

From High Potential to Gifted Performance: Encouraging Academically Talented Urban Students

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Academically talented students in many urban areas in our Northeastern corner of the county have limited access to gifted and talented programs due to lack of funding and attention focused on students who are achieving well below grade level.

In the city of Hartford, for example, no gifted program has been available for more than a decade, and teachers and administrators acknowledge that the needs of many high-potential and gifted students often are not met in classrooms. In fact, the Renzulli Academy emerged from an initiative of the Assistant Superintendent with the full support of the Superintendent, Dr. Steven Adamowski. The creation of the Renzulli Academy is the result of this awareness and the collaborative effort between Assistant Superintendent Miriam Morales-Taylor and Sally Reis, professor and researcher in gifted education and talent development at the Neag School of Education, University of Connecticut. It was Miriam Morales-Taylor's vision that created the impetus for the academy. Having worked closely with the Institute for Learning (IFL) at the University of Pittsburgh, Mrs. Morales-Taylor recognized that the principles of learning, particularly academic rigor, clear expectations, and socializing intelligence, should play an important role in the development of the Renzulli Academy.

Over the course of several months, a preliminary plan was developed for the curriculum and instruction that would guide the program, as well as its organization. Our plan was simple: to identify and serve gifted students from across many of the 25 elementary schools in the district. A decision was made to serve these students by creating a school within a school characterized by differentiated curriculum and instruction across all core content areas. In addition, students would be offered opportunities for enrichment according to the Schoolwide Enrichment Model, as these types of resources and opportunities for enrichment were considered to be critical needs for these children. An additional part of the Renzulli Academy

was the opportunity for independent study and mentoring services during the students' time in the program. This article briefly describes the academy, its philosophy and model, social and emotional adjustment of the students, curriculum and instructional programming, strategies that worked, and changes and modifications.

Introduction to the Renzulli Academy

The Renzulli Academy at Simpson Waverly School was created for 60 identified gifted/high-potential Hartford public students in grades 4, 5, and 6 in September of 2009 and is currently at full capacity in a high-poverty school that also houses another 350 students. Three teachers with master's degrees in gifted education, a commitment to work with urban students of poverty, and a strong content knowledge were hired to engage and challenge the students who had been selected and housed in one wing of the school. In this section, we briefly describe the philosophy and model of the academy, the curricula used to challenge these advanced learners, the strategies that have worked, and subsequent changes and modifications. All students at the academy are from high-poverty families and most (more than 95%) are from culturally and linguistically diverse backgrounds.

Philosophy and Model

The philosophy of the Renzulli Academy is based on the Schoolwide Enrichment Triad Model (SEM; Renzulli & Reis, 1985, 1997), a product of more than three decades of research and field-testing that combines the previously developed Enrichment Triad and Revolving Door Identification Models. The SEM has

been implemented in school districts worldwide, and extensive evaluations and research studies indicate the effectiveness of the model, which VanTassel-Baska and Brown (2007) called one of the mega-models in the field (Reis & Renzulli, 2003; Renzulli & Reis, 1994). Prior research suggests that the model is effective at serving high-ability students in a variety of educational settings and works well in schools that serve diverse ethnic and socioeconomic populations, exactly the population targeted by this school (Reis & Renzulli, 2003; Renzulli & Reis, 1994).

The Hartford Public Schools' Department of Assessment identified students in grades 4, 5, and 6 who scored at the highest levels on the recent Connecticut Mastery Tests. The parents/guardians of those students were invited to attend an informational session regarding the implementation of the Renzulli Academy. With this information at hand, they were able to make an informed decision whether to apply for admittance to the academy. Other school records also were used to make final decisions about admissions.

The Schoolwide Enrichment Triad Model

The Schoolwide Enrichment Triad Model (SEM) has evolved over time after three decades of research and field-testing by both educators and researchers (Reis & Renzulli, 2003; Renzulli & Reis, 1994). It combines the previously developed Enrichment Triad Model (Renzulli, 1977) with a more flexible approach to identifying high-potential students (Renzulli & Reis, 1997). Research on the SEM has been conducted in schools with widely differing socioeconomic levels and program organizational patterns and

has shown consistently positive results (Reis & Renzulli, 2003; Renzulli & Reis, 1994).

