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# An Ecological Assessment Inventory to Facilitate Community Recreation Participation by Severely Disabled Individuals

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Severely disabled individuals have long been systematically excluded from actively participating in normalized recreation/leisure activities in integrated community settings. Severely disabled individuals should be taught functional and age appropriate skills, based upon the performance characteristics of nonhandicapped peers. In order to present this position, typical assumptions of leisure skill instruction for severely disabled individuals are discussed and opposing points of view are presented. Finally, the article presents a concrete strategy, or inventory, that is divided into three inter-related areas including: skill selection and skill/facility description, component skills and adaptations for full/partial participation, and supportive skills. The inventory can be used by therapeutic recreation specialists and other educators to develop functional, age appropriate leisure skill instructional content. It is expected that this approach, coupled with longitudinal planning, will facilitate the provision of opportunities for severely disabled individuals to actively participate in normalized recreation/leisure skills in integrated community settings.

**KEY WORDS:** *Ecological Assessment, Leisure Skills, Therapeutic Recreation, Community-Based, Mainstreaming, Severely Disabled*

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Within the last few years, human service professionals have attempted to provide services to severely disabled individuals in community and other non-institutional settings. The least restrictive environment (LRE) is commonly used to describe this service emphasis. To apply leisure and discretionary time use to the LRE doctrine, it is simply defined as the acquisition and performance of leisure skills by severely disabled persons in normalized community environments. The use of the adjective, *normalized*, is critical since many human service providers program in the community, but in segregated settings.

The acquisition of functional (i.e., skills which are naturally occurring, frequently demanded and have a specific purpose), age appropriate (i.e., activities typically performed by persons in a particular age group), leisure skills referenced against nondisabled peer performance criteria presents a powerful tool to integrate disabled persons into normalized community environments. The selection of leisure skills for severely disabled individuals should reflect this potential benefit, in that only those skills or activities which have the potential of being performed in the presence of, or in interaction with nondisabled peers should be selected for instruction. Anything short of this goal will do little to mitigate the (unnecessary) longitudinally arranged segregation of severely disabled persons, and could result in the acquisition of leisure skills that meet the substandard performance demands of protective segregated settings.

The purpose of this article is to detail this position. Various obstacles to developing leisure skills for severely disabled individuals that maximize the chance for integration into normalized community environments are discussed. Additionally, a strategy adapted from an approach to analyze vocational tasks (Belmore and

Brown 1976), is delineated that can be used to develop leisure skill instructional content based on the performance of nondisabled individuals.

### Obstacles and Alternatives to Integration Into Normalized Community Leisure Environments

*Equating Leisure with Fun.* Leisure skills, or recreational activities generally, are considered to involve the performance of particular responses or behaviors that are not work related and are enjoyable, or fun (Arnold 1980). For example, swimming would be considered a leisure skill as long as you enjoyed it and were not employed as a lifeguard. Fulfilling this requirement for fun involves serious consideration for personal preferences.

Selecting leisure skills for instruction based on disabled student leisure preferences, could result in nonfunctional activities, such as, increasing rates of stereotypic chair rocking, improving the trajectory of a person's self-abusive arm biting, increasing another individual's overall french fry and donut consumption, and organizing a recital for a group of 18 year old *Sesame Street* carollers. Of course, such "leisure skills" should be discouraged rather than encouraged. However, it does highlight a frequent problem encountered by therapeutic recreation specialists and other educators attempting to select leisure skills for instruction with severely disabled persons. In general, severely disabled individuals reliably demonstrate few activity or object preferences. In addition, since very few severely disabled individuals possess extensive formal communication skills, determining whether particular leisure skills are enjoyable becomes even more subjective and suspect than it is with highly verbal individuals.

Furthermore, the need for prolonged repeated practice instruction with many

severely disabled individuals can seriously interfere with the pleasurable aspects of a leisure activity during training. For example, in a recent study, four months of instruction were required to teach a nonverbal severely retarded individual to independently bowl, order a drink from a refreshment stand, and purchase a snack from a vending machine at a community bowling facility (Schleien, Certo, and Hicks, in press). Such extensive training may minimize initial enjoyment on the part of the participant. However, such a low initial level of fun may be a necessary correlate of teaching severely disabled individuals to perform leisure skills that are referenced against nondisabled performance standards. As recreation professionals and teachers, the choice is clear. We can either perpetuate the Special Olympian paternalistic Zeitgeist and opt for enjoyment as our first priority, or we can temporarily subvert fun with extensive instruction, taking the chance that enjoyment will naturally evolve when a severely disabled individual is able to go bowling on a Saturday morning with his/her brother and friend.

