

NS - Television

A Program for Educational Television

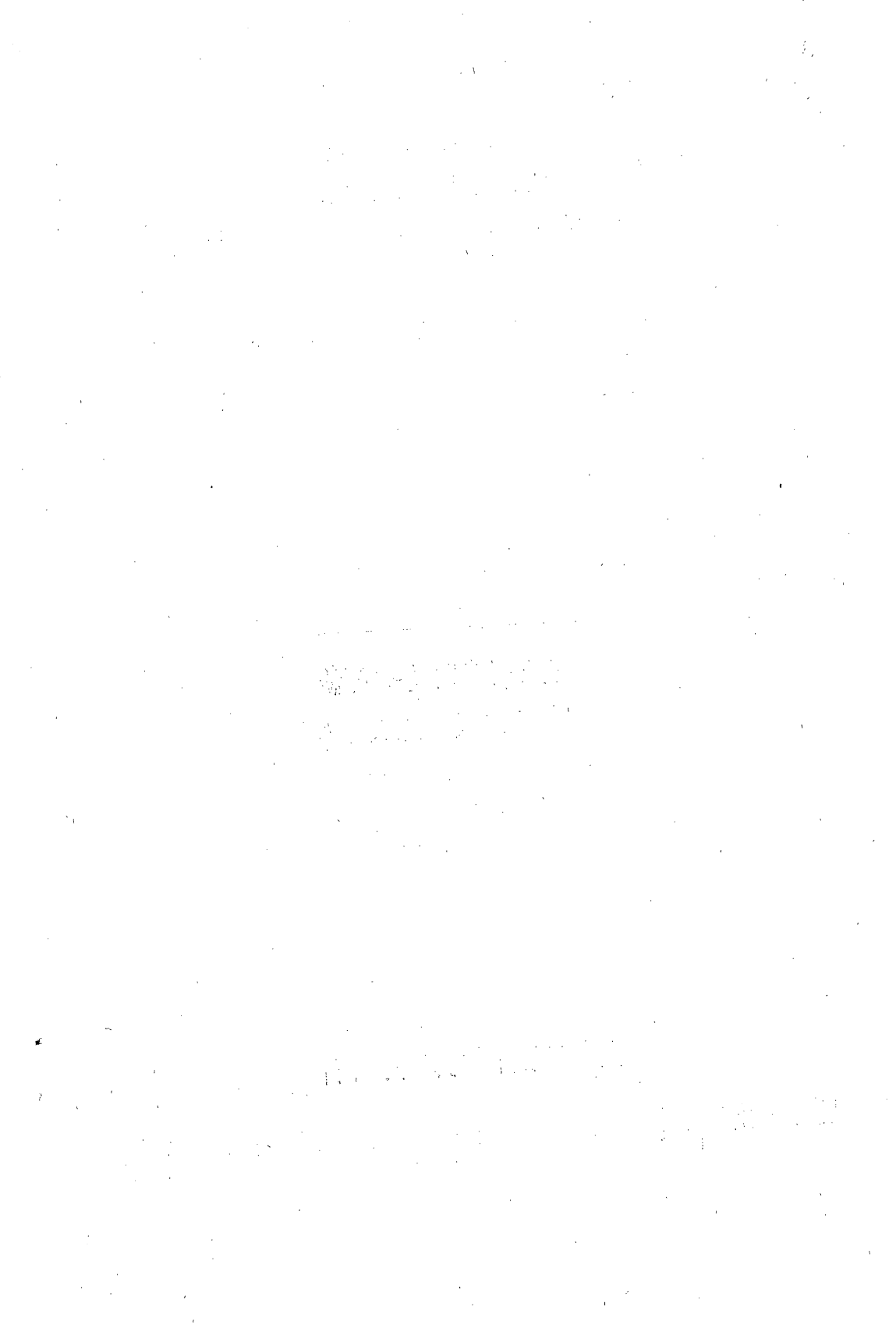
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IN NEW JERSEY

FIRST REPORT
March 12, 1953

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**THE NEW JERSEY COMMISSION ON
EDUCATIONAL TELEVISION**

Trenton, New Jersey



The New Jersey Commission on Educational Television

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- MR. CHARLES M. BURRILL, Research Engineer, RCA Laboratories Division, Radio Corporation of America.
- MR. WILLIAM H. KING, State Coordinator of Audio-Visual Education, Department of Education.
- MR. EDWARD C. RASP, JR., Assistant Coordinator of Audio-Visual Education, Department of Education, and Director of the New Brunswick Television Research Project.

Note: MR. KEETON ARNETT, General Assistant to the President, Allen B. DuMont Laboratories, Inc., has acted as Alternate to Dr. Allen B. DuMont.

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A PROGRAM FOR EDUCATIONAL TELEVISION IN NEW JERSEY

The Educational Value of Television

Television brings to education new vistas greater in promise than any technological advance since the invention of printing. To communication by the written or spoken word, television adds the practically instantaneous transmission of the visual scene and its accompanying sound. Its potentialities for bringing large quantities of information to large audiences are unrivaled. But education is more than the imparting of information, it requires the development of the proper atmosphere and motivation for learning. Television is outstandingly effective in this also. The fascination of television for Americans of all ages has amazed even television's most ardent advocates since the beginning of commercial television as a national service. No one doubts the ability of educational television to influence its viewers and mold their thinking. The problem is rather to control its very power and direct its application to ends which are positive, constructive and educational.

