

The National Research Center on the Gifted and Talented

1996 Spring Newsletter



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Everything You Need to Know About the NRC/GT: Web Site, Videos, and Texts

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WE ARE KNOWN AS THE National Research Center on the Gifted and Talented (NRC/GT). With all the technology available, however, we are essentially an international center. Our research is conducted in the United States and soon finds its way all over the world. Recently, Dr. Siamak Vahidi created a web site (www.ucc.uconn.edu/~wwwgt) for the University of Connecticut, highlighting the NRC/GT, Confratute—Summer Institute on the Gifted and Talented, Three Summers Program, and a new project—UConn Mentor Connection. All of these programs and opportunities for administrators, teachers, and students have a common purpose—*talent development*. The interest in talent development is universal. Our first contact on the new web site was from

the Republic of Singapore and the second from Leeville, South Carolina. People are eager for more information about the research findings and the educational opportunities to further their own knowledge and expertise. The NRC/GT web site contains our mission statement, abstracts of all our publications to date, our products list, text of the Winter 1996 newsletter, names and addresses of the participating universities and research teams, and links to home pages posted by the University of Connecticut, City University of New York—City College, Stanford University, University of Virginia, and Yale University. Through these links you may learn about features of each university such as academics, admissions, cultural events, and sports.

Technology makes information readily available using a few keystrokes. If connecting to the NRC/GT by computer keystrokes is not an option for you, consider accessing our videotape collection. During the first five years of the Center, we developed a series of videotapes to keep you informed of our research results and to provide you with concrete examples of translating research into classroom practices. From our first live videotape on *Curriculum Compacting: A Process*

for Modifying Curriculum for High Ability Students (Reis, Burns, & Renzulli, 1992) to subsequent ones on *The Explicit Teaching of Thinking Skills: A Six-Phase Model for Curriculum Development and Instruction* (Burns, 1993), *Curricular Options for "High-End" Learning* (Gavin et al., 1994), and *Enrichment Clusters: Using High-End Learning to Develop Talents in all Students* (Gentry, Reis, Renzulli, Moran, & Warren, 1995), we showcased classrooms as students and teachers experimented with strategies to promote the talents of young people. Videotape footage recorded the steps to reducing the repetition of mastered curriculum, defining and infusing thinking skills in multiple content areas, applying the strategies of curriculum differentiation, and designing and implementing enrichment clusters for a schoolwide focus on talent development. If you still need to know more about the NRC/GT, we have that information available, too.

Just over a year ago, we assembled our research teams and held our first conference entitled "Building a Bridge Between Research and Classroom Practices in Gifted Education" to provide people with another venue for

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first-hand information on the latest research findings. As presenters discussed their work with hundreds of practitioners, two film crews and a host of NRC/GT staff members conducted interviews with several researchers. We asked our researchers to reflect on their work and synthesize findings related to:

- nontraditional assessment;
- high potential, high risk learners;
- challenging learning opportunities; and
- professional development.

The videotape module entitled *The National Research Center on the Gifted and Talented: Reaching the Destination* (Gubbins, 1995) provides topical commentaries from our researchers. The module is designed for teacher trainers or as a self-study approach. Previewing the tape and reviewing the presentation guidebook provides a quick overview of the major topics. Segments of the presentation guidebook are followed by discussion questions and selected resources. Scanning the discussion questions aids you in deciding which findings you would like learn more about. The presentation guidebook serves as transparency masters to share with audiences or as print resources.

A sample of topical comments will hopefully spur further discussions among practitioners as you plan, develop, implement, and evaluate programs and services for students with known and emergent talents. The topic of nontraditional assessment is of primary importance under the Jacob K. Javits Gifted and Talented Students Education Act. How would you describe your present approach to screening and identifying potentially gifted and talented students? Do you have a comprehensive, defensible approach that is sensitive to the student populations of your district? Donna Ford, University of Virginia, reminds us:

Gifted students should be assessed more than just identified. With identification you answer one question: Is the child gifted or not? You get a yes/no answer. Assessment is more comprehensive and thorough and tells us not only whether the child is gifted, but in what ways he/she is gifted so that we can meet not only academic needs, but social, emotional, and psychological needs as well.

A multi-dimensional assessment system should be created including information from parents, teachers, students, and peers.

The multi-dimensional assessment must be comprehensive and defensible, and it must inform instruction. Identification, teaching, and evaluation should be regarded as integral links to improving the educational opportunities for high potential, high risk learners. (E. Jean Gubbins)

Designing and developing a multi-dimensional assessment system requires careful review and consideration of potential instruments that reflect the goals and objectives of the programs and services. The instruments should not be restricted to pencil and paper tests implemented during a single session.

We see a combination of new instruments and new techniques. . . which involves people looking at children over a longer period of time trying to get involved in bringing out the talent that's there, actually eliciting talent as much as identifying talent. (Carolyn Callahan)

We need to take a proficiency view, take a look at the strengths within cultures, take a look at the strengths of students, and find reasons within those strengths to

provide services to students. (Scott Hunsaker)

Looking at the strengths of students is a change in mind-set for some of us because much of our earlier training as teachers centered on looking at the deficiencies of skills among students. Now we realize that a focus on strengths allows us to enhance students' abilities and work towards eliminating deficiencies by engaging them in the curriculum.

We need to arrange opportunities within the curriculum for young people to engage in hands-on explorations in topics of their interest so that we can see talents emerge. (Jann Leppien)

When the focus on talents is not the primary philosophy of the school, students' strengths may not emerge. Sally M. Reis comments:

We investigated the experiences of college age students with learning disabilities. Most had been very bright in elementary school and had not been identified for gifted programs. . .or programs for learning disabled students. . . Their brightness was enough so that they could do well on most of the tests for learning disabilities. . .

As the students got older, the learning disability became more pronounced. . . They oftentimes did not gain the compensation strategies they would have needed had they been participating in a program—they started to have more problems in school.

