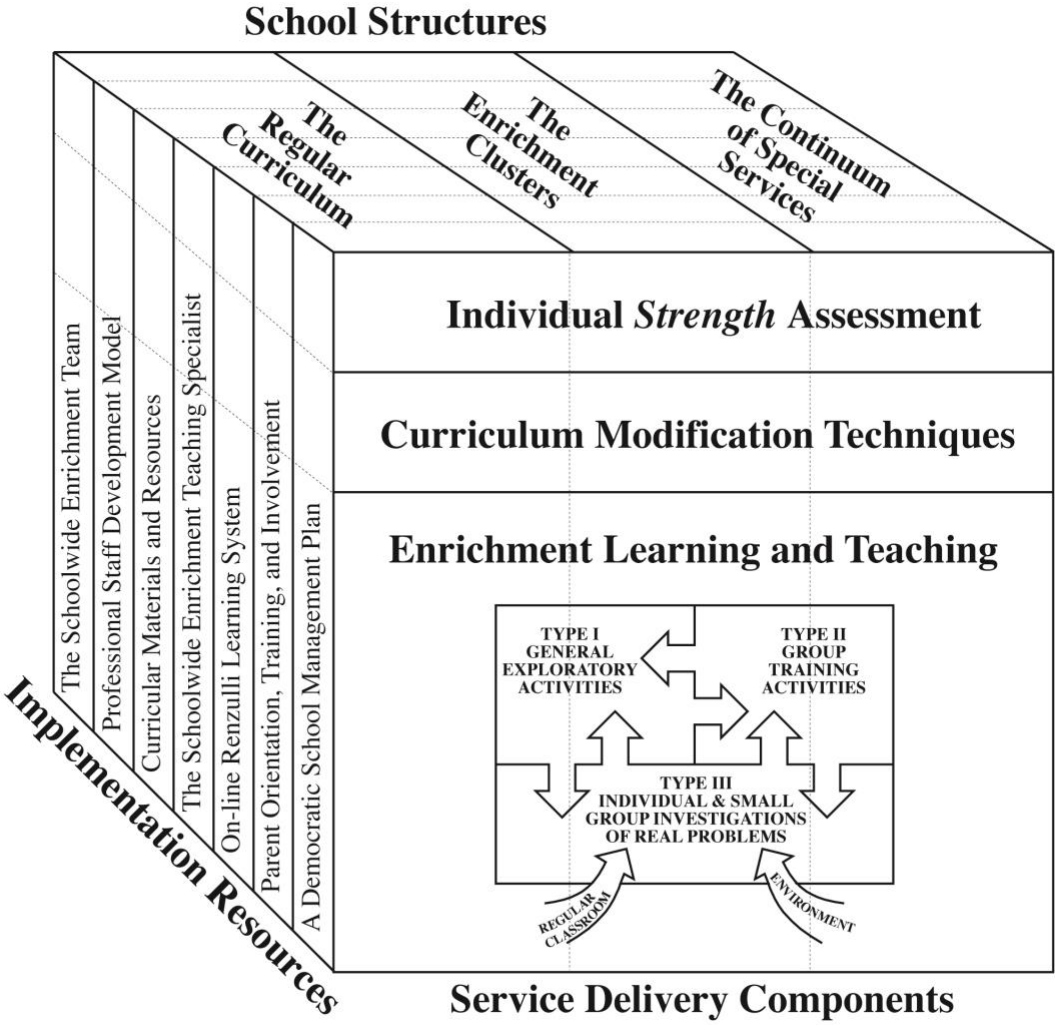

Figure 4. The Schoolwide Enrichment Model.

Curriculum Modification & Differentiation Techniques

The second service delivery component of the SEM is a series of curriculum modification techniques that can: (a) adjust levels of required learning so that all

students are challenged, (b) increase the number of in-depth learning experiences, and (c) introduce various types of enrichment into regular curricular experiences. The procedures that are used to carry out curriculum modification include curriculum differentiation strategies, such as curriculum compacting, and increased use of greater depth into regular curricular material (Renzulli, 1994; Reis et al., 1993). Curriculum Compacting is an instructional differentiation technique designed to make appropriate curricular adjustments for students in any curricular area and at any grade level, through (a) defining the goals and outcomes of a particular unit or segment of instruction, (b) determining and documenting which students already have mastered most or all of a specified set of learning outcomes, and (c) providing replacement strategies for material already mastered through the use of instructional options that enable a more challenging and productive use of the student's time. An example of how compacting is used is best represented in the form, "The Compactor" that serves as both an organizational and record keeping tool (see Figure 5). Teachers should fill out one compactor form per student, or one form for a group of students with similar curricular strengths. Completed Compactors should be kept in students' academic files, and updated on a regular basis. The form can also be used for small groups of students who are working at approximately the same level (e.g., a reading or math group). The Compactor is divided into three sections:

INDIVIDUAL EDUCATIONAL PROGRAMMING GUIDE

The Compactor

Prepared by: Joseph S. Renzulli
Linda M. Smith

NAME_____ AGE _____ TEACHER(S) _____ Individual Conference Dates And Persons Participating in Planning Of IEP

SCHOOL _____ GRADE_____ PARENT(S) _____ _____ _____ _____ _____

CURRICULUM AREAS TO BE CONSIDERED FOR COMPACTING Provide a brief description of basic material to be covered during this marking period and the assessment information or evidence that suggests the need for compacting.	PROCEDURES FOR COMPACTING BASIC MATERIAL Describe activities that will be used to guarantee proficiency in basic curricular areas.	ACCELERATION AND/OR ENRICHMENT ACTIVITIES Describe activities that will be used to provide advanced level learning experiences in each area of the regular curriculum.

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Figure 5. The Compactor.

- The first column should include information on learning objectives and student strengths in those areas. Teachers should list the objectives for a particular unit of study, followed by data on students' proficiency in those objectives, including test scores, behavioral profiles and past academic records.
- In the second column, teachers should detail the assessment tools or procedures they select, along with test results. The pretest instruments can be formal measures, such as pencil and paper tests, or informal measures, such as performance assessments based on observations of class participation and written assignments.
- Column three is used to record information about acceleration or enrichment options; in determining these options, teachers must be aware of students' individual interests and learning styles. We should never simply replace compacted regular curriculum work with more and harder, more advanced material that is solely determined by the teacher; instead, students' interests should be considered. If for example, a student loves working on science fair projects, that option may be used to replace material that has been compacted from the regular curriculum. We should also be careful to help monitor the challenge level of the material that is being substituted. We want students to understand the nature of effort and challenge, and we must ensure that we are not simply replacing the compacted material with basic reading or work that is too easy. We should also consider the compatibility of student interests and learning styles when we replace the work that has been compacted.

Enrichment Learning and Teaching

The third service delivery component of the SEM, based on the Enrichment Triad Model, is enrichment learning and teaching that has roots in the ideas of a small but influential number of philosophers, theorists, and researchers such as Jean Piaget (1975), Jerome Bruner (1960, 1966), and John Dewey (1913, 1916). The work of these theorists coupled with our own research and program development activities, has given rise to the concept we call enrichment learning and teaching. The best way to define this concept is in terms of the following four principles:

1. Each learner is unique, and therefore, all learning experiences must be examined in ways that take into account the abilities, interests, and learning styles of the individual.
2. Learning is more effective when students enjoy what they are doing, and therefore, learning experiences should be constructed and assessed with as much concern for enjoyment as for other goals.
3. 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; and therefore, attention should be given to opportunities to personalize student choice in problem selection, the relevance of the problem for individual students at the time the problem is being addressed, and authentic strategies for addressing the problem.

4. Some formal instruction may be used in enrichment learning and teaching, but a major goal of this approach to learning is to enhance knowledge and thinking skill acquisition that is gained through formal instruction with applications of knowledge and skills that result from students' own construction of meaning. (Renzulli, 1994)

The ultimate goal of learning guided by these principles is to replace dependent and passive learning with independence and engaged learning. Although all but the most conservative educators will agree with these principles, much controversy exists about how these (or similar) principles might be applied in everyday school situations. A danger also exists that these principles might be viewed as yet another idealized list of glittering generalities that cannot be manifested easily in schools that are entrenched in the deductive model of learning. Developing a school program based on these principles is not an easy task. Over the years, however, we have achieved 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. Numerous research studies and field tests in schools with widely varying demographics have been carried out and are summarized in Appendix A (Renzulli & Reis, 1994). These studies and field tests provided opportunities for the development of large amounts of practical know-how that are readily available for schools that would like to implement the SEM. They also have shown that the SEM can be implemented in a wide variety of settings with various populations of students including high ability students with learning disabilities and high ability students who underachieve in school.

School Structures of SEM

The regular curriculum. The regular curriculum consists of everything that is a part of the predetermined goals, schedules, learning outcomes, and delivery systems of the school. The regular curriculum might be traditional, innovative, or in the process of transition, but its predominant feature is that authoritative forces (i.e., policy makers, school councils, textbook adoption committees, state regulators) have determined that the regular curriculum should be the "centerpiece" of student learning. Application of the SEM influences the regular curriculum in the differentiation of the challenge level of required material using curriculum compacting and the enrichment recommended in the Enrichment Triad Model (Renzulli, 1977) integrated in regular curriculum activities. Although our goal in the SEM is to influence rather than replace the regular curriculum, the application of certain SEM components and related staff development activities has resulted in substantial changes in both the content and instructional processes of the entire regular curriculum.

