

1995

A resource guide for collaborative teaching

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A RESOURCE GUIDE
FOR COLLABORATIVE TEACHING

Master's Project

Submitted to the School of Education
University of Dayton, in Partial Fulfillment
of the Requirements for the Degree
Master of Science in Education

by

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December 1995

Approved By:

A solid black rectangular box used to redact the signature of the official advisor.

J Official Advisor *U*

DEDICATION

To my husband Jeff for all
of his love, encouragement, and
assistance.

To my first child who
will arrive this spring,
you have truly been with me from
the start of this project to the
finish.

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CHAPTER 1

INTRODUCTION

The administration of services to special education students has been in a constant state of reform. Since the passage of The Education of All Handicapped Children Act (P.L. 94-142) in 1975, the services provided to special education students has gone through many changes and revisions. Prior to P.L. 94-142 children with identified disabilities or handicaps were serviced through special schools, institutions, or were often not educated at all. P.L. 94-142 called for all students regardless of their handicap to receive a free and appropriate public education. The parents of disabled children then began to band together and insist on what they felt was an appropriate education for their child.

From P.L. 94-142 came many changes in the education of the handicapped. The development of individualized education, regular evaluation, funding for special programs, the rights of parents, and labeling students based upon ability were just a few of the sweeping changes. One of the changes that received the most debate was the term "least restrictive environment," defined as the setting which is closest to full participation in the regular classroom but

still meeting the needs of the disabled child. Often the school's beliefs as to the "least restrictive environment" and the parents beliefs varied greatly. This was especially true for children identified as learning disabled or L.D..

Learning Disabilities were often categorized as a group of disorders involving the acquisition and use of listening, speaking, reading, writing, reasoning, or mathematical abilities. Students qualified for learning disabilities services if there were a significant discrepancies between their ability and their actual achievement determined through extensive educational and psychological testing. This broad definition left the services provided to learning disabled students open to debate. Educators did not feel they had the skill nor the training to service these students appropriately within the regular classroom. This led to the development of resource rooms or pull out programs. Learning disabled students were educated within their regular classes, or mainstreamed, for those subjects in which they did not qualify for special services. Students were then removed for instruction for the areas in which they did qualify for special services. This was supposed to allow for appropriate peer interaction and still provide for direct service from a special education teacher. Reluctantly, many parents accepted this type of service as the best possible solution.

Unfortunately it was not as successful as anticipated. Pull out programs left many learning disabled students feeling singled out and often resulted in these students becoming socially distant from their peers. The attitudes and actions of regular educators towards these students when they were mainstreamed was often not favorable. It made it the responsibility of the special educators to make needed modifications for those students with disabilities. The students in pull out programs were often educated in small groups on levels far below those of their regular peers. The original intent of the program was to remediate these students as quickly as possible and work them back into the mainstream with their peers. Regretfully, once again the program fell short.

Regular educators were often reluctant to accept these students back into the mainstream or make needed the modifications. Additionally, the students were unfamiliar with the materials used within the mainstream classes and often were unable to adjust. The students also felt a lack of support once back with their peers because they no longer had the constant contact they once had with their special education teacher. This combination of factors lead to pull out programs becoming a permanent placement for many learning disabled students with them seldom returning to the mainstream.

The most recent trend in the education of the learning disabled child has been called inclusion. Inclusion has been defined as the bringing of special education services to the child in the regular classroom. Studies have concluded that such programs addressed both the educational needs and social needs of the child as a whole. The degree to which learning disabled students have participated in inclusive programs depends upon the individual student's needs and the availability of inclusion programs within the child's district. In theory, inclusion calls for the regular educator and the special educator to work cooperatively to educate the child. This has meant that the teachers meet to plan, develop appropriate modifications, and in many instances cooperatively teach the subjects in which inclusion is most suited.

Many school districts decided to implement this type of program to the fullest extent possible. Many have fully included all students regardless of disability and put an end to pull out programs entirely. Much of the responsibility for the success of such a program has been dependent upon the type and frequency of the contact between the regular educators and the special educators.

Collaboratively taught classes, when implemented properly, have allowed for disabled students to be serviced directly and remain fully included within their regular

classrooms. The success or failure of a collaborative class has been based upon several factors including the relationship between the collaborative teachers, administrative support, scheduling, and proper training.

Rationale

Though collaboration is only one aspect of inclusion, it has been found to be the key to successful inclusive programs. It has been determined that if collaborative programs are implemented properly, other aspects of inclusion are more easily implemented because collaboration opens the lines of communication between regular and special education teachers.

Special education has allowed teachers to determine the a student does not belong within their class and have them removed. Many students have needed modifications in order to succeed. Inclusive or collaborative classes have gone back to the basics of educating to the needs of the individual students not always to the class as a whole. The collaboration of teachers has allowed for not only the students to get the most out of the class but also allowed the teachers to learn new strategies and techniques to help their students achieve. This has been done through the sharing of knowledge, ideas, and areas of specialization.

Purpose

The purpose of this project was to design and develop a handbook to support regular and special educators in their collaborative efforts and to help them assist the students in their care. Both regular and special educators have needed well developed resources to turn to in order to develop a successful collaborative classroom. This has included but is not limited to: scheduling, defining of responsibilities, concerns, strategies, and gaining administrative support. When implemented properly collaborative classes have allowed the regular educators to remain responsible for the content that has been their specialization and also allowed for special educators to teach strategies which benefit all of the students.

Limitations

The collaborative teaching strategies presented within this handbook apply primarily to learning disabled students participating in collaborative classes for sixth grade science and/or social studies. They may however be adapted to a variety of collaborative situations on all levels.

Definitions

Collaborative Teaching: an educational approach in which general and special educators work in a co-active and coordinated fashion to jointly teach heterogeneous groups of students in educationally integrated settings.

Inclusion: the administration of services to special education students within their regular classes where appropriate.

Individual Education Plan (I.E.P.): educational program mandated by federal legislation in P.L. 94-142; designed and signed by parents, teachers, and additional professionals needed to implement the program. It reflects both short and long terms goals for the child for a year. Ensures confidentiality, placement in the least restrictive environment, and appropriate, individualized education.

Learning Disabilities: a generic term referring to a heterogeneous group of disorders that are most evident in problems with acquisition and use of listening, speaking, reading, writing, reasoning, or mathematical abilities; presumed to be due to central nervous system dysfunction.

Least Restrictive Environment: the educational setting which is closest to full participation in the regular classroom but which still meets the exceptional student's special needs.

Mainstreaming: system for integrating handicapped students into regular classes, providing for their special needs through individualized instruction, tutoring, or their spending a portion of their day with a resource teacher.

Public Law 94-142: Education for All Handicapped Children Act, requiring for all handicapped children "a free appropriate public education which emphasizes special education and related services designed to meet their unique needs."

CHAPTER 2

REVIEW OF LITERATURE

The purpose of the chapter was specifically to review research into inclusion and it's effects on the learning disabled student. The research has covered a wide range of controversial issues including the debate over what is truly the "least restrictive environment" and the influence it has had on learning disabled children. It has been a very emotional issue due to the long term effects special education services have had on both the educational and psychological well being of a student.

This chapter has been divided into three sections with each section focusing on one area of the debate. The areas addressed are elements of responsible inclusion, teacher attitudes and roles, student and parental views.

Elements of Responsible Inclusion

As with many other areas of special education, parents and school districts have taken their beliefs regarding inclusion to the courts. Cases such as *Sacramento City Unified School District v. Holland*, *Greer v. Rome City Schools*, and *Oberti v. Clementon School District* all have one key factor in common: The courts gave more consideration to the needs and goals set forth in the student's I.E.P. than to the placement of the student. Basically, they

concluded that I.E.P. goals can be adequately met within the regular classroom.

The debate has often centered on the definitions for mainstreaming and inclusion. Mainstreaming and Inclusion have not been not synonymous in meaning or theory as addressed by Pamela Brucker (1994) in her article entitled "The Advantages of Inclusion for Students with Learning Disabilities". She stated that "mainstreaming presumes that students must earn the right to be part of a regular classroom by completing their work, and keeping up with assignments, and mastering class content". In contrast she summarized inclusion as "the commitment to educate each child, to the maximum extent possible, in the school and classroom he or she would have otherwise attended ..."
(Brucker 1994). The focus of the debate has been the question, should students really have to keep up with their peers in order to qualify as a true member of the class? Brucker stated that "inclusion brings the support services to the student and requires only that the student benefit from being in the regular classroom" (1994). Another area of the debate has centered on the question, can I.E.P. goals be met through regular classroom instruction?

The goals for students within the same class do not necessarily have to be the same. The learning disabled child

can benefit from the regular classroom if the goals set forth within the I.E.P. can be achieved in this setting. This has been done through the cooperation between the special educator and the regular educator. Sharing between the regular and special educator has lead to changes such as developing two versions of the same test, changes in test administration, and modifying assignments and projects. The key factor has been a sense of "shared goal setting" for the students by the educators (Brucker 1994).

By pulling these students out into resource rooms "a situation is created in which the general education teacher need not be accountable to the student" (Taylor 1994). Teachers have lost the ability to address the needs of individual students. Another question that has yet to be answered is, will teacher effectiveness improve if we keep these students in the regular classrooms? The research continues, but if teacher effectiveness improves as the result of inclusion, it will be of benefit to not only the identified disabled students but also to those who are struggling to survive without the benefit of services.

Inclusion also has allowed the learning disabled students to benefit from the regular educators specialty in content areas and from the special educators knowledge of learning strategies and styles. It has been determined that

content areas such as social studies and science have best been taught by those who have had the needed training not with low level supplemental materials that have offered very little challenge to the students using them. Special educators have been able to use their area of expertise to its fullest extent by collaboratively teaching, developing strategies, aiding in modification of materials, administering tests, and providing additional support as needed. The key to the success has been the relationship between the regular educator and special educator. Inclusion "can be accomplished through collaboration of special and regular education services, with an ongoing review of student progress" (Brucker 1994).

The overall conclusion regarding mainstreaming versus inclusion has been that the poor outcomes of current special education programs can be blamed on the "unnecessary segregation and labeling of children for special services, and the ineffective practices of mainstreaming, which has splintered the school life of many students - both academically and socially" (Brucker 1994). In order to remediate this we must make teachers accountable for all their students, get special educators and regular educators working together, and focus on the students not the class (Taylor 1994).

Many models of inclusion are now in place across the country with not all of them producing the same results. The inclusion of disabled students must include elements of responsibility on both the part of the teachers and the district. It has been determined that responsible inclusion must begin with "caution against abandoning the current continuum of service placements that allows responsible educators to make individualized decisions about the education of disabled students" (Lombardi 1994). Inclusion is not for all disabled students regardless of disability. The focus must remain on the needs of individual students and not on disabled students as a whole.

In preparing for inclusion within a school or district, school systems must offer support and programs in the form of inservice for teachers and administrators. Collaboration, consultation, cooperative learning, peer tutoring, team teaching, behavior support, curriculum adaptations, and environmental accommodations are just a few of the many support strategies that need to be addressed prior to the implementation of an inclusion program. The key has been to provide appropriate support systems to all involved (Lombardi 1994). "Responsible inclusion requires careful planning and adequate support before any students with disabilities are placed in a regular class" (Lombardi 1994).

Teacher Attitudes and Roles In a Collaborative Setting

Defining the roles and responsibilities of those educators involved has been found to be one of the most difficult aspects of inclusive or collaborative programs. The first step to developing a successful collaborative relationship has been time spent clarifying goals and developing each person's commitment to collaboration. True collaboration must be based on the equality of the distribution of power and responsibilities of the collaborative members (Campbell-Whatley and Drakeford 1994). Depending upon whether or not the members have chosen to collaborate or have been told to collaborate has determined the success of the division of responsibility. Often administrators have decided without teacher consultation that they wanted to begin a collaborative program and they assigned the teachers to teams. It has been crucial to collaborative relationships that the teachers were the ones to make the decision to collaborate. Collaboration has to have been a decision between two compatible teachers that they were willing to make the commitment needed to develop a successful collaborative program. When forced to collaborate by administrators, teachers have often become defensive and resentful of their co-teacher. Conflict have arisen over

ownership of students, turfism within the classroom, and lack of power. A willingness to collaborate, proper training, and a positive attitude have often overcome many of the problems (Voltz, Elliot, Cobb 1994).

