Principle **of** Partial Participation and Individualized Adaptaiions in Educational Programs for^ Severely Handicapped Students[1,2]

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this article defines the principle ofpartial participation and individualized adaptations and describes their use to generate functional school and nonschool curricula /or severely handicapped students. An eight-phase strategy is discussed for incorporating partial participation and adaptations. In addition, an example of the use of the eight-phase strategy is provided along with cautions for optimal utilization.

One of the basic goals of educational programs for severely handicapped students should be to teach the performance of chronological age-appropriate and functional skills in as many school and nonschool environments as possible. However, as one examines actual educational programs, it is usually obvious that such a goal is far from realized or, in many cases, it is never even addressed. More specifically, educational

programs offered to most severely handicapped students are often unacceptable for the following reasons:

1. Educational and related services arc almost exclusively confined to handicapped-only schools.
2. Too many nonfunctional skills are being taught.
3. An abundance of skills that arc not chronological age-appropriate arc being taught.
4. Instruction is rarely provided in nonschool environments.
5. Students are usually taught to respsond to cues and correction procedures that are rarely representative of those that are functional in nonschool environments.

Of the many hypotheses that contribute to the generation, proliferation, and maintenance of unacceptable educational programs, four will be considered in more detail: the developmental age hypothesis, the all or nothing hypothesis, the independent performance hypothesis, and the prerequisite skill hypothesis.

The Developmental Age Hypothesis

One of the most popular strategies to determine the environments, activities, skills, instructional materials, and performance criteria to which a severely handicapped student will be exposed is the developmental age hypothesis. Utilizers of this hypothesis assume that in each curricular area or domain, e.g., self-help, language, motor, social, cognitive, and functional object use, there is a normal and/or a hierarchical sequence of stages or levels through which a student must progress. A teacher using the developmental age hypothesis to generate curricular content usually assesses developmental levels in several domains. The student's repertoire is then matched to correlated developmental levels in normal hierarchies, and developmental ages are then ascribed. These developmental ages contribute substantially to the selection of instructional environments, activities, objectives, materials, and performance criteria.

If, in fact, a student progresses at reasonable rates through the hypothesized stages or levels, such a strategy for developing curricular content would be appropriate. The problem is that severely handicapped students rarely, if ever, progress at reasonable rates through the developmentally based skill sequences, hierarchies, stages, steps, etc. through which nonhandicapped children progress.

Unfortunately, if one of the many variations of the developmental age hypothesis is the primary or only strategy used to generate curricular content, the developmental age/chronological age paradox almost always ensues. That is. the chronological age of a severely handicapped student increases linearly with the passage of time, but the developmental age as measured by standardized tests and other normal developmental based assessment instruments increases very little ami. in some cases, not at all. Thus, with the passage of time a student is compared to normal children who are increasingly younger. Tragically, this often results in adolescent and young adult severely handicapped students receiving instruction in environments, engaging in activities, and utilizing materials, language cues, and so on that arc clearly designed for much younger nonhandicapped children, usually under the age of four or five.

The All or Nothing Hypothesis

The all or nothing hypothesis refers to the requirement that there are reasonable assurances that a student can acquire all the skills in an activity before instruction is initiated. Utilizers of the all or nothing hypothesis assume that unless it is the considered judgment of an adult that a student will be able to perform all the skills required, at least several possibilities are more appropriate:

1. The student should not receive instruction on the skills needed to engage in the activity.
2. The activity should be performed for the student.
3. A less complex sequence should be selected for instructional purposes.

Mark, a 15-year-old severely handicapped student, is able to push down the lever of a toaster during the activity, making toast, but he is not able to perform any of the other skills, such as securing the bread and butter, opening the bread wrapper, taking out a slice of bread, and inserting the bread in the toaster. A teacher using the all or nothing hypothesis would probably decide:

1. It is not worth the time and energy required if only one skill in the activity will be acquired.
2. It is actually more efficient to make the toast for the student.
3. It is probably better that the student use the lever-pushing skill in a less complex skill sequence, such as pushing down a lever when given an infant-level musical toy.

Stated another way, the use of the all or nothing hypothesis results in exclusion from a chronological age-appropriate activity and. as a substitute, inclusion in an activity appropriate for a much younger nonhandicapped child.