The enrichment clusters. The enrichment clusters, a second component of the SEM, are non-graded groups of students who share common interests, and who come together during specially designated time blocks during school to work with an adult who shares their interests and who has some degree of advanced knowledge and expertise in the area. The enrichment clusters usually meet for a block of time weekly during a semester. All students complete an interest inventory developed to assess their

interests, and an enrichment team of parents and teachers tally all of the major families of interests. Adults from the faculty, staff, parents, and community are recruited to facilitate enrichment clusters based on these interests, such as creative writing, drawing, sculpting, archeology and other areas. Training is provided to the facilitators who agree to offer the clusters, and a brochure is developed and sent to all parents and students that discusses student interests and select choices of enrichment clusters. Students select their top three choices for the clusters and scheduling is completed to place all children into their first, or in some cases, second choice. Like extracurricular activities and programs such as 4-H and Junior Achievement, the main rationale for participation in one or more clusters is that *students and teachers want to be there.* All teachers (including music, art, physical education, etc.) are involved in teaching the clusters; and their involvement in any particular cluster is based on the same type of interest assessment that is used for students in selecting clusters of choice.

The model for learning used with enrichment clusters is based on an inductive approach to solving real-world problems through the development of authentic products and services using the Enrichment Triad Model to create a learning situation with the use of specific methods, the development of higher order thinking skills, authentically applied to creative and productive situations. Enrichment clusters promote real-world problem solving, focusing on the belief that *"every child is special if we create conditions in which that child can be a specialist within a specialty group"* (Renzulli, 1994, p. 70).

Enrichment clusters are organized around various characteristics of differentiated programming for gifted students on which the Enrichment Triad Model (Renzulli, 1977) was originally based, including the use of major disciplines, interdisciplinary themes, or cross-disciplinary topics (e.g., a theatrical/television production group that includes actors, writers, technical specialists, costume designers). The clusters are modeled after the ways in which knowledge utilization, thinking skills, and interpersonal relations take place in the real world. Thus, all work is directed toward the production of a product or service. Cluster facilitators do not prepare a detailed set of lesson plans or unit plans in advance; rather, direction is provided by three key questions addressed in the cluster by the facilitator and the students:

1. What do people with an interest in this area (e.g., film making) do?
2. What knowledge, materials, and other resources do they need to do it in an excellent and authentic way?
3. In what ways can the product or service be used to have an impact on an intended audience?

Enrichment clusters incorporate the use of advanced content, providing students with information about particular fields of knowledge. The methods used within a field is also considered advanced content by Renzulli (1988a), involving the use of knowledge of the structures and tools of fields, as well as knowledge about the methodology of particular fields. Enrichment clusters are not intended to be the total program for talent development in a school, or to replace existing programs for talented youth. Rather, they are one component of the SEM that can stimulate interests and develop talent in the entire school population. They can also serve as staff development opportunities as

they provide teachers with an opportunity to participate in enrichment teaching, and subsequently to analyze and compare this type of teaching with traditional methods of instruction. In this regard the model promotes a spill-over effect by encouraging teachers to become better talent scouts and talent developers, and to apply enrichment techniques to general education classroom situations.

The continuum of special services. A broad range of special services is the third school structure targeted by the model, as represented in Figure 6. Although the enrichment clusters and the SEM-based modifications of the regular curriculum provide a broad range of services to meet individual needs, a program for total talent development still requires supplementary services that challenge our most academically talented young people who are capable of working at the highest levels. These services, which cannot ordinarily be provided in enrichment clusters or the regular curriculum, typically include: individual or small group counseling, acceleration, direct assistance in facilitating advanced level work, arranging for mentorships with faculty members or community persons, and making other types of connections between students, their families, and out-of-school persons, resources, and agencies.

