A model for integrating severely handicapped children and youth is composed of five major components: (1) general integration (in which a needs assessment determines such aspects as visibility of the classroom, interaction with regular classroom staff, and school-home communication); (2) active integration (in which educational and social activities are systematically programmed); (3) prelanguage and language communication (which includes training of peer tutors and peer partners to use the student's prelanguage system, electronic devices, manual signs, or communication boards); (4) generalization of communication and social interaction (in which skills are generalized to nontraining environments); and (5) parent support and involvement. Five products of the model are being field tested and revised. (CL)
This issue of the newsletter describes the Integration for Severely Handicapped Children and Youth Project and was prepared by Kathleen Stremel-Campbell. Other project staff include Dr. William Moore, Nancy Johnson-Dorn, Judy Clark, and Jane Toews.

INTEGRATION FOR SEVERELY HANDICAPPED CHILDREN AND YOUTH

The right of an individual to a free appropriate public education in the least restrictive environment is the result of The Education for All Handicapped Children Act (P.L. 94-142, 1975). Increased numbers of students with severe handicaps are being educated in settings with their nonhandicapped peers due to the federal mandate and legal actions by advocates (Education of Handicapped Law Report, 1980-1982). Wilcox and Sailer (1980) stress that the major integration issues to be addressed by administrators, educators, and parents should not longer focus on "does integration work?" Instead, efforts should be directed to "how to make integration work." The purpose of integration is not simply the physical placement of the student with special needs in the public schools and community; rather, integration activities should result in regular and sustained interactions between nonhandicapped students and students with special needs (Taylor, 1982). There is a growing agreement among educators that positive interactions between nonhandicapped and handicapped students is important to the overall development and socialization of both groups even when the handicaps are so severe that integration into the regular classroom may be difficult (Rynders, Johnson, and Johnson, 1980). A number of studies (McHale and Simonsen, 1980; Voeltz, 1980; 1982) show that increased contact of nonhandicapped and severely handicapped students can influence the accepting attitudes of nonhandicapped students toward their handicapped peers. However, positive attitudes do not necessarily assure that increases in social interactions will occur. The work of a number of educators (Bricker, 1978; Fredericks, Baldwin, Grove,
Moore, Rigga, and Lyons; 1978; Guralnick, 1980; Hamre-Nietupski and Nietupski, 1981; and Stainback and Stainback, 1981) indicates that specialized arrangements of the environment and programming may be necessary if positive interactions are to occur.

Based on the review of the literature and preliminary project data, the Teaching Research Integration Project has formulated a number of major perspectives on which the integration model is based. These include:

1. Integration of Individuals with Severe Handicaps is a critical component of the student’s educational and functional living skills program.

2. Systematic planning must occur between the regular education staff, the administration, and the special education staff to assure that actual contact between handicapped students and their nonhandicapped classmates does occur.

3. Integration of severely handicapped individuals and nonhandicapped individuals must include more than physical proximity. If increased social interactions are to occur, active integration must be an ongoing process that includes systematic programming.

4. Active integration should encompass a “shared environment” concept that includes a three-way process of:
   - nonhandicapped students being engaged in activities in the special education classroom,
   - handicapped students being involved in activities typically engaged in by the nonhandicapped students (art, music, guide group, dances, assembly),
   - handicapped and nonhandicapped students interacting in noneducational environments (hallways, cafeteria, bussing, community activities and facilities).

5. The intent of active integration should emphasize the importance of the differences between individuals and build upon the commonalities of each individual.

6. The special education staff need to become actively involved in regular education activities. In addition special education administrators or a person responsible for integration activities need to be available to provide technical assistance.

7. The development of a communication system between the handicapped students and their nonhandicapped peers is critical if increased levels of social interaction are to occur.

8. There is a greater need for active integration and social interaction training with those students exhibiting more severely handicapping conditions.

9. Benefits to the handicapped peers can include learning new ways of communicating, accepting differences in others, and learning that persons with even severe handicaps can communicate.