In the SEM, a talent pool of 15%–20% 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 (e.g., self-nomination, parent nomination). These measures were used in the academy, with the highest levels of performance on achievement tests documenting the basis for identification in this school.

In the SEM, students receive several kinds of services, also delivered in the Renzulli Academy. First, interest, learning styles, and product style assessments are conducted with talent pool students using the Renzulli Learning System (<http://www.renzullilearning.com>). Each student has created a profile that identifies his or her unique strengths and talents and teachers can identify patterns of a student's interests, products, and learning styles across the three classes. These methods are being used in the academy to both identify and create students' interests and to encourage students to develop and pursue these interests in various ways. Learning style preferences assessed include projects, independent study, teaching games, simulations, peer teaching, programmed instruction, lecture, drill and recitation, and discussion. Product style preferences include the kinds of products students like to do, such as those that are written, oral, hands-on, artistic, displays, dramatization, service, and multimedia.

Curriculum Compacting

To maximize instructional time, we incorporated rigor into the com-

packed curriculum. Compacting is used to document the content areas that have been compacted and the alternative work that has been substituted. This approach requires academic rigor, which includes commitment to a knowledge core, high thinking demands, and active use of knowledge (Resnick & Hall, 2005). Resnick and Hall (2005) challenged educators to integrate rigorous content with high-level thinking and active use of knowledge. Research on compacting has shown that it eliminates and streamlines curriculum, enabling high-potential students to avoid repetition of previously mastered work and guaranteed mastery while simultaneously finding time for more appropriately challenging activities (Reis & Purcell, 1993; Reis, Westberg, Kulikowich, & Purcell, 1998).

Curriculum compacting was provided to all eligible students, as the teachers modified the general education curriculum by eliminating portions of previously mastered content when students showed strengths in these areas (Reis, Burns, & Renzulli, 1992).

Enrichment

The Enrichment Triad Model was used as the basis for all enrichment in the academy, based on previous research about its success with all students including those in urban areas (Reis & Renzulli, 2003; Renzulli & Reis, 1994). For example, it was integrated into all content areas and was the basis for the reading program, the enrichment clusters, the social studies and science projects, and the regular exposure and training across all other content areas.

Type I Enrichment consists of general exploratory experiences such as guest speakers, field trips, demonstra-

tions, interest centers, and the use of audiovisual materials and technology (such as webinars), which are designed to expose students to new and exciting topics, ideas, and fields of knowledge not ordinarily covered in the regular curriculum. Type II Enrichment includes instructional methods and materials purposefully designed to promote the development of thinking, feeling, research, communication, and methodological processes. Type II training, usually carried out both in classrooms and in enrichment programs, includes the development of creative thinking and problem solving, critical thinking, and affective processes; a variety of specific learning-how-to-learn skills; skills in the appropriate use of advanced-level reference materials; and written, oral, and visual communication skills.

Type III Enrichment is the most advanced level in the Enrichment Triad Model. Although Types I and II Enrichment and curriculum compacting should be provided on a regular basis to talent pool students, the ability to revolve into Type III Enrichment depends on an individual's interests, motivation, and desire to pursue advanced level study. Type III Enrichment is defined as investigative activities and artistic productions in which the learner assumes the role of a first-hand inquirer, thinking, feeling, and acting like a practicing professional, with involvement pursued at as advanced or professional level as possible given the student's level of development and age. The most important feature of the model is the "flow" or connection among the experiences. Each type of enrichment is viewed as a component part of a holistic process that blends present or newly developed interests (Type I) and advanced-level thinking and research skills (Type II) with application situations based on

the modus operandi of the first-hand inquirer (Type III).