High potential, high risk learners can sometimes be overlooked unless we incorporate multi-assessment procedures and use the curriculum to elicit the skills and abilities.

The talents of high potential, high risk learners will be unveiled by enriching the tapestry of the curriculum. The emphasis

becomes more than just *talent recognition*—it is *talent development*. (E. Jean Gubbins)

Carol Tomlinson notes that creating challenging learning opportunities can be accomplished in many ways such as pre-assessing students' skills, amplifying learning opportunities, providing choices for students, and differentiating professional development opportunities.

The easiest way to build in relevance and challenges in curriculum is to give young people some opportunity to select the work that they would like to pursue, ordinarily in the form of a project that leads to a product or some kind of service. (Joseph S. Renzulli)

Working with students' strengths and interests helps us to consider responses to questions such as:

- What is the level of challenge in our curriculum?
- What documentation exists that describes the challenge level of our curriculum?
- In what ways can we differentiate the curriculum to offer more challenging learning environments?

To make changes in screening and identification procedures and curricular options requires professional development opportunities for administrators and teachers.

So much of our training in the past as classroom teachers has been prescription and didactic teaching strategies. We need to work with teachers to move the model of teaching to involve the children—to engage them in exploration. (Jann Leppien)

We are asking teachers to think of students in terms of academic abilities, interests, and style preferences. This is a tremendous

change for teachers. We need to provide teachers with time to make these changes. (Jeanne Purcell)

Changing instructional approaches and providing curricular options requires time:

Time has to be built in so that people can make the changes personally before they can make the changes with respect to their instruction. (Deborah Burns)

Providing time and opportunities for professional development and follow-up opportunities with peer coaches results in more effective adoption and implementation of new strategies. Definite differences between the quality of teacher training and actual practice have been documented:

Teachers who are successful in using differentiated strategies have been shown how to make modifications versus told how to make modifications. (Karen Westberg)

We continually try to show practitioners how to translate research findings into practices. With our multimedia approach, we reach our target audiences. Another text resource also lends itself to providing you with "everything you need to know about the NRC/GT": *Developing the Gifts and Talents of All America's Students: NRC/GT 1990-1995*. This monograph summarizes the scope of the NRC/GT and synthesizes the findings and themes across studies and commissioned papers. The findings and themes complement the topical commentaries by our researchers from the videotape described above entitled *The National Research Center on the Gifted and Talented: Reaching the Destination* by focusing on:

- characteristics and identification;
- special populations;
- program impact, options, and outcomes;
- professional development; and

- policy, program organization, and management.

Following this synthesis of the research, we provide readers with abstracts of over 50 publications and accompanying guidelines, recommendations, or conclusions. These briefing sheets offer a concise format for readers as you search for the most pertinent research-based findings to improve and enhance your programs and services for students with known and emergent talents. We will continue to provide practitioners with information about the NRC/GT through our web site, videos, and texts as we proceed with our research agenda through the year 2000.

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A. Harry Passow: Scholar and Friend

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THE FIELD OF EDUCATION often reflects the ebb and flow of ideas of scholars and practitioners, which at first blush sound new or cutting edge. Then we realize the ideas can be traced back to earlier viewpoints so well constructed they stood the test of time. Studying the evolutionary ideas results in a sense of admiration and respect for the person who penned the earlier thoughts. Dr. A. Harry Passow was such a person whose ideas make us proud to have known him as a scholar and friend. Dr. Passow died March 28, 1996, and his personal and professional legacies to the world are immeasurable. We treasure our encounters with him, whether they were face-to-face meetings, telephone conversations, or reading the numerous books and articles by such an incredible wordsmith.

Harry's many gifts and talents were evidenced in initial encounters with him. Just listening to him tell a story made you realize that he was destined to write. His words and ideas flowed so gracefully. He captured your attention with his gentle demeanor, sound grasp of relevant research, and keen perspectives from experiences. Over 40 years ago, Harry talked about issues that sound so current in the field of gifted and talented education in the 1990s. He was acutely aware of the importance of developing the talents of young people, studying the scholastic underachievement among bright students, determining the effects of ability grouping, and opening opportunities for disadvantaged

learners before some of us even realized the importance of these issues.

In 1979, Dr. A. Harry Passow served as the editor of *The Gifted and the Talented: Their Education and Development*, *The Seventy-eighth Yearbook of the National Society for the Study of Education*. He assembled a team of scholars to prepare chapters on nurturing and educating students with high abilities. In a closing chapter entitled "A Look Around and a Look Ahead," Harry delineated some generalizations and principles that could have been written in response to educational issues of the 1990s. A few statements illustrate the prophetic relevance:

- A design for a curriculum for the gifted and talented should provide for differentiation of goals, content, instructional strategies, resources, and evaluation.
- The desired balance between basic general education and specialized education in the program for gifted and talented students should determine the selection of content and instructional strategies.
- Various gifts and talents emerge, can be identified, and can be nurtured at different developmental levels.
- Gifted and talented students need access to a variety of "teachers"—instructors, mentors, counselors, and role models.
- Programs for the gifted and talented must be viewed as an integral part of an ongoing

educational program of the school system and not as an appendage or a luxury. (Passow, 1979, pp. 447-451)

Harry's words and wisdom offered us guidance in designing and developing programs when they were published almost two decades ago, and they continue to hold promise for the vision of what could or should be. Fortunately, in many schools around the world, these generalizations and principles are practiced regularly because they represent the best of educational research and practice. Harry knew and understood the educational milieu of advantaged and disadvantaged students in urban, suburban, and rural environments. His first-hand knowledge of schools and his communications with educators paid off tenfold as he wove his visions for schools into his many writings.