The Teaching Research Integration Project for Severely Handicapped Children and Youth is funded (1981-1984) through Special Education Programs, Department of Education. \(^1\) The major goals of the three-year project are to develop, validate, demonstrate, and disseminate an innovative integration model for severely handicapped students, ages 0-21 years. The population addressed by the Integration Project are severely and profoundly handicapped children and youth who display the following characteristics: a) severe cognitive deficits; b) no functional expressive language skills; c) limited receptive language skills; and d) few functional social skills. Twenty-two students with severe handicaps currently are serving as the project’s participants. Preliminary project results and reports from other integration models (Taylor, 1982) suggest that it may be necessary for the teacher to have assistance from another person to share in inservice activities and to plan systematic integration activities.

The project has developed a General Integration Needs Assessment to assist the special education staff in determining overall integration objectives for any student within any public school environment. Since the level of support, attitudes, and cooperation for integration may vary dramatically across schools and even across students within the same school, it is necessary to pinpoint the problems and to develop objectives and strategies. The General Integration Needs Assessment serves as a tool to pinpoint areas in which integration could be improved. These major areas include: a) the visibility of the classroom and the accessibility of all school settings; b) the involvement and cooperation of the regular school staff; c) the special educator’s integration efforts; d) the appearance and social behavior displayed by the handicapped student; e) the interactions of the nonhandicapped students with the handicapped student; and f) school-home communication and cooperation.

Additional activities within the general integration component include the special education teacher’s...

\(^1\)The information presented herein does not necessarily reflect the views or policy of the Department of Education and no official endorsement should be inferred.
involvement in ongoing school activities and the level of integration in the cafeteria, hallways, gym, music, art, leisure settings or recess, assemblies, school events and special activities. The project has prepared a format to assist teachers in preparing different types of inservice activities in which the audience may be the school principal, regular education staff, specific support personnel, or the nonhandicapped students. Considerations in developing inservice activities include overall objectives, rationale and purpose, the target audience, the type of inservice format, the level of knowledge of the audience, the type of audio-visual materials to be used, the level of desired participation by the audience, and ways to evaluate the success of the inservice.

Active Integration

While the purpose of the general integration component is to increase positive attitudes and cooperative efforts and to facilitate opportunities for social interactions to occur, activities within the active integration component are systematically programmed to assure that positive social interactions between the nonhandicapped and handicapped students do occur and are maintained across time.

Two types of interaction programs are central to the model: a) educational interactions in which "peer tutors" are trained to conduct specific programs; and b) social interactions in which reciprocal nonlanguage, prelanguage, and language interactions are facilitated between "peer partners" and their handicapped friends. These two types of interactions require that the special education staff conduct different types of inservices and training programs with the nonhandicapped students.

The training format and techniques to increase the skills of the peer tutor are those described for the volunteer role in the Teaching Research Data Based Classroom. The peer tutors serve as volunteers and learn to deliver appropriate cues and consequences and to record the program data. In this program the peer tutors assume a teaching role and a supervisory position. While interactions do occur, they are not reciprocal in that the handicapped and nonhandicapped students do not exchange social roles. Often, the training activities do not provide opportunities for social interactions.

The development of the "peer partner" integration program has been a result of preliminary project data that demonstrated that even though nonhandicapped students had received inservice training and were paired with a handicapped peer during lunch or recess, interactions between the students were limited. In addition very few of the handicapped students' IEP objectives reflected that social interaction skills were being targeted. Therefore, a Social Interaction Placement Assessment has been developed to measure the social interaction skills and needs of the handicapped student. The assessment evaluates nonlanguage and language initiating and responding skills as well as inappropriate social skills that may interfere with social interactions. These data are used to develop individual IEP goals written by the parents and educational staff. Once IEP objectives are developed, interaction activities and peer partners are selected for the social interaction program. A worksheet is used to assist the teaching staff in selecting interaction activities that are age appropriate, of high interest to both the handicapped and nonhandicapped students and directed toward opportunities for interaction.