The definition of collaboration states that both regular educators and special educators are responsible to teach a heterogeneous group of students and to maintain joint responsibilities for specific areas of instruction (Bauwens and Hourcade 1991). Determination of which teacher has had responsibility for which area of instruction goes back to the quality and quantity of the planning. The dissemination of responsibility must be done on an on going basis and in reference to daily lesson plans. Each member of the collaborative team needs to know his or her role in each days lesson in order to allow for adequate preparation. This has been successful when the teachers have had a planning worksheet or form they used to identify each teachers responsibilities for specific tasks and content. This worksheet or form has in a sense become a negotiated agreement between collaborative teachers (Nolet and Tindal 1994).

Collaborative functions or roles have fallen into several domains as presented by Voltz, Elliot, and Cobb in their article *Collaborative Teacher Roles: Special and*

General Educators. They divided the roles into the following categories or clusters; communication and planning, problem solving, instruction, and dissemination of information. The division of the responsibilities between the regular and special educators depended upon the strengths of the individual members not necessarily on whether it has been a special education or a regular education responsibility. It has been important to remember that both teachers are responsible to all the students within the class with no division made between "your" students or "my" students.

Communication and collaborative planning roles have been the key to the success of any collaborative program. These roles included; exchanging student progress information, sharing diagnostic information, sharing responsibilities for grading, participating in short and long term planning, and meeting with parents. The commitment, openness, and participation of each member in these roles has eliminated the development of hostility or resentment towards one other. "These roles provide a common base of student-related information to teachers who are jointly responsible for the education of students with disabilities" (Voltz, Elliot, Cobb 1994). These roles also provided the foundation for other collaborative roles.

The second group of roles included collaborative problem solving. "Through this process, general and special

education teachers use their collective expertise in a collegial, equal-status relationship" (Voltz, Raymond, Elliot 1994). This has been an area where special educators and regular educators have used their individual areas of expertise. Special educators may have recommended alternative teaching or testing strategies. Both educators may have voiced and discussed areas of concern in regards to the collaborative or inclusive setting. The general educator may have suggested strategies used in the past that were successful. In general each member must have been open to sharing concerns, successes, suggestions, and feelings in order to achieve successful problem solving.

The roles of regular educators and special educators in regards to instruction have been some of the most difficult to disseminate. The roles involved in instruction included; preteaching/postteaching, actively planning for skill transfer, small-group instruction, and training peer tutors. These roles should have been divided based upon the comfort of the individual teacher in implementing them. These roles have also fluctuated in regards to specific curriculum. "These roles encourage teachers not only to jointly plan and problem solve, but also to integrate their efforts in actual delivery of instruction" (Voltz, Elliot, and Cobb 1994).

The group of roles involving the dissemination of information to general education teachers have been

considered the responsibility of the special educator.

"These roles encourage special educators to share information with general education teachers that may not otherwise be accessible to them." In many cases this information has been readily available to the special education teacher because they have acted as the case manager for that child by having completed the I.E.P., monitored grades, and provided instruction in areas where collaborative programs were not available (Snell and Raynes 1995). Included within this area have been long and short term goals, required modifications, recommendations from past teachers, and sharing professional literature regarding specific difficulties or disabilities (Voltz, Elliott, and Cobb 1994).

Though the importance of collaborative or inclusive programs have been well addressed in educational literature and research, researchers have found that regular educators often have felt that the communication between themselves and the special educators was lacking. The following roles were identified by regular educators as very important or vital to successful collaboration: attending parent conferences, meeting informally to discuss student progress, providing information on behavioral characteristics, providing academic assessment data, scheduling meetings to evaluate progress, providing material

for classroom use, and providing written reports of students' activities and progress. Yet, most regular educators felt that special educators were only providing two of the nine services with any degree of regularity; informal student progress meetings and remedial instruction (Voltz, Elliot, and Cobb 1994). In addition they also expressed concerns regarding the equality of the academic work that children with learning disabilities produced in inclusive classrooms. Regular educators were often hesitant to use alternative materials, adapt scoring and grading, and set alternative goals (Bender, Vail, and Scott 1995).

The concerns of special educators included lack of planning time within the school day, lack of administrative support, and lack of inservice/preservice training. They also felt that they were not serving necessary functions and that activities such as consultation and joint planning should be an important part of their role. Due to instructional and noninstructional responsibilities, they often felt they were not given adequate time to plan with the regular educators. The teachers also felt as if the general educators were generally uncooperative (Voltz, Elliot, and Cobb 1994).

These concerns and frustrations all have lead back to how responsible inclusion and collaboration have been defined. In order for collaborative instruction to have been

successful the following components must have been met: individual student needs must have come first, teachers must have chosen to participate in collaborative programs, adequate resources must have been provided, services must have been evaluated on a regular basis, ongoing professional development need to have been provided, open communication must have been present, and curriculum and instructional needs of the student must have been developed and refined. Those collaborative programs which were not successful were often missing many of the necessary components needed to achieve success. When educators were forced to participate in collaborative programs, not given proper training, did not have administrative support, and could not communicate effectively with their co-teacher the program did not succeed. There must first have been a commitment from all those involved to have implemented a responsible program of inclusion and to have worked together to solve difficulties (Voltz, Elliot, and Cobb 1994).

Student and Parental Views

Parental and student views as a whole have often overlooked when determining the success of collaborative programs within classrooms. Neither parents or students were given the choice of participation or nonparticipation and this has often fostered feelings of resentment in both parties. This has been especially true for the parents of

the regular education students within the class. These parents have often learned second hand that their child is a part of a collaborative classroom and they have not often realized or have not been told as to the purpose of having had two teachers in a given class. Though not addressed in educational literature, there has often been concern for the academic needs of the nondisabled students. Parents feared that the students would progress at a slower pace, receive less attention, or be labeled as a "special education" student. Many of these same fears have been felt by the students themselves. They often have wondered how they were placed in a collaborative class, would they be considered "learning disabled", and how would their peers react. All of these concerns should have been addressed through an open meeting including both the disabled and nondisabled students and their parents. Such a meeting has been another aspect of responsible inclusion. All of those involved should have been included in the planning and implementation of such a program.

The majority of the literature focused on the disabled child's parents and their fight for inclusion. The parents of disabled students have been very vocal in their insisting that their children be educated within their regular classrooms. They wanted their children to have been included both a socially and academically to the fullest extent

possible. These views have been held by both parents of learning disabled and more severely disabled children (Rogers 1994).

The attitudes and concerns of disabled students varied from the concerns and attitudes of their parents. Many special education students were apprehensive about leaving the supportive environment of a resource room for the vastness of a regular education classroom. They were often overwhelmed at first by the materials, the pace, and the number of students. As time passed, many students began to feel very much a part of the class and participated fully. They were often challenged in ways that they would have never experienced in a resource room. They were exposed to curriculum that could have never been adequately covered in a small group setting. They gained confidence and self-assurance to go beyond what they would have considered their limits. Regular education students, when surveyed, felt that they benefited from the varied content presentations, learning strategies, and the extra support two teachers provided (Vaughn, Schumm, Klinger, and Saumell 1995). Regular education students when interviewed "perceive that they had benefited from these relationships in a number of ways, which we categorized as improved self-concept, social-cognitive growth, reduced fear of human differences, increased tolerance of other people, development of

principles of personnel conduct, and enjoyment of relaxed and accepting friendships" (Rogers 1994).

These social benefits alone have supported the program of inclusion with collaboration. The social benefits would carry these students, disabled and nondisabled, through the rest of their lives with a new appreciation for the differences in people. The academic benefits have spoken for themselves through the research done into collaborative programs. The key to the success of the implementation of such programs has been that we implement them in a responsible manner following the guidelines set forth through the educational research and that we always put the student first.

CHAPTER 3

METHODOLOGY

Inclusive education has become one of the "buzz" words when referring to the education of handicapped students. Having been a special education teacher for six years, the author of this handbook had heard the advantages and the disadvantages from all sides of the issue. Knowing that it was going to be the current trend in the delivery of services, the author began reading research and collecting data during the early stages of inclusion. It was the author's original fear that inclusion was a way of eliminating the need for special education teachers and the funding for special education programs. Her fears were quickly put to rest by reading the educational literature available. Having researched the trend, the author was anxious to develop and participate in such a program. The true meaning of inclusive or collaborative classrooms did not really evoke much feeling, good or bad, in the author until forced to participate in such a program herself.

After moving to Roanoke, Virginia in the spring of 1993, the first teaching assignment of the author was at Northside Junior High School. Having taught only in primary level pull out program in the past, it was much to the author's surprise to have been asked to collaboratively

teach an eighth grade math class with a teacher the author had never met. The administration and staff assured the author that this individual was very willing to participate and eager to begin a new program. It became evident very early in the school year that this was not the case.

The author had attended a workshop prior to the beginning of the school year but the co-collaborator was unable to attend. This individual was also hesitant to meet with, plan with, or in any way communicate with the author. Being in a new school system, at a new grade level, and in a strange environment this was very intimidating and upsetting. This relationship was not at all what was described in the workshop or literature. The relationship continued to deteriorate throughout the course of the school year and required intervention from an administrator. The author realized early the importance of the relationship between collaborators and the need for a certain comfort level with the material being taught prior to any commitment to collaborate. The school district had abandoned the original continuum of services and placed all students in need of service for eighth grade math into a collaborative situation, forced two strangers into what needed to be a strong relationship, failed to provide common planning time, failed to provide resources, and did not require that both

participants attend the collaborative workshop or inservice training.

The year ended with very little success on either the part of the teachers or the students. Many of the learning disabled students within the class experienced great frustration as did the collaborative teachers. The students were often singled out and few modifications were made to meet their needs. The author assumed the role of an assistant rather than that of a teacher. The author realized then the collaborative teaching required more than just a regular educator and a special educator.

Unfortunately, the author did not learn her lesson from the first year of collaborative teaching. The next school year progressed much in the same way. The author was "told" that she would be collaborating in eighth grade math, only this time with a different teacher. The author was again assured that this individual was very willing to collaborate and eager to begin. The author knew this individual but did not have what would be considered a working relationship. The new collaborative partner did attend the workshop but the author did not attend because the original plan was to have another special education teacher be the co-collaborator. The original collaborator became involved in a different collaborative relationship and felt two classes

were too much to handle. This change in collaborator left the eighth grade math teacher feeling abandoned and made for a rough start once again. The year was some what more successful than the first with some success being experienced on the part of the students and the collaborators. There was a lack of resources and planning time that left both collaborators feeling frustrated. The communication between the teachers improved as the year went on but was not as open as it should have been. The eighth grade math teacher had a sense of "turfism" about her content and students and was not open to the suggestions of the author. This was once again not what the author wanted in a collaborative situation.

When the next year was in the planning stages the author decided enough was enough. By refusing to participate in a collaborative relationship that did not feel comfortable, insisting on an adequate common planning time, and demanding that all individuals involved attend the workshop and all inservice training the author took control over her situation. The plan for the upcoming school year was for the author to be assigned to an academic team of teachers all dealing with the same group of about eighty students. The author was asked to collaborate in two subject areas; sixth grade science and sixth grade social studies.

The author would be responsible to the same group of twelve learning disabled students through out the day and provide pull out services for all students in language arts and for some students in social studies. Collaboration would be provided for science and social studies with all of the twelve students receiving collaborative services for one of the two classes. The author met with her collaborators to discuss common goals, expectations, and fears for the upcoming year. Though their have been some rough spots the year has been much more successful. This was accomplished by following the rules for successful inclusion.

The author invested much time in preparing for the current school year. Having taught the subject matter in a pull out program during the previous year the author was much more comfortable with the content of the material to be taught. Both the author and her co-collaborators attended the summer workshop and all inservice training. The author was able to research strategies, techniques, and instructional suggestions for the collaborative classes by knowing what she would be collaborating in during the upcoming school year.