Renzulli Learning System

Students in the Academy also have had access to the Renzulli Learning System (RLS), another research-based component of the SEM (Field, 2009). Field (2009) studied the use of the RLS, an innovative online enrichment program based on the Enrichment Triad Model, for students in both an urban and suburban school. In this 16-week experimental study, both gifted and nongifted students who participated in this enrichment program and used Renzulli Learning for 2–3 hours each week demonstrated significantly higher growth in reading comprehension than control group students who did not participate in the program. Students also demonstrated significantly higher growth in oral reading fluency and in social studies achievement than those students who did not participate (Field, 2009). Four steps enabled students in the academy to have access to enrichment during the day as well as after school and at home if the technology was available in their homes.

Step 1. The first step consisted of a computer-based diagnostic assessment that created a profile of each student's academic strengths, interests, learning styles, and preferred modes of expression. The online assessment, which took about 30 minutes, resulted in a personalized profile that highlighted individual student strengths and set the stage for Step 2 of the RLS.

Step 2. The profile served as a compass for the second step, which was a differentiation search engine that examined thousands of resources that related specifically to each student's profile. Student profiles also could be used to form groups of students who

shared common interests. A project management tool guided students and teachers to use specifically selected resources for assigned curricular activities, independent or small-group investigative projects, and a wide variety of challenging enrichment experiences. Another management tool enabled teachers to form instructional groups and enrichment clusters based on interests and learning style preferences. Teachers had instant access to student profiles, all sites visited on the web, and the amount of time spent in each activity. Parents also had access to their own child's profile and web activities. In order to promote parent involvement, we suggested that students work on some of their favorite activities with their parents. Next, the differentiation search engine matched student strengths and interests to an enrichment database of 40,000 enrichment activities, materials, resources, and opportunities for further study that were grouped into the following categories: virtual field trips, real field trips, creativity training, critical thinking, projects and independent study, contests and competitions, websites, fiction and nonfiction books, summer programs, online activities, research skills, and high-interest videos and DVDs. These resources were not merely intended to inform students about new information or to occupy time surfing around the web. Rather, they were used as vehicles to help students find and focus on a problem or creative exploration of personal interest to pursue in greater depth. Many of the resources provided the methods of inquiry, advanced-level thinking and creative problem-solving skills, and investigative approaches. Students were guided toward the *application of knowledge* to the development of original research studies, creative projects, and action-oriented undertakings that put knowledge to work in personally

meaningful areas of interest, and provided students with suggestions for outlets and audiences for their creative products. The resources available in Step 2 also provided students with opportunities to pursue advanced-level training in their strength areas and areas of personal interest.

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. . .

Step 3. The third part of the RLS for students was a project organization and management plan called The Wizard Project Maker. Using this project planner, teachers could help students target their web-based explorations to undertake original research, investigative projects, and the development of a wide variety of creative undertakings. The sophisticated software used in this tool automatically located potentially relevant web-based resources that could be used in connection with the student's investigative activity. This management device was designed to fulfill the requirements of a Type III Enrichment experience,

which is the highest level of enrichment described in our discussion of the Enrichment Triad Model. Specifically, the Wizard Project Maker provided students with the metacognitive skills to define a project and set a goal; identify and evaluate both the resources to which they had access and the resources they needed (e.g., time, Internet sites, teacher or mentor assistance); prioritize and refine goals; balance the resources needed to meet multiple goals; learn from past actions and project future outcomes; and monitor progress, making necessary adjustments as a project unfolded. The Wizard Project Maker helped students make the best use of web resources, helped to focus their interests as they pursued advanced-level work, and established a creative and viable responsibility for teachers in their role as “the guide on the side.” By helping students pursue advanced levels of challenge and engagement through the use of the Wizard Project Maker, we hoped students would begin to regard their teachers as mentors rather than just as disseminators of knowledge.

Step 4. The final step in the RLS was an automatic compilation and storage of all student activity from Steps 1, 2, and 3 into an ongoing student record called the Total Talent Portfolio. A management tool allowed students to evaluate each site visited and resource used, students completed a self-assessment of what they derived from the resource, and, if they chose, they stored favorite activities and resources in their portfolio. This feature allowed easy-return access to ongoing work. The portfolio could be reviewed at any time by teachers and parents through the use of an access code, which allowed teachers to give feedback and guidance to individual students and provided parents with information about students’ work and opportunities for parental involve-

ment. The Total Talent Portfolio will travel with students throughout their years at the academy to serve as a reminder of previous activities and creative accomplishments that they might want to include in college applications and as an ongoing record that can help students, teachers, guidance counselors, and parents make decisions about future educational and vocational plans.

