

Rural and Suburban Cluster Grouping: *Reflections on Staff Development as a Component of Program Success*

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Staff development practices that successfully implemented long-term applications of cluster grouping in two districts are analyzed, compared, and reviewed. Parallel practices and differences are discussed concerning program beginning, implementation, and maintenance. Conclusions are drawn and six steps for use and consideration by others engaged in gifted program development and implementation are suggested. These steps are: (1) conversations, (2) research, (3) choosing a course of action, (4) implementation, (5) supporting the new program initiative, and (6) maintenance and growth.

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A longitudinal study of the use of cluster grouping in a rural school completed a few years ago (Gentry, 1996; Gentry & Owen, 1999) has received quite a bit of publicity. From this research, grounded theory emerged regarding teacher practices and professional development (Gentry, 1999). Further, longitudinal development of a similar program in a larger suburban district was examined. This particular program existed successfully for 16 years. By comparing and integrating what was done in these sites, we will discuss and offer some strategies for planning and

carrying out staff development that can help build successful gifted programs with benefits for all students and teachers.

Method

Participants

In this article we examine parallel cluster grouping programs in two different school districts and the nature of the staff development that was delivered when the programs were initially implemented through the programs' successful existence in the context of the continuum of programs and practices within these schools. One district was the subject of a previous quasi-experimental, longitudinal study, and was located in an impoverished rural area; the other district existed in an affluent suburban area. The rural site involved one school (the only elementary school in the district), whereas the suburban site involved 7 different elementary schools.

Design, Procedures and Materials

Upon reading the study of the rural site, the coordinator of the suburban site began to examine identification data from his suburban schools and identified similar trends and findings. Dialogue concerning practice and programs between the researcher and the coordinator led to the present study, in which we examined staff development similarities and differences in an effort to describe what was done and inform others of these practices. A comparative case study approach was chosen to examine practices in staff development in both sites and to provide insights into possible reasons that each program experienced longevity in an era when many "new" programs never reach full implementation. We discussed what staff-development activities were done in start-up and continuation at each site and carefully reviewed program records and evaluations at each site; these records included qualitative teacher interviews as well as staff development evaluations and student identification data. What follows are the results of our combined findings together with recommendations concerning staff development for others who may be considering implementing a cluster grouping or similar program.

Analyses

Records were analyzed and experiences discussed qualitatively, with chronological topical themes emerging. These areas are discussed in the following order: background, start-up staff development, staff development for general educators, staff development for cluster teachers, and finally, teachers' reactions to staff development.

Background: Similarities in Identification

In the above mentioned study of cluster grouping in the rural school, in each of 3 program years (grades 3-5), more elementary students were identified as high achievers while fewer students were identified as low achievers—from the same class of students. It was as if the low achievers were disappearing and were being replaced with high achievers. Achievement test scores were documented as improving as well, with students in the cluster grouping school improving and outperforming students from a comparison school (Gentry & Owen, 1999). These results were a trend because they existed for more than one graduation year of students. One does not have to look too far to realize that improving test scores has become a national educational obsession. However, in this school the increasing test scores were a side benefit of a strong program, as no one in the school had as their focus the goal of raising standardized test scores. There was no analysis and remediation of test area weaknesses—a practice far too common in too many school districts today. Teachers in this school simply taught students using the best, most interactive, engaging, and effective methods they knew. As part of this quest for excellence, staff development was an integral and ongoing focus. The continued support and attention to staff development over a period of 8 years is noteworthy given the limited financial resources of the school. This district ranked 503rd of 524 state school districts in annual per pupil spending, with wealthier schools spending in excess of 3 times the dollars per student than this school did (Michigan Department of Education, 1994).

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Similarly and simultaneously, in a suburban district in a different state, more students in a similar application of cluster grouping were identified each year as gifted. For identification, this district used a minimum score of 130 on the Slosson Intelligence Test (Nicholson & Hibpshman, 1991) for placement in the cluster-grouped classroom. Similar to the increase in the rural students' achievement scores, over time more students qualified for program placement on the basis of their Slosson scores from grades one to six. In fact, the number of identified students often quadrupled from the primary grades to the upper grades, and this, too was a trend that occurred repeatedly for six consecutive graduation years of students (students who would be graduating from high school in 2000-2005) during their elementary years (Gentry & Keilty, 1998)¹. These increases are depicted in Figure 1.

In The Beginning

To implement and develop a new program in each of these sites, the first step was conversation. What were the beliefs, what were the goals, what were the possible courses of action that could be taken given limited funding but the desire to do something, and finally, what further information was needed to make programming decisions? The importance of such conversations cannot be overemphasized. One has only to look at the "mission statements" posted in nearly every school across the country, then examine practices that run contrary to the stated missions, to realize that with-

out dialogue and buy-in, program changes are not likely to matter (Fullan, 1991; Senge, 1991).