The research into material began during the summer prior to the beginning of the collaborative relationship and continued through out the school year. Materials were

developed and purchased to be shared by the author and her co-collaborators. The author remains in constant contact with her co-teachers through a common "team" planning time daily. Special days are set aside each week with each teacher to develop both short range and long range goals for the upcoming week and weeks. Through the development of a planning form, instructional duties and responsibilities are divided each week as are grading and other administrative responsibilities. A strong professional and personal relationship has developed between the author and her collaborators through open communication. Concerns and successes are shared monthly by all collaborators within the district at special sharing meetings. Overall, the relationships are a success because the author refused to participate in a collaborative situation in which she was not comfortable.

This handbook is a collection of the materials, strategies, forms, modifications, instructional practices, study guides, graphic organizers, and many other materials used within the collaborative situation or researched by the author. The materials came from workshops, inservices, other collaborative teams, professional literature, and from the collaborators involved. The author feels that had she had the experience, the background, and the resources her

original collaborative relationships could have been much more successful.

Though Roanoke County does not mandate inclusion of all their special education students, many counties in the area are participating in full inclusion. Parents, legislators, and advocates of the disabled are pushing for full inclusion in the near future. It is essential that these inclusive programs that include collaboration have resources that aid in the transition. Teachers must be able to communicate openly and on a regular basis for these programs to provide the educational and social benefits anticipated. Teachers have to be their own advocates in determining with who and in what subject areas they collaborate and in which their students are included. The author strongly feels that it would be of great disservice to the overall population of special education students to abandoned entirely the current continuum of service for total inclusive programs. It must remain foremost in the minds of those making decisions to put the individual student's needs first and not the plans of an entire district. Inclusive programs with collaboration do not always meet the needs of all students. It is important to keep other alternatives to education available. This is especially true when dealing with children who are more

severely handicapped. The I.E.P. is an individualized education plan and it is essential that we do not lose the "individual" when administering services.

The author took into account her personal experiences and used this to develop a handbook for both regular and special educators participating in collaborative teaching. The materials that are included have come from workshops, professional resources, other collaborative teachers, and from the author's collaborative teaching experience.

The materials which were included were those that were most easily adapted to any collaborative situation on any grade level and in any subject. Some of the materials have been adapted to suit the needs of the author and her collaborative teachers and many include examples of how they were actually used within the classroom.

CHAPTER 4 - HANDBOOK
MATERIALS AND STRATEGIES
FOR COLLABORATIVE TEACHING

MATERIALS AND STRATEGIES
FOR COLLABORATIVE TEACHING
Nancy Bradley

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INTRODUCTION

The author has organized this handbook into the following sections; building the collaborative relationship, teaching strategies, modifications, and note taking and study strategies.

Each section includes a brief explanation of the strategies or materials to be presented. When specific forms are used the author has provided both a completed and a blank copy of the form to show actual use within the collaborative classroom. The materials presented were used in sixth grade collaborative science and social studies classes but could easily be adapted to a variety collaborative or regular classroom situations.

The information and strategies presented in this project were adapted from a variety of resources including workshops, other teachers, professional resources, and from the author's own collaborative partnerships. Much of the material came from the Roanoke County Collaborative Teaching Program (1993) and workshops conducted by Roanoke County in their hopes of developing and improving their current collaborative teaching program.

CHAPTER 1
BUILDING THE COLLABORATIVE RELATIONSHIP

BUILDING THE COLLABORATIVE RELATIONSHIP

In building a collaborative relationship it is important that the teachers involved first become familiar with each other by sharing personal and professional beliefs, developing shared beliefs, managing conflict when it happens, working together to develop rules and procedures, and developing a system for sharing responsibility.

Sharing Beliefs

When entering any new professional relationship it is important to first open the lines of communication by sharing personal and professional beliefs. Discussions need to center around attitudes towards special education students, discipline, teaching style, content, modifications, past experiences, and any other areas of concern or interest. This time of discussion is important because it is the foundation on which this collaborative relationship will develop. Once each individual has an understanding of the others beliefs the relationship will be able to develop with a more open approach to communication. The following are some sample belief statements adapted from the Roanoke County Collaborative Teaching Program (1993):

- * All students can learn.
- * All students learn differently.
- * All teachers have different teaching styles.

- * There isn't always one solution.
- * Students have a variety of talents.
- * All students need to feel success.
- * Teachers must be flexible.
- * The role of the teacher is always changing.
- * Fail together/succeed together.

Developing Collaborative Belief Statements

After personal and professional beliefs have been shared and discussed the next step is to develop the shared beliefs regarding collaborative teaching. The following is a list of guidelines taken from the Roanoke County Schools Collaborative Teaching Program (1993):

- "1. Clarify a mission toward which you will mutually strive.
2. Represent the value structure of the classroom/school.
3. Provide information for effective program evaluation and plan for improvement.
4. Become powerful determinants of the quality and productivity of an instructional program.
5. Give direction to the development of desired outcomes, the manner in which the classroom is organized, and the way in which instruction is delivered.
6. Share the issues you have identified; record agreements and/or differences of opinions about each issue.
7. Discuss or write a brief statement which describes best practices and most desirable conditions for students learning relative to each issue.
8. Seek consensus on shared belief statements.
9. Determine the extent to which each belief statement is currently being implemented."

When beginning to share and develop beliefs it is important to remain flexible and to be willing to

compromise. Developing shared beliefs is the first step to developing a true collaborative team.

Managing Conflict

There will more than likely be issues in the collaborative relationship that are not easily resolved. They may center around beliefs, discipline, teaching practices, or one of many other areas. The following is a way of preventing conflict and dealing with it when it happens. It was presented at the Roanoke County Collaborative Teaching Workshop in February of 1995. The presenter was Chriss Walter-Thomas from the College of William and Mary.

"Before Conflict Develops:

- * Develop mutual trust, respect, and role division among team members.
- * Use problem solving and communication skills.
- * Anticipate others' needs, interests, and positions.
- * Learn conflict management skills.

When Conflict Happens:

- * Schedule convenient times to discuss the conflict.
- * Schedule an appropriate place and sufficient time.
- * Separate the person from the problem.

In conflict situations use RESOLVE:

Respond first to the other person's feelings.

Employ Body Basics (e.g., eye contact, body language, attending behaviors, breathing, facial expressions, and vocal tone)

Stay focused on finding an appropriate solution—don't get sidetracked by other issues.

Organize your thoughts before the meeting.

Listen responsively to understand the other person's position.

View conflict management as opportunities to increase

team skills.

End the discussion on a positive note. Thank the person(s) for his/her willingness to work with you to resolve the conflict.

After the Conflict is Resolved:

- * Self-evaluate your own behavior.
- * Make changes as needed to increase personal effectiveness.
- * Follow through on commitments that you made during the conflict resolution session."

Developing Rules and Procedures

The following checklist is a useful tool when beginning a to establish a collaborative classroom. It provides an opportunity for both teachers to share openly the views on seating arrangement, procedures, grading policy, and many other areas that are a part of every classroom.

Checklist for Rules and Procedures

41

Class _____ Teacher _____
Period _____

1. Seating Arrangement:

- ☐ Open Seating
- ☐ Assigned Seating

2. Behavior for Entering the Class:

- ☐ Visiting with friends allowed
- ☐ Visiting with friends not allowed
- ☐ Place personal belongings in desk, locker, or bookshelf, etc.
- ☐ Place class materials on desk
- ☐ Copy class work from board
- ☐ Copy homework assignment from board
- ☐ Other _____

3. Behavior When Leaving the Class:

- ☐ Leave when the bell is sounded
- ☐ Leaving only when dismissed by the teacher

4. Format For Heading Papers:

- ☐ Model of format

- ☐ Location On Paper

--	--

5. Procedure for Turning In Completed Work:

- ☐ Will be discussed with each assignment
- ☐ At beginning of each class
- ☐ At end of each class
- ☐ Only when requested by teacher

6. How to Request a Drink of Water:

7. Procedures for Going to the Restroom:

8. Procedures for Going to the Clinic:

9. Procedures for Sharpening Pencils and Requesting Supplies:

10. What to do When Tardy to Class:

11. Class Policy for Making Up Work:

12. Penalty For Late Work:

13. Grading Policy:

14. Testing Schedule:

15. Structure of Class Procedures:

16. Where to put trash:

17. Can I chew gum or have snacks:

18. Procedures for Class Participation:
How to ask for assistance:

When talking is allowed:

How to properly ask questions:

How to properly respond with answers to questions:

What to do if you are unsure about asking a question in front of peers:

Instructional Plan

Developing an instructional plan or format is a good way to prevent conflict in instruction. Attached is an instructional plan used by the author. It states the duties and responsibilities for both the general and special educator as well as homework and comments/needs. This instructional plan becomes a contract between the collaborative teachers in regards to instructional responsibilities.

The author has attached one completed and one blank copy of the form to show it's use within the classroom. The form was taken from the Roanoke County Schools Collaborative Teaching Program (1993).

Collaborative Teaching Instructional Plan

Coteachers _____

Class _____

Week of _____

Lesson Objective(s)	Description of Coteaching Responsibilities		Homework	Comments/ Needs
	General Educator	Special Educator		
Monday To learn how to acquire information from a textbook.	(2) Textbook inventory in pairs	(1) Warm-up "brainstorm" for ideas of considerate and inconsiderate textbooks (overhead) (2) Introduce "rivals"	"Finish-up textbook inventory"	
Tuesday To learn the steps of the scientific method and how they apply to lab report	(2) Lecture on scientific method	(1) Warm-up ("rivals") (2) "Review steps of scientific method using Antitheseo as example (on overhead)"		"Make poster of lab format"
Wednesday Continued	(2) Lecture on lab format (2) Show example of lab format	(1) Warm-up (introduce the term mnemonic "example scientific method") (2) Present poster illustrating proper lab format	"Create mnemonic"	
Thursday To write a lab using the correct format	(2) Complete lab on igneous rocks "Students work in pairs "Both teachers provide assistance as needed"	(1) Warm-up students Share their mnemonics with class		"Make bulletin board of example mnemonics"
Friday Continued	(1) Complete lab (2) Collect lab for grade	(2) Brainstorm on overhead for lab conclusion. Formulate the "conclusion as a group."		

Collaborative Teaching Instructional Plan

Coteachers _____

Class _____

Week of _____

Lesson Objective(s)	Description of Coteaching Responsibilities		Homework	Comments/ Needs
	General Educator	Special Educator		
Monday				
Tuesday				
Wednesday				
Thursday				
Friday				

CHAPTER 2
TEACHING STRATEGIES

TEACHING STRATEGIES

In a collaborative teaching setting it is often difficult to initially determine the responsibilities of each of the collaborative teachers. Most teachers are not used to another individual in the room to share responsibilities and instruction.

The following are some strategies to use during collaboration that may improve the delivery of instruction and the comfort of each teacher. They were taken from an article written by Lynne Cook and Marilyn Friend entitled "Educational Leadership for Teacher Collaboration" (1993).

Parallel Teaching

The goal for this type of co-teaching is to lower the student-teacher ratio. In parallel teaching, the teachers plan the instruction together, but each teacher delivers it to half of the class. The teachers must coordinate their instruction to insure that all students receive basically the same instruction and group the students heterogeneously to make sure that the special education students are not being singled out. This application is often used for remediation, drill and practice activities, projects, and test review. In considering this approach, it is important to determine if the classroom being used will allow for this type of instruction without interference between the two groups due to noise and activity.

Station Teaching

In this strategy, the teachers determine the content to be taught, divide it into centers or stations, and then each teacher assumes responsibility for a portion of it. This allows for groups of students to be working on different tasks and lowers student-teacher ratio. In a classroom where this approach is being used groups of students may be involved in peer tutoring, independent work assignments, or participating in lab activities. Essentially, the students move from station to station with each teacher guiding them through a station or portion of the instruction. This is particularly effective when used in a lab situation in science classes.