*Delegating Responsibility to Standardized Assessments.* Another obstacle to the selection of leisure skills which naturally leads to integration appears to be that certain therapeutic recreators and educators tend to depend too heavily upon information generated from assessment protocols and other related tests, generally standardized on populations which are exceedingly different from the severely disabled population under investigation. One consequence is that leisure skills and materials become the vehicles to improve motor performance. In appearance, leisure skills selected on this basis may appear to be appropriate choices. However, it is what the instructor does not teach that is the more critical factor to consider. For example,

a particularly severely disabled individual might be taught to grasp a bright colored clutch ball. However, this object may have been selected solely because it can improve simple palmar grasp, not necessarily because of any "game-like" peer interaction possibilities it provides. The prior question should have been: Do nondisabled peers grasp objects when performing leisure skills; if so, what are those objects and skills, and are they reasonable to teach in standard or adapted versions to severely disabled persons? If the answers are negative, then the selection of a leisure skill should not be sacrificed for improved palmar grasp.

A second common consequence of strictly relying on standardized assessment information to make instructional decisions for severely disabled individuals is that most leisure skills performed by nondisabled peers will appear to require responses too advanced for most severely disabled individuals. For example, assume there is a severely disabled adolescent whose standardized assessment data display the following profile: limited alternating leg movements, limited arm flexion and extension, poor eye-hand coordination, no numeral recognition or money skills, five word expressive sign vocabulary (generally requiring a modelled cue), long response latency, and demonstrated ability to follow only frequently encountered two-step directions. From both a motoric and cognitive point of view, such an individual would seem to be an unlikely candidate to learn how to independently bowl, secure appropriate size bowling shoes, pay for a game, order a drink at a refreshment stand, and use a vending machine. Such persons are frequently excluded from instruction because assessment information shows that they do not possess the prerequisite skills for the task. The behavioral characteristics outlined above

describe the severely retarded adolescent, mentioned earlier, who was taught to functionally use a bowling alley (Schleien et al., in press). Therefore, it is believed that standardized assessment information provides minimal insight, other than detecting gross obvious problems, into the actual success or failure of a particular participant in reference to a specific leisure skill. Consequently, a thorough assessment of the skill (and facility), rather than the individual, is potentially more useful in determining whether a particular leisure skill (or recreational facility) should be selected for instruction. A degree of risk and responsibility is involved in any instructional decision. However, risk cannot be effectively reduced by relying on standardized assessment information. As a result, it is preferable to err on the side of progress by attempting such instruction, rather than deciding not to teach a skill, based on information that may be equivocal.

A final consequence of selecting leisure skills based on standardized assessment information is the selection of tasks that are appropriate for what appears to be a person's developmental functional level, yet, highly inappropriate for an individual's chronological age. Brown, Branston, Hamre-Nietupski, Pumpian, Certo, and Gruenewald (1979) present a convincing argument for at least giving equal consideration to a severely disabled individual's chronological age because the leisure skills we select may function to emphasize the discrepancies between severely disabled individuals and the nondisabled population, creating additional unnecessary obstacles to integration.

*Single Solution Approach.* Many times, as therapeutic recreators and educators, we select and attempt to teach one or two "all purpose" leisure skills to severely disabled persons. These are

skills that can be used in a variety of leisure settings with a variety of people. Examples would be an adapted form of tag using a ball or the manipulation of seven piece puzzles. The teaching of a specific motor or cognitive skill may be justified as a valid treatment technique in a clinical role. However, often the selection of these skills are based on assumptions that severely disabled individuals generally require long acquisition periods; that it is difficult to predict where these individuals will be living, and therefore, what leisure facilities they will have access to; and that it is difficult to determine who will be available to participate in leisure activities with these severely disabled individuals. All of these and other similar assumptions seem to result in the *single solution approach* to leisure skill programming for severely disabled individuals. That is, a limited number of very conservative, restrictive, instructional choices are made that involve simple skills presumed to be applicable to practically all severely disabled students. If therapeutic recreation specialists and other educators are to succeed in teaching functional, integrative leisure skills to severely disabled persons, the skills selected must represent the diversified approach to leisure practiced by much of the nondisabled population.