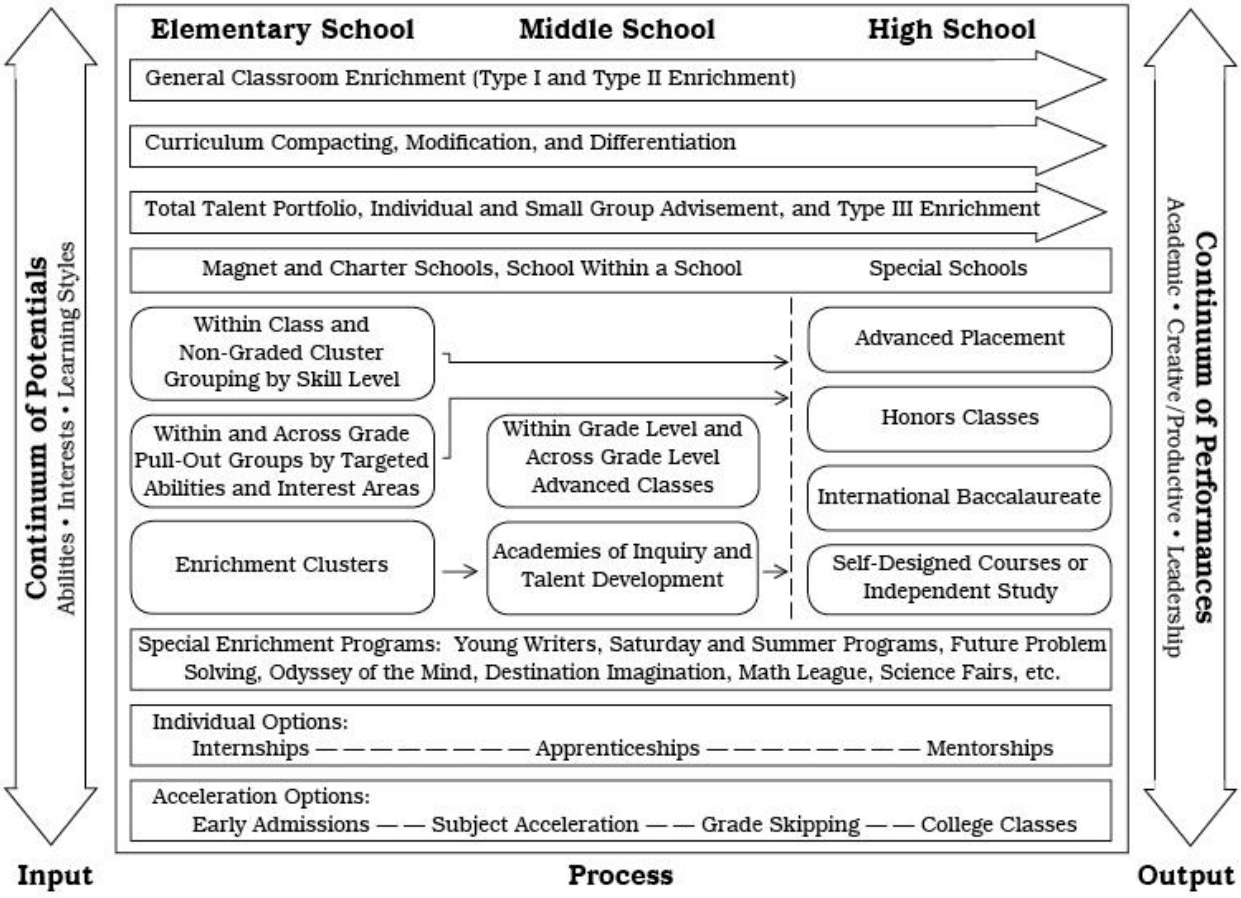

Figure 6. The continuum of services for total talent development.

Direct assistance also involves setting up and promoting student, faculty and parental involvement in special programs such as Future Problem Solving, Odyssey of

the Mind, the Model United Nations program, and state and national essay competitions, mathematics, art, and history contests. Another type of direct assistance consists of arranging out-of-school involvement for individual students in summer programs, on-campus courses, special schools, theatrical groups, scientific expeditions, and apprenticeships at places where advanced level learning opportunities are available. Provision of these services is one of the responsibilities of the Schoolwide Enrichment teaching specialist or an enrichment team of teachers and parents who work together to provide options for advanced learning. Most schoolwide enrichment teaching specialists spend 2 days a week in a resource capacity to the faculty and 3 days providing direct services to students.

New Directions in the SEM: Using Renzulli Learning™ to Provide Enriched, Differentiated Learning for All Students

Renzulli Learning™ is the newest component of the SEM. It is an interactive online program that aids in the implementation of SEM by matching student interests, expression styles and learning styles with a vast array of enrichment educational activities and resources, designed to enrich gifted and high potential students' learning process. Using Renzulli Learning™, students explore, discover, learn and create using the SEM married to the most current technology resources independently and in a safe environment. Renzulli Learning™ consists of a series of services that represent the various components of SEM.

The Renzulli Profiler is an interactive assessment tool that identifies students' talents, strengths, interests, and preferred learning and expression styles providing a comprehensive student learning profile. The RLS Profiler is a computerized assessment tool, creating a unique profile for each student. It consists of carefully selected, user-friendly, research-based questions related to a student's particular interests. The system assesses students' interests in 13 major categories, including: Performing Arts, Writing and Journalism, Mathematics, History, Fine Arts, Sciences, Athletics and Sports, Photography/Video, Social Action, Business, Technology, Literature/Reading, and Foreign Languages.

