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ABSTRACT
              Described is Project TELEPAC, a
telecommunications-based system which provides instructional packets
to parents of severely handicapped children in rural areas of Utah.
In addition to the parent involvement packets which outline teaching
methods, correction procedures and behavior management practices for
arithmetic, language arts, self help and recreation/leisure time
skills, the TELEPAC model is said to offer a parent resource library,
multimedia collection, and resource directory for services in the
state. Toll-free telephone lines are explained to give the parent
direct access to a TELEPAC resource teacher. (CL)

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The TELEPAC Project:

A Service Delivery Model for the Severely Handicapped

In Rural Areas

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In Rural Areas

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A major problem encountered in attempts to provide services
to the severely handicapped child in rural areas is the lack of
specialized facilities. In urban areas, the population is often
sufficient to support a centralized facility which (1) provides
specialized personnel and services for the handicapped child, and
(2) provides resources and training to the educator not specifically
trained to meet the needs of the child with severe handicaps. The
problems of time and distance associated with rural areas make the cost
factor so high that centralized facilities have difficulty meeting the
day to day training needs of children living in sparsely populated areas.
The Utah State University TELEPAC Project is a service delivery model
which makes use of: (1) telecommunication technology, (2) parents as
a basic treatment resource, and (3) the technology of instructional
packaging.

A program which used telecommunications to make effective
use of the limited number of professional personnel available in
rural areas appeared to be one means of reducing the effects of

time and distance problems. Ghatala and Wedemeyer (1973) made
the following observation:

> Telecommunications, properly used, can be one of the most
> effective tools for distant teaching and learning yet
> employed. Educational communications offers a unique way
> to provide opportunities for learning to large numbers of
> spatially separated learners ... Appropriate application
> of media, technology, and communications to education is
> capable of individualizing, humanizing, personalizing, and
> optimizing instruction and learning. (p. 63)

A comparatively recent development in the field of instructional
technology is that of "package" development. Instructional "packages"
allow the developer to have an impact without being present. In Project
TELEPAC, the technology of package development is being used to advantage
in overcoming some of the problems associated with instruction in rural
areas.

Among the untapped manpower resources of rural areas are
the parents or other members of the child's family. A training
program which utilized local resource personnel (e.g. educators
and public health nurses) and parents and had a low initiation and
maintenance cost would be consistent with resources available in the
rural setting.

The TELEPAC Project is presently in the summative evaluation
phase. In developing and assessing the different components of the
service delivery model, the following factors were taken into consideration.

(1) Limited funds suitable for continuation after expiration
of development funds.

(2) Limited availability of professionals.

(3) Limited hardware servicing facilities.

(4) Relatively low level of development in curriculum
programming and validation for the severely handicapped
(the history of instructional technology is replete with
examples of ineffective instruction being mediated by
sophisticated hardware systems).

(5) Need for highly individualized approaches.

(6) Limited response capability of the severely handicapped
child.

(7) Limitations imposed by time and distance factors in
sparsely populated areas.

After reviewing a variety of telecommunications possibilities,
it was felt that the standard telephone system was the most appropriate
telecommunication system for rural areas.

Despite the availability of the telephone to the education
profession, Rao and Hicks (1972) note, "The educational enterprise
in North America, in spite of its heavy dependence upon the telephone
for administrative communications, does not seem to have realized the
potential of the telephone as an instructional communications device (ICD).
There have been few cases where the telephone was used as an ICD with
fruitful results, and its full potential has yet to be explored." (p. 18)

The Telephone and the Handicapped

A California telephone company offers a special service called

'"Teleclass." At the request of a parent, a "telephone teacher"
calls a handicapped or homebound youngster on the telephone at
a regular time each day. The teacher conducts a class over the
phone with one child or as many as 20 children simultaneously.
Equipment can be modified to accomodate youngsters with motor
disabilities. This service is available at monthly rates. One
school district using this telephone service is the Oakland
District, which developed the elementary Tele-Teaching Program
(Steele, 1969).

In Illinois, the telephone company is conducting a program
called "home to school" service. Selected classrooms have been
fitted with special portable telephones that are connected by
ordinary telephone lines to the home telephone of a handicapped
or bedridden child. A special microphone at the teacher's end
picks up all classroom discussion so the home student can hear
his classmates, as well as his teacher. Modified "talk-listen"
switches permit disabled youngsters to operate the equipment
(Lewis, 1971).