We were honored to have Harry collaborate with The National Research Center on the Gifted and Talented on several monographs. He called us one day to talk about a policy study. He collected legislative and regulatory documents, as well as resource books, from 49 states and reviewed them for explicit and implicit



policy statements regarding the education of gifted and talented children. He wanted to know if we were interested in publishing a summary of his study. We were thrilled with his request because we knew the quality of his review process and recognized how valuable such a document would be to practitioners and legislators. Harry, as the lead author,

presented us with a research study on *State Policies Regarding Education of the Gifted as Reflected in Legislation and Regulation* (1993), highlighting critical elements of program planning such as:

- philosophy or rationale;
- definitions of gifted and talented;
- identification procedures;
- differentiated curriculum and instruction;
- counseling and support services; and
- program evaluation.

Harry continued his collaborative work with the NRC/GT by co-authoring monographs that present historical, philosophical, and contemporary perspectives on two major issues in the field: identification and assessment. Dr. Mary M. Frasier and Jaime H. Garcia of the University of Georgia and Dr. A. Harry Passow produced the following monographs that will continue to influence discussions and directions in the field for decades to come:

Frasier, M. M., & Passow, A. H. (1994). *Toward a paradigm for identifying talent potential*. Storrs, CT: University of Connecticut, The National Research Center on the Gifted and Talented.

Frasier, M. M., Garcia, J. H., & Passow, A. H. (1995). *A review of assessment issues in gifted education and their implications for identifying gifted minority students*. Storrs, CT: University of Connecticut, The National Research Center on the Gifted and Talented.

Harry never shied away from critical educational issues; he always approached them with the sense of an historian, the intellect of a philosopher, and the analytical skills of a researcher. In the past few years, there has been a considerable amount of discussion about grouping practices. Some people thought it was a new issue; others realized that it was cycling back into the education scene. In 1962, Harry prepared an article for *Educational Forum* (Volume 28) entitled “The Maze

of the Research on Ability Grouping.” He reviewed research findings and discussions dating back to the 1920s and summarized the difficulties in generalizing from the research. He noted that the problems of equating and synthesizing research findings stem from the following:

- The studies vary considerably in scope of aim and purpose.
- The studies differ in the number of students, the number of groups, and the size of the classes involved.
- The studies differ in their duration—ranging from a semester or less to a year or more.
- The studies differ in the adequacy of the selection bases and the means of matching experimental and control groups.
- The studies differ in the “treatment”—i.e., the differentiation of curricula and methods of teaching.
- The studies differ in the deployment of teachers in various groups.
- The studies differ in the instruments and techniques used in evaluating changes in students.
- The studies have generally failed to assess the effects of grouping on teachers and administrators. (Passow, 1962, pp. 285-288)

Harry’s analytical approach did not involve meta-analysis, best evidence synthesis, or calculation of effect sizes. However, he certainly critiqued the research and made us realize that the issue was one of *what goes on in the group that makes the difference*—not the grouping practice. Harry recognized the importance of research and practice throughout all of his writings. As readers, we continue to come away with a sense that he really clarified the issue. What an incredible gift he has shared with all of us who keep returning to his words for future directions!

Harry’s dedication to equity and excellence in schools will be witnessed for generations because of his extensive professional legacy. In an article for *Gifted Education International* (Volume 10) entitled “Families and Communities: Essential Resources for Nurturing Giftedness and Talent,” he reminds us that

The school is the catalyst for talent identification and talent development. (Passow, 1995, p. 55)

In many ways, Dr. A. Harry Passow was a catalyst for the field of gifted and talented education. With his gentle manner and incredible wisdom, he guided us for decades. His words will always be with us and our personal memories of him over the years will remain in our hearts.

A Tribute

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A. Harry Passow promulgated a gentler belief about the nature of giftedness. He stated in *Essays on the Intellect*, ASCD (1985):

What educators and psychologists recognize as giftedness in children is really **potential** giftedness, which denotes **promise** rather than fulfillment and **probabilities** rather than certainties about future accomplishments.

How high these probabilities are in any given case depends on the match between a child's budding talents and the kinds of nurturance provided.

Harry Passow believed unequivocally that what we challenge children to think about must be substance that will nurture their talent. He believed in offering children high-quality experiences to enrich their lives.

It's been said that progress comes from sticking your neck out. Standing on one or two giants' shoulders doesn't hurt, either. Harry, please let us stand on your shoulders for a while. We can think of no one who has embodied these ideals more fully. Help us experience even a fraction of the gentle humanness that was you. We will miss you, friend. Shalom!

Learning How New Teachers Relate to Academic Diversity in Mixed Ability Classrooms

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IN A BURGEONING NUMBER of classrooms around the country, heterogeneous grouping of students is the order of the day, and general classroom teachers find themselves unsure of how to adjust instruction in response to the readiness levels, interests, and learning profiles of students who differ widely in those ways. Research tells us that teach-to-the-middle instruction still prevails in our schools and that few veteran teachers are predisposed to differentiate instruction (that is, to modify what and how they teach) for students who differ significantly from the norm.

If it is the case that experienced teachers find it difficult to make changes in their practice so that they can establish classrooms with appropriately differentiated curricula, we might hypothesize that our best hope for addressing academic diversity in heterogeneous settings lies in novice teachers who may possess both state-of-the-art training and the flexibility necessary to establish classrooms with varied avenues to learning. Yet a strong body of research indicates that prospective teachers leave teacher education programs with relatively the same set of beliefs about teaching with which they entered these programs. In part, teacher education programs appear unable to reshape novice teachers' views of schooling because of the power of the images of teaching and learning that formed during the dozen or more years of schooling beginning teachers encountered prior to formal teacher education. This research calls into question the

flexibility of novice teachers in breaking entrenched patterns of educational practice.

While much research exists on how novice teachers make the transition from college or university into full time teaching, little research has been done on how novices come to understand and address the needs of academically diverse learners during the earliest stages of teaching. The University of Virginia site of The National Research Center on the Gifted and Talented recently concluded a 3-year project entitled Preservice Teacher Preparation in Meeting the Needs of Diverse Learners, studying how novice teachers grow in their early attempts to think about and plan for students who are gifted, learning disabled or remedial, in the context of general classrooms.