The Independent Performance Hypothesis

Utilizers of the independent performance hypothesis assume that before instruction on a particular skill sequence is provided, it must be reasonable to expect that each skill in the skill sequence will be performed without assistance or supervision. If a teacher determines that a student will probably not learn to perform a skill sequence independently, it usually follows that

easier or less complex skill sequences are selected for instructional purposes, and/or the student is confined to environments in which independence is rarely neeessary or required.

Joan, an 18-year-old severely handicapped student, requires verbal and gestural reminders to depart from a public bus at a specified destination, to walk across a street within the time allowed by the traffic light, and to quality check her work when on her job as a towel folder in the laundry of a Howard Johnson's Motel. In the professional opinion of her teacher. Joan will not learn to perform these skills independently, even after three more years of instruction. Using the independent performance hypothesis, the teacher then decides to prepare her to function in an environment where more intense assistance will always be available: a sheltered workshop. As a result, at age 21. Joan will most likely have been taught pnly the minimum number of skills necessary to board the van that picks her up at her house, to ambulate from the van to the sheltered workshop, and to perform at her work station. Stated another way. there are no streets to cross, no decisions to make about where and when to board or depart from a public bus. and little need to acquire quality checking strategies, since personnel at the sheltered workshop will do that for her.

The selection of such a sheltered environment and its associated activities preclude instruction that might assist her to become, at least in part, a more independently functioning person. In this case, such a selection is unacceptable, because more creative, educationally productive, and individually habilitative options are available or can be created.

The Prerequisite Skill Hypothesis

The prerequisite skill hypothesis refers to the belief that there are skills that must be mastered before access to specific environments and activities is allowed. Utilizers of the prerequisite skill hypothesis argue that if a student without the hypothesized prerequisite skills is required to engage in environments and activities requiring those skills, unnecessary failure and frustration will occur, and engaging effectively in the activity will not be possible until those skills are acquired. Usually, if a severely handicapped student cannot perform hypothesized prerequisite skills:

1. The student is given direct, isolated, and repeated instruction on those skills rather than on actual chronological age-appropriate and functional skills.
2. The student is not allowed to participate in a variety of meaningful activities.
3. The student receives instruction in a confined and limited number of environments.

Unfortunately, severely handicapped students rarely learn a sufficient number of presumed prerequisite skills. Thus, they are usually excluded from instruction in chronological age appropriate and functional activities in school and nonschool environments throughout their entire educational careers.

In summary, the position offered here is that curricular content derived primarily from variations of the developmental age. the all or nothing, the independent performance, and/or the prerequisite skill hypotheses should be scrutinized carefully and discarded as soon as possible whenever severely handicapped students arc of concern. Furthermore, these hypotheses are generally not affirmative in nature; they allow utilizers to overlook or not address critical skills that are vital to efficient performance in nonschool environments; and they rarely help minimize the performance discrepancies that will always exist between severely handicapped and nonhandicapped persons.

What Is the Principle of Partial Participation?

The principle of partial participation is essentially an affirmation that all severely handicapped students can acquire many skills that will allow them to function, at least in part, in a wide variety of least restrictive school and nonschool environments and activities. More specifically, the principle of partial participation affirms that:

1. Partial participation in chronological age-appropriate environments and activities is educationally more advantageous than exclusion from such environments and activities.
2. Severely handicapped students, regardless of their degree of dependence or level of functioning, should be allowed to participate at least partially in a wide range of school and nonschool environments and activities.
3. The kinds and degrees of partial participation in school and nonschool environments and activities should be increased through direct and systematic instruction.
4. Partial participation in school and **nonschool** environments and activities should result in a student being perceived by others as a more valuable, contributing, striving, and productive member of society.
5. Systematic, coordinated, and longitudinal efforts must be initiated at a young age in order to prepare for at least partial participation in as many environments and activities with nonhandicapped chronological age-appropriate peers and other persons as possible.

While a severely handicapped student may be capable of at least partial participation in selected environments and activities, there is no doubt that s/hc will not be able to learn all of the thousands of age-appropriate and functional skills in the repertoires of nonhandicapped persons of the same chronological age range.