Students' Expression Styles are also assessed, whether they are writing, oral debates, stage performance, sculpture, dance, or a host of other expressive techniques; the student shares how he or she most enjoys interacting with the world. The Profiler considers 10 specific expression styles: Written, Oral, Hands-on, Artistic, Audio-Visual/Display, Dramatic, Service, Technological, Musical, and Commercial.

Renzulli Learning™ also assesses learning styles or the ways students like to learn new information ranging from individualized study to large group learning, from paper-based review to digital technology, focusing on 9 learning styles: Lecture, Computer-Assisted Instruction, Discussion, Peer Tutoring, Group Work, Learning Games, Technology, Simulations, and Independent Studies**.** Students answer questions about their interests, learning and product styles in 30–50 minutes, and the Profiler produces an accurate, printable assessment of each student's interests, abilities, and how that individual best learns. Even better, the Renzulli Profiler reflects the world of

learning from the *students'* perspective, not necessarily that of their parents or teachers. This makes it possible to provide enrichment based on the Enrichment Triad Model with optimum effectiveness and efficiency. By representing the student's view, the Profiler assessment becomes a major productivity tool for teachers—placing them literally months ahead in their efforts to understand each child's learning style(s), and to be able to respond to and incorporate those styles as part of an effective learning plan.

The Renzulli Enrichment Database includes thousands of carefully screened, grade-level appropriate, child-safe enrichment opportunities that are regularly monitored, updated, enhanced and expanded at a rate of over 500 per month. The RLS Enrichment Database provides teachers with a vast storehouse of differentiated enrichment materials and resources for students with varying ability levels, interests, learning styles, and preferred styles of expression. To truly individualize and differentiate for students of various needs, teachers using the RLS have easy access to an unlimited supply of enrichment activities and resources that make such differentiation possible. The data bases are organized into 14 separate categories, representing a wide range of educational activities. These include: Virtual Field Trips, Real Field Trips, Creativity Training Activities, Training in Critical Thinking, Independent Study Options, Contests and Competitions, Websites Based on Personalized Interests, High Interest Fiction Books, High Interest Non-Fiction Books, How-To Books for Conducting Research and Creative Projects, Summer Program Options in Special Talent Areas, On-Line Activities and Research Skills, Research Skills, Videos, and DVDs. All enrichment database entries are carefully researched by Renzulli Learning™ educational specialists, screened for grade-level applicability, and coded as one of the 14 enrichment categories. Elements of each category are then matched to students' top three choices of interests, learning and product styles, providing each student with a unique personalized selection of enrichment opportunities. The search automatically links each student's Profile (interests, learning styles and product styles) with the Enrichment Database to generate a customized list of activities designed to appeal to that student's grade level, interests, and abilities, as well as his or her learning and expression styles.

A secondary self-directed search enables students and teachers to enter set of one or more self-selected keywords to locate specific database entries from their own individual activity list or from the entire data-base. This feature is particularly useful for selecting a particular topic for project work or for in-depth study. A global search capability enables students and teachers to access the entire Enrichment Database, across all interests, expression styles, learning styles, or even grade levels. This permits students with above-grade capabilities to locate and pursue new activities and threads of interest, all within the safety of a prescreened information environment. It also helps teachers identify possible projects and other curriculum enhancements within the same space their students explore. The RLS combined search facilities offer children an extensive, expanding menu of learning opportunities, and offer teachers a new and valuable resource for their classroom preparation.

The Total Talent Portfolio provides a complete record of the student's on-line learning activities and academic progress and an on-line portfolio to save students' best

work. The Talent Portfolio enables students to create and post writings, Internet links, images, and other work on projects or areas of interest.

The Wizard Project Maker is an on-line project-management tool that helps students to create their own high interest projects and store them in their own Talent Portfolio. Over 200 Super Starter Projects are being added to the Project Maker to enable students to begin the process of doing projects on a small-scale, short term basis that may later enable them to initiate and complete projects more independently.

Renzulli Learning™ also offer a series of management tools for teachers, administrators and parents, designed to help follow individual students' learning progression, analyze group usage patterns, and formulate lesson plans and classroom organization. The RLS features a collection of administrative reports designed to help make the process of enriching each student's learning process more efficient. These tools enable teachers, parents, and other mentors to learn more about their students and to make grouping and enrichment easier. Reports include printable listings of individual and group interests; individual and group summaries of student expression styles and learning styles. Also available are teacher learning maps for enrichment differentiation activities; down-loadable enrichment projects; down-loadable creativity training activities; background articles by leading educational practitioners; lesson plans for using the RLS effectively; and outstanding websites for teachers.