In these initial conversations many biases and beliefs emerged about gifted students and gifted education. There were feelings of contempt among several people from both sites regarding the perceptions of "haves" and "have-nots." Many teachers expressed their concerns about meeting the needs of average and low achieving students as well as concerns about how the "so-called gifted" would be identified. During the first few years of implementation, the suburban district encountered obstacles. General education teachers invited to staff development were somewhat resistant. A number of experienced faculty members appeared at the inservice with "cluster buster" badges to express their opposition to the program implementation.

Rural Site Start-up Staff Development

As a result of these conversations, all teachers involved in developing the cluster grouping program in the rural site were given a general overview of gifted education and talent development based on the three-ring conception of giftedness (Renzulli, 1978) and the Enrichment Triad Model (Renzulli, 1977; Renzulli & Reis, 1997). The three-ring conception of giftedness views giftedness as a behavior that results from the interaction among the three traits: above average ability, task commitment, and creativity. With the interaction of these three traits in a specific area of human endeavor, gifted

behavior occurs. Renzulli believes that gifted behaviors can be developed in students who are given appropriate opportunities to develop their strengths and interests. He proposed the Enrichment Triad Model as a means for developing talent in more students in schools. In this model, three types of enrichment activities are provided for students and there is an interaction among these types of enrichment. Type I Enrichment consists of general exploratory activities designed to expose students to a variety of topics and areas of study not ordinarily covered in the regular curriculum. Type II Enrichment consists of group training in thinking and feeling processes; learning-how-to-learn skills; research and reference skills; and written, oral, and visual communication skills. Type III Enrichment consists of first-hand investigations of real problems and is based on ways in which people learn in a natural environment, rather than the artificially structured environment that characterizes most classrooms. These inservice sessions were conducted informally with the 15 teachers and their administrators during 4 half-day inservice sessions provided by the district. The three-ring conception and the Enrichment Triad Model were selected because both focus on the development of gifts and talents, and their selection helped to create buy-in among some of the more skeptical staff.

Due to limited financial resources there was no room for gifted students and little possibility of hiring a specialist to assist the classroom teachers with meeting the needs of academically advanced students. Therefore, the conversations turned to what program would best facilitate this notion of developing talents and encouraging students to participate in Type III opportunities within regular classrooms. Cluster grouping was suggested by the third-grade team as a viable option worthy of investigation. These teachers researched the concept and presented their idea to their colleagues. While teachers at the other grade levels were not initially interested in becoming involved in cluster grouping, they encouraged their colleagues to pilot the program in grade 3.

When the cluster grouping program was adopted, all teachers were involved in two half-day inservice training sessions regarding the approach to cluster grouping that was being used successfully in Detroit Public Schools, which also used the Enrichment Triad Model as a

Identification Numbers by Graduation Year and Grade Level

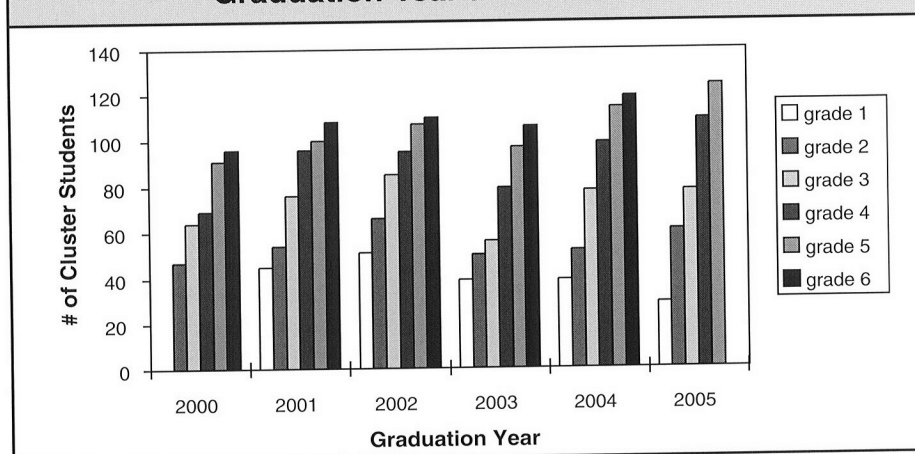


Figure 1. Suburban Identification Trends

¹ The authors acknowledge that the Slosson is more readily available than other intelligence tests and recognize that part of the increase in number of students identified might be due to this availability.

basis for their program. Bessie Duncan, the director of gifted services for Detroit, conducted both inservice sessions with teachers. She explained Detroit's program, described identification and achievement outcomes based on program evaluation data (Grissom, 1989), and answered questions. She also helped them plan what their program might look like. After these inservices, 7 interested teachers visited the Detroit site. The third grade piloted the program the following school year. After two years of successful operation in grade 3, grades 4 and 5 implemented the program as well. A "refresher" inservice was conducted and a second round of visitations was offered. Another 4 teachers chose to visit the Detroit site, bringing the total of those who voluntarily took part in the site visits to 11 of 15 teachers.

Suburban Site Start-up Staff Development

Simultaneously, in the suburban site, clustering (Minnesota Department of Education, 1982) was presented as an alternative to a district wide send-out experience for the top 1% of the elementary students in which students received weekly enrichment experiences with a motivated and creative teacher who had a background in gifted education. At that time the district had a half-time coordinator who provided support to the teacher.