Teacher resources in the RLS enabled teachers to differentiate assignments and send tiered and compacted assignments to students by placing them in their electronic talent portfolio. Teachers also have used the RLS to group students based on their interests, learning, and expression or product styles.

Social-Emotional Adjustment of These Urban Academically Talented Students

A comprehensive review of research (Neihart, Reis, Robinson, & Moon, 2001) found that high-ability students are generally at least as well adjusted as any other group of youngsters, suggesting that most talented students do not face any more social and emotional problems than do other students. One exception to this statement is creatively gifted adolescents, such as those talented in writing or the visual arts, who have been found to manifest significantly higher or lower rates or severity of depression than those for the general population (Neihart et al., 2001). This review also found that gifted and talented students faced a number of situations that, while not unique to them, constituted sources of risk to their social and emotional development if their needs were not met (Neihart et al., 2001). One example of these risks is underachievement,

widely regarded as one of the most pervasive problems affecting this population (Reis & McCoach, 2000). In the city in which the academy is housed, underachievement of gifted students at the high school level was found to be approximately 50% (Hébert & Reis, 1999) and findings from this study suggested that early lack of challenge contributed to the underachievement of these students (Reis, Hébert, Díaz, Maxfield & Ratley, 1995). However, our experiences with students in this academy identified other social and emotional challenges in addition to lack of exposure to effort and an inability to deal with challenging content. These alone could contribute to underachievement, but in addition to these, students at the academy were from high-poverty environments and some had encountered very challenging situations in their early lives. We also found, for some of the students, difficulties in controlling impulses and aggression to others.

Findings from earlier research about academically talented high school students who underachieved in the same city suggested that certain factors can positively influence the self-regulation of high-ability students (Reis & Colbert, 2005) such as a strong belief in self and ways to cope with the negative aspects of their school and urban environment. Other protective factors included supportive adults, friendships with other achieving students, opportunity to take honors and advanced classes, and participation in multiple extracurricular activities both after school and during the summer. The Renzulli Academy has been created to provide these types of support, with students interacting with all three teachers on a regular basis.

Almost half of students at the Renzulli Academy have demonstrated signs that they are at risk for underachievement, most likely due to the

fact that they have been in under-challenging classrooms and schools, have faced peer pressure to conform to patterns of minimal effort, and in some cases have faced social isolation in their neighborhood schools because they are so smart. Some have also faced family tragedies as they have lost siblings to deaths from gunshots and parents to drugs, crime, and prison. Unfortunately, the pattern of underachievement is difficult to reverse and can persist into adulthood without intervention (Reis & McCoach, 2000). Therefore, attempts to reverse negative patterns have been both proactive and immediate. These students may also encounter barriers to racial identity development if they believe they must choose between academic success and social acceptance, and so grouping them together at the academy has given them peer models for high achievement (Ford & Harris, 2002; Neihart et al., 2001). The pervasive problems students have experienced at the academy relate to their absence of self-regulation manifested in an inability to extend effort when faced with challenge, to focus for any extended periods of time, and to learn how to garner their own resources to avoid following social impulses related to aggression.

Self-Regulation

Current research indicates that some gifted students possess better self-regulated learning strategies than their peers; however, some gifted students may have done very well in school without using good self-regulation strategies because of a combination of their high abilities and/or an unchallenging curriculum (Zimmerman, 1989, 1990). If learning is relatively easy for someone, less effort, organization, and other self-regulated activities are expended. Social conditions or

personal issues may prevent students from developing self-regulated learning strategies. For some students who already have some of these strategies, social or personal issues may prevent them from using them regularly, and thus, they need to be helped and encouraged to do so. Some talented students with high potential may find it difficult to learn self-regulation when it is not taught, modeled, or rewarded by the adults in their home and family. Even if students interact regularly with adults who demonstrate self-regulation, they may fail to use these skills themselves due to peer pressure or refuse to use the strategies their parents or teachers regularly employ at home or school.