As one reviews the literature on the use of the telephone
with the handicapped, a clear and unfortunate pattern emerges -
the severely mentally and emotionally handicapped child has been
virtually totally ignored. School districts have screening techniques
designed to make sure that only chronically ill and physically handicapped
participate in the telephone related programs. The reason for exclusion
of the severely mentally and emotionally handicapped appears essentially

to be the same as used for segregating the less handicapped child attending school; namely, an attitude which states "you are not welcome if you are not able to fit in with the instructional processes that exist in the traditional classroom."

Parents and Remediation

There is a trend on the part of school programs to involve parents in strategies for changing the behaviors of their children. Lloyd (1965) described a program in the New York City schools which involved parents in teaching their children to read. One parent tutoring program's success in increasing children's reading skills led to its being extended to six public and seven parochial schools in the community (Pollack, 1969).

The emergence of behavior modification as a treatment technique, and the use of nonprofessionals, especially parents, has added a new dimension to the prevention and remediation of educational problems of students (Clement, 1971: Latham, 1971; Patterson & Cobb, 1972).

Efforts to train parents to alter the behavior of their own children in the home have led to the development of both intervention procedures and programs for training of nonprofessionals. Ray (1965) trained four mothers of atypical children (mentally retarded, autistic, etc.) to use techniques of behavior management. Similar techniques were used by Morrey (1970) in an attempt to increase parents' ability to manage children at home. He successfully trained parents to manage selected

behaviors of their mentally retarded children.

Smith and Brahce (1963) reported that parents can make positive changes in children's learning. The essential components of the program they described were parent meetings and getting parents to work with other parents. Their research indicated overall gains for the children of 5.4 months in reading during a five month treatment program. Children in the control group gained 2.7 months in reading during the same period. Luszki and Schmuck (1965) reported improved functioning in school and greater "self-esteem" for elementary school students who perceived their parents as being supportive of school activities. Their results indicated that parental support of school was more important in the elementary school years.

Most of the attempts to train parents to manage their children have required the presence of a professional leader. Within the last six years, several training texts have been published by professionals for parents. These publications were designed to train, or suggest methods to parents for better home management. The Krumboltz and Krumboltz (1972) text, Changing Children's Behavior, gives principles and actual examples on how to change inappropriate behavior. Illustrations are based on real happenings, such as "generating enthusiasm for school", "learning to enjoy reading", "improving mathematical skills", and many other management situations parents and educators are often confronted with. Patterson (1971) published a text Families. This text for parents and professionals is based on Patterson's research in the area of "social

learning technology". Becker's (1971) book Parents are Teachers
was designed to be used by either professionals in parent training
programs or independently by parents. The objective of Becker's
manual was to teach parents to use positive reinforcement systematically
in raising their children. Zifferblatt (1970) published a book to
guide parents in techniques of reinforcing the study behaviors of
their children and in scheduling study times. Patterson and Gullion
(1968) published a program text for parents. This text, Living With
Children, programmed techniques for parents to use in managing the
"problem" behaviors of their children. In 1966, Smith and Smith published
a self-instruction booklet with a discussion guide for parents.

Some of the most substantial efforts in the area of the
severely retarded have been those generated by a team of program
developers at Teaching Research, Monmouth, Oregon (Baldwin, Fredericks,
& Brodsky, 1973).