One Teach, One Assist

In this strategy, each teacher assumes a different responsibility within the classroom. Both teachers are present, but one teacher assumes the primary role of providing instruction and the other teacher assists students by moving about the classroom. This approach requires little collaborative planning and allows one teacher to focus in on students who are off task or to collect data on individual students. It is important that these roles be shared equally so that neither teacher begins to feel like an aide or assistant. If shared equally and not used as a primary teaching strategy, this application can be effective.

Alternative Teaching

This strategy allows for needed reteaching or preteaching of skills by allowing one teacher to work with a small group while the other instructs the larger portion of the class. It is important when considering this strategy to not single out the same group of students each time. This can be remediated by varying the groups through enrichment groups and making sure that all students participate in a group at one time or another.

Team Teaching

Team teaching is the most difficult type of collaboration because it requires a high level of comfort for both teachers involved. In this strategy the teachers both share the instruction but in an alternating style. One teacher may speak while the other models a concept, they may take turns leading the discussion, one may speak while the other writes notes on the board, and so on. This strategy also allows teachers to role play, simulate conflict, and model appropriate questioning procedures. The type of teaching is one shared by collaborators who have a strong commitment, a high level of comfort, and a sense of mutual trust.

Cooperative Learning

Cooperative learning is an effective strategy when collaboratively teaching because of the presence of two teachers to monitor group progress. It also allows for students to be paired heterogeneously and to benefit from

the knowledge of other class members. It is important to insure the participation of each member by assigning roles such as leader, reader, timer, recorder, or presenter. Each member of the group must be held accountable for their responsibilities within the group. Roles among group members need to alternate to allow for a true sharing of responsibility and for all students to benefit from the experience. Collaborative teaching allows for collaborators to model roles from within the groups and to more closely supervise student participation.

Conclusion

When considering strategies to implement in a collaborative classroom, the teachers need to communicate openly regarding their comfort level in implementing different strategies. Initially some strategies may prove to be better than others. It is also important to vary the strategies used in order to further develop the level of collaborative instruction.

CHAPTER 3
MODIFICATIONS

MODIFICATIONS

Modifications are those changes which must be made for individual students because of their specific disabilities. These changes may be required based upon the students Individual Education Plan or by a teacher initiated based upon particular content or individual need. Modifications are typically found in the areas of instruction, environment, tasks, or testing. Not all students need or deserve the same modifications. They must be based upon individual need and constantly assessed to determine effectiveness.

Modifications are an area that can cause conflict in a collaborative teaching relationship. Many teachers, especially regular education teachers, often feel that certain modifications are cheating or are unfair to the other members of the class. They are actually those changes needed to help a student participate in a mainstreamed classroom to the fullest extent possible.

Open communication and flexibility on the part of both teachers will help eliminate any conflict regarding modifications. In most circumstances, the regular education teacher needs to consider the special education teacher the expert in this field and give him or her free domain over needed modifications.

I.E.P. Modifications

I.E.P. modifications are those determined by the I.E.P. committee to be needed at the time the I.E.P. was written. They may include areas such as a required assignment sheet, having tests read aloud, being aloud to leave a testing situation to go to a resource room, allowing a re-test when test performance is poor, seating a student at the front of the room to eliminate distractions, or any other area deemed necessary by the I.E.P committee.

These modifications are required and must be met in order to stay in compliance with the I.E.P.. If an I.E.P. modification is no longer deemed necessary, then a change must be made to the I.E.P. to eliminate that modification.

In a collaborative setting I.E.P. modifications are sometimes difficult to meet without singling out the special education students. It is often necessary to be discreet when administering them. The following are creative ways of allowing for modifications without singling out specific students.

Modification

The student will take tests outside of the classroom with special education specialist.

The student will have different or reduced test content.

Solution

Arrange to meet the student or students at an alternative site to take the test.

Have an alternative test prepared and pull it from the bottom of the stack.

The student will have tests read aloud by the special education specialist.

Read the test allowed to all students or give all students the opportunity to leave and have the test read aloud.

The student will be allowed additional time to complete tests.

Allow the student to finish the test during homeroom or a study period.

The student will be allowed to copy or should be provided with a copy of another student's class notes.

Set up a model notebook with all the notes in it any student can copy.

The student will be allowed a retake when test performance is poor.

Allow all students to retest when performance is poor or have the student retake the test during another time period such as lunch or homeroom.

These are just a few of the modifications found within an I.E.P. and some solutions for overcoming them in a collaborative classroom. The goal needs to be to make all needed modifications but not to single out the student or students receiving them. In many cases basic I.E. P. modifications such as reading a test aloud could be beneficial to all students and should be considered as a way to help the whole class. I.E.P. modifications that are specific to individual students take prior planning and flexibility on the part of both teachers.

Instructional Modifications

When making modifications in instruction it may be helpful to look back over the different teaching strategies presented in Chapter 2. If a student is in need of small group instruction it may be necessary to consider cooperative learning groups or station teaching. It may also be necessary to examine the format of the instruction as it relates to the students within the class. This can be done by evaluating the instructional procedures based upon the following questions and making some of the recommended modifications. These questions and modifications have been adapted from the Collaborative Teaching Program developed by Roanoke County Schools (1993).

1. Can the student or students actively participate in the lesson as is and achieve the same essential outcome?

Possible Modifications: alternative evaluations, teaching strategies, or requirements.

2. Can the student or students participation be increased by changing the lesson format or instructional arrangement?

Possible modifications: cooperative groups, small groups (teacher or student directed), peer partners, activity based lessons, games, simulations, role-plays, or experiential lessons.

3. Can the student or students participation be increased by changing the instructional strategies or teaching style?

Possible Modifications: specific instructions (oral and written), smaller tasks sequenced from easy to hard, or additional presentations or guided practice.

Many modifications are small changes but can make a large difference in the ability of student to comprehend the material being presented.

Environmental Modifications

When determining the need for environmental modifications the two main areas to consider are physical conditions and social conditions. Both collaborators should work together to determine the best possible modifications. Physical conditions include things such as noise, lighting, space, or seating arrangement. These are, in most cases, easily modified through minor adjustments in the arrangement of the classroom, adding additional lighting or light sources, or changing the seating chart or arrangement to best suit the needs of an individual student or all the students. These changes, though minor, can make a significant difference in the ability of particular students to focus on lesson content and eliminate possible distractions.

Social conditions such as amount of movement around the classroom, talking or joking between students, sharing of materials, and cooperation among class members is often more difficult to modify. Often the social conditions are determined by the make up of the class. Some classes are more talkative or cooperative than others and modifications

should be judged accordingly. Physical changes such as a change in a seating chart or room arrangement may also help in making social modifications. The focus is to make all students feel welcome and give everyone equal opportunity to participate.

It is often tempting to seat all the students in need of special help at one table or near one another to help the teachers in assisting them and to aid in instructional modifications. In fact it is much more beneficial for them to be equally dispersed among their peers in order to allow for modeling and the development of relationships.

Task Modifications

When considering task modifications the focus should be on the characteristics and demands of the task being assigned, the way the task is done, the support structure, and any alternative activities that may enhance participation and interaction. Often task modifications fall into either adapted curricular goals or evaluation standards. In some cases it is necessary to make modifications in both areas in order for a student to be successful. Task modifications include working with a peer rather than individually, limiting the number of steps to completing the task, or considering how the directions are presented. When determining evaluation standards it is important to focus on what you want each student to learn

from the task and evaluate it on an individual basis rather than on a whole class basis. The following is a list of task modifications adapted from the Roanoke County Collaborative Teaching Program (1993).

1. Adjust performance standards or conditions by providing memory aids, different presentations, or response modes.
2. Adjust pacing and number objectives.
3. Break task into smaller sub-tasks.
4. Use the same content but less complex.
5. Adjust the evaluation system by changing presentations, having fewer items, or providing memory aids.

It is important to consider the individual student or students and not the class as a whole when determining the number and type of task modifications. Modifications can also be made for students within the collaborative class that need a more enriched task rather than a modified task. It is important that whatever the task modifications made that both collaborators work together to determine and implement the needed modifications.

Testing Modifications

Modifications in the administration of tests such as having a test read orally, removing time restrictions, or allowing a re-test when performance is poor is often dependent upon the I.E.P. modifications. Modifications on test content and format is dependent upon the collaborative

teachers and the students they are teaching. It may often be necessary to have two versions of the same test or to agree upon modifications that both teachers feel will help the class as a whole. The following page is a list of suggested adaptations taken from Adapting instruction for mainstreamed and at-risk students by J.W. Wood (1992). It includes simple modifications in test format that could help all students within a given class.

Suggestions for Adapting Test Directions

1. Keep the directions short.
2. Keep directions simple; avoid unnecessary words.
3. Type directions.
4. If directions are not typed, print neatly.
5. Place all directions at the beginning of each separate test section.
6. When giving more than one direction, list vertically.
7. List only one direction in each sentence.
8. Underline the word "Directions" to focus the student's attention.
9. Avoid using word such as never, not, always, except. If you must use these, underline and capitalize them.
10. Define any unfamiliar or abstract words.
11. Color code directions.
12. Avoid oral directions as the only means of making the purpose of the test known to students. Read directions orally as well as clearly writing them on the test.
13. Tell students the reason or purpose of the test.
14. Go over each direction before the test. Be sure that the student understands what is to be done.
15. Remember that the student who does not clearly understand the directions will be the last to raise his/her hand and ask for clarification.
16. While the test is in progress, walk around the room and check to see that students are following directions.
17. Teach students that if points are to be lost, lose them for not knowing items on the test not for not following or understanding the test directions.

Reference:

Wood, J.W., (1992). Adapting instruction for mainstreamed and at-risk students.
Columbus, OH: Macmillan Publishing Company. With permission.

18. Place a heading for each test section with directions if the directions have changed.
19. Handwriting should be neat and legible.
20. If typing is not possible, print the test.
21. All pages of the test should be numbered (Dave Meadows).

Reference:

Wood, J.W., (1992). Adapting instruction for mainstreamed and at-risk students. (pp.330-332)
Columbus, OH: Macmillan Publishing Company. With permission.

If adaptations in test format become an area of conflict between collaborators, it may be necessary to have two versions of the same test. When doing so, it is important that the students with the modified test not be singled out when distributing testing materials. This can be done by having one test on the top of the stack and a second on the bottom or by letting the class know that there are two versions of the same test being distributed. As collaborators you may decide that there are students who are not identified as disabled who are at risk for failing and may benefit from a modified test. It may also be an opportunity to meet the needs of some of the more advanced students within the class by having even three version of the same test in varying levels of difficulty and format.

It is important when evaluating a test for possible modifications to see it from the view point of your students. In many cases minor adjustments in testing format and content will enable a student with disabilities to share their knowledge and achieve success. The following are some examples of modifications that the author has developed through collaboration that can be made on certain types of test questions.

Matching Questions: have no more than five terms and definitions to be matched and have an equal number of questions and answers. Double space each question.

Short Answer Questions: whenever possible have students list three or four possible answers to a particular question or make the question multiple choice.

Fill in The Blank: provide a work bank whenever possible. Limit the number of questions.

Multiple Choice Questions: double space options and eliminate options such as none of the above or all of the above. Use no more than two or three options whenever possible.

Essay Questions: ask more general questions rather than those that require lists of facts. Focus on questions which give you an overall understanding of the students knowledge of a particular area.

The following pages are examples of adapted tests with a variety of modifications. Whenever possible, modifications were made that did not require two versions of the same test but one test that could be taken by all of the students within a collaborative science or collaborative social studies class.

Name: _____

Science Test
Chapter 6, Lessons 1 & 2

chemical property
chemical bond

nucleus

chemical change
neutron

1. _____ is a change that forms a new substance with new properties.
2. _____ are characteristics that determines how a substance reacts with another substance.
3. _____ is an uncharged particle in the nucleus of an atom.
4. _____ is the dense, positively charged core of an atom.
5. _____ is the strong attraction between two atoms.

proton

electron

atom

physical change
physical properties

6. _____ is a change that does not affect the composition of a substance.
7. _____ characteristics that can be observed without changing the composition of a substance.
8. _____ is the basic unit of an element.
9. _____ is a positively charged particle in the nucleus of an atom.
10. _____ is a tiny, negatively charged particle outside the nucleus of an atom.

