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ABSTRACT

This manual offers definitions, techniques, and strategies to generate curricular adaptations to meet the needs of students with a range of intellectual abilities, and thereby increase the practice of inclusive schooling in which all children learn together and multiplicity of learning styles is valued. First, an in-depth definition of "adaptations" is offered, followed by a summary of traditional adaptations. Then seven strategies for modifying the general education curriculum are presented. These are: (1) change the instructional grouping or arrangement; (2) change the teaching format; (3) change the environmental conditions; (4) change the curricular goals or learning outcomes; (5) change the instructional materials; (6) change the level or type of personal assistance; and (7) create an alternative activity. Next, a six-step process for designing curricular adaptations is explained and illustrated with a case study. An appendix outlines types of information for schools to gather about general education environments and activities and includes sample forms and checklists. (Contains 22 references.) (DB)



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Curricular Adaptations

Accommodating the Instructional Needs of Diverse Learners in the Context of General Education

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KANSAS STATE BOARD OF EDUCATION

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Strategic Directions for Kansas Education

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The beginning place for determining the mission for the Kansas State Board of Education is the assumption that all Kansas citizens must be involved in their own learning and the learning of others. It is the combined effort of family, school, and community that makes possible the development of a high quality of life. It is the parent who is the first "teacher" of children. As we grow older, we learn that the school, the workplace, and the community support our lifelong learning and our training and retraining. The Board recognizes the responsibility it holds for Kansas educational systems and promoting quality education programs. The mission for Kansas education is:

To prepare each person with the living, learning, and working skills and values necessary for caring, productive, and fulfilling participation in our evolving, global society.

We believe that the strategic directions for the structuring of is a sas education must be organized to:

- create learning communities
- develop and extend resources for parenting programs and early childhood education
- expand learner-outcome curriculum and learner-focused instruction
- provide inclusive learning environments
- strengthen involvement of business and industry in education
- provide quality staff and organizational development.



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Introduction

An increasing number of students with mild, moderate, and severe disabilities are receiving daily instruction from the base of general education classrooms in their neighborhood schools. The practice of educating children with and without disabilities together in heterogenous classrooms is referred to as inclusive schooling. This practice, although relatively new, has become a critical element in special and general education reform. The basic philosophy behind inclusion is that all children can learn together, and the multiplicity of learning styles found in diverse groups of children is valued. Instructional practices in inclusive classrooms reflect the beliefs that individual differences can be accommodated and learning outcomes will vary based upon each child's educational priorities.

School districts across the country differ in level of acceptance, commitment and implementation of inclusive principles. As models of inclusion emerge and take hold in local communities, school personnel must grapple with their own educational philosophy and role in the change process. For special educators, part of the change process requires that their support and instruction be provided in the context of general education. General educators must take greater responsibility for direct instruction of students with disabilities and consider their learning needs when planning instruction. Consequently, both educators must work together to plan for the participation and social integration of the student. The instructional collaboration that is required for successful inclusion has prompted both general and special educators to examine the structure of activities in general education classrooms. The challenge at hand is to assure that students with disabilities receive meaningful instruction within the context of general education while preserving the integrity of programming for students without disabilities.

As the population of students in general education becomes more and more diverse, there is a growing realization that general education practices, particularly those that rely heavily upon teacher-directed whole-class learning, must be adapted, modified and shaped in order to accommodate all learners. The purpose of this manual is to outline definitions, techniques and strategies that professionals and parents may use to generate curricular adaptations that are responsive to the learning needs of students with a range of intellectual abilities.

¹Throughout this manual the term "student with disabilities" will be used to refer to school age children with moderate to severe disabilities. This population includes students with intellectual disabilities, dual sensory impairments, and multiple physical disabilities. It should be noted that the general process described in the manual for adapting curriculum can be applied to students with a range of learning needs; however, the student examples presented here represent individuals with disabilities that require significant curricular modifications.



Adaptations: A Definition

In a general sense adaptations can be defined as: Any adjustments or modifications in the environment, instruction or materials used for learning that enhances the person's performance or allows at least partial participation in an activity

The purpose of an adaptation is to assist the individual to compensate for intellectual, physical, or behavioral challenges. In addition, an adaptation allows the individual to use his/her current skill repertoire while promoting the acquisition of new skills.

Embedded in this definition is the concept of partial participation. Partial participation is considered to be at least some degree of active involvement in a task or activity. The principle of partial participation acknowledges that many students, particularly those with severe disabilities, might never learn the skills to perform an activity with complete independence. Partial participation is central to the involvement of students with disabilities in general education classrooms because it reinforces the idea that a student should not be excluded from an activity due to the fact that he/she can perform only a portion of the required skills.

Adaptations have been used for many years in the education of students with disabilities across school, community, recreational and vocational environments. Traditionally, adaptations have been divided into five categories: (a) utilizing materials and devices, (b) adapting skill sequences, (c) providing personal assistance, (d) adapting rules, and (e) adapting the physical environment (Baumgart et al., 1982). Descriptions and supporting examples of each type of adaptation are found on the following page.