The above mentioned studies are representative of the more
recent attempts to train parents in the management of their children.
The most replicable programs appear concerned with decreasing inappropriate
social behaviors. Many of the studies included the heavy involvement of
professional personnel and resources outside that available to the rural
school district. A serious deficiency in several of the programs was
the lack of replicable skill oriented programs for parents of the
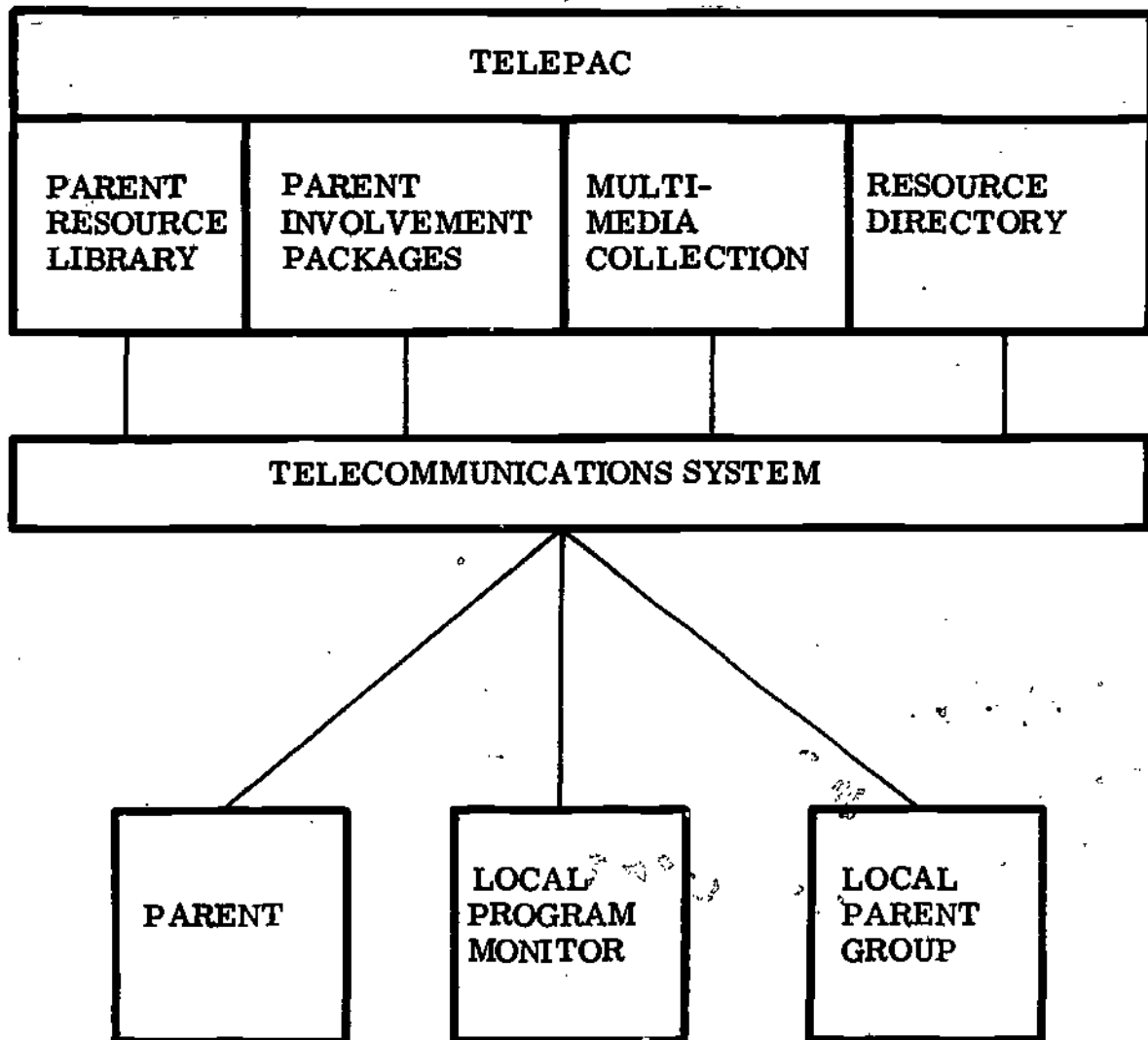severely handicapped child.

Project TELEPAC: Program Description

The basic components of Project TELEPAC are outlined in Figure 1.
TELEPAC has four components: (1) The Parent Resource Library, (2) e
Parent Involvement Packages, (3) The Multi-Media Collection, and
(4) The Resource Directory. These four components are provided to
the home, a local program monitor, and local parent groups through toll-
free telephone lines (telecommunications system).

TELE AC is the basic source of administrative and instructional
management. This project is located in the Exceptional Child Center
at Utah State University and serves as the base for program development
and validation as well as service. The Center is available to serve in
a demonstration capacity in the same way as it operates demonstration
programs in the treatment of the severely retarded, the hard of hearing,
and the emotionally disturbed. The following are the major divisions of
TELEPAC:

Parent Involvement Packages: The staff is responsible for the
development and dissemination of Parent Involvement Packages. Each
package provides the parent with a direct instructional procedure (scripted
format) for introducing and teaching an unmastered skill or concept to his
child. Correction procedures and techniques for providing practice in
the new skill or concept are also specified for the parent. Child
management procedures are tied directly to the teaching sequences via
suggestions for praising at specified points and suggestions for employing
token economies within the teaching sequence. Pre/posttest criterion
referenced tests and administration procedures for continuous progress