List the three states of matter.

11. _____ 12. _____ 13. _____

Write C if the example is a chemical change or a P if the example is a physical change.

14. _____ Ice melting into water.
15. _____ Charcoal in a fire turns to ash after several hours.
16. _____ Frying an egg.
17. _____ Apple juice turning into vinegar because it spoiled.
18. _____ Breaking a glass.
19. _____ A pencil being sharpened.
20. _____ Wax on a candle melting

Multiple Choice

21. The state of matter that can fill any volume. _____
a. solid b. gas c. liquid
22. Matter changes from a solid to a liquid when _____
a. temperature stays the same
b. temperature increases
c. temperature decreases
23. Matter changes from a liquid to a gas when _____
a. chemical properties change
b. temperature decreases
c. molecules can move in all directions

NAME: _____

CHAPTER 4 TEST THE FERTILE CRESENT

Fill in the blanks using the words provided.

city-state
cuneiform
drought
famine
Judaism

monotheism
polytheism
surplus
Ten Commandments
ziggurat

1. The belief in many gods is called _____.
2. When farmers produce extra food it is called a _____.
3. A self-governing political unit is a _____.
4. The system of "wedge-shaped" writing was called _____.
5. The belief in one god is called _____.
6. The religion of the Hebrews was called _____.
7. A long period of dry weather is called a _____.
8. A Mesopotamian temple honoring a god or goddess is called a _____.
9. A lack of food is called a _____.
10. The laws that govern the hebrew religion are the _____.

DRAW A MAP AND INCLUDE THE FOLLOWING LOCATIONS. (#11-15)

Tigris River

Euphrates River

Persian Gulf

Mediterranean Sea

Fertile Cresent

CIRCLE THE CORRECT ANSWER.

16. What was the name of the strip of rich land, shaped like a quarter moon, that became the sight of several important civilizations?

Fertile Crescent

Mesopotamia

17. This Greek word means the land between two rivers.

Fertile Crescent

Mesopotamia

18. What was the name of the first important civilization to appear between the Tigris and the Euphrates rivers?

Sumer

Babylon

19. What group of people conquered Mesopotamia and brought an end to the Sumerian civilization?

Babylonians

Egyptians

20. What was the name of the first written system of laws?

The Ten Commandments

The Code of Hammurabi

ANSWER THE FOLLOWING QUESTION IN COMPLETE SENTENCES.

21. Compare and contrast the Egyptians and the Mesopotamians. List a least five similarities and differences.

CHAPTER 4
NOTE TAKING AND STUDY STRATEGIES

NOTE TAKING AND STUDY STRATEGIES

The teaching of note taking and study strategies is an area where the special education teacher can be a great asset to the collaborative team. In many cases special education teachers have had specialized training in helping students learn and remember information. They also have an insight into the difficulties some students have in learning and remembering information. Strategies such as graphic organizers, mnemonic devices, organizational strategies, assignment sheets, and test taking strategies are all areas that aid in the organization and retrieval of information.

Graphic Organizers

Graphic organizers allow students to both write down and visualize information. They help students organize information into a visual format that can be more easily remembered than by note taking alone. Graphic organizers come in many designs and formats and are often most effective when they are designed with a particular concept in mind. They often have titles such as venn diagram, time line, chart, or hierarchy but come in as many styles as there are concepts. This strategy for organizing information is particularly effective when working with the learning disabled students because they are most often visual learners but it is also effective when dealing with general education students as well.

The following pages provide a few of the many variations on graphic organizers. One of the sample types of

organizers have completed copy showing actual use within the classroom.

Any variation from traditional note taking procedures often sparks student interest and teacher interest as well. Students are often the best designers of graphic organizers when given some information to organize and time to create their own graphic organizer.

EGYPTIANS

SUMMERIANS

Different

Same

Different

Built Pyramids

Bury Dead

Write in Hieroglyphics

Write on Papyrus

Traders

Written Language

Worshipped Gods

Craftsman

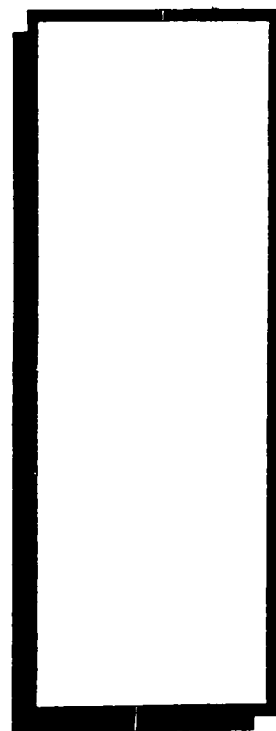
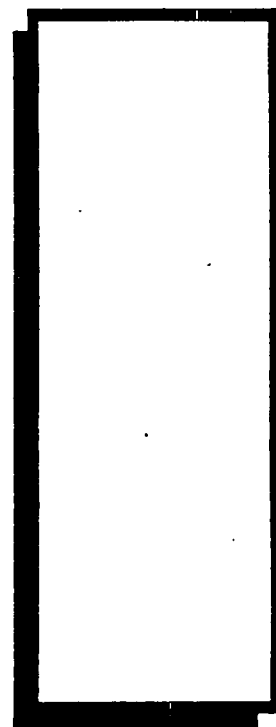
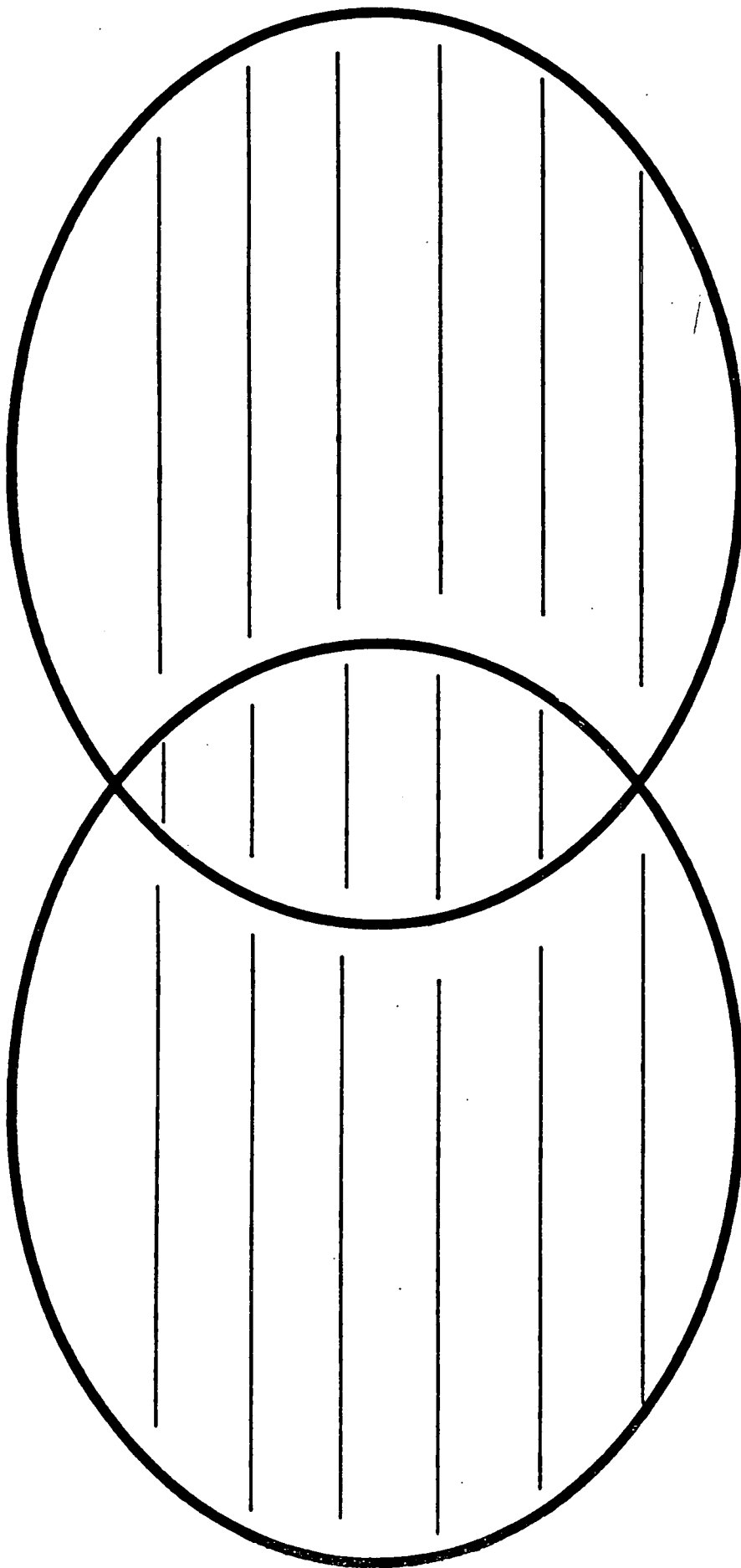
Bartered