These components provide both students and teachers with unique educational experiences, directly suited to each individual's learning profile, while simultaneously giving parents insights about their child's enrichment needs. Renzulli Learning™ also helps all teachers better understand and know their students and thus meet their diverse needs. Perhaps the most significant aspect of the RLS is its emphasis on a student's strengths, celebrating and building upon students' academic abilities, and interests, in the tradition of SEM. This web-based on-line program matches students' interests, learning styles, expression styles, abilities and grade level to thousands of opportunities designed to provide enriched, challenging learning. It gives teachers a virtual equivalent of multiple "teaching assistants" in their classrooms—each and every day—to implement the SEM. Teachers can also access exciting web sites to help their own teaching and download creative activities to use in their classroom. They can monitor students' progress by accessing their profiles and viewing all of the activities and assessments that they have completed. Teachers using this system can even submit their own ideas for activities and interact with other teachers, enrichment specialists, curriculum coordinators, and administrators from around the country. Finally, parents can view their child's progress, his or her profile, and their choice of enrichment activities and projects.

Research Related to SEM

A collective body of research on the SEM (Renzulli & Reis, 1994; Gubbins, 1995) summarized in Appendix A suggests that the model is effective at serving high-ability students in a variety of educational settings and in schools serving diverse ethnic and socioeconomic populations. These studies also suggest that the pedagogy of the SEM

can be applied to various content areas, implemented in a wide variety of settings, and used with diverse populations of students including high ability students with learning disabilities and those who underachieve. This research suggests that the use of the SEM results in more use of advanced reasoning skills and thinking skills. This research also has demonstrated that students who are involved in SEM activities achieve at higher levels in traditional achievement tests than students who continue to use regular curricular or remedial activities.

Non-Negotiables in Implementing the SEM

The many changes taking place in general education have resulted in some unusual reactions to the SEM that might best be described as the good news/bad news phenomenon. The good news is that many schools are expanding their conception of giftedness and they are more willing than ever to extend a broader continuum of services to larger proportions of the school population. The bad news is that the motivation for these changes is often based on mistaken beliefs (a) that we can adequately serve high potential students without some forms of grouping, (b) that we don't need special program teachers, or (c) that special program teachers are best utilized by going from classroom to classroom with a "shopping cart" of thinking skill lessons and activities.

Non-negotiable #1

The first non-negotiable is that anyone who tries to implement an SEM program has read our book entitled *The Schoolwide Enrichment Model: A Comprehensive Plan for Educational Excellence* (Renzulli & Reis, 1997). A thorough knowledge of the goals and components is essential.

Non-negotiable #2

Although we have advocated a larger talent pool than traditionally has been the practice in gifted education, and a talent pool that includes students who gain entrance on *both* test and non-test criteria (Renzulli, 1988b), we firmly maintain that the concentration of services necessary for the development of high level potentials cannot take place without *identifying and documenting individual student abilities.* Targeting and documenting does not mean that we will simply play the same old game of classifying students as "gifted" or "not gifted," and let it go at that. Rather, targeting and documenting are part of an ongoing process that produces a comprehensive and always evolving "Total Talent Portfolio" about student abilities, interests, and learning styles (Dunn, Dunn, & Price, 1977). The most important thing to keep in mind about this approach is that *all information should be used to make individual programming decisions about present and future activities, and about ways in which we can enhance and build upon documented strengths.* Documented information will enable us (a) to recommend enrollment in advanced courses or special programs (e.g., summer programs, college courses), and (b) it will provide direction in taking extraordinary steps to develop specific interests and resulting projects within topics or subject matter areas of advanced learning potential.

Non-negotiable #3

Enrichment specialists (aka gifted education teachers) must devote a *majority* of their time to working directly with talent pool students, and this time mainly should be devoted to facilitating individual and small group investigations (i.e., Type IIIs). Some of their time with talent pool students can be devoted to stimulating interest in potential Type IIIs through *advanced* Type I experiences and *advanced* Type II training that focuses on learning research skills necessary to carry out investigations in various disciplines. To do this, we must encourage more classroom teachers to become involved in talent development through both enrichment opportunities and in curriculum modification and differentiation within their classrooms. We must also encourage more classroom teachers to participate in enrichment teams who work together to provide talent development opportunities for all students in the school, enabling the enrichment specialists to work with more advanced students.

Non-negotiable #4

SEM programs must have specialized, trained personnel who work directly with talent pool students, to teach advanced courses and to coordinate enrichment services in cooperation with a schoolwide enrichment team. The old cliché, "Something that is the responsibility of everyone ends up being the responsibility of no one," has never been more applicable than when it comes to Enrichment or Gifted Education Specialists. The demands made upon general education classroom teachers, especially during these times of mainstreaming and heterogeneous grouping, leave precious little time to challenge our most able learners and to accommodate interests that clearly are above and beyond the regular curriculum. In a study completed by The National Research Center on the Gifted and Talented (Westberg, 1991), it was found that in 84% of general education classroom activities, *no differentiation was provided for identified high ability students.* Accordingly, time spent in enrichment programs with specialized teachers is even more important for high potential students.