Figure 1

BASIC COMPONENTS OF
THE SERVICE DELIVERY SYSTEM

TELEPAC			
PARENT RESOURCE LIBRARY	PARENT INVOLVEMENT PACKAGES	MULTI-MEDIA COLLECTION	RESOURCE DIRECTORY

TELECOMMUNICATIONS SYSTEM

PARENT	LOCAL PROGRAM MONITOR	LOCAL PARENT GROUP

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monitoring add to the child management effectiveness. Parent Involvement
Packages have been written in the curriculum areas of arithmetic, language
arts, self-help skills, and recreation/leisure time. The curriculum was
not meant to be comprehensive, but is sufficient to provide validation
data on the service delivery model in both academic and self-help areas.

Parent Resource Library: Because the packaged curriculum is
not fully comprehensive, a set of books and pamphlets is used to
supplement the training needs of parents. The Parent Resource
Library consists of materials carefully screened and selected to
provide practical "how to" content.

Multi-Media Collection: Like the Parent Resource Library,
the Multi-Media Collection is designed to provide parents with a
training materials resource supplemental to the more specific Parent
Involvement Packages. The collection consists of slide/sound sets,
films, records, tapes, and supporting paper-pencil materials that
were selected because the content provides techniques for parents to
use in teaching their severely handicapped child. Materials from the
Multi-Media Collection are most often used in group settings, such as
part of the program for a local Association for Retarded Citizens
meeting.

The Resource Directory: Services for Handicapped Citizens in
the State of Utah: The Resource Directory is utilized by the project
staff to locate appropriate referral sources for parents of severely

handicapped children. Listed within the Resource Directory are consultant services in a wide variety of disciplines including medical services, religious counseling, recreation facilities, and respite care services. The directory is divided by county and cross-indexed for easy reference.

Telecommunications System: A Wide Area Telecommunications System (WATS) provides for a variety of interactions between the parent, TELEPAC Master Resource Teachers, a local program monitor (LPM) and a variety of consultant services. The utilization of standard telephones equipped with intercom speakers is consistent with the resources available in rural areas.

The Service Delivery Model: In order to achieve replication and a high level of exportability of the treatment processes, the components of the model emphasize the use of the Parent Involvement Packages. These packages provide for replicable administrative and training procedures at three levels: (1) the training of the handicapped child in the home, (2) the training of the parents, (3) the involvement of the local program monitor.

Training of Pupils: The training of the severely handicapped child is done by the parents or other member of the child's family. The curriculum and training procedures are presented and programmed by the Parent Involvement Packages. These packages are used in conjunction with school, day care, or sheltered workshop instruction where such placement is available.

Training of Parents: The training of the parents is also
accomplished by the Parent Involvement Packages.   Each parent
Involvement Package trains the parents in: (a) direct teaching
of selected skills, (b) supervision of practice of these skills,
and (c) monitoring of pupil progress in the skills.   Telephone conferences
between the parent and the TELEPAC staff are an important component
of both package development, evaluation, and ongoing service procedures.

Training of the Local Program Monitor: The Local Program Monitor
(LPM) is a local educator, health or social worker.   The LPM helps to
coordinate (a) the identification and screening of potential families,
(b) the notification and involvement of the parents, and (c) the liaison
with the TELEPAC Master Resource Teacher.   The LPM also receives information,
help and training from the staff.

Telecommunications. Interactions

The major thrust of the TELEPAC Project is the utilization of
the telephone as a vehicle for the use and evaluation of packaged
programs and other services.   The toll-free WATS lines provide the parent
with direct access to a resource teacher within TELEPAC.   The parent calls
the resource teacher, or the request for services is initiated by the LPM.

Many of the interactions between TELEPAC and the home are taken over
by the LPM.   Where possible, the staff attempts to encourage expertise,
independence, and resource development at the local level.

It is not possible for the TELEPAC staff to provide all the services that are requested by the parent or LPM. One such service is the facility to respond to a wide range of health related requests. In such cases, TELEPAC establishes access to appropriate consultant services.

It is felt that this project, with its emphasis on the present form of telecommunications and the development of exportable multi-media programs and Parent Involvement Packages will enable effective use to be made of more comprehensive and elaborate telecommunication systems in the future.

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