Recognizing the limitations of the send-out program design and the importance of challenging these and other gifted children on a full-time basis, another option was deemed necessary by an active parent advocacy group led by parents of the identified children. Clustering was explored as a possibility. Teachers and administrators in all 7 elementary schools were introduced to the concept at staff meetings. Over a 3-month period, building meetings were scheduled to answer questions and provide a broader image of what clustering would look like in the host school. An agreement was established that guaranteed teachers that the program would not be forced into the school without the complete support of the staff. Building staff voted regarding whether to implement clustering, and some began immediately while others took more time for buy-in. Once a building staff voted to implement the program, the district supported this decision by providing program coordination and staff development for the entire staff. One by one, over a 3-year period, all 7 elementary schools in the district agreed to participate.

The introduction of cluster grouping came with problems. Questions arose that were similar to those raised in the rural site. Who would be the cluster teacher? Would the talent be drained from all the other classrooms at that grade level? Would parents, once aware of the program, petition to have their child in the cluster classroom? Program coordinators sought to resolve confusion and address concerns. Much of the problem solving took place through conversations with individuals and small groups, and these conversations occurred deliberately and often.

Similarities and Differences: Start Up

Each district tried to address limited resources and provide appropriate programming to students. The suburban site had a resource teacher, but provided services part-time limited to its top scoring students. The rural site had neither. The suburban site chose cluster grouping to expand services to more students and to increase the amount of time students would receive services beyond just the designated "send-out" time. The rural site proposed cluster grouping as a program delivery model and combined it with the idea of developing gifted behaviors and providing Triad enrichment to all of its students. In each case, at the beginning, existing models were considered, formal staff development occurred, and ongoing conversations were encouraged to facilitate start-up of the program.

Up and Running, Now What?

General Staff Development

Rural site. Based on requests from the teachers concerning their own professional needs, a menu of inservices in gifted education was provided annually to all teachers. Offerings including curriculum compacting, curricular and instructional differentiation, enrichment teaching and learning, and thinking skills. These inservice sessions were optional, but made available to all staff, with all 15 teachers attending at least one of the sessions and 12 attending three or more during a period of five years. Opportunities to attend regional, state, and national conferences on gifted education were made available to all teachers, and 10 of the 15 teachers attended a state or national conference in the area of gifted education.

As documented by Gentry (1999) in her monograph, an extremely important

area of staff development, which might not receive enough credit due to its ordinary nature, is that of the day-to-day dialogue between the teacher of the gifted, in this case the cluster classroom teacher, and his/her colleagues. At each grade level in the rural school there was collaboration between the teachers of the high achieving cluster and their colleagues wherein the general education teachers sought the cluster teachers' input and ideas and used curriculum resources from the cluster teachers. The gifted education specialist is an invaluable source of information, resources, and ideas. If a collegial relationship exists in the school, then there is free dialogue and exchange of ideas. The effects of having such a specialist in the building can be far reaching and can serve to improve the general education program as well as enhance the gifted program.

Another notable area was the use by this staff of between-class grouping as a means of meeting the diverse academic needs of their students in the areas of math and reading (Gentry, 1999). Within the grade levels, teachers grouped students between classes for math and reading, using performance-based, flexible achievement groups. The high achieving cluster teacher did not necessarily teach the "high" math students or the "high" reading students, and the students in these groups were not necessarily in the high achieving cluster. In this manner, adults other than the high achieving cluster teacher worked with high achievers in specific content areas. Therefore, the charge to teach advanced level content did not rest solely on the shoulders of the cluster teacher. This encouraged others to seek appropriate skills and knowledge through the ongoing staff development options, which might explain why so many teachers participated in the optional staff development sessions.

Further, the strategy of between-class grouping by skill made the term flexible grouping a reality. For example, there might have only been 8 cluster students in grade 3, but there were enough students who had advanced skills in either math or reading to form an entire class for those specific content areas. As a result, students with advanced skills in a specific area received advanced curriculum and instruction in that area, and conversely, those who were struggling in a specific area were placed in a class where they received instruction and help targeted toward their skill levels. Across

all classes of math and reading there was a curricular emphasis on advanced thinking skills and application of skills to real problems. Teacher expectations were high. Students were encouraged to move through the curriculum at an individually challenging pace. It was not uncommon to see a third grader reading with fourth or fifth graders or a fifth grader going to the middle school for math class. In general, there was an orientation of the teachers toward achievement and individual needs, and staff development existed to support all teachers in their efforts to use gifted education strategies with their students. All of the teachers in the study explained that grouping in this manner allowed them to focus on meeting the academic needs of the students in reading and math by developing exceptional materials for their students at one instead of several levels.

Suburban site. During the first three program years, as school faculties were adopting the clustering program, staff development was provided to the teachers who taught designated clusters of identified gifted students. As the program expanded to include all 7 elementary schools, staff development was expanded to include all school personnel. An initial 5 days of staff development was provided to all staff, including classroom teachers, media specialists, special education teachers, and administrators. After the first 7 program years, 98% of the elementary staff had attended 5 inservice days focused on gifted education strategies and cluster grouping. These 5 days included topics such as theories and definitions of giftedness, curriculum and instructional differentiation, classroom management, curriculum compacting, and acceleration and enrichment strategies. During the 5 inservice days there were opportunities for teachers to work collaboratively and develop curriculum and instructional strategies for their classrooms.