Research Design

The Preservice Study was conducted through six university sites in four states. During the baseline phase of the study, novices received no intervention. During phase two of the study, one group of novices participated in a day-long problem solving workshop focused on helping participants think about and plan for learning needs of academically diverse learners. A second group of phase two novices took part in the same workshop and were then assigned a curriculum coach whose role was to continue to mentor their thinking about responding to academic diversity in their classrooms throughout their student-teaching

placements. In the third phase of the study, a few novices from all three groups (no intervention, workshop, and workshop plus coach) were followed into their first year of full-time teaching. The study used both qualitative and quantitative design. All participants were observed at least three times during a given phase and interviewed after each observation. In addition, the novices and their cooperating teachers completed pre and post student-teaching surveys designed to assess their beliefs and practices related to academic diversity.

Key Findings From the Preservice Study

Findings from the study yielded a wide array of insights and implications for teacher educators as well as for public school leaders. Among many findings that merit consideration are the following:

- Novices in all three groups reported that they received little encouragement to differentiate instruction for academically diverse learners from their teacher education programs, university supervisors, or cooperating teachers. While the novices typically took a survey course on exceptional learners, they most often recalled the course to be an exceptionality-a-week with little practical value in the field. Cooperating teachers often cautioned the novices to be sure to "keep all of the students together," even when the novices proposed more instructionally responsive plans.
- The novices' images of schooling were ill-suited to differentiating instruction. As they saw it, curriculum was about coverage with teachers telling and students absorbing and repeating information that is largely factual in nature. Everyone was allotted the same amount of time to complete

the same tasks. Assessment came at the end of learning to “see who got it.” Grading was according to a standardized yardstick.

- Images of advanced or gifted learners and struggling or learning disabled/remedial learners were limited and limiting, and were often intertwined with compliance. Asked to describe advanced and struggling learners, the novices noted that gifted learners “do what I ask them to do” and “do it happily.” Struggling learners misbehave, “can’t stay on task,” “don’t want to work.”
- The novices appeared to have a shallow well of instructional strategies from which to draw. Lecture and worksheets dominated. Even in the early grades, it was common for all learners to complete the same activities or learning centers.
- The single “alternative” instructional strategy common across many of the novices and sites was cooperative learning. The preservice teachers often spoke about cooperative learning in ways that clearly delineated the academic haves from the academic have nots, referring frequently to the students who “cannot learn” but who can at least be aided by the students “who already know it.” A number of the novices discussed the benefits and relief they felt in having “junior teachers” to help them with their role as instructor.
- In the framework of overwhelming standardization in their images of schooling as well as in the realities of the classroom, the novices were frustrated by advanced and struggling learners. Gifted learners already know what is to be covered prior to instruction, “but they can’t sit still, so I have to find fillers for them.” Struggling learners “can’t get it” in the time allotted, “but at least I expose them to it.” There was a virtual absence of images of

teaching in which there was more than a single “content,” more than a single time allotment, or more than a single assessment, regardless of the diversity of the student population.

- Novices in the intervention groups persisted in their beliefs that learners vary in need and that an effective teacher will modify instruction based on those varying needs. Non-intervention novices, on the other hand, quickly jettisoned differentiation as a goal, often noting that it was unrealistic. Intervention novices also made more attempts to differentiate instruction than did their non intervention counterparts.

Some Implications From the Study’s Findings

The role of a novice teacher is complex and demanding. In the virtual absence of either images of differentiated classrooms or persistent encouragement to develop the skills of differentiation, it was easy for the novice teachers in this study to succumb to the standardizing effects of schools. If we want to encourage novice teachers to move away from one-size-fits-all teaching, this study suggests that we will need to do a better job than we are currently doing, both at the university and public school level.

- Teacher education programs need to make differentiated instruction a key component of all pedagogical and practical experiences for all prospective teachers.
- Teacher education programs need to ensure that prospective teachers are developing the “gross motor skills” of teaching (e.g., understanding key concepts of a discipline, developing tasks that foster student meaning-making, teacher as facilitator, on-going assessment of student understanding, reflective practice) that are most likely later to lead to

the “fine motor skills” of differentiation (e.g., creating tasks at varied levels of complexity, managing multiple groups in a classroom).

- Teacher education programs need to coach cooperating teachers in how to differentiate instruction (or at least the need to do so), so that the experienced teachers facilitate (or are at least open to) modifying instruction in ways responsive to academically diverse populations.
- Public schools need to establish for novices (and other staff) a core expectation that teachers appropriately address varied readiness levels, interests, and learning profiles in mixed ability classrooms.
- School leaders need to provide for novices in-school models of and coaching in creating and applying differentiated curricula, establishing and managing differentiated classrooms, flexible time use, alternative assessment, and grading patterns that support individual growth.
- Public schools need to provide novice teachers help in establishing reasonable long and short term goals for professional growth, consistent encouragement and support in achieving the goals, and recognition of growth throughout the early stages of teacher development.

The Preservice Study indicates that if the needs of academically diverse learners, including the gifted, are to be met in the regular classroom, much work needs to be done with preservice level teachers. We must establish a sense of need for teachers to be responsive to varied learner needs, perceptions and practices related to curriculum and instruction. This, of course, will require prolonged support and commitment at the university and school levels for long-term development in differentiation.

Total School Cluster Grouping: An Investigation of Achievement and Identification of Elementary School Students

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CLUSTER GROUPING OF students for instructional purposes is a programming strategy that can be used to meet the needs of high achieving and gifted students in the regular classroom. It has gained popularity in recent years due to heterogeneous grouping policies and financial cutbacks that have eliminated special programs for gifted and talented students (Purcell, 1994). Cluster grouping has been defined as the intentional placement of a group of high achieving or gifted students in an otherwise heterogeneous classroom with a teacher who has both the background and willingness to provide appropriate challenges for these students (McInerney, 1983). Research indicates three major benefits exist to cluster grouping. First, gifted students interact with their intellectual peers as recommended by Rogers (1991), as well as their age peers on a regular basis. Second, cluster grouping provides services for gifted students without additional cost to the school district. Third, recent research has demonstrated that cluster grouping facilitates ongoing programming for gifted or high achieving students in the regular classroom (Hoover, Sayler, & Feldhusen, 1993).