Modifications that relate specifically to use in general education environments are referred to here as curricular adaptations. The purpose and definition of curricular adaptations fit the general guidelines offered; however, they also serve the important function of preventing a mismatch between the student's skills and the general education lesson content. When considering curricular adaptations, the traditional categories are a bit narrow and need to be expanded to reflect the unique instructional conditions of general education.



Types of Traditional Adaptations

Utilizing materials and devices: Adaptations found in this category can be considered portable objects, equipment or materials that enhance an individual's performance. These items can be teacher-made or purchased commercially. For example, Jose' is a young man with cerebral palsy. Due to his disability he is unable to grasp and hold a spoon or manipulate small objects. To make his orange juice in the morning, Jose' utilizes a blender rather using a spoon to mix the concentrate. A push panel microswitch attached to the appliance which allows him to use the palm of his hand to activate the blender.

Adapting skill sequences: Adapting a skill sequence means that the steps of a task are somehow changed, simplified or rearranged. For example, Evan works in an italian restaurant. His primary job is to prepare the pizza sauce. He is totally blind and moves very slowly in the tight quarters of the kitchen. The other employees gather their cooking utensils from a variety of locations as they are needed throughout the cooking sequence. To make Evan's job more manageable, efficient, and to decrease the number of times he has to stop to search for materials, he job sequence was rearranged so that he gathers all of his supplies (i.e, spoons, whisk, sauce and seasoning packets) at the beginning of the job.

Utilizing personal assistance: Any verbal, physical, or supervisory support offered by another person defines this category. For example, at the health club, Julie is unable to match her key to the correct locker because she does not recognize numbers. The desk clerk at the club gives Julie her key and points out the correct locker. Once in the locker room Julie can change her clothes independently.

Adapting rules: This adaptation requires a modification in the usual patterns, practices, or customs of a particular environment. For example, in most businesses, it is expected that one person will fill a vacant position and carry out all of the necessary duties. A modification to this common employment "rule" was made when Ben and Sylvia were hired as a team to complete the job typically held by one person at a local insurance office. Sylvia, due to her physical limitations was best suited for a desk job. Ben, however, liked to be up and moving and had a great sense of direction. Together, they filled the job of a clerical assistant. Sylvia completed bulk mailings and operated the copy machine while Ben delivered mail and the completed copy requests to employee offices.

Adapting the environment: The adaptations in this category reflect adjustments that have been made in the physical surroundings or conditions. The most common examples include accommodations that are made for individuals with physical disabilities, such as sloped curb cuts, ramps, and cabinets or sinks that allow wheelchair access. There is usually some overlap with adaptations found in this category and those in materials and devices.



Curricular Adaptations: Strategies to Modify General Education Curriculum

Curricular adaptations can make the difference between a student merely being present in the classroom and being actively involved in daily school life. When collaboratively engineered, curricular adaptations can minimize the differences between students with differing abilities. Successful modifications individualize the lesson content and help create a match between the student's learning style and the instructor's teaching style. Therefore, most adaptations employed in the general education classroom address either the way instruction is arranged and delivered or the way the student takes part in an activity. In many ways these two factors are interrelated since the way instruction is delivered directly affects how the student is expected to respond and participate.

If a student with disabilities is unable to participate in a general education activity as it has been originally planned, changes may need to be made in one or more of the following instructional conditions:

- instructional groupings or arrangements
- teaching format
- environmental conditions
- curricular goals & learning outcomes
- instructional materials
- level or type of personal assistance

A change in one or more of these instructional components is considered a curricular adaptation. If adjustments in these six areas still do not allow the student to participate in an educationally relevant way, then a seventh option may be employed; that is, to design an alternative activity for the student with disabilities and a small group of peers. Each instructional condition is described in more detail below.

- Change the Instructional Grouping or Arrangement: When a lesson is planned the teacher must select the instructional arrangement that is most appropriate for the lesson content. For any given activity there are a number of instructional arrangements from which to choose. Alternatives for student groupings include:
 - (1) Large-Group or Whole Class Instruction the entire class learns the same content from the teacher and students are usually expected to assimilate the information and work at approximately the same rate.



- (2) Teacher-Directed Small Group Instruction the teacher instructs a small group of students, usually between 5 8 in number. The instruction pertains to a particular topic, subject, or content area.
- (3) Cooperative Learning Groups students work together in groups of 2 6 individuals. The students work cooperatively to achieve a common goal. Interdependence and social skills are fostered by assigning roles and responsibilities to each group member. The completion of the task is dependent upon the participation of each member.
- (4) Student-Directed Small Group or Peer Partners students are allowed to work together to complete a project or are allowed to socialize and share ideas while completing individual work. This arrangement differs from cooperative learning groups because students are not necessarily assigned roles or work together to complete a common task.
- (5) Peer Tutor or Cross-Age Tutor the student is coached on a particular topic or assignment by a classmate or older student. Students may take turns as tutor or tutee for different subjects.
- (6) One-to-One Teacher/Student Instruction the student receives direct instruction, supervision or guidance from an adult. Instruction may be provided by the classroom teacher, specialist, related service personnel, classroom volunteer etc.
- (7) Independent Seat Work-the student is expected to work alone on assigned homework or material that has been presented in class.