Compared with low-achieving students, high achievers set more specific learning goals, use a variety of learning strategies, self-monitor more often, and adapt their efforts more systematically (Zimmerman, 1989). The quality and quantity of self-regulation processes is crucial. We must recognize that one self-regulation strategy will not work for all students, and that the use of only a few strategies will not work optimally for a person on all tasks or occasions. It is important that students learn to use multiple self-regulatory learning skills rather than single strategies, and so, at the academy, students are reminded continually that both their goals and their use of self-regulation strategies will have to be adjusted over time. Our hope in this school is that we will be able to continue to work with students who will learn to persist when they are challenged, which is especially critical for talented students who have seldom experienced high levels of challenge. We have continued to integrate self-regulation strategies across all content areas in the Renzulli Academy.

Self-regulation is an integrated learning process, consisting of the development of a set of construc-

tive behaviors that affect one's learning. These processes are planned and adapted to support the pursuit of personal goals in changing learning environments. According to Zimmerman (1989), self-regulated learning involves the regulation of three general aspects of academic learning. First, self-regulation of *behavior* involves the active control of the various resources students have available to them, such as their time, their study environment (e.g., the place in which they study), and their use of others such as peers and faculty members to help them (Garcia & Pintrich, 1994; Pintrich & De Groot, 1990). Second, self-regulation of *motivation and affect* involves controlling and changing motivational beliefs such as self-efficacy and goal orientation, so that students can adapt to the demands of a course. In addition, students can learn how to control their emotions and affect (such as anxiety) in ways that improve their learning. Third and finally, self-regulation of cognition involves the *control of various cognitive strategies for learning*, such as the use of deep processing strategies that result in better learning and performance than students showed previously (Garcia & Pintrich, 1994). Within days of school starting, as we had expected, we found that many of these talented students lacked all three aspects of self-regulation, and so our goals have been to help them acquire specific strategies that work for them and enable them to increase their control over their own behavior and patterns of study. This has been a major goal at the academy, as it has meant that students learn to decrease negative behaviors across all three aspects of self-regulation and increase positive behaviors. Progress has been made with almost all students in this regard, and we anticipate that this progress will continue, enabling students to succeed personally as well as academically.

Curriculum and Instructional Programming

It is critical for teachers to have clear expectations and to effectively communicate them to the students. Clear expectations include: standards and objectives posted and discussed, models of student work displayed, students judging their own and others' work, intermediate expectations specified, and communication with family and community (Resnick & Hall, 2005).

The curriculum and instructional program adopted for the academy combined the philosophy and work of Renzulli and Reis (1997) and Sandra Kaplan's (2009) grid approach to adding depth and complexity for gifted and high potential students. The SEM was infused across all content areas as both enrichment and opportunities for independent and small-group study were used to enrich and extend the regular content curriculum across the content areas. Each content area curriculum combined the depth and complexity advocated by Kaplan with the ideas included in the Multiple Menu Model (Renzulli, Leppien, & Hayes, 2000). Research on the SEM has documented its benefits for students in urban areas and the use of engagement and interest-based opportunities for gifted and high-potential students (Reis & Renzulli, 2003; Renzulli & Reis, 1994).

Mathematics

Students in the Renzulli Academy participated in an advanced mathematics curriculum called Project M³: Mentoring Mathematical Minds (Gavin, Casa, Adelson, Carroll, & Sheffield, 2009; Gavin et al., 2007). This program emerged as a result of

a collaborative research effort coordinated by Dr. Katherine Gavin, a faculty member at the University of Connecticut, and collaborative researchers from other universities comprising a team of national experts in the fields of mathematics, mathematics education, and gifted education. The team created 12 curriculum units of advanced mathematics. Using a project-based approach, Project M³ offers depth and complexity of math concepts taught across grade levels to high-ability students. The program was field-tested over the last several years and includes advanced math curriculum with projects and investigations to foster creativity, critical thinking, and problem-solving skills that lead to higher math and problem scores than comparison group students (Gavin et al., 2009). For example, in place value, students move beyond using tens, hundreds, and thousands and take part in a simulated archaeological dig, where they will discover unusual calculations carved into rock. Using creative problem-solving skills, students are asked to determine which place value system was used by these people.