This study examined the effects of a cluster grouping program on the

identification and achievement on students in a small, rural, mid-western school district that was purposefully selected because of its innovative use of cluster grouping. Cluster grouping in this district begins in grade 3 and continues through grade 5, with a yearly, flexible identification process beginning at the end of second grade that includes information from teachers, parents, and achievement tests. Within this program, some students are identified on the basis of their academic achievement and performance as *high achieving*, and placed together in a classroom with a teacher who modifies curriculum and instruction to meet the academic needs of these students. Other students are identified as *above average*, *average*, *low average*, *low*, or *special education* for placement in heterogeneous classrooms, in which students are flexibly grouped and regrouped for instructional purposes. There are five classrooms per grade level and each year one classroom has the cluster of high achieving students, with the remainder of this class comprised of average, low average, and low achieving students. The other four classrooms each have a heterogeneous mix of students who achieve at above average, average, low average, and low levels. Additionally, two of these classrooms have clusters of special needs students who receive Title 1 assistance in math and reading, or who receive assistance from a special education teacher-consultant. By arranging classes in this manner, each heterogeneous classroom has a group of above average achieving students, and the use of resource personnel is maximized.

Background of the Study

General Background

Several analyses of studies regarding ability grouping in elementary schools (Kulik, 1992; Kulik & Kulik, 1984, 1985, 1992; Rogers, 1991; Slavin, 1987) have been completed; however,

only six studies could be located that examined the effects of ability grouping on gifted students in schools that used a cluster grouping model (Hoover et al., 1993; Ivey, 1965; LaRose, 1986; Long, 1957; Simpson & Martinson, 1961; Ziehl, 1962). All of these studies were concerned with the effects of cluster grouping on gifted students, and none examined the effects on students of other achievement levels. Additionally four of these studies are over 30 years old and may not apply to current educational settings. Cluster grouping is commonly suggested as a programming option for gifted students (Balzer & Siewert, 1990; Brown, Archambault, Zhang, & Westberg, 1994; Davis & Rimm, 1985; Kulik & Kulik, 1991; LaRose, 1986; McInerney, 1983; New York State Dept. of Education, 1982; Renzulli, 1994; Rogers, 1991; Winebrenner & Delvin, 1991) when, in fact, very little evidence exists regarding its impact on these students, and no existing research examines the impact of cluster grouping on all students (Hoover et al., 1993). It is surprising that since so many professionals advocate the use of cluster grouping, so little research actually exists regarding its effectiveness. A need clearly exists for empirical and qualitative evidence concerning the effects of cluster grouping, not only on high achieving students, but on other students as well.

Rationale for Cluster Grouping

The rationale for the total school cluster grouping used by the school that this study investigated is based upon the following issues discussed in the literature:

- *The program is cost effective.* Cluster grouping often exists in schools which can not afford additional personnel for a gifted and talented program. Hoover et al. (1993), LaRose (1986), Rogers (1991), Rogers and Span (1993), and Winebrenner and Delvin (1991) suggested that cluster

grouping can be a solution when other programs are not affordable.

- *Students are clustered with their intellectual peers.* Rogers (1991) concluded, in her meta-analysis, that gifted students should spend the majority of their school day with students of similar abilities. Research by Schunk (1987) has shown that students learn from those who are like themselves in ability. Kulik and Kulik (1991) concluded that it is beneficial, with respect to achievement gains, for gifted students to be grouped together.
- *Special needs students and the highest achieving students are placed with teachers who have had training and are interested in meeting these special needs.* Kulik and Kulik (1984) noted that the greatest benefit for ability grouped gifted children occurred when there was curricular differentiation. Rogers (1991) noted that without training and commitment to providing appropriately challenging curricula, achievement gains would probably be insignificant.
- *The highest achieving students are removed from other classrooms, thereby allowing new leaders and achievers to emerge.* Kennedy (1989) studied the effects of gifted pull-out programs on the students who remained in the regular classroom, and found that achievement increased in the classroom when the gifted students were pulled-out for programming. Contrary to Oakes' (1985) assertion that grouping harmed lower ability students, Kulik and Kulik (1992) and Rogers (1991) found no such evidence.
- *Heterogeneous grouping is maintained while there is a deliberate reduction in the range of achievement levels that each*

teacher must teach. In this program, grouping within the classrooms was flexible as recommended by Renzulli (1994) and Slavin (1987). Students interacted with both intellectual and age peers on a continual basis, identification categories were used for placement, and teachers had a limited range of achievement levels in their classrooms.

- *More efficient use of special education and Title I personnel is achieved by creating clusters of these students in one or two rooms instead of spreading them across five rooms.* This allowed team teaching between teacher consultants, aides, and classroom teachers, while providing targeted students with more time with specialists.
- *A high achieving group of students exists in every teacher's classroom.* Kennedy (1989) found that low and average ability students flourish when gifted students are not present and leading the competition in the regular classroom and Schunk (1987) indicated average and low ability students use children of similar ability as models instead of high ability children. By placing the highest achievers in a single room and above average students in the other classrooms, all students had the opportunity to grow.
- *High expectations for all students are maintained across all classrooms.* In her meta-analysis of research related to teacher expectations, Smith (1980) found that teacher expectations were linked to student learning, attitudes, and achievement. In addition, Brophy and Good's (1970) self-fulfilling prophecy model explained that students who are expected to achieve at high levels will do so, and conversely,

students who are expected to achieve at low levels will not achieve at high levels.