Nevertheless, the principle of partial participation should be viewed as a supplement to other instructional strategies to ensure that each severely handicapped student is allowed access to environments and activities to which s/he may currently be denied even if:

1. The student is ascribed a myriad of developmental ages under 2 years.
2. The student is neither able to perform nor likely to learn all the skills required by an activity.
3. The student is unable to perform skill sequences independently in either school or nonschool environments.
4. The student does not have the prerequisite skills usually associated with an environment and an activity.

Misuses of the Principle of Partial Participation

One of the fundamental premises upon which the principle of partial participation is based is that all severely handicapped students have a right to educational services that allow them to be the most that they can be. The phrase "the most that they can be" in this context refers to being able to perform at least partially as many different skills, to engage in as many different activities, and to function in as many different environments as is instructionally possible. An educational program that allows striving for the attainment of this goal is more acceptable than one that does not. Nevertheless, it should be noted and emphasized that it is certainly possible to use the principle of partial participation in ways that do not enhance the life space of a severely handicapped student significantly or acceptably.

Juan is severely handicapped and 14. His teacher enrolled him in a typing class in an attempt to provide vocational training. During class, he was taught to turn on an electric typewriter and to press keys randomly. Certainly, it could be argued that Juan is partially participating in the typing activity. However, the intent of the principle of partial participation is to maximize the repertoire of each student, and, clearly, this was not accomplished by the instruction provided. In fact, this is a misuse of the principle of partial participation for the following reasons:

1. Although Juan has learned to turn on a typewriter and to press keys randomly, it is doubtful that he will be valued or respected any more by others than if he could not perform those skills.
2. It is highly unlikely that he will be able to utilize the skills to produce typed pages of information that will be of functional use to anyone.
3. It is extremely doubtful that anyone will ever employ him to type.
4. It is improbable that the environments to which he is allowed access have increased because he has learned to turn on a typewriter and press keys randomly.
5. There are certainly many other environments and activities that can be utilized to provide more functional and valuable vocational training experiences.

Individualized Adaptations

There arc at least two salient points relative to the principle of partial participation. First, it is rarely, if ever, possible to allow or enhance partial participation without giving equivalent consideration to adaptations, i.e., any adjustments or modifications of typical environmental conditions that might allow or enhance at least partial participation. In fact, in the view of some, partial participation is an adaptation, since it is a departure from the way nonhandicapped persons function.

Second, a person observing nonhandicapped or severely handicapped students will notice that they rarely participate in the activities in the same manner or to the same degree, utilize the same cues and/or correction procedures, or perform skills within the same rate ranges or with the same intensities. It is at least the above differences in each person's preferences, styles, and so on that require the creation and use of *individualized* adaptations.

An individualized adaptation is one that is personalized and enables a particular student to participate at least partially in a particular chronological age-appropriate and functional activity. This is done by enhancing the performance of existing skills, compensating for missing skills that will not likely be acquired, and allowing for the acquisition and utilization of alternative skills. For example, in order to ambulate through a shopping mall, two students may need wheelchairs. Janice can move her fingers but not her arms and thus uses an electric wheelchair. Joe, who is totally deaf and totally blind, pushes his manual wheelchair and is guided by other persons. Obviously, different skill repertoires require different individualized adaptations.

Why Use an Individualized Adaptation?

The purpose of an individualized adaptation is to allow or enhance at least partial participation in a wide range of functional, challenging, habilitative, interesting, and enjoyable environments and activities with a variety of handicapped and nonhandicapped persons. Concurrently, by using an individualized adaptation, it is possible to minimize the following unacceptable practices:

1. Teaching the performance of nonfunctional skills in environments and activities that are not chronological age-appropriate.
2. Selecting an adaptation solely because it is available, convenient, and/or utilized with other students in the same classroom, school, category, functioning level, city, etc.

3. Excluding a student fiom a variety of activities in school and nonschool environments solely because some of the skills typically required are missing or performed at less than acceptable criteria.

