

**REPORT OF TELECOMMUNICATION
IN THE FIELD OF
SPECIAL EDUCATION**

**REPORTED TO
THE GOVERNOR
AND
GENERAL ASSEMBLY OF VIRGINIA**



HOUSE DOCUMENT NO. 7

**COMMONWEALTH OF VIRGINIA
Department of Purchases and Supply
Richmond
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COMMONWEALTH of VIRGINIA
STATE DEPARTMENT OF EDUCATION
RICHMOND, 23216

October 31, 1975

Honorable Mills E. Godwin
Governor
State Capitol
Richmond, Virginia 23219

Dear Governor Godwin:

Pursuant to requirements of House Joint Resolution 238 of February 7, 1975, the Department of Education in cooperation with a select statewide committee has reviewed the pertinent findings of The Center of Excellence, Inc., Williamsburg, Virginia regarding the practicality and effectiveness of the utilization of telecommunication in the field of Special Education.

This review, as outlined on the attached document, indicates the following broad areas of application:

1. direct instruction of certain handicapped children,
2. pre-service and in-service training of professional and paraprofessional personnel,
3. diagnostic and prescriptive services for handicapped children, and
4. information and guidance to parents of handicapped children.

Accordingly, the Department of Education is developing a proposal for submission to the U. S. Office of Education (Bureau of Education for the Handicapped) to test the effectiveness of telecommunication in these above referenced areas. Additional efforts are underway to coordinate such services for handicapped children in state and private facilities.

The technical feasibility of applying the findings of The Center of Excellence, Inc. is to be reviewed by the Virginia Telecommunication Council. This information will be provided by that agency in a companion report.

Sincerely,

W. E. Campbell
Superintendent of Public Instruction

WEC:pgd

Honorable Carter Lowance
George L. Hall
John A. Curtis

STATE DEPARTMENT OF EDUCATION
RICHMOND, VIRGINIA 23216

Report from the Department of Education - As Required by H.J.R. 238

The following report constitutes a response to the Governor and the General Assembly of the Commonwealth regarding the "practicality and effectiveness of the increased use of telecommunications in the field of special education."

It is submitted to comply with a directive of the General Assembly contained in House Joint Resolution 238 (Hs. Amendments - February 7, 1975).

I. Pertinent Background Data

House Joint Resolution 238 directed the Department of Education -

- a. "to review the pertinent findings of the Center of Excellence, Inc. (Centex) a non-profit educational research organization in Williamsburg, Virginia."
- b. "if the Department deems it advisable, to develop a pilot program in cooperation with the Center to determine the practicability and the effectiveness of the increased use of telecommunications in the field of Special Education."
- c. "to conclude its studies and submit a report to the Governor and General Assembly not later than November one, nineteen hundred and seventy-five."

II. Collaborative research conducted by Department of Education staff and the Center of Excellence focused on the following areas:

- a. the telecommunications needs of Special Education and those of educational programs and processes in general;
- b. the various types of telecommunications systems which would likely be most effective and at the same time economically meet the telecommunications needs of general education, and in particular, those that impact on programs of education for the handicapped.
- c. the operational and fiscal requirements of an educational telecommunications system operating in the 2,500 - 2,686 Mhz band (The so-called ITFS band was established by the

Federal Communications Commission for exclusive use by non-profit educational organizations. It contains twenty-eight 6-Mhz channels which can be used for one and two-way telecommunications services and, may be used for the transmission of one or more of the following: transfer-audio, video-audio-T.V., computer center-access-and retrieval, and "hard-copy" transmission, such as facsimile).

- d. possible Federal funding for a pilot, test installation to determine the real usefulness, operating requirements, and costs of an education telecommunications system, designed specifically to serve Special Education needs and operating in the ITFS band.