Research Questions

Since 1988 when a cluster grouping program was implemented in the treatment school, a trend regarding the identification of students was observed by the program coordinator, district administrators, and teachers. Specifically, during the 3 years that students spent in the school cluster grouping program, more students were identified by teachers as high achieving or above average and fewer students were identified as low or low average. This trend, together with the paucity of research on cluster grouping, lead to the following research questions:

1. Does a cluster grouping program affect teacher perceptions of student achievement as measured by teacher identification categories?
2. How do students in the cluster grouping school compare with students from a similar school who are not involved in cluster grouping with regard to achievement?

Methods and Procedures Research Design and Sample

This study employed an ex post facto examination of quasi-experimental, non-equivalent comparison group intervention which used a purposive sample. The treatment sample included all students from the Class of 2000 (N=96) and Class of 2001 (N=104) from a small rural school district. These students were involved in the program from grades 2 through 5 that allowed for an examination of the program effects over time. A comparison school was selected on the basis of its similarity to the treatment school with regard to: geographic region, socioeconomic status, ethnicity, and school configuration and size. The

(continued on page 10)

(continued from page 9)

comparison district did not have a program for gifted students, and made available for research student achievement data [Class of 2000 (N=68); Class of 2001 (N=69)].

Instrumentation

Student achievement in the treatment school was measured on a yearly basis using the *Iowa Tests of Basic Skills (ITBS)*. The *ITBS* is a nationally recognized achievement assessment of the highest quality. For Form G, internal consistency and reliability coefficients are in the expected range of mid .80's to low .90's and stability reliabilities with a one year interval are in the .70 to .90 range (Willson, 1989).

The comparison school measured student achievement on a yearly basis using the *California Achievement Test (CAT)*. The *CAT* is well constructed, current, and well documented with internal consistency reliabilities in the high .80's and low .90's and stability reliabilities in the .80 to .95 range (Airasian, 1989). Additionally, Airasian stated the *CAT* "compares very favorably to other achievement batteries of its genre such as...the *Iowa Tests of Basic Skills*" (p. 128). Thus, while the content of these two standardized tests is not identical, use of Normal Curve Equivalent (NCE) scores provided an achievement standing relative to the respective test's norm in a group.

Data Analysis

Data were analyzed using descriptive statistics (means, frequencies, and percents) and repeated measure analyses of covariance using grade 2 as the covariate to equate the groups for initial differences.

Results

To address research question one, data were collected on the yearly student identification categories (*high achieving, above average, average, low average, low, or special education*). During the three program years, 48% of

the students from the Class of 2000 and 33% of the students from the Class of 2001 were identified as achieving at increased levels. The types of changes in identification categories are indicated in Table 1 and Table 2.

Additionally, the number of students identified as *high achieving* increased each year. For the Class of 2000, there were 10 third grade students identified as *high achieving*, but 23 students were identified as *high achieving* when they were in fifth grade. Further, for the Class of 2001, the number of students identified as *high achieving* grew from 15 to 23 between grades 3 and 5. For both of these classes of students, the number of students identified as *low* or *low average* decreased during the 3 program years.

To address research question two, the achievement scores from students who

attended the treatment school were compared with achievement data from students who attended the comparison school. The NCE scores for each student on the total battery (*ITBS*:

treatment; *CAT*: comparison) were used in two repeated measures analyses of covariance, one for the Class of 2000 and one for the Class of 2001. Students were statistically equated on achievement using the grade 2 scores as the covariate (significant covariate at $p < .05$). Adjusted and unadjusted means are displayed in

Table 3. The results indicated that there were significant interactions between group and total battery NCE scores for the Class of 2000 ($F=(2,304), p < .01$) and for the Class of 2001 ($F=(2,334), p < .01$). Effect Sizes of .14 and .10, respectively, indicated that the results are practically significant (Cohen, 1985). Interaction plots of adjusted means are depicted in Figures 1 and 2.

Table 1
*Class of 2000: Changes in Identification Categories Over Three Program Years**

Identification Change	Percentage of Students
Category increased	48
Category decreased	2
No change (regular education)	31
No change (special education)	9
Other changes (high-low-high, or low-high-low)	9
Total	99

Note. N=96, total may not equal 100% due to rounding.
*Categories were: *high achieving, above average, average, low average, low, or special education*

Table 2
*Class of 2001: Changes in Identification Categories Over Three Program Years**

Identification Change	Percentage of Students
Category increased	33
Category decreased	9
No change (regular education)	42
No change (special education)	6
Other changes (high-low-high, or low-high-low)	11
Total	101

Note. N=104, total may not equal 100% due to rounding.
*Categories were: *high achieving, above average, average, low average, low, or special education*

Table 3
Unadjusted and Adjusted Means for NCE Total Scores Grades 3 through 5 for the Class of 2000 and Class of 2001

Grade	Class of 2000				Class of 2001			
	Treatment		Comparison		Treatment		Comparison	
	UnadjM	AdjM	UnadjM	AdjM	UnadjM	AdjM	UnadjM	AdjM
3	49.9	52.5	53.6	50.3	46.7	47.1	52.9	52.3
4	51.2	54.2	51.4	48.1	50.4	50.7	50.9	50.3
5	54.3	57.0	47.4	43.8	52.4	52.8	49.3	48.8

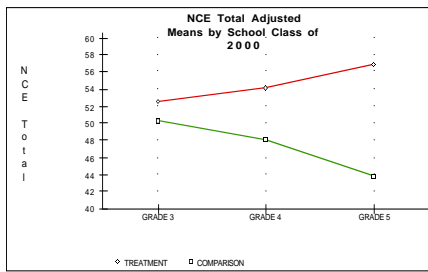


Figure 1. Interaction of NCE total scores by school for the Class of 2000.

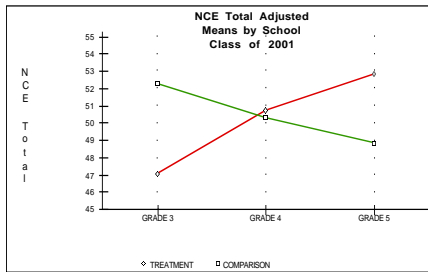


Figure 2. Interaction of NCE total scores by school for the Class of 2001.