Many severely handicapped students arc able to engage in appropriate activities within many environments without the use of adaptations. For example, there arc students who, after sustained and systematic instruction, are able to ride a public bus from their homes to a work site, watch television with a friend, purchase a drink from a vending machine, and dress for school. Certainly, if a student can perform skills acceptably without adaptations, s/he should be required to do so. However, there are times when even with systematic and longitudinal instruction, many important skills are not acquired, and exclusion from many environments and activities is the tragic result. In such circumstances, the judgment that all the skills necessary to engage in an activity will not be acquired should be accompanied by a decision to generate individualized adaptations designed to allow or enhance at least partial participation.

Types of Individualized Adaptation

For organizational purposes, six types of individualized adaptations will be delineated. The six types are not meant to be exhaustive or mutally exclusive. They are an expansion of the adaptations described by Brown, Branston-McClean, Baumgart, Vincent, Falvey, and Schroeder (1979) and Wehman, Schleien, and Kiernan (1980).

Utilizing/creating materials and devices. Materials or devices, as the terms are used here, refer generally to portable objects, equipment, or materials created for instructional purposes that enhance or allow at least partial participation. In certain instances, one kind of material may lead to unacceptable performance while a different material may lead to enhanced participation. For example, riding a public bus involves waiting at a bus stop, paying the fare, locating a seat, sitting appropriately, and exiting at a correct location. Assume a student does not have the skills to arrive at the exact combination of coins needed to pay the fare and to put them in the fare box. However, if the student is taught to use a bus pass, participation might be enhanced dramatically.

In addition, there are materials and devices that can be used appropriately only by or with the consultation, guidance, and supervision of competent and specially trained personnel. Examples of such materials and devices include wheelchairs, hearing aids, orthopedic braces, nonverbal communication systems, and adapted eating utensils. Often, such materials and devices can result in participation becoming both possible and practical. An electric wheelchair that allows a student to ambulate at rates and distances not previously possible and an enlarged portable switch (Figure 1) to activate a record player, tape recorder, television set, and/or a blender are but a few examples.

Utilizing personal assistance. Personal assistance refers to verbal, gestural, physical, or supervisory assistance provided by another person. For example, a job at the supply center of a large general hospital consists of opening perforated boxes of bandages and dumping them onto a supply tray. Matt, who is 17, totally deaf, totally blind, and severely intellectually handicapped, is able to perform many of the skills required by the job. However, Matt is currently not able to locate or set up the materials and probably will not acquire these skills. It is unacceptable to exclude him from this job without considering personal assistance adaptations. Instructional personnel could locate the materials and set up the work area during training, and the noninstructional personnel typically present can be taught to locate and set up the materials. Other examples of providing personal assistance include a nonhandicapped third grader directing a 9-year-old severely handicapped student to the school office as they both turn in their attendance records, a severely handicapped student pushing or guiding the wheelchair of a classmate up a ramp, and a public librarian assisting a severely handicapped student to check out a record or tape.

Adapting skill sequences. In some instances, it may be easier; more efficient, and more instructionally appropriate to engage in an activity utilizing a different sequence from that used by most nonhandicapped persons. For example, most persons lower their pants before sitting on a toilet. For a student with severe motoric and balancing difficulties, it may be more efficient to sit on the commode first and, when in a more stable position, lower his pants. The point to be made is that if rearranging the sequence, the type, or the number of skills required by an activity makes possible or enhances even partial participation, such an adaptation should be utilized.

Adapting rules. Rules essentially consist of prescribed guidelines, procedures, or customs for engaging in activities in specified environments. In some instances, rules may be too cumbersome, restrictive, or complex to allow even partial participation. Changes are then in order. For example, a student with severe motoric difficulties may not be able to eat in an elementary school cafeteria within the time interval allotted nonhandicapped students. However, the rules can be changed so that more than one lunch period can be used for instruction in the cafeteria skill sequence of waiting in line, getting food, locating a vacant scat, eating, disposing of waste, etc. Another example of rule changes is adapting the procedures that govern the actions and wages of a chambermaid at a Howard Johnson's Motel. Typically, a chambermaid might be expected to clean 12 rooms in an 8-hour work day at a minimum wage. To enable a severely hand-