Related to this non-negotiable are the issues of teacher selection and training, and the scheduling of special program teachers. Providing unusually high levels of challenge requires advanced training in the discipline(s) that one is teaching, in the application of process skills, and in the management and facilitation of individual and small group investigations. It is these characteristics of enrichment specialists rather than the mere grouping of students that have resulted in achievement gains and high levels of creative productivity on the parts of special program students.

Every profession is defined in part by its identifiable specializations, according to the task(s) to be accomplished. But specialization means more than the acquisition of particular skills. It also means affiliation with others who share common goals; the promotion of one's field; participation in professional activities, organizations, and research; and contributions to the advancement of the field. It also means the kinds of continued study and growth that make a difference between a job and a career. Now, more than ever, it is essential to fight for the special program positions that are falling prey to budget cuts. All professionals in the field should work for the establishment of standards and specialized certification for enrichment specialists. They should also help parents organize a task force that will be ready at a moment's notice to call in the

support of every parent (past as well as present) whose child has been served in a special program.

Conclusion

There may never have been a time when so much debate about what should be taught has existed in American schools. The current emphasis on testing as connected to federal legislation, the standardization of curriculum, and the drive to increase achievement scores has produced major changes in education during the last two decades. Yet at the same time, our society continues to need to develop creativity in our students. As overpopulation, disease, war, pollution, and starvation increase both here and throughout the rest of the world, the need for creative solutions to these and other problems is clear. The absence of opportunities to develop creativity in all young people, and especially in talented students, is troubling. In the SEM, students are encouraged to become partners in their own education and develop a passion and joy for learning. As students pursue creative enrichment opportunities, they learn to acquire communication skills and to enjoy creative challenges. The SEM provides the opportunity for students to develop their gifts and talents and to begin the process of life-long learning, culminating, we hope, in creative productive work of their own selection as adults.

Enrichment programs have been the true laboratories of our nation's schools because they have presented ideal opportunities for testing new ideas and experimenting with potential solutions to long-standing educational problems. Programs for high potential students have been an especially fertile place for experimentation because such programs are usually not encumbered by prescribed curriculum guides or traditional methods of instruction. The SEM creates a repertoire of services that can be integrated in such a way to create "a rising tide lifts all ships" approach. The model includes a continuum of services, enrichment opportunities and three distinct services: curriculum modification and differentiation, enrichment opportunities of various types, and opportunities for the development of individual portfolios including interests, learning styles, product styles and other information about student strengths. Not only has this model been successful in addressing the problem of high potential students who have been under-challenged, it also provides additional important learning paths for creative students who achieve academic success in more traditional learning environments but long for opportunities for innovation in school.

The absence of opportunities to develop creativity in all young people, and especially in talented students, is troubling. In the SEM, students are encouraged to become responsible partners in their own education and to develop a passion and joy for learning. As students pursue creative enrichment opportunities, they learn to acquire communication skills and enjoy creative challenges. The SEM provides the opportunity for students to develop their gifts and talents and to begin the process of life-long learning, culminating, that we hope, will result in higher levels of creative and innovative work in their areas of interest and passion as adults.

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Appendix A
Research Summary of Studies Related to SEM

Student Creative Productivity

Author & Date	Title of Study	Sample	Results or Findings
Reis, 1981	An analysis of the productivity of gifted students participating in programs using the Revolving Door Identification Model	E n = 1280	Students in the expanded talent pool (5–20%) produced products of equal quality to the top 3–5% of the population.
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.
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.

Author & Date	Title of Study	Sample	Results or Findings
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.
Baum, 1988	An enrichment program for gifted learning disabled students	E n = 7	The Type III study, used as an intervention with high ability, learning disabled students, improved 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.
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 investigations (Type IIIs) than the students who did not receive the training.
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 post-secondary 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; non-intellectual characteristics with students remain consistent over time.

Author & Date	Title of Study	Sample	Results or Findings
Delcourt, 1993	Creative productivity among secondary school students: Combining energy, interest, and imagination	S n = 18 (longitudinal)	Students participating in Type III projects, both in and out of school, maintained interests and career aspirations in college. Supports the concept that adolescents and young adults can be producers of information, as well as consumers. Student giftedness, as manifested in performances and product development, may be predicted by high levels of creative/productive behaviors at an early age.
Westberg, 2002	A Longitudinal Study of Students who Participated in a Program Based on the Enrichment Triad Model in 1981–1984		Students maintained interests over time and were still involved in creative productive work.