Built Ziggurats

Worship

Write in Cuneiform

Write on Clay Tablets

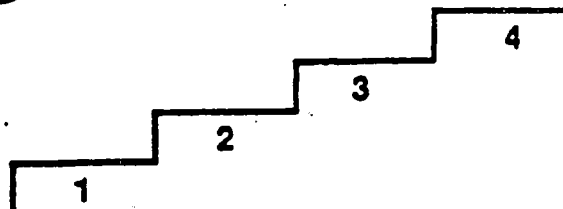


Graphic Organizer Examples

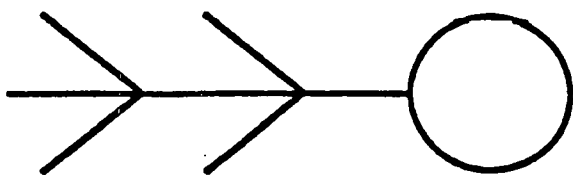
1 Timeline



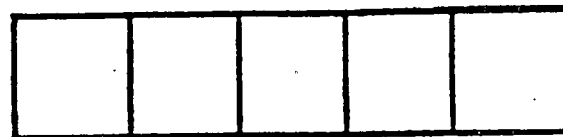
5 Step-by-Step



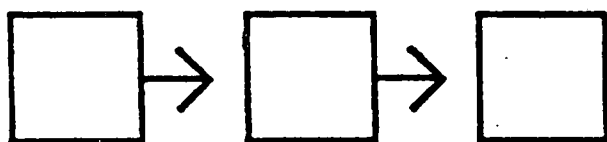
2 Cause to Effect



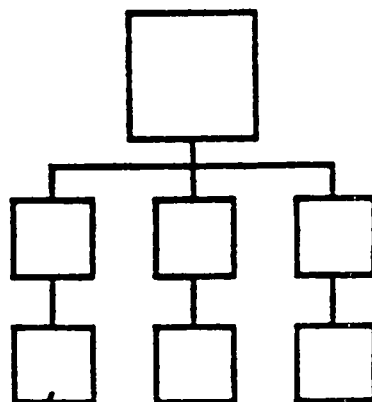
6 Main Points in Story



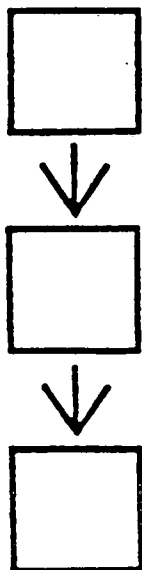
3 Order of Events



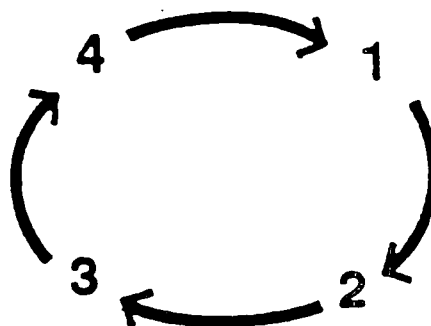
7 Hierarchy

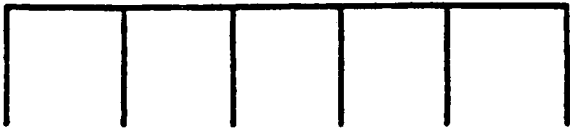
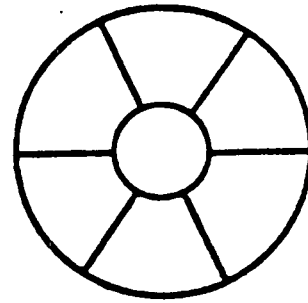
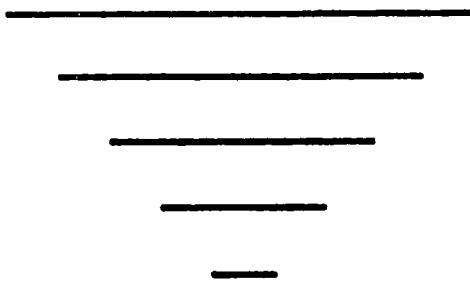
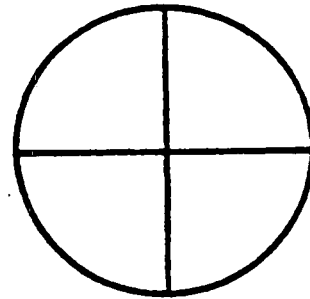
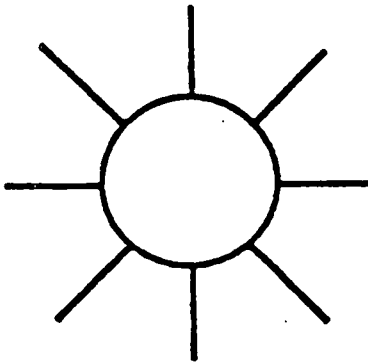
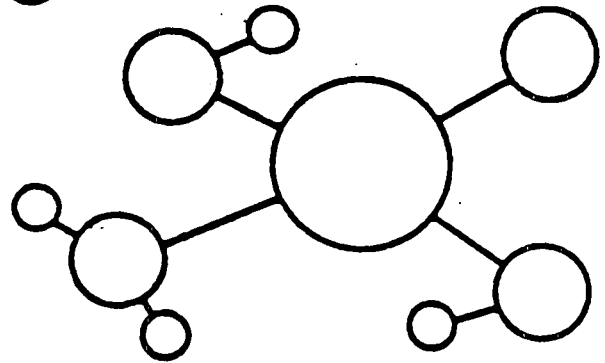
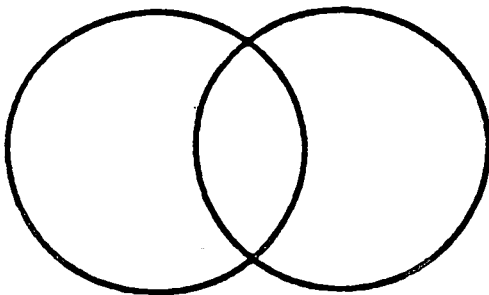
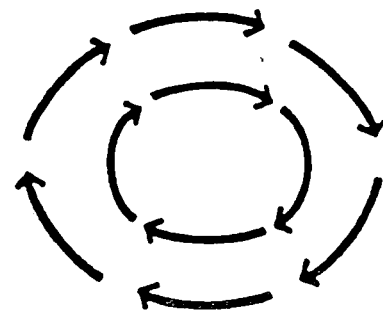


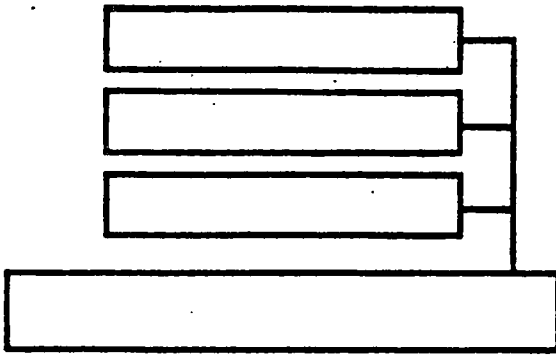
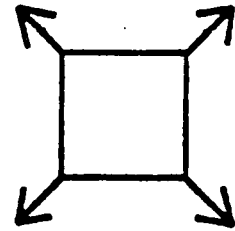
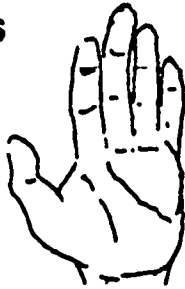
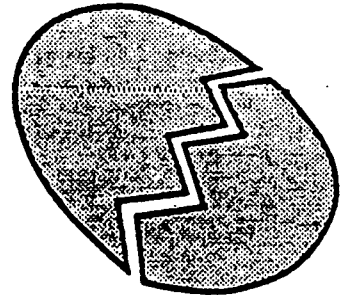
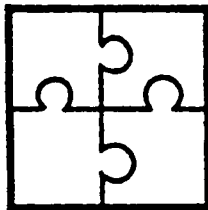
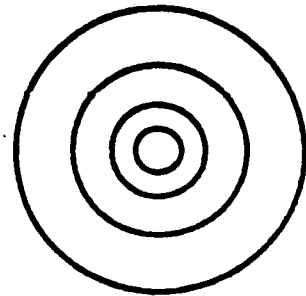
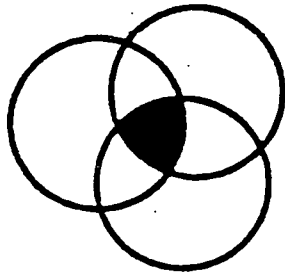
4 Chain of Command



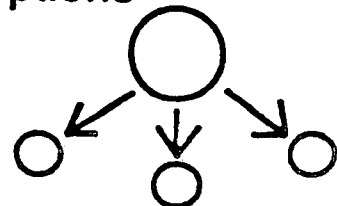
8 Cycle



9**Part of Related Information****13****Relation of Parts to Whole****10****Priorities in Descending Order****14****Parts of Whole****11****Parts of Concept****15****Relationships****12****Same/Different Venn Diagram****16****Overlapping Cycles**

17 Induction to Generalization**22 Predictions****18 5 Things or Parts of a Whole****23 Parts Come Together****19 Pieces of Whole****24 What is Central & What is Peripheral****20 3 Overlapping Concepts****25 Continuum****21 Points to Remember**

5 **4** **3** **2**

26 Options

Mnemonic Devices

A mnemonic device is a memorization strategy to help students remember lists of facts or information about a certain subject. The methods for forming a mnemonic device are as follows:

Method	Example	Mnemonic
Forming a Word	Common Human Fears Heights Insects Death Elevators Snakes	HIDES
Inserting a Letter(s)	Smallest Countries Monaco Nauru Tuvalu Sam Marino	MiNTS
Rearranging Letters	Types of Trees Pine Oak Maple Sycamore Elm	POEMS
Shaping a Sentence	Famous Leaders Who Where Assassinated Julius Caesar Mahatma Gandhi John F. Kennedy Abraham Lincoln	Can Greg Kiss Kim on the Lips?

Mnemonic devices are also useful in remembering study strategies, classroom procedures, and focusing techniques. The best mnemonic devices are those in which the students create them themselves.

The following pages are examples of some mnemonic strategies used in the author's collaborative classes which

have either come from other classroom teachers, students, or the Roanoke County Collaborative Teaching Program (1993).

Sample Content Mnemonics:

* Metric Terms in Order of Size

Millimeter	Mom
Centimeter	Calls
Decimeter	Dad the
Decameter	Delightful,
Hectometer	Happy
Kilometer	King

* The Colors of the Spectrum

	Red
	Orange
	Yellow
Roy G. Biv =	Green
	Blue
	Indigo
	Violet

* The Scientific Method

State the problem
Gather information
Form hypothesis
Perform Experiments
Record and analyze data
State conclusion

Some Girl Found a Pair of Red Shoes.

* Order of Operations

Please Excuse My Dear Aunt Sally	
Parenthesis	Please
Exponents	Excuse
Multiplication	My
Division	Dear
Additions	Aunt
Subtraction	Sally

* Class Preparation Strategy (P.R.E.P.)

- P Prepare Materials
- R Review What You Know
- E Establish Positive Mind Set
- P Pinpoint Goals

* A Listening Strategy (T.Q.L.R.)

- T Tune in
- Q Questions
- L Listen
- R Review

* HOW Should My Paper Look?

- H Heading
 1. First and last name
 2. Date
 3. Subject
 4. Page number if needed
- O Organize
 1. On the Front Side of the Paper
 2. Left Margin
 3. Right Margin
 4. At Least One Blank Line at Top
 5. At Least One Blank Line at Bottom
 6. Good Spacing
- W Written Neatly
 1. Words and Numbers on Line
 2. Words and Numbers Written Neatly
 3. Neat Erasing or Crossing Out

* Attention Strategy (S.L.A.N.T.)

- S Sit Up
- L Lean Forward
- A Activate Your Thinking
- N Nod
- T Track the Talker

Study Guides

A study guide is a way of summarizing and organizing information from a chapter or unit into a format that can be easily remembered. Study guides are another area where a special education teacher may have more expertise than a regular education teacher. Often the regular education teacher can provide the key concepts and the special education teacher can provide insight into the proper format. The most important thing is some form of a study guide be given to all students but especially special education students.

Students with learning disabilities often have trouble determining relevant from irrelevant information and become very frustrated in trying to prepare for tests. Study guides eliminate some of that stress by providing key information and insight into the test format. The following are examples of two formats of study guides used by the author in collaborative classes. The various sources are noted on the bottom of each study guide.

Summative Study Guide

Student: _____ Date of Test: _____
 Subject: _____ Date Guide Issued: _____
 Teacher: _____

Study Guide

1. Lesson/Test Objective:
2. Textbook/Workbook/ Manual Pages to be Covered:
3. Handouts/Lecture/Films/Speakers/Demonstrations/Labs/ Maps/Charts to be Covered:
4. Key Words/Vocabulary to be Learned. Location:
5. Review Questions for Organizing Study:
6. Type of Test to be Given:

Test Type	Number of Items	Point Value
<input type="checkbox"/> Multiple Choice	_____	_____
<input type="checkbox"/> Matching	_____	_____
<input type="checkbox"/> True/False	_____	_____
<input type="checkbox"/> Fill-in-the-Blank	_____	_____
<input type="checkbox"/> Word Bank Included?	_____	_____
<input type="checkbox"/> Short Answer	_____	_____
<input type="checkbox"/> Essay	_____	_____
<input type="checkbox"/> Diagrams/Charts	_____	_____
<input type="checkbox"/> Maps	_____	_____
<input type="checkbox"/> Word Bank for Map?	_____	_____
<input type="checkbox"/> List of maps to Review:	_____	_____
Math Items:		
<input type="checkbox"/> Computation/Equations	_____	_____
<input type="checkbox"/> Word Problems	_____	_____
<input type="checkbox"/> Formulas	_____	_____
<input type="checkbox"/> Graphing	_____	_____
<input type="checkbox"/> Proofs	_____	_____
<input type="checkbox"/> Other, Please Describe:	_____	_____

7. Other Suggestions For Study and Review:

Thank You For Your Help!

Student Signature: _____

Parent Signature: _____

Test-Prep Kit

Day/Date of test: _____

Topic of the test: _____

Five main ideas about the topic (important concepts, key ideas, causes, results, important events or people):

- | | |
|----|----|
| 1. | 4. |
| 2. | 5. |
| 3. | |

Ten important terms (vocabulary words) related to the topic:

- | | |
|----|-----|
| 1. | 6. |
| 2. | 7. |
| 3. | 8. |
| 4. | 9. |
| 5. | 10. |

On the back of this page, write 15 questions you think the teacher will ask on the test.