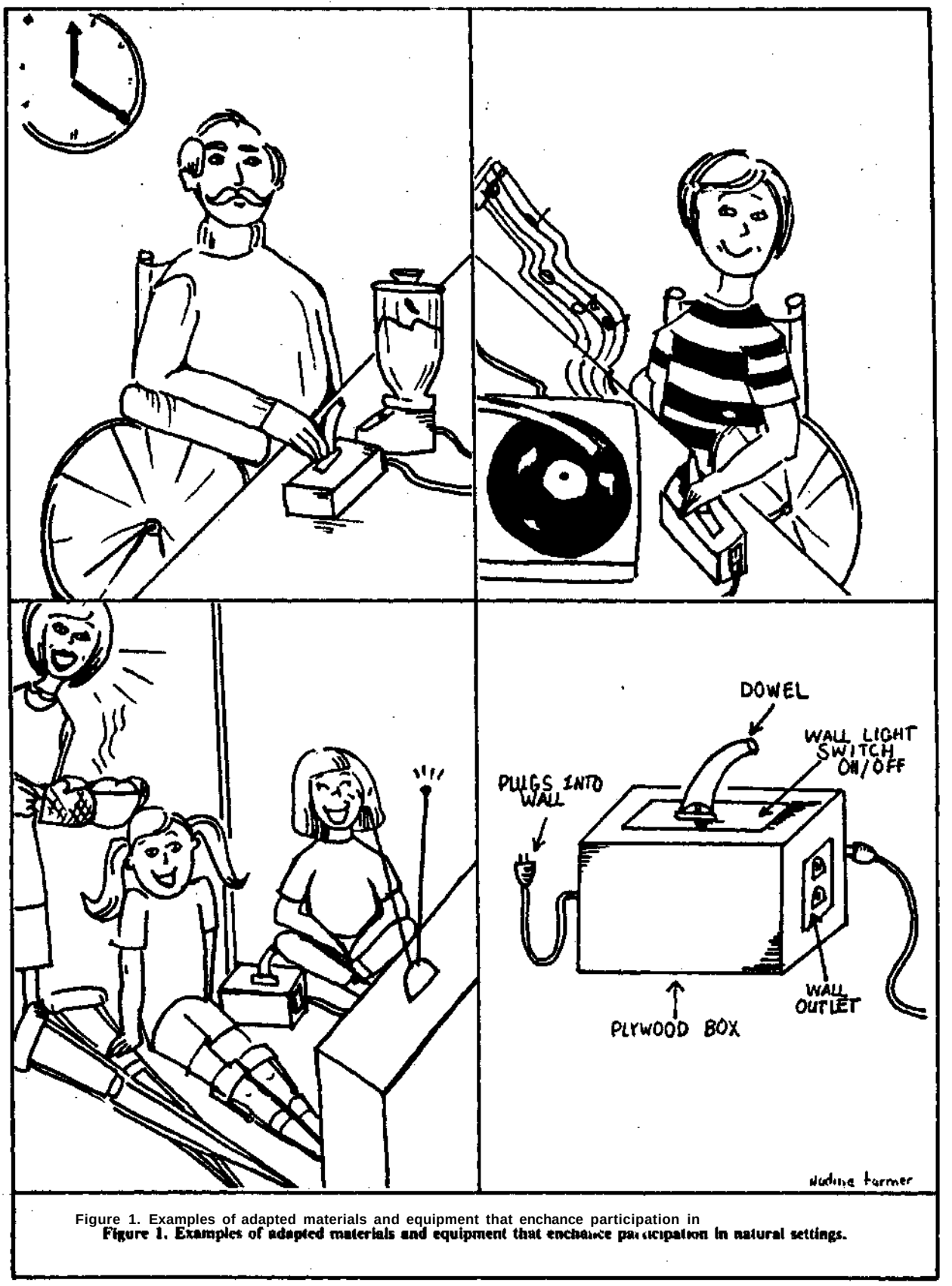

Figure 1. Examples of adapted materials and equipment that enchance participation in natural settings.

22 TASH Journal

icapped student to work ;it the motel, rooms cleared and payment schedules could be altered to allow p.i\ · mcnt baseil upon rooms cleaned to appropriate standards rather than on hours worked and part-time rather than full-time employment. Certainly, in instances in which partial participation might be allowed or enhanced such options should be utilized.