Discussion

During the 3 years that students were involved in the cluster grouping program, their achievement increased significantly when compared to similar students from a school that did not use cluster grouping. Additionally, during each of the 3 years of the program, more students were identified by teachers as high achieving, indicating that not only were achievement scores increasing, but that teachers were identifying students who were not initially recognized as high achieving. This may be due to the fact that high achieving students were clustered in one classroom, thereby allowing students in other classrooms to be recognized as high achieving. It is encouraging that not only did the identification categories of many students increase during the 3 program years, but that this was followed by an overall increase in achievement as measured by the *Iowa Tests of Basic Skills*.

The implications are that when a cluster grouping model is implemented, there

may be a positive effect on the achievement and identification of all students, not just those identified and placed in the cluster for high ability students. According to the model in the treatment school and the review of literature, this is most likely when teachers have training in tailoring curriculum and instruction to the individual needs of students and when teacher expectations are high for all students.

This study provides a basis for further, controlled research regarding the effects of cluster grouping on the achievement and identification of students. A follow-up investigation will be conducted into the classroom practices of the teachers involved in this program.

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Valuing, Identifying, Cultivating, and Rewarding Talents of Students From Special Populations

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IN OUR SOCIETY, WHICH IS far from uniform in its beliefs and values, reaching consensus regarding who is gifted is complicated, and identifying potentially gifted students can be ambiguous at best. The differences in cultural norms, languages, ethnic backgrounds, levels of education and income, and other differences, raise a number of issues with respect to what talents are valued, identified, cultivated, and rewarded.

The challenges of identifying gifted students from underrepresented or special populations is not new. For decades, issues were raised concerning the identification of gifted children from lower socioeconomic classes. Since World War II and especially since school desegregation, there has been a recognition that the traditional approaches to identifying gifted children have been inadequate and that the considerable talent potential among minority and economically disadvantaged students has gone undeveloped (Frasier, Garcia, & Passow, 1995). Gifted children with disabling conditions are also underserved and underrepresented in gifted and talented programs (Willard-Holt, 1994). Therefore, identifying and serving gifted students from racial and ethnic minority groups, economically disadvantaged students, students with limited English proficiency, and

students with disabilities is a priority in the Javits Gifted and Talented Students Education Act of 1988.

This section focuses on the reasons for the underrepresentation of students from special populations in gifted and talented programs and the proposals to deal with improving this problem.

Cultural and Ethnic Groups

People who live in the inner city, in the barrio, or on the reservation need to know that their children are gifted. There's too much raw ability going through the cracks. If a child we might lose had the ability to cure cancer but ends up joining a gang or dealing dope, that's a double loss to the country. (Ryan, 1983)

Over the years, numerous writers have observed that gifted children can be found in every level of society and in every cultural and ethnic group (Clark, 1993; Ford, 1994; Renzulli, 1973; Torrance, 1977). Yet, identification of students with learning or physical disabilities and those from different cultural and ethnic groups has not been in balance with their numbers in the school population.

By far, underrepresentation of cultural and ethnic participation in programs for the gifted is most frequently attributed to biases in standardized testing (Bernal, 1980; Richert, 1987, 1991). Charges of test bias may stem from the test's content and format, performance differences among groups, and the purposes for which the test results are used. However, there is some agreement (Anastasi, 1988; Kamphaus, 1993; Reynolds & Kaiser, 1990; Thorndike & Lohman, 1990) that there is little or no substantiating evidence in the claims of bias in most well-constructed modern tests of intelligence.

Charges of bias extend beyond the test's content and format. A number of others criticize the fact that testing instruments and practices developed in

Euro-American tradition are invalid measures for other minority group children (Boykin, 1986; Hilliard, 1991). In any event, discussions and disagreements about test bias will continue as long as standardized tests remain a dominant part of assessment and identification.

Another area of concern regarding assessment and identification of children from cultural and ethnic groups is in the referral process. It has long been recognized that minority students are simply not referred for programs for the gifted to the same extent as majority students. Factors contributing to the underreferral of these students are teacher attitude and the type of school these students are likely to attend (High & Udall, 1983). Research indicates that students, teachers, and school professionals continue to have low academic expectations for culturally and linguistically diverse students (Jones, 1988). With low expectations, teachers tend to overlook these students when making referrals for gifted program screening.

The traditional focus on deficiencies rather than on strengths is another reason for the low participation of students from cultural and ethnic groups in gifted programs. Since the 1950s and 1960s, with the emergence of school desegregation, civil rights activities, and the war on poverty, cultural deprivation became the driving theme for research. Identifying the knowledge, skill, and attitude deficiencies of ethnic students, and designing activities to eliminate or reduce them became the main focal points. This focus has made it difficult to recognize the strengths of these children, and has been criticized because it has diverted attention away from students who have achieved, despite the characteristics of cultural differences (Frasier, Garcia, & Passow, 1995).

Physical and Learning Disabilities

A major portion of their time is often spent in remediation or learning to circumvent the effects of the disability. This concentration on the child's disability may preclude the recognition and development of cognitive abilities. (Karnes & Johnson, 1991)

Identification of students with specific physical disabilities can be problematic. Children whose speech and language are impaired cannot respond to tests requiring verbal responses. Children with limited mobility may be unable to take nonverbal or "performance" tests requiring hand manipulation. In addition, limited life experiences due to impaired mobility may artificially lower scores. Another problem is that gifted children try to compensate for their weaknesses, and children with disabilities often hide special abilities in order to fit in. This combination may cause them to appear closer to average in both areas (Hemmings, 1985), and be overlooked for placement in gifted programs.