One instructional arrangement is not necessarily superior to another. In fact, most instructors use a combination of these groupings throughout a day. However, by nature, whole class and independent seat work arrangements often pose the most problems for students with disabilities. When whole class instruction is used students receive information in much the same manner and are expected to keep pace with the instructor. A high degree of attention and effective listening are usually expected. Formany students with disabilities who have difficulty processing, understanding, and integrating information, it is difficult, if not impossible, to assimilate and make sense of



the information. Large group arrangements offer fewer opportunities for students to respond and stay actively involved. Students who are unable to sit attentively for an extended period also have difficulty remaining focused in larger groups.

Long periods of independent seat work can result in similar difficulties. Students are expected to perform in a quiet, self-reliant manner while working independently at their desks. Students with disabilities often require prompts, cues and assistance to interpret classroom material used during independent seat work. While many students have acquired skills to work independently, others need supervision and instruction to perform independently or semiindependently. Generally, instructional arrangements that incorporate peer interaction, division of responsibilities and interdependence among children allow many more options for participation by a student with disabilities. These arrangements also have "built in" support systems, the presence of other classmates. It is virtually impossible for the instructor to eliminate all whole group or independent seat work. However, the instructor should be conscious that the participation of a student with disabilities will be affected in these arrangements. When it is possible to transform large group or independent work into cooperative, small group or partnership structures, the teacher should do so. When large group or independent work is necessary then steps should be taken to individualize materials, and match the presentation of information with the student's learning style.

- Change the Teaching Format: Tied closely to instructional arrangements is the teaching format. Teachers may use one or a combination of the following techniques to impart information to students and engage them in learning:
 - (1) Lecture and Demonstration: This traditional teaching format is one of the most frequently used models. Also referred to as the expository mode of teaching, the instructor provides an explanation of a concept or topic then supports verbal information with an illustration or model. A lecture/demonstration format is often followed by students participating in a class discussion, or engaging in independent practice of the concepts covered by the teacher. For example, a second grade teacher introduces the short vowel sound of the letter (o). She models the correct pronunciation and points out the sound as it appears in the weekly spelling words. Several members of the class are called on to select words with the short (o) sound from an array of words. After a 20 minute



- explanation, the children are directed to complete four pages in their spelling workbooks.
- (2) Whole-Class Inquiry or Discussion: After exposure to verbal written information, students are engaged in a question and answer exchange. Students are called upon or volunteer answers. Class members are encouraged to ask additional questions or elaborate on the topic.
- (3) Games, Simulations, Role Playing, Presentations, and Activity-Based Lessons: Activities are arranged that reinforce or extend the lesson content and encourage students to apply the information that has been previously taught or discussed. This type of lesson format is characterized by students (a) being actively engaged, (b) participating in the planning process, and (c) learning by discovery. These activities are relatively short in duration, usually one class period or a portion of a class period. For example, after a brief introduction to a science chapter on genetics, the class is divided into small groups. Each group conducts a mini-survey to record the prevalence of certain genetic traits in the 6th grade student population. After surveys are completed, each team presents its findings to the class.
- (4) Experiential Lessons: This type of lesson format uses real life activities to apply or enhance skills. Activities can take place in the classroom or non-school environments. For example, the students in a beginning architectural drawing class must design and build a small storage shed at a local park. In the context of this activity which lasts for 10 weeks, the students draw a feasible plan, order appropriate materials and utilize construction skills. Experiential lessons are also appropriate in lower grade leveis. For instance, in a first grade classroom, students are asked to bring simple recipes for healthy snacks and beverages from home. On a weekly basis during language arts, a small group of students plan and cook a healthy snack that is shared with the class. The students write their own recipe, make a grocery list, calculate the correct amount of money, purchase the groceries and prepare the snack. As a result of this year-long activity a student-generated recipe book is developed. Experiential lessons can be as short as one class period, employed over a number of weeks, or occur on a regularly scheduled basis throughout the year.

The value of activity-based and experiential lessons is becoming more evident as the school population becomes more and more diverse. These teaching formats offer options to assign different roles to students, delegate tasks that are matched to the student's ability level and knowledge base, individualize the presentation of information and differentiate the materials more effectively than in lecture/demonstration or whole class inquiry format.

Change the Environmental Conditions: Circumstances in the learning environment can affect any student's ability to acquire information. When lessons are designed with students in mind who have sensory impairments, physical handicaps, information processing difficulties or alternative communication methods, modifications in environmental conditions may be particularly warranted. Environmental conditions refer to such things as lighting, noise level, visual and auditory input, physical arrangement of the room or equipment and accessibility of materials.

A student who requires adaptive materials or devices may need additional space for an expanded work area. Placing the student's desk next to a large work table, or providing a bookshelf that is easily accessible provides a simple accommodation. A student who has difficulty sitting for any period of time may be equipped with more than one desk in the room, allowing the child to move to different locations in the room when needed without disrupting the class. Other environmental adaptations may include space for maneuvering a wheelchair or a private area for a student to streeth out on the floor when a break from sitting in a wheelchair is required.