Social/attitudinal adaptations. Social/attitudinal adaptations refer to changes in assumptions, judgments, beliefs, and so on that allow or enhance at least partial participation in environments and activities. Unfortunately, changes in the social/attitudinal expectations and beliefs relative to severely handicapped students are still necessary. Chris is severely handicapped, 6 years old, and attends a regular elementary school. His teacher accompanied him to the cafeteria for lunch and requested that he wait in line with other nonhandicapped students. Chris did not wait and instead pushed to the head of the line and was allowed to do so by the nonhandicapped students. His teacher determined that: First, the nonhandicapped students would continue to allow him to engage in this inappropriate behavior. Second, these same students would not allow their classmates to push to the head of the line. Third, the nonhandicapped students expressed that they felt sorry for Chris because he was handicapped, and fourth, in order to effect changes in the attitudes and behavior of the nonhandicapped students, information regarding appropriate performance requirements should be provided. Thus, information was provided to the nonhandicapped students pertaining to teaching Chris to wait in line. Subsequently, the nonhandicapped students redirected him to the end of the line when he cut in and engaged him in conversation as they all waited.

Using the Principle of Partial Participation and Individualized Adaptations

An example of the use of the principle of partial participation and individualized adaptations with a severely handicapped student, Adam, is presented below in an eight-phase strategy. These phases include:

Phase I:	A Nonhandicapped Person Inventory
Phase II:	A Severely Handicapped Student Inventory
Phase III:	Determining the Skills the Student Can Probably Acquire
Phase IV:	Determining the Skills the Student Probably Cannot Acquire
Phase V:	Generating Adaptation Hypotheses
Phase VI:	Conducting an Adaptation Inventory
Phase VII:	Deciding Upon Individualized Adaptations
Phase VIII:	Determining the Skills That Probably Can be Acquired using Individualized Adaptations

Adam, the hypothetical student in the following example, is It), handsome, severely intellectually handicapped, nonverbal, wears an upper trunk and neck brace to maintain his posture and assist him to walk, seizures frequently, and has a history of grabbing others or hitting himself to obtain attention. After school, he occasionally accompanies his parents to a grocery two blocks from home to purchase one or two items for supper or a snack. After consulting with his parents, his teacher initiated an instructional nonschool shopping program one morning a week to enhance his participation in walking and shopping and minimize his disruptive behaviors during these activities. The eight phases utilized are described below in an attempt to communicate how the strategy can be used instructionally:

1. To allow Adam to perform skills in his repertoire
2. To teach him to perform additional skills
3. To assist in the determination of skills that he probably cannot acquire and for which individualized adaptations must be sought
4. To teach him skills to perform when utilizing the adaptations selected

Some of the information secured using Phases I-IV is summarized in Table 1. Information secured from using Phases V-VIII is contained in Table 2.

Phase I: A Nonhandicapped Person Inventory

Here, it is required that the specific skills nonhandicapped persons perform when engaging in the activity of concern in a designated environment be determined. Thus, the teacher delineated specific street and intersection locations and observed and recorded the skills used by nonhandicapped persons as they crossed these intersections and purchased a single item at the fast food or grocery store. The information from this nonhandicapped person inventory for purchasing frozen orange juice is organized and presented in Phase I of Table 1.

Phase II: A Severely Handicapped Student Inventory

Here, it is required that the relevant skills a student can perform in an acceptable manner either totally or in part, as well as the relevant skills he cannot perform either at all or acceptably, be empirically verified. Thus, the teacher observed Adam under close supervision crossing the actual intersections on his way to the store, while in the store, and when returning to school. The skills that Adam performed either totally or in part and those that were performed unacccptably were recorded. This information is summarized in Phase II (Table 1).

Phase III: Determining the Skills the Student Probably Can Acquire

Here, it is required that the skills that a student might learn either totally or in part as a result of direct in-

struction be delineated. Thus, the teacher, after consultation wjth Adam's parents and a physical therapist, made judgments as to the skills he could probably acquire cither totally or partially with instruction during the remaining 11 years of his school program. These skills are summarized in Phase III (Table 1). The decision as to how these skills can be taught will be delineated later in an instructional program.