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

Special Populations and Affective Issues

Author & Date	Title of Study	Sample	Results or Findings
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.
Emerick, 1988	Academic Underachievement Among the Gifted: Students' Perceptions of Factors Relating 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. To reverse the academic underachievement in gifted students the following factors must be considered: - out-of-school interests - parents - goals associated with academic performance - classroom instruction and curriculum - the teacher - changes in the self
Taylor, 1992	The Effects of The Secondary Enrichment Triad Model on the Career Development of Vocational-Technical School Students	S N = 60	Involvement in Type III studies substantially increased post-secondary education plans of students (from attending 2.6 years to attending 4.0 years).

Author & Date	Title of Study	Sample	Results or Findings
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.
Reis, Schader, Milne, & Stephens, 2003	Music & Minds: Using a Talent Development Approach for Young Adults With Williams Syndrome	S n = 16	One third of the participants had high levels of musical talent, and the use of participants' interests and advanced training in music was found to both enhance all participants' understanding of mathematics and to provide opportunities for the further development of their interests and abilities, especially their potential in music. The use of a talent development approach focusing on strengths, interests, and style preferences was found to be successful for this group of young persons with WS.

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SEM as Applied to School Change

Author & Date	Title of Study	Sample	Results or Findings
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.
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.
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. Administrators found SEM to have an impact on all students.

Author & Date	Title of Study	Sample	Results or Findings
Reis, Gentry, & Maxfield, 1998	The Application of Enrichment Clusters to Teachers' Classroom Practices	E n = 120	Teachers trained to use enrichment clusters as part of the enrichment program were able to transfer and implement the use of advanced content and methods in their general education classrooms. Methods used by teachers included: advanced content and methods, advanced vocabulary, authentic tools of the disciplines, advanced references and problem solving.

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Curriculum Modification; Learning and Product Styles

Author & Date	Title of Study	Sample	Results or Findings
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 a significant predictor of posttest teachers' attitudes. Comparisons of teachers' attitudes toward curriculum compacting indicate a need for additional research on variables that enhance and inhibit the use of curriculum compacting as a classroom strategy.
Kettle, Renzulli, & Rizza, 1998	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 between 40–50% of curricula for students with demonstrated advanced content knowledge and superior ability resulted in no decline in achievement test scores.

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Application of SEM to Curriculum and Content Areas

Author & Date	Title of Study	Sample	Results or Findings
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.
Reis, Eckert, Schreiber, Jacobs, Briggs, Gubbins, Coyne, & Muller, 2005	The Schoolwide Enrichment Model in Reading	E, M n = 1,500	Students who participated in an enriched reading program based on SEM had significantly higher scores in reading fluency and reading comprehension than students in the control group. Students who participated in an enriched reading program based on SEM had significantly higher attitudes toward reading than students in the control group.
Eleck, 2006	Implementing Renzulli Learning™ in Enrichment Programs and Classrooms	E, M n = 200	Students in enrichment and general education classrooms used Renzulli Learning™ with minimal training. Almost 50% of students had ideas for completing products using Renzulli Learning™ and 80% enjoyed using Renzulli Learning™ completely or very much. Each of the pilot teachers using the system assigned projects to students on-line.
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 between 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

A directory of schools using the SEM is available on the SEM website, https://gifted.uconn.edu/schoolwide-enrichment-model/semdir/

Mansfield, CT School District
Contact Person: Susan Irvine, Southeast Elementary School
134 Warrenville Road
Mansfield Center, CT 06250-1229
(860) 423-1611

West Hartford, CT School District
Contact Person: Dr. Nancy Eastlake, Quest Program Coordinator
50 South Main Street
West Hartford, CT 06107
(860) 561-6607
https://www.whps.org/curriculum-instruction-and-assessment/quest-gifted-and-talented

St. Paul Public Schools
Contact Person: Gail Pattison, Coordinator
1001 Johnson Parkway
St. Paul, MN 55106
https://www.spps.org/academics/gifted-talented

Howard County Public School System
Contact Person: Penny Zimring
Instructional Facilitator
10598 Marble Faun Court
Columbia, MD 21044
(410) 313-6670

Discussion Questions

1. What are the differences between developing academic giftedness and creative productive giftedness in the SEM? In what ways does the SEM help to develop both?

2. What are the most challenging components to implement in the SEM?

3. What types of support are most needed from classroom teachers to implement this approach?

4. How does the “Rising Tide” philosophy underlying the SEM fit with current education reform efforts?

5. In what ways can the needs of high ability and gifted learners be met by a model that seeks to enhance creative productivity? Might conflicts exist related to creative productivity and the need for advanced content?