Hartford schools' math standards were integrated into classroom preparation time each day and compacted for students as part of this process. Flexible cluster grouping also was initially used across the three grade levels to place students in nongraded mathematics to participate in the open-ended problem-solving opportunities that are inherent in Project M³.

Reading/Language Arts/Writing

The Schoolwide Enrichment Model in Reading (SEM-R; Reis & Fogarty, 2006) also has been integrated into the Renzulli Academy as the core of the reading/language arts program. This approach, developed by Dr. Sally Reis and a team of reading and gifted edu-

cation specialists, focuses on reading acceleration and enrichment for talented readers through engagement in challenging, self-selected reading. The SEM-R has been the focus of several previous research studies and found to be beneficial for urban students (Reis, Eckert, McCoach, Jacobs, & Coyne, 2008; Reis et al., 2007; Reis & Housand, 2009). The SEM-R incorporates differentiation of reading content and strategies, coupled with more challenging reading experiences and advanced opportunities for metacognition and self-regulated reading. In other words, the SEM-R program challenges and prepares students who are talented in reading to begin reading more challenging books in school and to continue this reading at home (Reis et al., 2008; Reis et al., 2007; Reis & Housand, 2009). The goals of the SEM-R approach are to encourage children to begin to enjoy the reading process by giving them access to high-interest, self-selected books that they can read for periods of time at school and at home; to develop independence and self-regulation in reading through the selection of these books, as well as the opportunity to have individualized reading instruction; and, finally, to enable all students to improve in reading fluency and comprehension through the use of reading comprehension strategies. Based on almost a decade of research, the SEM-R has been proven to be effective at increasing achievement in reading and encouraging talented readers to read more challenging material for longer periods of time. Results of randomized studies suggest it is even more effective for urban talented students (Reis et al., 2008; Reis et al., 2007; Reis & Housand, 2009) and for students who speak English as a second language (Reis & Housand, 2009).

Phase 1. At the academy, the SEM-R intervention included three

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phases. During Phase 1, the “exposure” phase, teachers presented short read-alouds from high-quality, engaging literature to introduce students to a wide variety of titles, genres, authors, and topics. Along with these read-alouds, teachers provided instruction through modeling and discussion, demonstrating reading strategies and self-regulation skills, and using higher order questions to guide discussion. Early in the SEM-R at the Renzulli Academy, these Phase 1 activities lasted about 20 minutes per day; Phase 1 decreased in length over the course of the year when students could spend more time on Phase 2. Currently, all students read for about 50–60 minutes each day.

Phase 2. Phase 2 of the SEM-R emphasized the development of the students’ ability to engage in supported independent reading (SIR) of self-selected, appropriately challenging books, with differentiated instructional support provided through conferences with the teacher or another adult. During Phase 2, students selected

books that were at least 1 to 1.5 grade levels above their current reading levels. Students learned strategies for recognizing appropriately challenging books, and they were guided and encouraged to select challenging books in areas of their interest to promote engagement. Over the course of the intervention, students initially read for 5–15 minutes a day during Phase 2; over time they extended SIR to 20–25 minutes, and finally to almost an hour each day. During this in-class reading time, students participated in individualized reading conferences with their teachers; on average, each student participated in one to two conferences per week, and conferences usually lasted about 5–7 minutes. In these conferences, teachers and instructional aides assessed reading fluency and comprehension and provided individualized instruction in strategy use, including predicting, using inferences, and making connections. For more advanced readers, conferences focused less on specific reading strategies and more on higher order questions and critical concepts.