Change the Curricular Goals or Learning Outcomes: To match the unique needs and skills of students with disabilities within the context of a general education activity, it may be appropriate to individualize the learning objectives. Also referred to as multi-level or flexible learning objectives, the instructor may vary the goals and outcomes of the lesson for one or more students.

In a heterogeneous classroom, learners will acquire and apply knowledge at different levels and rates. Bloom's taxonomy of instructional objectives outlines six levels of learning. These levels include knowledge, comprehension, application, analysis, synthesis, and evaluation. Educational goals can be individualized based upon the student's learning priorities at each of these levels. For example, a group of three students must create a story about Alaskan wildlife which will be presented orally to the class. One of the group



members has severe intellectual and dual sensory impairments. The students have the option to develop audiovisual materials to communicate their story, select music to compliment the presentation or act out the story line dramatically. This particular group decided to make a diorama to represent Alaskan terrain and clay figures to depict the animals in the story. The learning objectives for the two students without disabilities relate to applying and synthesizing past information, composing a sensible story, utilizing correct grammar and employing accurate handwriting skills. The curricular objectives for the student with disabilities focus on participating in the creation of the diorama figures, following tactile signs from his classmates and making choices within the context of the activity. A learning objective to practice group cooperation skills is expected for all of the students in the group regardless of ability level. Individualizing the curricular goals, attending to each student's level of learning and acknowledging the value of each child's educational priorities allows the three students to work in a heterogeneous group.

Changes in curricular goals may be significant, as illustrated in the example, or they can be as minor as allowing the student more time to complete an assignment, perform fewer test items per page, or master only the highest priority material from a unit. When taking a flexible or multi-level orientation to curricular goals, it is also important to remember that "academics" per se or mastery of skills related to traditional content areas may not be the primary concern or fundamental reason for the student's inclusion in a specific subject area. The social aspects of the activity and the skills that facilitate interpersonal relationships may be considered of equal or greater importance and therefore should be regarded as viable learning outcomes.

Change the Instructional Materials: Teachers use an assortment of materials for instruction which can include such items as standard curriculum texts, magazines, newspapers, trade books, filmstrips, movies, manipulatives, games, art supplies, computers and objects used in daily life. Students with disabilities may benefit from using the same materials as other students in class, require slight variations or need alternative materials. Materials may changed or created to be more manipulable, concrete, tangible, simplified and matched to the student's learning style or comprehension level. For example, a student in second grade is unable to solve math story problems when they are presented only in written form. Yet when provided with Unifix Cubes® (small interlocking plastic blocks that can be easily manipulated) and allowed to carry out the steps of the mathematical equations with the blocks, she is able to solve the problems. Another student is unable to handle small objects or understand the abstraction of math problems presented in a paper and pencil format, yet, is able to apply math concepts during attendance by counting the number of cards presented by students representing the choice



of hot or cold lunch. The materials required to facilitate his participation and understanding are real, tangible and contextually-based.

Change the Level or Type of Personal Assistance: In the classroom, the general education teacher provides direct instruction, facilitates
learning among students or monitors behavior and performance. Spontaneous assistance is provided when it is requested by the student, needed by the
student to perform correctly or required to maintain classroom control. Many
students with disabilities need higher levels of assistance or intervention than
are provided to typical students. The need for assistance may range from
periodic spot checks to close continuous supervision. Assistance may vary
from day to day or be required at predictable times. Providing prompts, verbal
cues, gestures or physical assistance can support the student's participation
on a temporary or ongoing basis.

Personal assistance can be provided by a variety of individuals in the school environment including peers, cross age tutors (i.e., coaching from an older student), the general educator, special educator, related service personnel, classroom volunteers or instructional assistants (i.e, paraprofessionals, teacher aides). To facilitate inclusion and independence, an underlying goal should be to reduce the need for paid or specialized assistance over time. Consequently, it is preferable that natural supports, or support that can be provided by the general education teacher and peers be employed to the greatest extent possible. Regular prompts, cues and even physical assistance can often be incorporated as inconspicuous elements of the teaching sequence, which do not interfere with the instruction or the learning of others in the classroom. The intervention or assistance from someone "outside" of the classroo tructure can sometimes cause the student to be stigmatized and reduce so interactions from peers in the environment. Therefore, assignr ent of a full-time assistant should be assessed cautiously and arranged only when absolutely necessary.

Create an Alternative Activity: Establishing an alternative activity is a curricular adaptation that can be employed when changes in the previous six instructional conditions cannot be made. An alternative activity is most often activity-based or experiential in nature and in some instances may be community-based. By design, the activity should include the student with disabilities and a partner or small group of non-disabled peers.

Learning centers that offer alternatives to the typical curriculum can be established in elementary and middle school grades within the classroom so that more than one activity can occur in the same environment. For example, when the fifth grade class is taking a reading test during language



arts, Jessie and a small group of students who have mastered the test material work on a classroom newsletter. Jessie uses a tape player to record his classmates' ideas for a new article. Jessie plays back the tape a paragraph at a time, while a classmate uses a computer to transcribe the information. At the high school level, alternative work areas might be established in the classroom, commons or library. In secondary subject areas, research teams can be formed to investigate student's interests. As students generate questions related to the course topics, they are encouraged to write their ideas in a shared notebook. When the opportunity arises, a small research team of two to three students, including the student with disabilities, can investigate the topic using the school or public library. The written and multi-media information gathered is then utilized or presented in class the following day. Student-directed learning is fostered for the typical class members as they are allowed to explore their own interests. When this type of alternative activity was implemented in a local high school, a student with severe disabilities was an integral part of the team by obtaining slides and magazine articles that reinforced the content area. She participated in the presentation by using an adaptive switch to activate the slide projector.