Phase IV: Determining the Skills the Student Probably Cannot Acquire

Here, it is required that the skills that a student is *not* likely to acquire even with systematic instruction over a long period of time be delineated. This information can be used to generate adaptations to allow the completion of the activity by other means. The teacher and others decided that it was doubtful Adam could be taught some of the skills required to cross intersections and shop acceptably, e.g.. making reliable judgments as to the probability that a vehicle would turn into his path, appropriately and safely responding to distant "walk" and "don't walk" signals, and using a written shopping list. A listing of some of the skills he probably cannot acquire is presented in Phase IV (Table 1).

Table 1
A Partial Participation and Individualized Adaptation Determination Strategy: Phases I-IV

Environment: **Eagle Grocery Store**
Subenvlronment: **Aisle 10, frozen Juice section**
Activity: **Selecting *an* 8-ounce can of frozen orange juice**

Phase 1	Phase II	Phase III	Phase IV
A Nonhandicapped Person Inventory	An Inventory of Adam	Skills Adam Probably Can Acquire	Skills Adam Probably Cannot Acquire
Enter store, locate Aisle 10, frozen foods.	Adam did not locate Aisle 10 using aisle headings or verbal cues. He was physically guided to Aisle 10. He grabbed a can of tomatoes from a display.	Adam should be able to learn to follow another person to Aisle 10 without grabbing Items from shelves, or displays.	Adam probably will not learn to respond appropriately to aisle headings, learn the categories of Items In the store, or locate an item based, upon Its grocery store category.
2. Locate the frozen juice section of Aisle 10.	Adam walked down the aisle without scanning or stopping. He was physically guided to the Juice section.	Adam could learn to locate the juice section of Aisle 10.	
3. Select an 8-ounce can of frozen orange juice	Adam picked up the appropriate can after the teacher touched the can and told him to pick It up.	Adam could learn to pick up the can given only a small number of teacher-provided cues.	Adam will probably not learn to read the words of labels per taining to brands flavors of juice, or sizes.
4. Carry the Juice to the checkout area.	Adam carried the can and was verbally and, physically guided . To the checkout area. He took a box of crackers from a display on the way and crushed It. He often stopped to, stare at the celling.	Adam could learn to follow someone to the checkout area and behave appro-prlately on the way.	Adam will probably not learn *Independently* to go to the checkout area ap propriately in the near future.

Table 2

A Partial Participation and Individualized Adaptation Determination Strategy: Phases V-VIII

Environment: Eagle Grocery Store
Subenvironment: Frozen foods, Aisle 10, juice section
Activity: Selecting an 8-ounce can of frozen orange juice

Phase 1	Phase V	Phase VI	Phase VII	Phase VIII
A Nonhandicapped Person Inventory	Adaptation Hypotheses	An Adaptation Inventory	Deciding Upon Individualized Adaptations	Skills Adam Probably Can Acquire Using Adaptations
1. Enter store, locate Aisle 10, frozen foods.	Personal assistance might be used to direct him to the appropriate alsie. A backpack will be used to hold the purchased juice and the adaptation.	Adam followed the teacher-given verbal and physical prompts. He walked too slowly and took one item from a display on his way to Aisle 10.	Personal assistance was judged the most educationally beneficial adaptation. A backpack will be used to store Adam's shopping list and to carry the purchased juice.	Following a person at an appropriate pace without grabbing other items from shelves or displays.
2. Locate frozen juice section of Aisle 10.	Personal assistance might be used to direct him to the juice section, as might a photo or line drawing of the section or an empty juice container.	Adam followed the teacher. He crumpled the photo and tossed It on the floor. He was given the empty container and was assisted to hold onto It and walk to the juice section.	Personal assistance was judged the most educationally beneficial adaptation to assist Adam to locate the frozen juice section of the aisle and acquire skills to use his shopping list.	Stopping at the frozen juice area.
3. Select an 8-ounce can of frozen orange juice.	A photo, a line drawing of the juice can, an empty juice container, or the teacher pointing to the juice he is to select might be used.	The photo was not tried again. Adam did hold onto the empty containter and watched the teacher "match" the empty and full containers to determine if the correct frozen juice was selected.	An empty orange juice can of the specified brand and size was selected to maximize Adam's ability to select without direct teacher assistance.	Matching an empty container to the juice to be purchased.:
4. Carry the juice to the checkout area.	Personal assistance to direct, supervise, and compliment his appropriate behavior and redirect his Inappropriate behavior might be used.	Adam carried the frozen juice and the empty can. He followed the teacher to the checkout area but grabbed an Item from a display on the way.	Personal assistance was selected as the most efficient and educationally beneficial adaptation.	Following a person to the checkout area.