*Field Trip Method of Instructional Delivery.* Most educators provide leisure skill instruction for severely disabled students in school settings. As a result, many of the leisure skills selected for instruction are appropriate for subenvironments commonly found in schools, such as classrooms, gymnasiums, auditoriums and playgrounds. Occasionally, skills such as bowling, camping, roller skating or swimming are considered for instruction. For such skills, instruction usually involves a simplified or simulated version of the skill being taught at school,

followed by a trip to the related community leisure facility. Generally, these community leisure field trips are scheduled infrequently, often occurring only once per school year. Another hallmark of field trips to leisure facilities is the tendency on the part of school administrators to simplify scheduling logistics and reduce transportation costs by sending large numbers of students on each trip.

There seems to be several obstacles to acquiring functional, age appropriate, integrative leisure skills, created by programming solely for school-based leisure skills or utilizing infrequent field trips as the primary method of delivering community-based instruction. First, providing instruction in school when the final target environment is the community or home can lead to many oversights that can insure failure, as opposed to success. Second, infrequent trips to a neighborhood bowling center, for example, provide insufficient time for direct instruction of a leisure skill as complex as bowling with severely disabled individuals. Furthermore, the large number of atypical individuals in the leisure environment can discourage, if not eliminate, interactions with nondisabled individuals concurrently using the facility or setting.

Therefore, it is believed that well planned, frequent, systematic, small group instruction in community leisure environments must be implemented, if recreators and educators are to be successful in teaching realistic leisure skills to severely disabled students. In order to accomplish systematic community-based instruction, alliances between therapeutic recreation consultants and special educators could be formed and family members and friends could be encouraged to provide recreational opportunities to the severely disabled learner (Certo 1982).

The following section provides an explanation of a strategy that can be used to analyze performance demands of normalized leisure skills, facilitate realistic age appropriate skill selection decisions, and delineate useful instructional content.

### Components of a Community Referenced Leisure Skill/Facility Inventory

This section delineates the components of the inventory, organized to secure relevant leisure skill instructional information (for a more detailed description of the inventory components and process see Certo and Schleien 1982). This leisure skill/facility inventory is designed to circumvent the various obstacles cited in the previous section. The leisure skill/facility inventory proposed here is based on an adapted revision of an inventory developed by Belmore and Brown (1976) for use in the analysis of vocational skills.

As used here, an inventory refers to a systematic method of conducting an observation of an event as it occurs in a natural setting under typical conditions. Utilizing an inventory approach to the development of instructional sequences and related information provides therapeutic recreation personnel and educators with an accurate detailed description of a leisure skill. Since such a description is generated from the observation of nondisabled individuals, it can be considered to be referenced against nondisabled performance criteria. As a result, important, yet subtle, component responses (e.g., releasing a bowling ball from the left side of a lane) or qualitative response characteristics (e.g., average time to complete each ten-pin bowling frame), that might be easily ignored are highlighted for instruction. Incorporating such subtle component or qualitative responses can

minimize unnecessary performance discrepancies between severely disabled and nondisabled individuals using a leisure facility.

Table 1 provides an outline of the leisure skill/facility inventory. The inventory is divided into three interrelated areas: skill selection and skill/facility description, component skills and adaptations for full/partial performance, and supportive skills. Each section is subdivided into component parts. These component parts are provided to highlight response characteristics and issues that should be considered when conducting a leisure inventory.

### Section I: Skill Selection Considerations and Skill/Facility Description

This section of the inventory provides a justification for the selection of the leisure activity to be inventoried, and an initial description of the leisure skill. The section consists of four components: (a) a rationale for selecting the particular leisure activity; (b) a detailed task analysis of the skill; (c) description of the physical layout of the leisure facility; and, (d) description of the individuals who typically frequent the facility, and how they interact with other facility users and supervisory or service personnel. As a result of completing this section of the inventory, the recreation specialist or educator is provided with not only the content for instruction, but also the major events and stimuli that must be considered in conducting instruction in the leisure setting.

**A. Appropriateness of Leisure Skill/Facility for Particular Individual.** Several critical questions are offered below to assist in determining the appropriateness of a facility or skill for instruction with severely disabled students: (1) Is the skill or facility selected appropriate for

nondisabled persons of the same chronological age?; (2) Has the severely disabled individual previously acquired any skills related to this activity?; (3) If particular responses would be difficult to perform, are material/procedural adaptations available to enhance participation?; (4) Does the severely disabled individual have access to the facility or materials (e.g., financial, transportation)?; and, (5) Does the severely disabled individual demonstrate a preference for this activity?