The project is currently developing a catalog of interaction activities geared toward different age groups and for different skill levels so that activities can be varied to maintain a high interest level. Nonhandicapped peers are recruited as a result of inservice training activities and by cooperative activities between the special education teacher and by regular education teachers. Older students may receive class credit for the peer tutor or peer partner activities. Students in the elementary and preschool classrooms may volunteer as a special activity. Each peer selected for interaction activities is within two years of age of the handicapped student. Parent consent forms may outline the interaction activities and the benefits to both the handicapped and handicapped are signed by parents before special integration activities are initiated.

Interactions between nonhandicapped students and students with severe handicaps may not become naturally reinforcing for the handicapped students without more specific and additional reinforcement. As part of the project's evaluation efforts, interaction data has been collected for a two year period across students in preschool, elementary, middle school and secondary classrooms. The interaction data include inappropriate interactions, observations, nonlanguage interactions (such as, cooperative activities, imitation, following directions, etc.), prelanguage 'interactions (any intentional communication behavior in which a formal language symbol is not used), and language interactions (any form of formal language, such as, cooperative activities, imitation, following directions, etc.).

Trainer cues and consequences that are delivered to facilitate interactions are also recorded. The effects of these cues and consequences on the interactions of nonhandicapped and handicapped students across the four levels of classrooms are presented in Figure 1. These data indicate that trainer cues and consequences for positive interactions serve to increase the interactions of the handicapped and nonhandicapped students. The data also show that almost no prelanguage or language responses were directed to the nonhandicapped peer partner by the handicapped student without teacher cues and consequences. These data were collected on severely and profoundly handicapped students and should not be generalized to mildly and moderately handicapped students.

A major component of the social interaction training is arranging a social interaction activity and providing cues and consequences to promote positive interactions. Social interaction guidelines have been developed by the project to assist the teacher or an interaction monitor to develop and conduct social interaction programs. A social interaction checklist is used by the interaction monitor to measure interactions and to modify the interaction training program if positive interactions and social skills are not increasing.

Prelanguage and Language Communication

Communication skills are basic to the success of the severely handicapped individual in integrated environments. Many individuals with severe and profound handicaps do not demonstrate the cognitive and early communication skills that may be necessary before a formal language system (such as speech, manual signs, or symbolic communication boards) can be taught. However, the lack of a formal language system does not mean that a student cannot communicate or cannot have a basic understanding of the communication of others.
Often programs attempt to teach an alternate language system, such as manual signs, to a severely handicapped student who does not display early communication behaviors and representational skills. A major emphasis of the communication component is the development of expressive and receptive prelanguage communication skills. Contingency awareness and prelanguage communication skills, such as, assisting a person, extending objects, eye gaze, pointing, showing, gesturing, and object representations are targeted prior to the selection of an augmentative language system. Once the student's prelanguage skills are trained, these communication skills are utilized to develop additional communication functions (requesting objects/attention, protest, answering, requesting attention, and greeting) and an augmentative language system.

A Communication Placement Assessment and Curriculum have been developed by the project. The assessment and curriculum are divided into seven major content areas, that include: a) responses to memory and social stimuli; b) interactions with objects; c) vocal development; d) receptive communication; e) expressive communication; f) language modalities (speech, manual signs, communication boards); and g) communication functions. The specific skills within each of these areas are written for both younger and older students. While many of the communication skills, such as extending objects, may be appropriate for both age groups, the specific objects used and the context of the activities may be quite different for the different age groups. Samples of content for both younger and older students are provided in the Communication Assessment and Curriculum. An IEP planning worksheet is used to outline each student's skills and needs within each of the communication content areas. These assessment results are given to the parent prior to the IEP conference so that the parents have information prior to the development of their child's IEP.

Not only is it important that the severely handicapped student have a prelanguage or language system with which to communicate to his/her nonhandicapped peers, it is also critical that the nonhandicapped peer utilize the student's communication system. The handicapped and nonhandicapped students must demonstrate a "shared communication system" if they are to increase their social interactions. Peer tutors and peer partners are trained to use the student's prelanguage system, electronic devices, manual signs, or communication boards so that communication between the peers can occur.