Ask your teacher about the test, and check off which of the following you should include in your review:

- | | |
|---|---|
| <input type="checkbox"/> class notes | <input type="checkbox"/> teacher review sheets |
| <input type="checkbox"/> text readings | <input type="checkbox"/> past quizzes and tests |
| <input type="checkbox"/> handouts/dittos/worksheets | <input type="checkbox"/> other: _____ |

What format will the test follow:

- ☐ short answer (true-false, multiple choice, fill-in, matching, and so on)
- ☐ essay
- ☐ labeling a picture (a map, parts of a plant, the water cycle and so on)

Check off how many study sessions you will set aside to prepare for the exam:

- ☐ 2 sessions ☐ 3 sessions

Write which days you will study: _____

Check off which "active" study strategies you plan to use in preparation for the test:

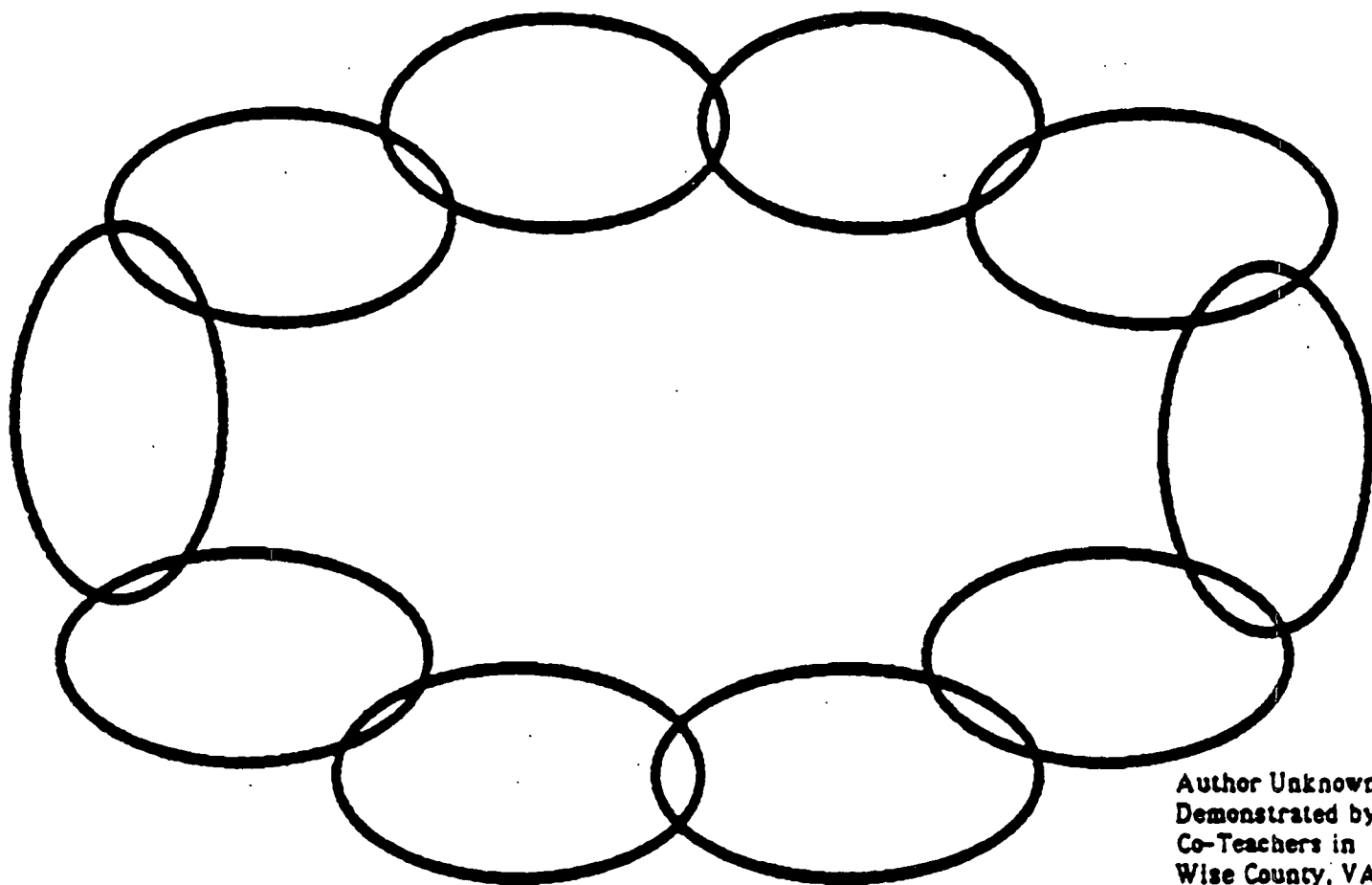
- | | |
|---|--|
| <input type="checkbox"/> reciting the main ideas | <input type="checkbox"/> creating a "semantic map" |
| <input type="checkbox"/> making a study review card | <input type="checkbox"/> creating a mnemonic device |
| <input type="checkbox"/> making and using a set of flashcards | <input type="checkbox"/> drawing a time line |
| <input type="checkbox"/> drawing a map, sketch or other diagram | <input type="checkbox"/> making lists of related information |
| | <input type="checkbox"/> other: _____ |

Test Review

In addition to study guides, mnemonic devices, and graphic organizers, the review prior to a test often gives students another way of organizing the information to be learned so that it can be more easily retrieved. Since many students do not know how to begin to study the review provided by a teacher prior to a test is often the only studying some students will participate in. By providing review games and sessions, teachers can give students a place to begin studying and an idea of what will be on the test.

Collaborative teaching is a perfect opportunity to develop some creative ways to review for tests. This is true because of the presence of two teachers to monitor the class and also because two teachers are more likely to come up with creative review plans to help the students. The following two games were used in collaborative settings and in the author's collaborative teaching experience. These games were adapted from the Roanoke County Collaborative Teaching Program (1993).

THE CHAIN GAME



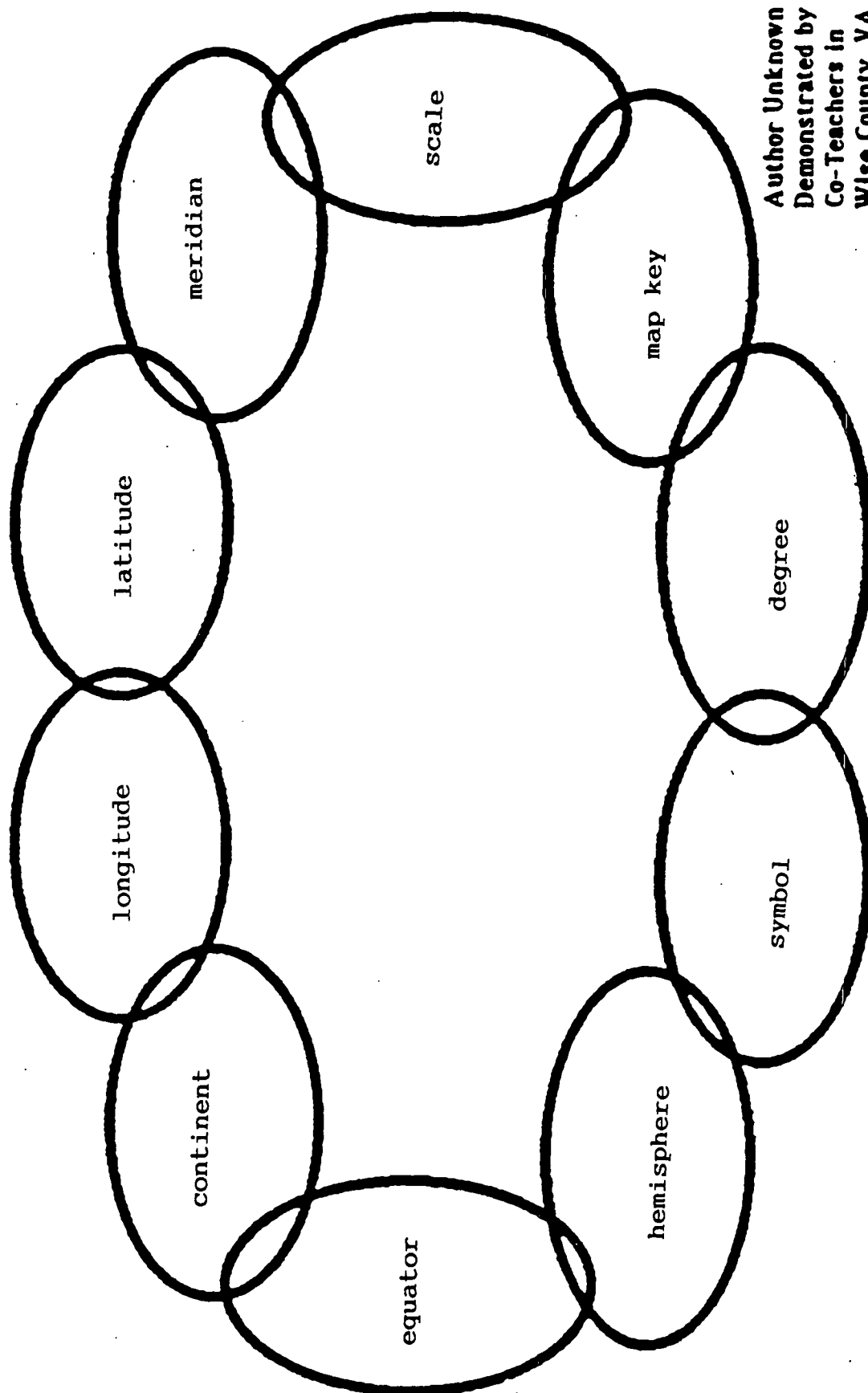
Author Unknown
Demonstrated by
Co-Teachers in
Wise County, VA

A Chain of Knowledge Vocabulary Review Game (A Supportive Learning Activity)

Directions:

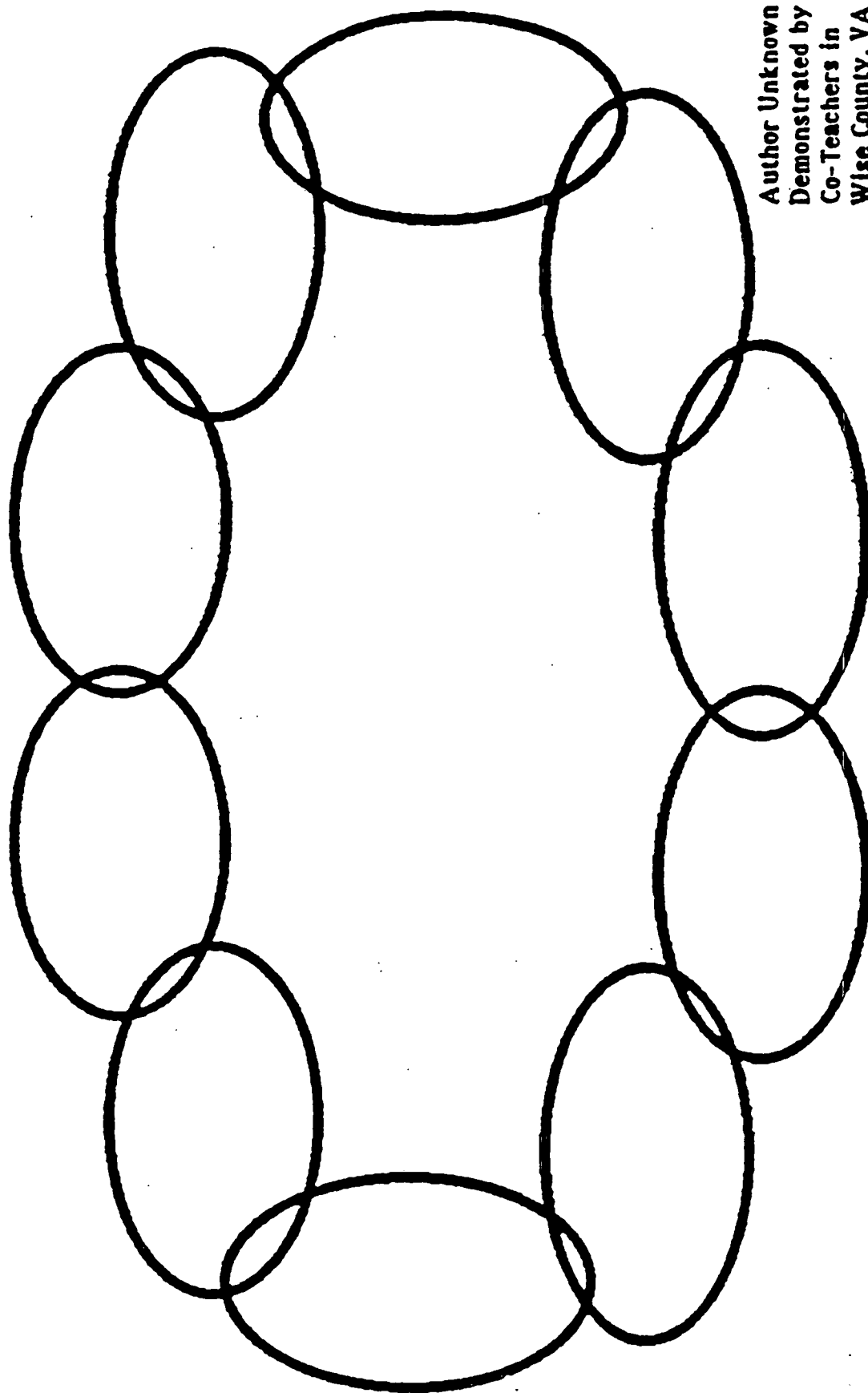
1. Draw chain links on the blackboard or overhead and write in each link a vocabulary word the class is studying.
2. Select player number 1. This student will choose any word in the chain, read and define it. (Suggestion: Select weaker students early in the game. They will have less work and more flexibility to choose words they know).
3. Select player number 2. This student will determine the direction play will follow by choosing to go to the right or left of the original word. Player number 2 will read and define the word selected by player number 1, then read and define the word of his choice to the right or left .
4. Select successive players. Each player from number 3 on will begin at the starting word and proceed to the next word in the chain, reading and defining each word.