Similarities and differences. Each site provided formal professional development for all staff, with the majority of staff participating in these opportunities. Unlike the suburban site, the rural site had documented the staff development that occurred informally and on site through collaboration, conversation, the use of grouping, and by practicing and teaching the advanced students. Though these things may have occurred at the suburban site no documentation existed to validate these effects.

Cluster Teachers Staff Development

Rural site. The teachers responsible for teaching the *high achieving* cluster were selected by the staff and administration, when three teachers who wanted to teach these classes volunteered for grades 3, 4 and 5, and none of the other faculty members wanted to teach the *high achieving* cluster students. One teacher had been involved with gifted education for many years and had taught a self-contained room of fourth- and fifth-grade gifted students for 5 years prior to the districts' adoption of the cluster grouping program. The second and third teachers who volunteered had been involved in many of the gifted and talented workshops, and one was the parent of two gifted daughters. Parents of academically advanced students often requested placement of their children in these teachers' classrooms because of their willingness to develop activities to challenge and stimulate these students. Each of these teachers took classes in gifted education and attended many workshops to improve their methods for working with high achieving students. These assignments were reconsidered on a yearly basis with the understanding that anyone who was interested would be given the opportunity to teach this class if they would be willing to attend workshops or classes related to meeting the needs of high achieving students. During 10 program years, with three and sometimes four cluster classrooms in grades 3-5, there had been six cluster teachers. Other teachers chose to work with clusters of learning disabled students and their teacher consultant or with clusters of compensatory education students and their math or reading aides.

Quarterly each year, cluster teachers were released from their teaching responsibilities for one half day to meet with other teachers of gifted students from the region and discuss topics of mutual concern. Some of these meetings were roundtable discussions, whereas others were more formal inservice sessions, but in every instance, the teachers set the agenda for the meetings. The major benefits of these meetings were the creation of a network, a support group, and an ongoing dialogue about issues and programs of their choosing.

Suburban site. The broad purpose of cluster grouping was to re-order the levels of instruction and expectations for achievement. Therefore emphasis was

placed on higher level thinking skills to challenge all students at high levels of cognition, while recognizing gifted students need to spend a greater portion of their time engaged at the higher levels of thinking (Clark, 1997; Feldhusen, 1991; Smutny, Walker, & Meckstroth, 1997). Therefore, building committees selected flexible, energetic teachers who applied to teach cluster classrooms and who committed to attend specific professional development focused on working with gifted students. Ongoing inservice for cluster teachers is crucial to the success of the cluster programs (Brown, Archambault, Zhang, & Westberg, 1995). As the program in the suburban district evolved so did staff development opportunities. A 5-day inservice session conducted annually before the beginning of the school year included various sessions for all cluster teachers such as: rationale for gifted education, characteristics of the gifted, curriculum differentiation, instructional and management strategies, curriculum compacting, teaching research, using critical and creative thinking, learning stations, designing lessons of varying difficulty, facilitating independent study, and using acceleration strategies.

Another component of staff development included cluster teacher development days, which were focused on continued program refinement and improvement. During the school year, all cluster teachers were given 5 curriculum development/networking days per year. On these days teachers met in grade level or building teams to develop curriculum alternatives and used the time to develop the "instead of" curriculum activities the cluster students demanded.

The success of the program is based, in part, on intent. Teachers and administrators were willing to commit time and energy to support challenging learning environments. Cluster teachers planned and implemented complex learning experiences that engaged not only the cluster students, but other students, as well. Gagné (1995) described the role of teachers as *catalysts*. These teachers nurture gifts into demonstrated talents and created the conditions that allowed students' gifts to unfold.

Regular grade level meetings in the buildings created time for dialogue between the cluster teachers and their colleagues. Widely available and ongoing gifted education staff development afforded the opportunity for many teachers to

teach in cluster classrooms, while anecdotally extending gifted education practices to noncluster classrooms. In 16 program years, 70% of the elementary teachers have taught in cluster classrooms.

Similarities and differences. In both places selection of the cluster teachers was based on willingness, training, and knowledge. Each site had continuing opportunities for the cluster teachers to meet, collaborate, learn, and create materials. The suburban site saw a larger percentage of teachers become involved as cluster teachers than did the rural site.

Perspectives of the Teachers Concerning all this Staff Development: Does it Matter?

In the course of studying the rural school, qualitative methods were employed using interview and document review in an effort to determine what factors existed in the school that might explain the increases in achievement of *all* students and the increased numbers of students identified as high achieving (Lincoln & Guba, 1985; Strauss & Corbin, 1990). Data were analyzed using open, axial, and selective coding as recommended by Strauss and Corbin. In short, three core categories emerged: the use of grouping, the impact of teachers, and the general school environment (Gentry, 1999). One of the themes that emerged in the core category of "the general school environment" was that of ongoing professional development opportunities. Program evaluation in the suburban district provided a rich source of data concerning teacher reactions to the staff development over time. Review of these evaluations and informal observations and conversations with teachers by the program coordinator are reported to indicate how staff development was perceived and put to use in the suburban district. The theme from the rural school and the summary of existing information from the suburban school are described in the following paragraphs.