Phase 3. In Phase 3, students were encouraged to move from teacher-directed opportunities to self-choice activities over the course of the intervention. Activities included (but were not limited to) opportunities to explore new technology, discussion groups, practice with advanced questioning and thinking skills, creativity training in language arts, learning centers, interest-based projects, free reading, and book chats. These experiences provided time for students to pursue areas of personal interest through the use of interest development centers and the Internet to learn to read critically and to locate other reading materials, especially high-quality, challenging literature. Options for independent study using RLS also were made available for students during Phase 3. The length of

Phase 3 varied with the length of the other phases, with more or less time devoted to Phase 3 on particular days based on progress in independent reading and needs for time to be devoted to independent projects and activities. All students in the academy had one period each day for an independent study/Type III block connected to SEM-R that also incorporated the enrichment philosophy of the school.

All teachers received approximately 350 high-interest books across several reading levels to support their SEM-R implementation, and the teachers augmented their collections as needed, choosing literature based on students’ interests and experiences. Teachers also used sets of bookmarks with higher order questions that were free and available for download at <http://www.gifted.uconn.edu/semr>. Each bookmark included about 3–5 questions addressing a particular literary element, theme, genre, or other area of study and was tied to advanced reading strategies as well as state standards. Teachers used the bookmarks in both Phase 1 discussions and Phase 2 conferences to promote higher order thinking. Using the SEM-R, students also completed advanced writing selections on a weekly basis.

Science

The Renzulli Academy science curriculum was based upon challenging standards and big ideas, applied to units of study across the grade levels. Using both the Multiple Menu approach (Renzulli et al., 2000) and Kaplan’s (2009) work, a curriculum map was created with essential questions and big ideas across content area units such as habitats and the water cycle. Science units also introduced project-based work that employed the scientific method. Students began by studying key concepts and principles

in science based on grade-level standards, and then depth and complexity was added to enable students to work actively on science projects by forming a hypotheses and applying the scientific method to project-based learning and inquiry experiences in science. Enrichment was scaffolded across each of these units, with Type I, II, and III opportunities in science. The goal each year was for students to complete an advanced science project in an area of interest using data collection methods and the scientific method.

Social Studies

Social studies was taught by adding depth and complexity (Kaplan, 2009) to the grade-level standards, infusing enrichment into the content area using the Enrichment Triad Model, and requiring a project based on advanced content acquisition, primary sources, and interests each year. A curriculum map was developed

for each grade level, with the goal of enabling these academically talented students to demonstrate and/or acquire knowledge of the grade-level social studies curriculum, as well as to engage in authentic historical research. Units of study on the curriculum map included the following, among others: explorations about Native Americans, Connecticut history, geography and map skills, and government. A focus on big ideas was integrated into these units that also introduced students to critical thinking and problem-solving skills. A social studies project was required each year during the second semester, culminating with a History Day project during sixth grade. In fourth grade, for example, students are required to complete a research project about a significant person or place in Connecticut history incorporating the use of primary sources and at least one big idea introduced during one of the years. The products were expressed in the students' areas of strength and choice, such as dramatic, written, display, technological, auditory, or in any combination of student preferences, and were completed during the last marking period of fourth grade. In sixth grade, advanced themes from the National History Day Competition have been integrated with standards-based instruction and all students completed a historical project of sufficient quality that it could be submitted to the regional competition.

Enrichment Clusters

Enrichment clusters, another component of the Schoolwide Enrichment Model, are nongraded groups of students who share common interests, and who are grouped together during specially designated time blocks to work with an adult who shares their interests and who has some degree of advanced knowledge and expertise in

the area. Research has suggested that the use of enrichment clusters results in higher use of advanced thinking and research skills in gifted and in other students as well (Reis, Gentry, & Maxfield, 1998).