THE CHAIN GAME



Author Unknown
Demonstrated by
Co-Teachers in
Wise County, VA

THE CHAIN GAME



Author Unknown
Demonstrated by
Co-Teachers in
Wise County, VA

BINGO: Chapter I

Scientific Measurement

Copy these 25 words or # onto your Bingo sheet in any order.

- | | |
|-----------------------|-----------------------|
| 1. 10 | 14. thousandths (.00) |
| 2. metrics | 15. volume |
| 3. 100 | 16. mass |
| 4. scientific method | 17. celsius |
| 5. liter | 18. balance |
| 6. gram | 19. hundredths (.00) |
| 7. 16 | 20. 1,000 |
| 8. graduated cylinder | 21. meter |
| 9. metric ruler | 22. hypothesis |
| 10. variable | 23. theory |
| 11. chemistry | 24. data |
| 12. physics | 25. law |
| 13. meter | |

B**I****N****G****O**

Test Taking Strategies

Many students are overwhelmed when first presented with a test or quiz. This is especially true for students with learning disabilities. The author has found that collaborative teaching is a perfect opportunity to teach strategies to help students learn to take tests. This is of benefit to all the students in the class, not just those with learning disabilities. By teaching test taking strategies, students have strategies to turn to when faced with a test they are either unsure of or overwhelmed with. The following two pages is a guide to test taking that is taken from the Roanoke County Collaborative Teaching Program (1993). It focuses on the different types of questions often used on tests and how to think through steps to answering them. The teaching of test taking strategies is another area where a special education teacher may have some special training or insight to add to the collaborative relationship.

STRATEGIES FOR TEST TAKING

STRATEGIES FOR TRUE/FALSE

1. Look for key / clue words

Generally True

probably
many
may
generally
seldom
better
sometimes
frequently
occasionally
some
more
might
usually
few
mainly
most
often

Generally False

all
only
always
worst
because
totally
none
every
first
never
best

2. Always guess, there is usually no penalty
3. Don't change your answers, the first choice is usually correct.
4. Remember, if any part of the statement is false, the entire statement is false.

STRATEGIES FOR MATCHING TESTS

1. Read all the directions carefully. Find out if you can use an answer more than once.
2. Work down the column with the longest phrases.
3. Match items you are sure of first.
4. Mark the items you are sure of first.
5. If you do not understand the directions, ask the teacher for help.
6. When you have matched an item, cross out its letter or number so you know you have already completed it.
7. If you are unsure of any of the items, make a good guess.

STRATEGIES FOR FILL IN THE BLANK TESTS

1. Read the questions carefully. Ask yourself: What is this question asking?
2. If you do not know the exact answer but do know something related to it, write down what you do know. You may get partial credit for the answer.
3. If you do not know the correct answer but have an idea about it, make a good guess.
4. Watch for clues in questions which may help answer other questions.
5. Use the number or length of the blanks as clues. If the teacher does not provide the same size of blanks for all the questions, try to think of an answer to fit the space.

STRATEGIES FOR MULTIPLE CHOICE TESTS

1. Make sure you understand exactly what the directions tell you to do.
2. Read the entire question and all the choices, even if the first or second choice seems correct. The last choice may be "all of the above" and this would be the best answer.
3. Decide which answers are definitely wrong. Draw line through the obviously incorrect answers. This helps to decrease the amount of information you have to reread when making your final decision.
4. Look out for small but important words like; only, always, all, and never. Words like most, generally and may, indicate some exceptions may be possible.
5. The word "an" is used only before words that begin with a vowel.
6. Select the best answer from the remaining choices.
7. If you cannot decide between two final choices, pick the answer that first seems right.

STRATEGIES FOR ESSAY TESTS

1. Before the test, predict questions and practice writing answers.
2. Essay questions usually begin with a key word which tells you what kind of answer is expected. Some of the more common are: compare, contrast, define, describe, diagram, name, prove, discuss, explain, list outline, state, summarize.
3. Answer easy questions first.
4. Plan ahead before writing. Make a brief outline or list of your ideas. Include main points in the proper order.
5. Write your answer in a clear, concise, neat manner. Use complete sentences. The main ideas should be made into topic sentences. Support each topic sentence with one or two examples.

CHAPTER V
SUMMARY AND IMPLICATIONS
FOR PRACTICE

Summary

Due to the ongoing changes in the service to special education students, the teachers serving these students are also being forced to change. Special education and regular education teachers are being forced to work collaboratively together due to the inclusion of special education students into the regular classroom. Because these teachers are needing to work together, there is a need for materials and resources for them to use to best service the students in their care.

The development of special education services has gone through many changes since the passage of public law 94-142, The Education of All Handicapped Children Act as addressed in Chapter 1. That is especially true for students categorized as learning disabled. These children are the ones most likely to be included first service through collaborative teaching.

The rationale for this project was to help teachers servicing these students to implement a collaborative program that would suit the needs of both the students and the teachers. The purpose was to give these teachers a resource guide they could follow to help them form a strong

collaborative relationship and to give them well developed collaborative materials to use within these classrooms.

The materials presented were used in a sixth grade science and social studies class but are not limited to these subjects in their use. The terms defined were those that related specifically to the inclusion of special education students such as collaborative teaching, inclusion, I.E.P., learning disabilities, least restrictive environment, and mainstreaming.

The current literature relevant to the inclusion of special education students was reviewed in chapter 2. Emphasis was placed on the elements of responsible inclusion, teacher attitudes and roles, and parental views.

The author of this study has had three years of collaborative teaching experience which was discussed in chapter 3. Personal views on responsible inclusion and the rights of those teachers asked or forced to collaborate was addressed. Also addressed was the need for proper training and administrative support. The author found that when beginning to collaborate there is a great need for materials and resources and this need was the motivation for creating this handbook.

The handbook presented in chapter four, entitled Materials and Strategies for Collaborative Teaching was designed for use by teachers when forming a new collaborative relationship or enhancing a current one.

The first section addresses steps to building a collaborative relationship such as sharing beliefs, developing collaborative belief statements, managing conflict, developing rules and procedures, and developing an instructional plan.

The second section entitled teaching strategies, was developed for use within the collaborative classroom to help teachers implement strategies such as parallel teaching, station teaching, alternative teaching, team teaching, assisted teaching, and collaborative learning.

The third section, modifications, discusses specific types of modifications that may need to be addressed or met within the classroom. They include modifications from the I.E.P., instructional modifications, environmental modifications, task modifications, and testing modifications.

The fourth and last section entitled note taking and study strategies focuses on graphic organizers, mnemonic devices, study guides, reviewing for tests, and test taking strategies that could be taught to help all of the students within the class.

Implications for Practice

The research and materials presented were directed primarily at middle school collaborative programs but could be easily adapted to suit the needs of other teachers. These materials, if adapted, could be used in collaborative classrooms on any level and by regular or special educators

who are not collaborating but need some additional resources to help their students.

The key to any collaborative program is the strength and openness of the relationship that develops between the two teachers. When teachers have resources and materials they can turn to in forming these relationships the relationship will become stronger.

The inclusion of special education students takes the primary responsibility for educating the disabled away from the special educators and puts it onto all educators. All children can learn in any classroom if the presentations, materials, and support allow the child to do so. The inclusion of special education students is showing us that the when teachers work together, all students can succeed in any classroom.

BIBLIOGRAPHY

- Bauwens, Jeanne and Jack J. Hourcade. "Making Co-Teaching a Mainstreaming Strategy." *Preventing School Failure*, vol. 35, no. 4 (Summer 1991), pp. 19-24.
- Bender, William N., Cynthia O. Vail, and Kristen Scott. "Teachers' Attitudes Toward Increased Mainstreaming: Implementing Effective Instruction for Students with Learning Disabilities." *Journal of Learning Disabilities*, vol. 28, no. 2 (February 1995), pp. 87-94.
- Brucker, Pamela O. "The Advantages of Inclusion for Students with Learning Disabilities." *Journal of Learning Disabilities*, vol. 27, no. 9 (November 1994), pp. 581-582.
- Campbell-Whatley, Gloria, Robert Drakeford. "Collaboration: Perks, Problems, and Promising Practices." *LD Forum*, vol. 19(4) (Fall 1994), pp.30-31.
- Cook, Lynne, and Marilyn Friend. "Educational Leadership for Teacher Collaboration." Program for Leadership for Serving Students with Disabilities, Virginia Department of Education, 1993.
- Dodge, Judith. The Study Skills Handbook. Scholastic Professional Books, 1994.
- Lombardi, Thomas P. Responsible Inclusion of Students with Disabilities. Phi Delta Kappa Educational Foundation, Bloomington, Indiana, 1994.
- Nolet, Victor and Gerald Tindal. "Curriculum-Based Collaboration." *Focus On Exceptional Children*, vol.27, no. 3 (November 1994), pp. 1-12.
- Roanoke County Schools. Collaborative Teaching Program Resource Manual. 1993. (Compiled by Helen Barrier, Paula Gerrol, Susie Mitchell, and Joni Poff).
- Rogers, Joy. Inclusion: Moving Beyond Our Fears. Phi Delta Kappa, 1994.
- Snell, Martha E. and Maria Raynes. "Changing Roles in Inclusive Schools: Staff Perspective at Gilbert Linkous Elementary." *Kappa Delta Pi Record*, 31(3) (Spring 1995), pp. 104-109.

- Taylor, Bruce R. "Inclusion: Time for a Change - A Response to Margaret N. Carr." *Journal of Learning Disabilities*, vol. 27, no. 9 (November 1994), pp. 579-580.
- Vaughn, Sharon, Jeanne Shay Schumm, Janette Klinger, and Linda Saumell. "Student's Views of Instructional Practices: Implications for Inclusion." *Learning Disabilities Quarterly*, vol. 18 (Summer 1995), pp. 236-247.
- Voltz, Deborah L., Raymond N. Elliot, Jr., and Hazel B. Cobb. "Collaborative Teacher Roles: Special and General Educators." *Journal of Learning Disabilities*, vol. 27, no. 8 (October 1994), pp. 527-535.
- Walter-Thomas, Chriss. Workshop: Roanoke County Schools Collaborative Teaching Workshop. University of William and Mary, February 1995.
- Wood, J.W. Adapting Instruction for Mainstreamed and At Risk Students. MacMillen Publishing Co., OH, 1992.

R002635969