Optimally, alternative activities should be: (a) similar or related to the curricular content of other students in the class (e.g. language arts, science, health, etc.); (b) meaningful for all of the students involved; and (c) arranged so that additional supervision from an adult is not necessarily required. Merely arranging one-to-one instruction with an instructional assistant in the same room does not constitute an alternative activity. By definition, the arrangement must include peers without disabilities.

There are many ways to categorize and conceptualize curricular adaptations. The seven curricular adaptations that have been discussed provide a framework from which to make decisions. For any given activity a student with disabilities may require no modifications at all or a combination of several adaptations. What is important to keep in mind is that changes may need to be made in the way instruction is delivered, environmental factors, student learning objectives and materials for instruction.



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Planning for the Development of Curricular Adaptations

The process to design curricular adaptations required can be divided into six basic steps:

- 1. Establish a student-centered planning team that utilizes a collaborative team approach.
- 2. Gather information about the student's abilities in school, at home and in the community.
- 3. Gather information about general education environments where the student will be spending time.
- 4. Observe the student in the general education settings.
- 5. Select or create adaptations that address the student's learning needs.
- 6. Arrange efficient methods of communication and planning between team members.

1. Establish a Collaborative Team Approach:

Ongoing communication and cooperation between general educators, special educators and related service personnel are essential to establish useful curricular adaptations. Without shared responsibility among professionals, adaptations will not be available when they are needed throughout the school day. The planning process most often fails when one professional bears the sole responsibility for designing and implementing the modifications. When a collaborative team approach is used, each professional brings unique expertise to the problem-solving situation. Ownership of the problem is shared and responsibility to implement solutions is distributed fairly among team members. When school personnel are committed to these basic tenets of collaboration, each member of the student's educational team plays an active role in the planning, design or implementation of curricular adaptations.



2. Gather Information About the Student:

To initiate the planning process, a clear picture of the student as a learner across home, school and community settings should be developed. Information concentrating on the student's preferences, strengths, need for supervision, educational priorities and strongest learning modalities (e.g., gaining information from pictures rather than written words), give insight into the student's learning style. Parents, family members, peers, special educators and related service personnel are key sources for this information.

3. Gather information about general education environments:

The existing practices in general education directly influence the types of adaptations that are feasible. The unique instructional conditions of the general education environments should be considered and discussed candidly among team members. Key elements that should be noted include: an outline of a typical school day and week; the general scope and sequence of curriculum that will be covered in a year; typical teaching formats and instructional arrangements preferred by the general educator; materials, media and modifications currently employed; the social climate of the setting; classroom management; student evaluation practices; and the physical design of the classroom. The general educator is the most obvious source of this information. It is logical to discuss many of these elements prior to the start of the school year. Basic information about typical curricular content and scope, classroom social climate and management and evaluation techniques may be shared the previous spring or summer to the student's fall classroom placement.

Other components of the classroom are more dynamic, such as teaching formats and use of materials. This information may need to be updated and shared on a weekly basis. An expanded inventory that may serve as a guide to collect information about the general education environments and activities is found in Table 1 on page 31.

4. Observe Student in General Education Settings:

After gathering information about learning environments, the student of concern should be observed in the context of general education activities. The purpose of the observations is to determine where difficulties are likely to occur or where there is a mismatch between the student's learning needs and general education practices or instructional content. It is impossible to accurately project the student's adaptation needs without allowing him/her to experience the activities. This safeguards the teacher from assuming the student cannot participate, or creating adaptations that may not be needed.



Since activities in general education are varied and change frequently, it is not realistic to expect every activity to be examined in detail before employing an adaptation. As an alternative to evaluating every task, attention may focus on those activities that have a fairly consistent sequence from day to day. For example, an introduction to a new unit, theme, or chapter may follow the same general sequence. The basic format of an oral report given to the class remains the same from one occasion to another. The student's performance in these activities serves as a guide for the types of difficulties that may be encountered in other activities that change more frequently.

5. Select or Create Adaptations:

Next, ideas for adaptations are generated to increase the student's participation, minimize the difficulties encountered, and create an acceptable match between the general education curriculum and the student's educational priorities. To select effective adaptations, team members must make their best guess as to the source of discrepancy in the student's performance. This step of the process relies upon the input of the special educator and related service personnel. Their collective expertise assists to determine whether the barriers to participation are due to the student's learning characteristics or other factors in the setting. Making an educated guess about the origin of the discrepancy can give direction to selecting the most appropriate adaptation. For example, if a student is physically unable to hold an instrument in music class then changing the materials, providing personal assistance and working with a partner are logical remedies. For a student with severe intellectual disabilities and dual sensory impairments, the content of a lecture on proper nutrition may be too difficult and abstract. Here, a combination of flexible learning objectives, different materials and an activity-based lesson format are appropriate modifications. Rather than learning rote facts about nutrition from a tenth grade text, the student learns to select healthy alternatives to junk food in the context of the classroom, applies the skills in the grocery store by purchasing items and prepares a nutritional meal in the home economics class with a small group of peers.