If the responses to these questions are affirmative, the remainder of the inventory should be completed at the facility under investigation.

**B. Description of Leisure Skill: Task/Activity Analysis.** As with all other components, the task/activity analysis should be determined through direct observation of the skill/facility under investigation. The task/activity analysis should be thorough, therefore, all skills necessary to independently use the recreational facility should be delineated.

**C. Description of Leisure Facility/Environment: Including Diagrams.** It is absolutely necessary to be familiar with the environment in which the individual will ultimately participate and function. This component should include a general description of the leisure environment for determining the physical conditions under which the player will be required to participate and interact. Additionally, this component should include diagrams of the facility/environment. See Figure 1 for a diagram of the community bowling facility that was under investigation in the previously identified bowling study.

**D. Description of Social Environment: Other Players, Supervisors, Special Rules/Contingencies.** Social interactions with peers, supervisors, and others in the immediate environment, typical dress, and type, amount and attitude of supervision are some of the critical factors

**Table 1.**  
**An Outline of a Community Referenced Leisure Skill/Facility Inventory**

### I. Skill Selection Considerations and Skill/Facility Description

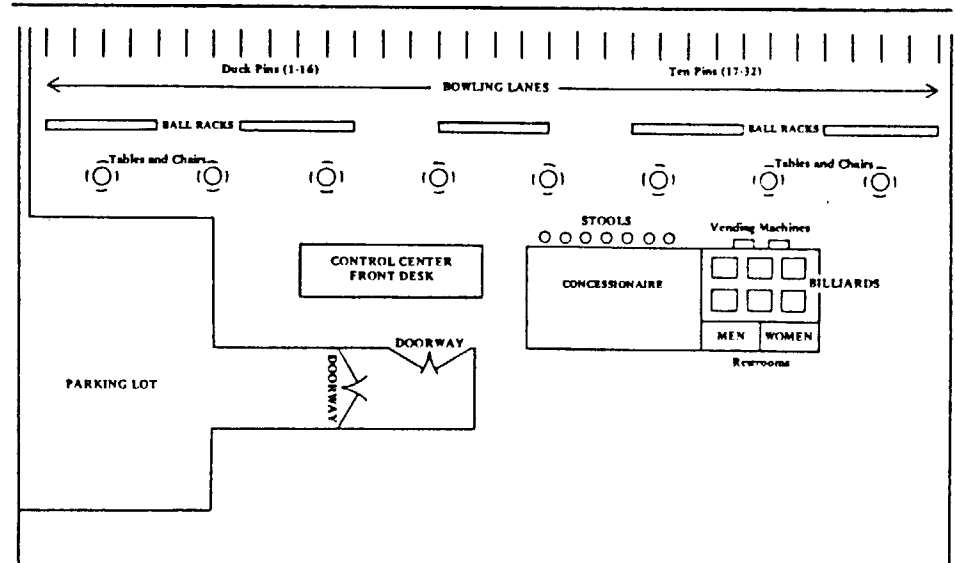
- A. Appropriateness of leisure skill/facility for particular individual
- B. Description of leisure skill: Task/activity analysis
- C. Description of leisure facility environment: Including diagrams
- D. Description of social environment: Other players, supervision, special rules/contingencies

### II. Analysis of Component Skills and Adaptations for Full/Partial Performance

- A. Required equipment and materials: Listing
- B. Physical considerations: Manipulatory, motoric, health
- C. Perceptual considerations: Visual, auditory
- D. Interpersonal interaction considerations: Exchanges between participants, formal communication
- E. Functional academics: Reading, writing, arithmetic/scoring, time telling, conceptual skills
- F. Decisions/judgments: Time judgment, situational judgments
- G. Adaptations/adjustments for partial participation

### III. Analysis of Supportive Skills

- A. Leisure preparation: Dress, eating, financing/money management
- B. Transportation options
- C. Informed consent, legal requirements
- D. Orientation



**FIGURE 1. BOWLING ALLEY CENTER**

that should be considered when selecting leisure skills for instruction.