Professional Development Opportunities: Rural Site

During the 5 years of the study, professional development was ongoing, and most teachers indicated that it was an important part of their success as teachers and with the cluster grouping program. In addition to the initial cluster grouping inservices and visitations

described earlier, national, state, regional, and local professional development opportunities in gifted education were made available to staff, with all participating in at least the local opportunities. Local workshops ranged from 2 hours to a full day in duration and included a follow-up to cluster grouping for all of the staff, curriculum compacting, differentiating and individualizing curriculum and instruction, promoting science talent through Science Olympiad, working with LD gifted and underachievers, integrating technology and curriculum, and meeting the needs of gifted math students. Further, 5 teachers (3A, 3B, 3C, 4A, 5A)² attended a national conference on gifted education where they also made presentations; 2 (4A, 5A) attended a national 2-week summer institute on gifted education; 6 (3A, 3B, 3D; 4A, 5A, 5C) attended the state conference on gifted education (4 as presenters); and 9 (3A, 3B, 3C, 3D, 4A, 5A, 5B, 5C, 5D) attended regional conferences on gifted education. A total of 64% of the teachers attended national, state, or regional professional development conferences or workshops in gifted education. The effects of these workshops on the general education classrooms are reflected in the finding that 55% of the teachers who were not responsible for the high achieving students indicated that they used strategies in their classrooms that they thought were typically "gifted education" strategies.

These teachers described the effects of their professional development experiences on their teaching:

Almost any professional development will give me something I can use. I want to grow and improve. I think my best experiences have been from the gifted/talented and science conferences—they have good speakers, and . . . a lot of hands-on ideas that involve children. I think that good teaching has the children really involved in what they are doing. (Teacher 3A)

I've gone to a lot of gifted conferences [and] I always go to [the Council for] Exceptional Children every year in March. That's the special education side of me. I'm lucky—I get to go to both because of what I do. I implement a lot of the gifted

stuff into the LD stuff. Because I think those things work with all kids—not just gifted kids. [When we went on the visitations,] I didn't think that just because there was the cluster group, that they were the only ones that should get to do those kinds of things. (Teacher 3B)

I don't ever go to any [inservice] that I don't learn something. I've been teaching 34 years, and each year there seems to be an interest area. I've taken classes, right now I'm taking inservice in technology. Each year there seemed to be a need for me to become a better teacher. (Teacher 4D)

I think [the cluster grouping inservice] was helpful—there are many things people assume educators know automatically and I think the experience in being told and given a model in how to do something has always been helpful to me. I know it is with kids. I like to see new things, and particularly cluster grouping, I thought it was good to see. (Teacher 5B)

A final part of the influences of professional development became evident when 6 teachers mentioned how helpful it was to have the teachers who teach the high achieving cluster in the building as resources. Two fifth-grade teachers expressed how much they had learned from and borrowed from teacher 5A over the years. "I definitely learned a lot from her, and not that she would tell me 'do this,' but she might just mention something or let me borrow her ideas or materials" (Teacher 5D). Another teacher explained:

I've learned so much from [Teacher 3A] and I adapt many of the strategies that she uses with her high achievers and use them with my LD and low achievers. I don't think that gifted education is just for gifted students.

Tangibles that resulted from the professional development, both formal and informal, can be seen in the instructional strategies that the teachers reported using in their classrooms. Table 1 summarizes these strategies, identified through qualitative interview and subsequent analysis, and lends support to the

² Teachers were coded by their grade level (e.g., 3=3rd grade) and classroom designation of A through E, with A designating the high achieving cluster classroom teacher.

Strategies for Challenging and Meeting Students' Needs in the Classrooms: Frequency of Use by Cluster Teachers and General Classroom Teachers

Strategy	Cluster Teachers (n = 3)	General Classroom Teachers (n = 11)
Integrating High Order Thinking Skills	3	8
Developing Curricular Extensions	2	10
Using Open-Ended Questioning	3	10
Providing Enrichment Experiences	3	7
Implementing Curriculum Compacting	3	5
Adjusting Assignments	1	9
Integrating Problem Solving	3	5
Assigning Projects	3	2
Providing Choice to Work Alone or Together	3	5
Developing Critical Thinking Skills	2	6
Using Creative Thinking Skills	3	3
Using Acceleration	3	1
Providing Choice of Partners or Groups	3	5
Offering Independent Study	3	4
Using Challenge Questions	2	3
Providing Choice of Problems or Assignments	2	5
Spending Time with High Achievers	3	0

Table 1

notion that this particular gifted program had positive effects on the general education program. Most of these strategies might be considered gifted education strategies but are clearly used by many of the noncluster teachers in their classrooms. These findings provide support for extending inservice in gifted education to all educators as a means of improving education in general.