6. Arrange Methods for Communication and Planning Time:

Determining the need for adaptations requires ongoing communication between team members. The inclusion and active involvement of the general educator is essential because the problem-solving process to create adaptations ultimately influences instructional practices in the classroom. Teams across schools and even within schools use various methods of planning; however, there are some common procedures that ensure efficient collaboration.



Most teams feel a need to meet for a one to two hour block on at least a monthly basis to discuss the upcoming activities and changes in curricular content. In some schools it has been effective to employ a rotating substitute that is hired to teach one to two hour blocks of time, relieving each general educator who attends a planning meeting. To decrease the additional pressure on general educators to plan for a substitute, some districts employ a "super substitute". This substitute is hired to implement special activities in his/her areas of expertise (e.g., art, music, science, etc.) so that the general educator does not need to arrange the lesson.

Beyond the monthly meeting some teams find a need to plan for adaptations on a weekly or bi-monthly basis. A regular meeting time of 30 minutes to an hour is set aside weekly. The membership at this meeting usually includes the special educator, general educator and instructional assistant. Initial meetings may require the presence and input of all team members, then as time goes on, parents, administrators and related service personnel may attend on a rotating basis or when particular issues arise that require their assistance. Meeting agendas focus on discussing upcoming general education activities, making plans for adaptations and dividing responsibilities for development of the modifications. To make the meetings practical and productive, several forms have been developed to guide the exchange of information and decision-making process. Table 2 provides a format that can be used by the general educator to jot down key information prior to the meeting about upcoming activities and areas of concern that may need to be addressed. The advantage of this form is that it can be easily exchanged between teachers through school mailboxes. Table 2 can be found on page 32.

During the meeting new activities are discussed and options for adaptations are devised. The Curricular Adaptation Planning Form offered in Table 3 on page 33 provides a vehicle to discuss changes that may be needed in each of the seven areas of modification.

When team members become adept at the process, a more streamlined planning form may be appropriate. The Curricular Adaptation Checklist for Multiple Activities, shown in Table 4 on page 34 allows team members to check off the types of adaptations that seem the most appropriate and make notes about the suggested modifications. This form may also be exchanged between teachers through building mail if weekly meetings cannot be arranged. The form may also be an effective tool to communicate with an instructional assistant about daily changes in modifications.



Before adjourning a planning meeting, responsibilities for the development of adaptations should be distributed and arrangements for supervision of the student communicated. Division of responsibilities among team members will vary from school to school so teams must use their judgement to make logical and fair task assignments. The general educator may make some individualized materials for the student as she prepares items for the whole class. Peers, parents and the student with disabilities should not be overlooked as participants in the development of adaptations. A sample form, table 5, on page 35 may be used when making task assignments.



An Illustration of the Adaptation Planning Process

In the following scenario, a sixth grade student named Evan serves as the example to illustrate the decision-making process for adapting a general education activity. Evan has severe multiple disabilities, uses a wheelchair and an augmentative communication system. To communicate he uses a 20 symbol picture/word communication board. He is able to interpret simple line drawings and has learned 15 - 20 written sight words. In addition to his picture communication system he uses a simple sign language vocabulary and conventional gestures. Evan has a visual impairment that allows him to see items clearly when they are presented at a distance of 12 to 24 inches. To get a sense of Evan's educational priorities, a few goals from his individualized educational plan are provided:

- Increase his sight word vocabulary
- Use two signs, gestures or words in combination to express a message, concept, make choices or a request
- Solicit a partner and work cooperatively
- · Use money and math skills to make a purchase in the community
- Engage in an activity for 10 minutes with periodic spot checks
- Use a picture schedule to carry out daily responsibilities
- · Respond to the cue of an alarm watch to transition to the next activity

The sixth grade language arts teacher has planned an introduction to new vocabulary and spelling words related to the Middle Ages, the new theme for instruction. She introduces the words by stating them aloud, providing a definition and using them in a sentence. The students in the class are required to spell the words by writing them on a piece of paper. The papers are handed in at the end of the class and corrected by the teacher. Words that are spelled wrong are targeted for independent study and practice. This instructional arrangement represents large group or whole class instruction. The teaching format is lecture/demonstration paired with independent seat work.

Given these circumstances, Evan is not be able to participate in the same manner as his classmates without disabilities. A summary of adapta-



tions discussed and implemented by Evan's educational team is presented below:

<u>Instructional Arrangement:</u> Rather than working in a large group arrangement, students are allowed to select a partner. Each student quizzes the other on vocabulary words related to the theme.

<u>Teaching Format:</u> The students work in a game format by quizzing one another and taking turns as the giver or receiver of information. This eliminates the need for the instructor to assume the role as Lecturer and sole provider of information.

<u>Environmental Conditions</u>: No extraordinary changes are needed in this area except to position Evan and his partner near the teacher's work station in case periodic assistance is needed.