III. Department of Education Actions and Findings

Regarding the four research areas noted above, the Department of Education undertook the following action:

- a. Utilization of telecommunications for the education of handicapped children:

A statewide committee was appointed who reviewed material developed by a Special Education Advisory Board appointed by Centex two years ago. This Board had representation from both public and private sectors, including public school programs, teacher training and state institution programs for handicapped children. This Board considered some 52 possible uses of telecommunications as applicable to the Special Education Programs. Of this number, 16 were selected as those most likely to be most significant. These items along with other ideas were reviewed by the State Committee, who were subsequently reduced to the following broad areas:

1. "direct child use/i.e. teacher-learner interaction and instruction."
2. "utilization as a resource for two professional training components:
 - a. pre-service instruction
 - b. inservice/continuing education for practicing teachers, administrators and support services personnel, and
3. information and guidance to the parents and family members of Special Children."
- b. Various types of telecommunications systems most likely to be useful and economically practical:

The State-appointed Committee saw value in the proposals and findings offered by Centex in that if determined to be technically sound and feasible by the Virginia Public

Telecommunications Council, the Centex recommended ITFS Systems should be developed and field tested to determine if it would best meet the telecommunications needs of Special Education for these reasons:

1. The ITFS band sets aside twenty-eight 6-Mhz channels for non-profit educational use. There are, therefore, a sufficient number of channels to provide a simultaneous distribution for the varying age-level needs of identified handicapped students.
2. In a letter dated September 29, 1975, the Federal Communications Commission, Dr. Robert L. Hillard stated the following:

"Section 605 of the Communications Act of 1934, as amended (copy enclosed) would indicate that it is illegal to receive an ITFS signal without approval of the licensee.

However, Commission authority under this section for illegal reception remains untested. A deterrent to unauthorized home reception of ITFS programming is, of course, the cost of the downconverter necessary..."

Since both the Centex Advisory Board and the State-appointed Committee concur that circuit privacy is a basic "must" of any telecommunications system that would be utilized, it is important that ITFS circuits have the privacy protection of a communications circuit...and are not open to general use (reception) as in the instances of current commercial and non-commercial broadcasting program distribution.

3. The ITFS rules permit the band to be used for two-way, interactive communications (as well as for one-way communications). Thus, the ITFS spectrum and its associated F.C.C. rules make it possible to use ITFS circuits for diagnostic-prescriptive services and for student or staff inservice training and in the observation of clinical intrusion by trainees or those in practicum upgrading courses. The two-way, interactive capabilities of the ITFS band, plus its multi-channel capacity and legal privacy protection, give the proposed Centex system the capabilities considered essential to an effective Special Education telecommunications system by the State-appointed study committee.
- c. Operational and fiscal requirements of an ITFS system designed for use by Special Education services:
- Centex has estimated that the costs of a test system (engineering, equipment, installation, regulatory

requirement costs) with sufficient operating capability to determine the per-student cost effectiveness of its use, would range between \$200,000 and \$400,000, dependent on the type of services to be distributed. It has also been estimated that the annual operating costs for its projected systems would run between \$25,000 and \$35,000, dependent on system size and location.

d. Federal Funding:

Based on the above findings it was agreed that the Department of Education would initiate efforts to develop a proposal to seek funds from the U. S. Office of Education, Bureau of Education for the Handicapped to test the efficacy and economic feasibility of the above findings.

Accordingly in cooperation with the Department of Mental Health and Retardation and the Eastern Virginia Medical School, a proposal for the use of Federal funds has been developed and initiated by Centex with endorsement from the Division of Special Education that will test telecommunication applicability for education of the handicapped in another geographic area of the state. Subsequently, a proposal will be developed to include the school divisions located on the Middle Peninsula of Virginia which will be linked to the initial grant submitted by Centex.

If these grants are subsequently funded, it is anticipated that sufficient evidence can be obtained to determine the value of telecommunications in enhancing a total program of special education and related services to the handicapped children and adults in Virginia.

The Special Education Division of the Department of Education has, to-date fulfilled two of its three major assignments as directed under HJR 238 and is in the process of endeavoring to fill the third major component, namely "to develop a pilot program in cooperation with the Center for Excellence to determine the practicability and effectiveness of the increased use of telecommunications in the field of special education."

October 29, 1975