Responses from the Suburban District Concerning Staff Development

At the close of each staff development experience, session evaluations were conducted. The comments collected provided direction for future planning and programming. A common thread that appeared throughout the staff development experiences focused on the applicability of the session content. Teachers consistently reported that the strategies they had experienced during the staff development days could be implemented immediately. Examination of the evaluations from formal gifted education inservices revealed 85% of the respondents consistently reported the strategies were applicable and would help their instructional strategies.

The 5 curriculum development days provided yearly to the cluster teachers received high marks (averaging above 4.0 on a 5.0 scale) from these teachers in the areas of preparation, relevance,

effect on student learning, and new knowledge. Even with financial cuts to the program, teachers and building administrators recognized the importance of continued networking and were able to maintain these days as a part of the ongoing program staff development.

One interesting aspect of the professional development journey has been the emergence in all of the buildings of cluster teachers as teacher leaders. Their growing confidence in the pedagogy, their artistry in the generation of engaging learning activities, and their willingness to engage their colleagues in critical dialog about practice, has placed cluster teachers on district curriculum teams and on building leadership teams, as well as provided opportunities outside the classroom for leadership. An experienced cluster teacher, successful in her/his initial experience teaching a graduate course in gifted education, remarked, "The training I received as a cluster teacher provided so much of what I employed today. And the teachers like it!"

Discussion: So What Does It All Mean?

As a result of comparing the role of staff development in the two long-term cluster grouping programs, several similarities have become apparent. Start-up is not instantaneous and in both cases

took many conversations to create buy-in and ownership. In each site the time from introduction to full implementation was 3 years. Support for faculty in the form of staff development was provided and was ongoing. One important note here was that in both sites this support was both formal (i.e., district inservices, visitations, conferences) and informal (i.e., regularly scheduled networking and curriculum development sessions, gifted education teacher as an informal building resource). Further, professional development was provided to all staff, not just those who taught identified gifted students, and as a result of this, gifted education practices found their way to general education classrooms. Finally, as the programs developed, much of the content of the staff development opportunities was determined by the faculty and their requests. All of these things working in concert seemed to help develop a strong program with buy-in from staff.

Based on our analyses and comparison of the types of staff development afforded to the professionals in each of these programs and on our collective experiences in working with these two long-term programs we have developed six steps for use and consideration by others who are engaged in program development and implementation. These steps are: (1) conversations, (2) research, (3) choosing a course of action, (4) implementation, (5) supporting the new program initiative, and (6) maintenance and growth (see Appendix).

In each site, program start-up began informally with conversations to identify what people believed and hoped and to clarify their missions and goals. Some may not think of this as staff development, but we discovered that these early conversations build a foundation for both the program and for future staff development. Conversations were followed by research. We suggest determining from staff what further information they need to make programming decisions and to identify sources of this information. We found that such action helps to invest faculty in the early development and understanding of the program while at the same time replacing doubts with information. Once a program that aligns with beliefs and mission has been selected and researched, we suggest developing a long-term plan that has at its core continuous staff development and evaluation, with each used to inform practice as the program develops.

After a program has been chosen it must be implemented (step 4), and we found many considerations at this juncture that involve staff development. The first concerns what knowledge is necessary for start-up, and at the very least includes a whole staff general awareness session to help everyone begin on the same page. The plan needs to be aligned with beliefs, mission, and goals, and this alignment should be both discussed and apparent. The planned implementation needs to be both defensible and flexible so that it can be adapted to facilitate improvement as it is implemented. The previous research and alignment with mission and goals will create a defensible program, and using a problem-solving approach to issues that arise can embed flexibility. Another programming issue that will help strengthen the program is the alignment of identification methods with what the program offers. For example, if the program were a cluster program as in the rural school that has as its focus academic achievement, then it would not make sense to use a creativity test for admission. Also at the implementation point, program planners should decide what data will be collected and used in evaluation, as it is much easier to plan and collect data at the onset than to try to gather them at a later point in time. In our review of program evaluations and in our conversations, we concluded that one of the reasons for the longevity and success of both of these cluster grouping programs was that in each district the cluster grouping program was an integral part of the general education program. Accordingly, we recommend that in developing a gifted program and the staff development that accompanies it, the connection of the gifted program to the general education program should be considered and include general education whenever possible. Another important consideration for moving a program forward as it is implemented (for we all can point to a new program that was doomed at the onset) is for those involved to acknowledge that with a new program will come problems, and to agree to work together on the problems to strengthen (not kill) the program. Finally, in beginning program implementation, professional criteria need to be established for the individuals who will teach in the program. We suggest that these criteria be developed and agreed to by a representative committee and then communicated with all staff. Professional development planning and opportunities can then assist interested individuals in meeting the professional criteria set for the program.