<u>Curricular Goals:</u> Evan's curricular goals relate to his language and communication. Learning new sight words, maintaining the use of previously acquired words and combining two gestures, signs or words are Evan's objectives during this activity. His list of words and picture symbols differ significantly from his classmates. Since students quiz one another, it is feasible for Evan to use an individualized list of words in an unobtrusive manner.

Instructional Materials: Evan greets and solicits a partner using his picture communication board. The students without disabilities in the class have been taught to respond to Evan by using the signs for "yes" or "no thank you". To test his partner, Evan uses a pre-recorded Language Master® card with the partner's words printed on one side. Evan runs the card through the Language Master® to communicate the spelling word to his partner. To check the spelling, Evan turns the card over so his partner can see the printed word. The non-disabled partner uses an individualized set of word cards with Evan's list of new sight words or picture symbols. The partner shows the card to Evan and he must respond with the correct word or sign. As an enrichment activity for both Evan and his partner, cards are prepared with picture symbols or words. After reading the word or symbol the students must respond with the correct sign.

<u>Personal Assistance</u>: During the first three weeks of class, an instructional assistant is present in the classroom to facilitate the interaction between Evan and his partner. The assistant's presence is faded completely during this class period allowing the general educator to provide periodic spot checks to all of the spelling partners.



The adaptations generated in this scenario are relatively simple and low in cost. Once the initial set of materials is developed it can be used throughout the school year during language arts. New and more complex words or symbols can be added without much effort or planning time. Restructuring the groupings and teaching format may prove to be beneficial to more students than just Evan. By utilizing these teaching practices, students are able to progress through their word lists at an individualized pace. Classmates take a more active role in their own learning. Students who are faster learners can be assigned additional or more complex vocabulary. In addition, the instructor is released from a traditional role to one of facilitator. Table 6 on page 36 shows a completed Curricular Adaptation Checklist for Multiple Activities which reflects each of the curricular adaptations selected for Evan.



Conclusion

A commitment to the principles of inclusion brings with it new roles for educators and new expectations for teaching practices. Well conceived curricular adaptations can maximize abilities and minimize disabilities in the general education classroom. Adaptations should maximize opportunities for face to face interactions with peers, increase the student's opportunities to be an initiator and active participant and reduce the level of abstraction of information while making activities more concrete and meaningful to the student's current and future life.

Selecting the right adaptations is still an imprecise "science". There are no definitive sources to say "If you experience this type of disability, then you need this precise adaptation". Good adaptations come from the thoughtful, collective observations and foresight of parents, peers and professionals. Albert Einstein was quoted as saying, "Imagination is more important than knowledge". This statement rings true when developing adaptations. Team members must allow themselves to think and create beyond the confines of traditional teaching conventions...when this happens the result is usually good for all learners.

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Appendix



Table 1

Information to Gather About General Education Environments & Activities

SCHOOL:	GRADE:
PRINCIPAL:	
GENERAL EDUCATION TEACHER(S) AT GRADE LEV	ELSUBJECT OF CONCERN:

1. OUTLINE OF A TYPICAL SCHOOL DAY/WEEK:

- ► Content areas/subjects
- Class options

- ► Length of class or activity periods
- ► Extra-curricular activities/clubs

2. GENERAL SCOPE AND SEQUENCE OF GENERAL EDUCATION CURRICULUM FOR TARGET AGE GROUP:

- ▶ Amount and complexity of information covered across the year
- ▶ Units, themes, or topics upon which instruction will focus

3. DESCRIPTION OF TYPICAL INSTRUCTIONAL TECHNIQUES/ARRANGEMENTS UTILIZED BY GENERAL EDUCATION TEACHER(S):

- ▶ Use of peer tutors, cross-age tutors
- ▶ Time spent in cooperative learning groups, small group learning, large group activities, independent seat work, one-to-one teacher/student instruction
- ► Amount of time spent in lecture/demonstration format, whole class inquiry, activity-based lessons, experiential lessons

4. MATERIALS, MEDIA, AND MODIFICATIONS CURRENTLY USED IN GENERAL EDUCATION CLASSROOM:

- ▶ Use of manipulatives, worksheets, workbooks, textbooks, trade books
- ▶ Use of film, video, slides, tape players, computers, videodiscs
- ▶ Alternative methods arranged by the teacher for students to receive information or respond

5. SOCIAL CLIMATE OF CLASSROOM & OTHER SCHOOL ENVIRONMENTS:

- ▶ Opportunities for interactions
 - · Joking, sharing information/materials, social interchanges, requesting/giving assistance
- ▶ Climate/Atmosphere: autonomous, independent, competitive, interdependent
- ▶ Unique traits of the teacher that affect the social climate of the classroom
- ▶ Receptivity of teacher, other staff, & principal toward inclusion

6. CLASSROOM MANAGEMENT:

- ► Established system of classroom management
- ► Explicit and implicit rules
- Norms for behavior, dress, interactions
- ► Individualized systems of management
- Methods of reinforcement used by teacher

7. METHODS OF STUDENT EVALUATION:

- ► Types of tests given
- ► Amount of feedback given to students
- ► Frequency of student evaluations
- Contact/communication with parents regarding student progress
- ► Grading system(s)
- ► Student involvement in goal setting/self evaluation