Problems inherent in the identification of gifted students with learning disabilities can be grouped into four categories (Whitmore & Maker, 1985). The first has to do with stereotypical expectations about gifted children. Although most of the old images of the gifted child as a weakling wearing thick glasses are gone, stereotypes remain, such as, the gifted are always mature, self-directed, and well behaved in the regular classroom. The second category includes developmental delays. Some disabling conditions can produce delays in specific developmental abilities that are often used as indicators of giftedness. While developmental delays may hinder intellectual aptitude, they are not necessarily indicators of cognitive inability.

The third obstacle to identification includes incomplete information about the child which limits the view of the

child's potential. Educators are usually not provided with detailed information about the characteristics of high ability students with learning disabilities. This may cause the classroom teacher to concentrate on disruptive behaviors and learning deficits instead of the child's talents (Cramond, 1995; Reis, Neu, & McGuire, 1995).

The last category of obstacles to identification relates to existing programs for students with learning disabilities. In programs for children with learning disabilities, students are rarely provided with opportunities to display their talents. There is little information about enrichment programming for bright students with learning disabilities.

The problem of identification is further compounded by the absence of procedures to locate these students within most public schools. The identification of high ability students with learning disabilities is a rarity in school professional development programs, therefore, there is a general lack of awareness regarding the phenomenon of gifted students with learning disabilities (Boodoo, Bradley, Frontera, Pitts, & Wright, 1989).

Assessment and Identification Issues

Cultural and Ethnic Groups

The use of multiple criteria and nontraditional measures figures prominently in many of the proposals to improve the identification and consequent representation of gifted students from minority populations. (Frasier, Garcia, & Passow, 1995)

Assessment issues related to the identification of gifted children from different cultural and ethnic groups highlight the difficulties with traditional methods in recognizing the talents of students from diverse groups (Callahan & McIntire, 1994). Various researchers have offered a range of possible ways of increasing effective

identification procedures. They include: developing new data matrices; renorming or redesigning standardized tests; creating more authentic evaluation procedures such as portfolios or performance assessment; using objective and subjective data from multiple sources; extending the range of persons in the referral and nomination process, which involves creating enriched learning opportunities so students can demonstrate their abilities; adjusting cutoff scores and analyzing subtest scores differently; and developing culture-specific checklists and rating scales (Frasier, Garcia, & Passow, 1995; Lidz, 1991).

There are many difficulties inherent in these proposals. There are claims that some of these nontraditional, nondiscriminatory forms of assessment may actually provide invalid information (Hilliard, 1991). Others argue that "doctoring" measurement techniques by adding points stigmatizes these children, while failing to recognize their many gifts (Bernal, 1980). Lastly, summing scores from different tests, scales, and checklists is considered statistically inappropriate (Pendarvis, Howley, & Howley, 1990).

The long-standing debates related to the identification of talent potential among this population will, no doubt, continue for some time. There is no single new assessment procedure that will fix all the problems associated with assessment and identification of these children. Among the areas that research can profitably address are in the development of a consensus on the construct of giftedness and in the exploration of the value and validity of data from multiple sources.

Clearly, new models for identification that will include populations that have not been adequately identified are needed (Frasier & Passow, 1994). The promise is that educators will better

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understand how to identify and nurture talent potential among all learners.

Students With Physical and Learning Disabilities

Intellectually gifted individuals with specific learning disabilities are the most misjudged, misunderstood, and neglected segment of the student population and the community. (Whitmore & Maker, 1995)

There are three areas educators can address which relate to recognizing talent in students with physical and learning disabilities. They include: the difficulty in expressing and recognizing talent, the impact of the classroom atmosphere, and integration into the regular classroom (Cramond, 1995; Reis, Neu, & McGuire, 1995; Willard-Holt, 1994). First, there are a variety of measures which may be used to assess

the cognitive abilities of students with physical limitations. Standardized tests include the *Columbia Maturity Test*, *Detroit Test of Learning Aptitude-2*, and the *Stanford-Binet*—to name just a few. Certain adaptations and modifications may be necessary, not to make the test easier, but to make it possible for students to demonstrate their abilities.

The difficulty in recognizing indicators of giftedness may be reduced with informal measures such as observational checklists of characteristics of gifted children and those specific to gifted students with various disabilities. Recognizing and nurturing talents in children who are unable to speak is extremely difficult. These children cannot explain their thinking processes, respond to or ask questions, or display leadership abilities in conventional ways. They

must rely on others or on mechanical devices to interpret for them.

The second area of focus involves the classroom. The classroom atmosphere, its structure, and the instructional activities offered greatly impact the intellectual development of gifted students with physical disabilities. A positive atmosphere, where students with physical abilities are respected, facilitates their development. Classes that are structured for individualization, advanced work, and an emphasis on achievement tend to be the best suited for these students. Hands-on activities such as science experiments and field trips are valuable in building tactile experiences not often encountered by students with physical disabilities.

The last area involves integration into the regular classroom. Gifted students with physical disabilities need a

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mainstreamed setting with opportunities to interact with nondisabled peers. Spending more time with nondisabled students helps them to learn adaptive behaviors more quickly. They also should be given access to gifted programs in their schools.

In addition, there are various measures to enhance the identification of students with specific learning disabilities other than those which are physical. A substantial amount has been published about various traits or characteristics which hamper the identification of high ability students with learning disabilities. Practitioners interested in this population have also identified positive characteristics which can aid educators and parents in recognizing the talents of these students (Reis, Neu, & McGuire, 1995).

These lists of characteristics may help rid the stereotypes which still remain about the gifted child, and allow educators to look beyond disruptive behaviors and learning deficits, toward the talents the child may have. In order to do this, however, professional development programs are imperative for classroom teachers who often find it difficult to recognize giftedness in one area when the same student is having difficulties in other areas.

Finally, instructional strategies which avoid drill and practice, but provide special enrichment activities which develop creative abilities are a few of the many recommendations offered by experts interested in high ability students with learning disabilities. These recommendations are consistent with the overall recommendations offered by experts in the field of gifted and talented education (Baum, 1984). The key to addressing students with disabilities lies in getting beyond the specific disability while allowing the cognitive talents to blossom.

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