Once a new program has been implemented, it needs support (step 5). Quite simply we found the most effective means of supporting the new program was through staff development and that the way to determine what staff development to offer was to simply ask the teachers. To enhance efforts to connect general education and gifted education, we suggest offering opportunities to attend staff development related to the gifted program to *all* interested staff. Another method used in both sites to facilitate professional development and conversations included scheduling meetings for gifted education teachers. Such meetings can facilitate conversation among gifted education teachers who are in different buildings or grade levels. They learn from each other and discuss common concerns and issues related to the gifted program. Also scheduled were meetings of gifted and general education personnel (e.g., by grade level or team) which facilitated conversations about the program and its relationship to general education and helped to reinforce the concept that the teacher of the gifted is a building or grade level resource. In the rural site, several teachers explained how much they had learned from the cluster teacher at their grade level, and some of this learning took place during the scheduled meeting times. Each program also offered regional, state, and national staff development opportunities. We suggest that building into the plan such opportunities will help foster continued growth among staff who may have "done it all" locally. In our cluster schools, staff who attended state and national workshops brought these experiences back to school and to their colleagues, and in doing so helped to provide a broadened perspective of gifted education at the local level.

The sixth and final step that we suggest for consideration is maintenance and growth. Once a program is implemented and running smoothly, one might be tempted to leave it alone, however, we found that success requires deliberate and continued maintenance. We suggest continued support efforts described in step 5, while adding orientation and conversations for new faculty to facilitate their understanding of the program and their support. Evaluation, action research, and sharing the findings are effective means of keeping program quality high. Teachers in the study sites presented several data-based sessions on their programs at state and national venues, thus building both repu-

tation and ownership. To entice them to agree to present their knowledge and practices, we required that those who wanted to attend a state or national conference for a *second* time must submit a proposal to present a session. We also believe that the evaluation must be focused on outcomes for all students and teachers (not just the gifted), and by doing this the program can be strengthened, justified, and seen as a integral part of the school. Once evaluations of program effects on students and teachers are conducted, results need to be disseminated and publicized locally. Finally, we suggest continuing to ask the teachers what they need and then respond with appropriate resources, professional development, and support services; continuing to connect the program to the mission of the school and asking what else can be done to help all students reach their potentials and become life-long learners in a diverse democracy.

It is our hope that these suggestions can serve as guidelines for others who want to develop strong gifted education programs that continue to grow and evolve over time. The intent is for others to take these steps and use those that are applicable as they develop their own long-term professional development plans when implementing a new program. We believe that these general steps might work with any program, but are confident that they will work when implementing cluster grouping.

As noted by Tomlinson and Callahan (1992), Renzulli (1994), Reis and Gentry (1998), and the U. S. Department of Education (1993), the use of gifted education "know-how" has the potential to improve general education practices. The rural cluster grouping program investigated by Gentry (1999) was designed to simultaneously address the needs of high achieving students *and* the needs of other students. As a result of this connection with the general education program, professional development opportunities in gifted education were made available to all staff, and dialogue between teachers of the high achieving cluster students and the rest of the staff was encouraged. As a result all teachers ($n = 14$) received professional development in gifted education strategies and reported using these strategies in their classrooms with all of their students; evidence of this use is presented in Table 1. Teacher 5D explained that she started using strategies that she learned from teacher 5A who taught advanced students: "It taught the other kids a lot of

things, and many of the lower kids wanted to be involved because of the high achiever's work, so more students became involved in more advanced work." Teacher 5A summarized this concept when she related a situation that had occurred in her classroom:

I used the same materials that I used with what we were calling the gifted and talented kids, and I adjusted my evaluation and my approach to teaching. When we came to evaluation time I discovered that the kids who were not classified as G/T had made tremendous strides in their academics and growth. One girl in particular I remember because I was so astounded she had gained 3 years' growth on her test at the end of the year. So it really convinced me that the strategies that we used with G/T kids are good for all kids, and I use those strategies in all my classes. I'm a real believer in it.

Similar reactions were recorded in the suburban district. Parents of gifted students often questioned staff regarding "cluster activities." An experienced cluster teacher reported:

I have had a number of parents call this fall and ask when was I going to be introducing the cluster challenges. I explained to them that I had been engaging the cluster students with challenging experiences since the beginning of the school year. I had posed questions at high levels. I have assigned projects to the whole class that had enough depth to challenge all my students. I reminded them of assignments that had come home and depended on their efforts to support their child to get it done well. I was challenging the cluster kids and the rest of the class, as well!

Cluster teachers requested that the district coordinator include in a fall parent communication information about strategies they use in their classrooms. An excerpt from this letter follows:

The cluster teachers plan activities of a progressively challenging nature. These learning activities may be considered "instead of" rather than "in addition to" the regular curriculum. We suggest to teachers

that it can be interpreted as not "more of the same" but something "instead." For example, instead of answering a number of low-level comprehension questions at the end of a story the student may be asked to describe the story's theme and analyze how it could apply to his/her own life. In another situation, cluster teachers may pretest their students on the content of the math unit to be covered during the next two weeks. Students who demonstrate mastery of that content on the pretest might then be directed towards an independent research study facilitated by a teacher. In some classrooms the teacher may design a lesson with sufficient depth and breadth to challenge all of his/her students. In some cases students might be accelerated through a portion of the curriculum. In other situations, teachers may decide to provide an enrichment unit that extends the learning into higher levels and newer horizons.