8. PHYSICAL DESIGN OF CLASSROOM:

► Architectural barriers, space, location of bathroom in relationship to room, space/accommodations for positioning and handling out of wheelchair, traditional vs. nontraditional desk/classroom arrangement

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Teacher Communication Form

ŢÖ.			STUDENT(S):	
FROM:	A:	UPCOMII	UPCOMING ACTIVITIES	
	DAY/TIME	SUBJECT/ACTIVITY	INSRUCTIONAL ARRANGEMENT	MATERIALS
Chan 32	Changes in routine that you should be aware of:	be aware of:		
Area	Areas I would like to talk about:			
ם	The adaptations/modifications for:_	as for:		
0	The level of support for the student.	student.		
	The student's behavior.			
o	Other:			
				3.6
30				IIdvari-Solner 1992

Curricular Adaptation Planning Form

CURRENT INSTRUCTIONAL PLAN Date:	Od	DO CHANGES NEED TO BE MADE IN:	
Content Area/Subject:	Instructional Arrangement?	Teaching Format?	Environmental Conditions?
Instructor:			
Estimated Time:			
Activity:			
33	Curricular Goals/Learning Outcomes	Instructional Materials? Instructional Sequence?	Level of Personal Assistance?
Instructional Arrangement:			
 Materials: -	Does an Act	Does an Activity Need to be Arranged? Any other Adaptations?	daptations?
			Ċ.

Table 4

Curricular Adaptation Checklist for Multiple Activities

GENERAL EDUCATION ACTIVITIES	CURRICULAR ADAPTATION ANALYSIS	SUGGESTED ADAPTATIONS/ ALTERNATIVES
Date:	☐ No changes	
Activity:	☐ Instructional Arrangement ☐ Teaching Format ☐ Environmental Conditions or	
Instructional Arrangement:		
Instructional/Staff:	☐ Instructional Materials ☐ Personal Assistance ☐ Alternative Activity	
GENERAL EDUCATION ACTIVITIES	CURRICULAR ADAPTATION ANALYSIS	SUGGESTED ADAPTATIONS/ALTERNATIVES
Date:	1	
Activity:	 ☐ Instructional Arrangement ☐ Teaching Format 	
	Environmental Conditions or Location	
Instructional Arrangement:	Curricular Goals Instructional Materials	
Instructional/Staff:		
GENERAL EDUCATION ACTIVITIES	CURRICULAR ADAPTATION ANALYSIS	SUGGESTED ADAPTATIONS/ ALTERNATIVES
Date:	O No changes	
Activity:		
Instructional Arrangement:	Environmental Conditions or Location Curricular Goals	
Instructional/Staff:		ļ
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Division of Responsibilities: Supervision & Adaptations

TEAM MEMBERS:

	II	ī	T	1	1	1	1 · · · · ·	\neg
ADAPTATIONS: PERSON RESPONSIBLE								
SUPERVISION OR ASSISTANCE IF NECESSARY*								
ACTIVITY								
DAY/TIME								

* Options for supervision or assistance should include: (a) general education teacher (b) special education teacher (c) instructional assistant, (d) peers, (e) cross age tutors, (e) volunteers - e.g., room mothers (f) related service personnel - e.g., P.T., O.T., etc. (g) other school personnel - e.g. librarian, phy. ed. teacher, art teacher etc. <u>Note:</u> supervision or assistance may come from 1 or a combination of the above.

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Curricular Adaptation Checklist for Multiple Activities

GENERAL EDUCATION ACTIVITIES	CURRICULAR ADAPTATION ANALYSIS	SUGGESTED ADAPTATIONS/ ALTERNATIVES
Date: October 5 - ongoing	☐ No changes ☑ Instructional Arrangement	Use peer partners to tutor & quiz one another with with an individualized list of spelling/vocab.
Activity: Introduction to new spelling words		words. Teacher facilitates peer partners, students keep track of own mastery with a personal chart.
Instructional Arrangement: Large group/lecture/demonstration	•	Focus on signing skills, sight word recognition, and appropriate interactions.
Instructional/Staff: Julie (General education teacher)	Personal AssistanceAlternative Activity	Use word/picture cards for Evan. Tape spelling words for partner on cassette or Language Master.
GENERAL EDUCATION ACTIVITIES	CURRICULAR ADAPTATION ANALYSIS	SUGGESTED ADAPTATIONS/ ALTERNATIVES
Date:	□ No changes	
Activity:	☐ Instructional Arrangement☐ Teaching Format	
	☐ Environmental Conditions or	
Instructional Arrangement:		
Instructional/Staff:	☐ Instructional Materials ☐ Personal Assistance ☐ Alternative Activity	
GENERAL EDUCATION ACTIVITIES	CURRICULAR ADAPTATION ANALYSIS	SUGGESTED ADAPTATIONS/ ALTERNATIVES
Date:	□ No changes	
Activity:		
Instructional Arrangement:	Location Curricular Goals	
Instructional/Staff:	☐ Instructional Materials ☐ Personal Assistance ☐ Alternative Activity	
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