Early in the school year, at a before-school professional development session for all teachers in the school, the idea for the Renzulli Academy was discussed and the notion of enrichment clusters was introduced to all teachers as a way to introduce and include other faculty in the mission of the academy. A series of clusters was planned and implemented for all students in the school every Friday afternoon from late September through December as a way to introduce some enrichment for all students. Students completed an interest inventory developed to assess their interests, and an enrichment coordinator, one of the academy teachers, tallied all of the major families of interests and then recruited teachers and other professionals in the school to facilitate enrichment clusters based on these interests, such as drama, history, creative writing, drawing, music, archeology, and other areas. Training was provided to the facilitators who agreed to offer the clusters, and a brochure was developed and sent to all parents and students with descriptions of enrichment clusters. Students selected their top three choices for the clusters and scheduling was 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 was that *students and teachers wanted to be there*. All teachers (including music, art, and physical education) were involved in facilitating the clusters, and their involvement in any particular cluster was based on the same type of interest

We have been successful, we believe, for in just one academic year, most students are working diligently at advanced levels, engaging in higher level thinking and problem solving . . .

assessment that was used for students in selecting clusters of choice.

Strategies That Worked

In reflecting on our efforts to date, the teachers' efforts to challenge these academically talented students by focusing on their strengths and interests have worked well. The ability of teachers to compact students' curriculum—finding out what they already have mastered in the core, basic skills curriculum, eliminating work that they know already, and replacing it with a combination of more challenging and engaging work, as well as some interest-based opportunities, also has been successful. The cluster grouping of students during math enabled some tiering of assignments that also extended to some open-ended, more challenging assignments in reading, social studies, and science. These have enable students to pursue some of these assignments in more depth, adding writing options to reading and project options to science and social studies. The ability to find some students' interests, learning styles, and product/expression styles using the Renzulli Learning System has helped to identify students' primary areas of interest, learning styles, and product styles, and has matched them with an individualized, differentiated set of enrichment opportunities. Although RLS can be used for all students, these teachers used the advanced materials for more talented students that are a part of the program.

The use of above-grade-level reading content for the most advanced readers also has been successful. Using the SEM R, teachers have used challenging fiction and nonfiction books related to students' interests as the focus of their reading and language arts program. Our most advanced students

now have the chance to encounter words and ideas that are new to them. Integrating creative and critical thinking activities into all content areas has enabled our students to integrate these higher level thinking strategies into all content areas. Enabling all of the students to explore their interests through a daily period of project and independent study time has worked well. Some students did need more scaffolding than others. Posing questions enabled them to consider doing work that might make a difference in their community such as solving problems that relate to children who need shelter or clothing in the cold weather or those among them who do not have enough food. The success of the whole-school enrichment clusters enabled the academy teachers to create an additional weekly cluster time period for academy students in writing, the arts, and social studies. We also have integrated counseling into the academy, recruiting graduate students in school counseling to mentor students who are at most risk for underachievement and whose self-regulation has continued to be limited. This one-on-one counseling approach, given after parent permission was attained, has resulted in some improvement on the parts of some students.

Changes and Modifications

As with any new endeavor, reflecting on what we have put in place enables us to make appropriate modifications and adjustments to improve our Renzulli Academy. In the future, the identification process will be revised, modified, and fine-tuned. Teacher nomination must be more closely supervised. We want to ensure that the students selected to participate in the Renzulli Academy bring with

them the potential and motivation to learn, a commitment to fulfill the expectations of the academy, and the willingness to integrate self-regulation and effort to overcome the challenges that may impede their learning.

For the next school year, we are working on developing a School Compact, which clearly defines the respective responsibilities of the students, parents, and staff in order to ensure success of the highest academic and personal goals. Students, parents, and staff will meet, discuss, and adopt the School Compact. The signatures of all parties will validate the expectations of this living document to provide an effective framework for student achievement.

However, as with any new venture, we sometimes focus on what we still need to do instead of focusing on what we have accomplished. We have been successful, we believe, for after just one academic year, most students are working diligently at advanced levels, engaging in higher level thinking and problem solving, and completing advanced products on a regular basis. Student behavior is improving steadily, and we are encouraged that participation in the academy will decrease underachievement, increase achievement, and help to create more highly motivated and engaged students who will achieve at the highest levels, have a successful high school experience, gain acceptance to competitive colleges, and as adults, realize their career aspirations and their dreams for a successful, satisfying, and productive future. **GCT**

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