These strategies may be used in any subject area with just the cluster students, a mixture of cluster students and other students, or the whole class. The plans may be shared with other teachers.

Unlike the classrooms described by Archambault et al., (1993) where there was little differentiation, and observed by Goodlad (1984), where formal teacher-directed instruction and little student choice were the norm, and Westberg, Archambault, Dobyns, and Salvin (1993) where seatwork and drills were common, the classrooms in these schools were characterized by a variety of challenging activities and varied instructional strategies. Renzulli (1994) noted that the practice in many schools of diagnosing and remediating weaknesses should be replaced with a talent development approach to enrichment learning and teaching that recognizes student interests, strengths, and talents as a basis for their education. In these schools, integrating the cluster grouping program with the general education program seemed to affect all teachers and students in the school. The cluster grouping school teachers applied many strategies from gifted education to their

daily teaching, something that might not have happened had professional development in gifted education been reserved only for the teachers of the high achieving students. The implication is that all staff, and consequently all students, can benefit from inservice concerning the use of gifted education strategies. Therefore, schools should be careful not to limit their professional development in gifted education to just those teachers who work with identified gifted students. By offering more teachers opportunities to learn and to apply gifted education know-how, perhaps talent can be developed in more students in our schools.

Another important aspect of these efforts is that although both districts took different paths concerning their professional development plans, each had a plan and continued efforts and ongoing professional development. This provides support for the notion that teachers are not "trained," but that professional development is a continual effort that ought to be personalized to meet the needs of the teachers and the district in which they teach. No one program of professional development will work for everyone, therefore a comprehensive and emerging staff development plan can help to meet the diverse needs of individual teachers (Dettmer & Landrum, 1998).

Finally, one important point that warrants emphasis is the informal aspect of professional development. As in the rural school, simply having a teacher at each grade level was a source of informal, but ongoing, staff development concerning gifted education and strategies for meeting individual needs of students. Conversations in the staff lounge concerning teaching, learning, and students are powerful sources of learning and sharing among faculty members, and expertise in the area of gifted and talented education among some members of a faculty can serve as a resource to other members of the same staff.

Limitations

This article describes professional development practices that occurred in two schools that implemented and used cluster grouping models successfully over many years. Inherent in this type of report are several limitations. First, many things other than professional development influence the success or failure of a program. In other words, we cannot

attribute the success of the programs entirely to the professional development practices described herein. However, due to the similarities of practices and longevity of the programs, we feel confident that professional development was one key component to the implementation, growth, and success of the programs in each site. Therefore, sharing these practices with others might serve to enhance program implementation and planning and ultimately might lead to conclusive data concerning what works in different places when striving to implement a gifted education program in a general education school. This account is a starting place, not a conclusion. Further study is warranted as we strive to fully understand the effects of formal and informal professional development on program implementation and success.

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Appendix

Staff Development for Successful Program Selection, Implementation, Growth, and Success: A Six-Step Outline Based on What Worked in the Cluster Grouping Sites

Step 1: Conversations

1. What are our beliefs?
2. What is our mission?
3. What are our goals?

Step 2: Research

1. What further information do we need to make programming decisions?
2. Where can we get information on those things that we're considering?

Step 3: Choose a course of action

1. Develop a long-term plan.
2. Include provisions for ongoing staff development and evaluation to inform practice.

Step 4: Implementation

1. What do we need to know to get started (crucial introductory information from which to build)? Develop an awareness inservice based on the answer to this question.
2. Is what we're planning aligned with our beliefs/mission/goals?
3. Are we flexible yet defensible?
4. Does the identification system align with the program?
5. What data will we keep to evaluate whether what we're doing is working?
6. Have we considered the relationship of the gifted and general education programs?
7. Do we agree that with new programs there will be problems, and have we agreed to work together to solve problems that arise to strengthen the program?
8. Do we have professional criteria for individuals who will teach in the gifted program?

Step 5: Supporting the new program initiative

1. Ask the teachers what they need, then respond by offering it.
2. Provide opportunities for all interested faculty and staff.
3. Schedule regular conversations/meetings for (1) gifted education personnel (2) gifted and general education personnel (e.g., by team or grade level).
4. Include opportunities for professional development from the region, state, and nation to provide broad perspectives.

Step 6: Maintenance and growth

1. Continue support activities.
2. Move to the next level through evaluation, action research, and sharing of knowledge.
3. Focus evaluation and study on outcomes for all (not just gifted program children) children and teachers.
4. Develop panel discussions for state/national conferences where practitioners share their knowledge and practices.
5. Use the "if we've sent you once you need to submit a proposal to present or showcase something you do well" approach to address repeated requests to attend state/national conventions. This will create local "stars" and most importantly bring recognition to your people and program.
6. Publicize the program results and effects on students and teachers.
7. Ask the teachers what they need and respond with appropriate resources, professional development opportunities, and support services.
8. Build in orientation and conversations for new faculty integration.
9. Ask what else can be done to address the mission of helping every student reach his/her fullest potential, become lifelong learners, respect and honor diversity and repeat the process.