During the second year of the project, over 200 first and second graders have been trained in manual sign language. While not all, of these children are involved in integrated activities, these children are learning that persons can communicate in different ways. Benefits to the nonhandicapped children include learning a second language and utilizing the signs in reading programs.

Generalization of Communication and Social Interaction

It is important that handicapped students not only acquire communication and social skills, but that these skills generalize to nontraining environments. Therefore, a major emphasis of the project is to focus on the generalization of skills so that the objectives are not complete until generalization has occurred. Active generalization techniques (Stokes and Baer, 1977) are included within the communication curriculum and with the social interaction programs in order to
Facilitate the generalization of trained skills across new adult, peer, setting, and activities. Two observation systems have been developed to measure the acquisition and/or generalization of communication and social interaction skills within the natural environment. The Prelanguage and Language Communication Assessment System is used to measure different types of prelanguage skills, the use of speech and augmentative language systems, the frequency of responses and initiations, and the type of communication functions displayed by the student. Ten-minute observations are taken on a weekly basis to measure the student's use of communication across activities and persons involved in the initial training. These communication samples are also used to plan the content of a student's communication programs. The Social Interaction Observation System is used to measure the acquisition and generalization of social interaction skills in training and nontraining activities.

**Parent Support and Involvement**

Parent support and involvement in both the student's educational and community programs are necessary to increase the student's skills and to increase their child's participation in school and community activities. A Parent Resource Guide developed by the project, is used within the model so that parents become aware of the activities, facilities, and resources that are available to them. The Social Interaction Observation System is also used to plan for future educational and/or living environments, this information or the name of a contact person is given to the parent. Parents are encouraged to actively program communication in the home setting and to assist in providing program content so that the trained communication skills are functional in the nonschool environment. The project assists parents in developing leisure skills in the home environment, integrating their child into community activities and training siblings to increase their positive interactions with the handicapped child.

The products developed by the project are currently being field tested and revised. The following products will be available in January, 1984.

1. Prelanguage and Language Communication Assessment and Curriculum for Severely Handicapped Students

2. Integration of Severely Handicapped Students: An Administrator's Manual


5. Parent Resource Guide

Please contact Jane Toews at Teaching Research if you are interested in receiving more information regarding the products.

**References**


Hayward, N. and Nietupski, B. Involvement of severely handicapped students with regular public schools. Journal of the Association for the Severely Handicapped, 1981, 6, 30-39.


**Recent Publications by Staff**

Guide to a model work activity center. Teaching Research Publications, Monmouth, Oregon 97361, 1983. $10.00

Teaching Research assessment procedures for the secondary student with severe handicap. Teaching Research Publications, Monmouth, Oregon 97361, 1983. $10.00

The Teaching Research curriculum for handicapped adolescents and adults—Dressing, clothing care and selection. Teaching Research Publications, Monmouth, Oregon 97361, 1983. $20.00
MATERIALS CATALOG

Materials developed by the Teaching Research Staff:


Fredericks, et al. Toilet training the handicapped child, 4th edition. Instructional Development Corp., PO Box 361, Monmouth, Oregon 97361, 1981. $4.75

Campbell B., & Baldwin, V. (Eds.) Severely handicapped/hearing impaired students: Strengthening service delivery. Paul H. Brooks Publishing Co., PO Box 10624, Baltimore, Maryland 21204, 1981. $15.95

Maryann, C., & Stremel-Campbell, K. Communication Training Program (Levels 1, 2 and 3). Level 1 - prelanguage training; Level 2 - language program for early language training includes 67 objectives and 280 colored photo cards; Level 3 - language program for higher level syntax and language concepts includes 64 objectives and 292 colored photo cards. Teaching Resources Corp., 50 Pohd Park Road, Hingham, Mass. 02043.


Developmental charts to accompany self help and cognitive skills curriculum and gross and fine motor curriculum. Charles C. Thomas, Publisher, 301-327 East Lawrence Ave., Springfiel, Illinois, 1980. $3.50 each volume


RECOMMENDED READING

Edrington, Mewa. Friends. Instructional Development Corp., PO Box 361, Monmouth, Oregon 97361, 1979. $6.75

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