## Section II: Analysis of Component Skills and Adaptations for Full/Partial Performance

This section identifies and categorizes subskills from the task/activity analysis to provide the therapeutic recreation specialist or educator with detailed information that can be used to determine participatory requirements for full or partial performance in the leisure skill or facility. Important skill selection decisions (Wehman and Schleien 1980) and instructional information is generated by this process that is not readily apparent from a delineation of skills in the task analysis.

**A. Required Equipment and Materials.** Successful instruction requires that the type of equipment and materials be identified and described in detail prior to preparing an individual for active participation in the leisure setting. One of the barriers to independent and successful participation is the lack of knowledge or "surprise" element of an object in the environment that will be encountered at one time or another during an activity.

**B. Physical Considerations: Manipulatory, Motoric, Health.** This component categorizes the number and type of motoric responses involved in the leisure skill in at least the following areas: the number and complexity of simultaneously coordinated motor patterns; approximate strength required to manipulate materials or equipment; body positions; speed, cardiovascular endurance; energy expenditure; flexibility; and agility. Finally, it should be noted if a physical examination or specific minimal physical health condition is necessary for the particular leisure skill.

**C. Perceptual Considerations: Visual,**

**Auditory.** In addition to simply listing visual and auditory requirements, unusual or demanding discriminations should be highlighted.

**D. Interpersonal Interaction Considerations: Exchange Between Participants, Formal Communication.** Information gathered in this component should include the types of interaction patterns (e.g., turn taking, cooperative, unstructured) necessary to participate in the leisure activity. Additionally, the number of participants and optional interactions that may occur during participation in the activity should be addressed. Finally, this component includes a listing of the language requirements, encompassing a vocabulary of popular verbs, nouns, prepositions, cues and statements typically used in the setting.

**E. Functional Academics: Reading, Writing, Arithmetic/Scoring, Time Telling, Conceptual Skills.** Functional academic skills are basic, essential skills, typically associated with classroom education, which can often facilitate participation in a leisure activity/facility. They are not usually prerequisite skills for the activity however, since many times they can be bypassed through skill modifications.

**F. Decisions/Judgments.** Through direct observation of the activity/facility, and from conversations with others who frequent or work in the facility, time and situational judgments that may have to be made by the disabled individual to successfully participate become evident.

**G. Adaptations/Adjustments for Partial Participation.** The task of adapting a leisure skill should not be taken lightly. There are several important guidelines to consider: (1) activities should not be altered to make the participant stand out as different; (2) whenever possible, adaptations should be viewed as temporary; and (3) adaptations should be made on an individual basis, meeting individual

needs, as opposed to modifications for an entire group when only one participant needs activity simplification (Wehman and Schleien 1981).

## Section III: Analysis of Supportive Skills

The final section of the inventory delineates skills that are needed to insure social acceptability in and accessibility to the facility. These necessary, yet sometimes overlooked supportive skills include: (a) leisure preparation, such as dressing, eating and determining participation costs; (b) transportation options, costs, and distances; (c) informed consent and legal requirements for independent participation; and (d) orientation opportunities.

## Summary

This article has presented a conceptual framework for leisure skill instruction with severely disabled individuals. The position offered is that severely disabled persons should be taught functional, age appropriate leisure skills referenced against the performance characteristics of nondisabled individuals which lead to performance in integrated community settings. Through the selection of such leisure skills, maximum gains in independent community performance are expected to longitudinally accrue. In order to present this position, typical assumptions of leisure skill instruction for severely disabled students were examined with opposing points of view presented. These typical assumptions included: the practice of equating leisure with fun; delegating decision making responsibility to standardized assessments; single solution strategies; and, the field trip service delivery approach. The less typical assumptions advocated by the authors included: systematic instruction prior to indicators of enjoyment; the

encouragement of skill adaptations and instructional decisions based on complete skill analysis, rather than nonfunctional student analysis; the development of multiple leisure skill repertoires tailored to current and subsequent leisure time; and, direct regular instruction in the community leisure facility/context.

In order to facilitate this transition to more functional leisure skill instruction for severely disabled students, a multiple component inventory strategy was presented. This inventory is designed to provide the therapeutic recreation specialist or educator with relevant instructional content and the information needed to make viable leisure skill instructional decisions for severely disabled individuals. It is acknowledged that the inventory process delineated is long and initially tedious. However, the advantages it provides in developing functional, age appropriate, integrative leisure skills for severely disabled learners far outweighs the disadvantages it presents to the professional.

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