Phase V: Generating Adaptation Hypotheses

Here, it should be determined If there are appropriate adaptations currently available that could be used. If none is available, the task becomes one of creating those that might enhance or allow the performance of skills missing from a repertoire or the performance of skills other than those usually used to engage in an activity. Some of the individualized adaptaions that might be utilized by Adam are listed in Phase V of Table 2.

Phase **VI:** Conducting an Adaptation Inventory

Here a teacher and other appropriate persons should determine empirically over a number of trials the skills a student can perform in an acceptable manner either totally or in part and the skills that cannot be performed either at all or acceptably using the adaptations generated in Phase V. The skills Adam performed either totally, in part, or unacceptably are summarized in Phase VI (Table 2).

Phase VII: Deciding Upon **Individualized Adaptations**

Here, a teacher and others must make judgments as to which individualized adaptations will be used, and these decisions should be reviewed and reevaluated frequently. In addition, the reasons for selecting a particular adaptation should be recorded.

Adam's teacher determined that to locate Aisle 10 and carry the can of juice to the checkout area, physical assistance would be required. In addition, the decision was made that Adam could select the correct brand, kind, and size of frozen orange juice by using an empty juice can as a shopping list. The individualized adaptations selected are listed in Phase VIII (Table 2).

In summary, the use of the eight-phase strategy provided information that will be used by the teacher to design an instructional program to teach Adam to use the skills already in his repertoire and to acquire new skills to participate in grocery shopping. The reader interested in a more detailed description of the components of an instructional program is referred to Ford, Brown, Pumpian, Baumgart, Loomis, and Schroeder (1980).

Cautions When Deciding Upon and Using Individualized Adaptations

A number of points become critical when selecting and using individualized adaptations. At least six points of caution will be discussed below. First, the appropriateness and effectiveness of adaptations must be empirically verified in the environments in which they will ultimately be used. The adaptations generated in Phase V were used with Adam in the grocery store to determine empirically the skills he did and did not utilize. It is doubtful that the selection of the adaptations made in Phase VI could be determined accurately without empirically verifying the skills in his repertoire in the actual grocery store. Second, adaptations are selected for a particular student to function in specific situations. Changes in circumstances often warrant changes in adaptations. The adaptations selected were specific to Adam, and it is likely that similar adaptations could be used to assist him to purchase other frozen juices. However, if other or many additional items are to be purchased, e.g., a loaf of bread, a gallon of milk, and a bottle of ketchup, it is unlikely that empty containers would be the most efficient adaptations. Thus, the eight-phase strategy should be utilized empirically to determine alternatives. Third, students should not overutilize or become overly dependent upon adaptations. It is possible that over time Adam may be able to perform many of the skills listed in Phases I, III, or VIII using more complex actions. As time progress, he should be reevaluated, and adaptations should be gradually removed or altered. Fourth, adaptations are generated for an individual student, not for a class, a group, a category, a level, or a diagnosis. It is possible that one of Adam's five classmates may also utilize an empty juice can to purchase frozen orange juice, but it is extremely unlikely that all will benefit from the same adaptations or need to purchase the same item. Fifth, adaptations should be utilized that allow and enhance participation in environments and activities most critical to the life space of a student. It is critical that adaptations are selected *after* determining the most salient environments and activities for instruction rather than vice versa. It is unacceptable to select an environment or activity for instruction totally because a particular adaptation can be used. Sixth, it is rare that an adaptation can be judged effective for a student in one trial. Time should be allowed for the student to have various opportunities to use a variety of adaptations before one is selected. In addition, sufficient instructional time and/or trials should be allocated for a student after an individualized adaptation is selected before judgments are made relative to its effectiveness.

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Footnotes

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