The cost of television seems formidable until one takes into account its remarkable capabilities for mass communication. When it brings vivid impressions to large numbers of avid viewers, it may indeed be one of the most inexpensive means for effective communication. Television is essentially a mass medium, yet its viewers need not all be gathered together in one place. Instead, television is usually viewed in small groups, to which it brings an intimacy and an immediacy providing an excellent atmosphere for

learning. Television magnifies the audience for a good teacher while retaining for each pupil the warmth and inspiration of his or her personality.

Television is not a medium which can reach its greatest effectiveness or economy simply by adding it to existing educational systems. Its complete use will doubtless ultimately involve changes in educational techniques and procedures. In the limited period that educational television has been a technical possibility, there has not been time to develop such changes, and therefore television has for the most part simply been added to current practices. It is natural, therefore, that educational television has had its most striking successes in fields and subjects which have not been extensively covered by well established classroom teaching methods. The field of adult education is an example. In the general cultural field and in the bringing of community resources and leaders to the school, television has clearly shown its outstanding possibilities.

The three R's have been taught effectively for a long time by current classroom methods. It is not so easy to see how to use television to do more than supplement such teaching. However, the educators with the most experience with television believe that there are possibilities which merit careful investigation. One approach is to use television for basic presentation to more pupils in order to free teachers' time for more aid and counsel to individual pupils.

It is easy to see that the provision of educational television facilities in the State of New Jersey could supply additional desirable educational services for the citizens of the state. Furthermore, it is believed that these services would be supplied in this way at less cost than by any other method. It is more difficult to see how the use of television might during its first period of operation reduce the cost of essential educational services. It might as well be faced, that until more experience is obtained with classroom television and necessary curriculum changes are developed, television will not reduce education costs. However, it is the conviction of those pioneers in educational television in New Jersey who have developed much of the available experience on the subject that further experimentation has excellent promise of developing educational television for increased efficiency and reduced cost. The Commission is taking as one of its objectives the encouragement of such experimentation. It will review and study means to bring about an understanding of how television may be utilized to provide more effective education at less cost per pupil.

The use of educational television in basic classroom education continues in the research or experimental stage.

Additional carefully planned and scientifically controlled classroom experimentation with television is needed. Such experimentation could not be carried out with complete effectiveness utilizing commercial television facilities because of difficulties of scheduling to suit both classrooms and commercial requirements, and heretofore there have been no noncommercial television stations available for the purpose.

Hence, the essence of this report is the recommendation that New Jersey continue to pioneer in educational television programming and that this research be broadened to include the establishment of an experimental non-commercial television station. With such a station, New Jersey's progress with educational television, so well begun, may be continued in an effective manner with excellent expectation of finding efficient and economical means of integrating television into the state's educational program. The members of the New Jersey Commission on Educational Television are convinced that this is a sound program of advance in education which should commend itself to the taxpayers of the state. Like any real research project, its outcome cannot be predicted in detail, but it can be said that the expectation of widespread benefits far outweighs the cost.

The Progress of Educational Television To Date

General

Educational television began with television itself. Many of the experimental programs developed in television field testing before the advent of commercial operations were designed to explore possibilities in education as well as in entertainment. From the beginning of commercial operation, television broadcasters have offered station time and programming facilities

to educational organizations without cost as a public service, and a number of programs of outstanding educational value have been offered under commercial sponsorship or on a sustaining basis.

WATV, until recently the only New Jersey commercial television station, has been noteworthy in its support of educational programming and New Jersey has also had the benefit of edu-

ational programs produced by commercial television stations in New York City and Philadelphia.

New Jersey State Teachers College, Montclair

In the fall of 1950, a program of educational television research and experimentation began at the New Jersey State Teachers College at Montclair with the establishment of a 24-member faculty committee on educational television. A bibliography on the subject was prepared. An undergraduate course entitled "Television in Education Workshop" was established at the College in the spring of 1951. With the help of 21 selected students enrolled in this course, closed-circuit experiments were conducted using television equipment loaned by cooperating industrial concerns. These concerns also aided in the training of College personnel in operating techniques.

The continued experimentation during the academic year 1951-1952 culminated in a full school day of classroom television in the public schools of Bloomfield and Montclair on April 30, 1952. Eight programs of lesson material were planned and produced by public school teachers for their own classes as part of their regular school work for the day. The programs were produced live at the Montclair State Teachers College and were transmitted by microwave to an experimental UHF television transmitter of the Allen B. DuMont Laboratories, Inc., which broadcasted them to thirteen public schools in the towns of Bloomfield and Montclair, including the high schools in both towns. Some three hundred pupils were in classes that were thus taught by television.

The College now is preparing to launch an expanded project with advanced objectives in the classroom use of television. The results of this project

will be available to this Commission as it continues its studies and as the project progresses.

State Department of Education Project at New Brunswick

In July 1952, shortly after the Federal Communications Commission had, as stated below on page 4, allocated 242 television channels to noncommercial educational use, the State Department of Education initiated a research project at New Brunswick, designed to develop methods, techniques and plans for the operation of an educational television station and to train a nucleus of operating personnel. The research at the Montclair State Teachers College provided the background for this work. A studio was established on the University Heights campus of Rutgers University, the State University of New Jersey, in a temporary building made available by the University.

With a full-time staff of five and with the help of students from the University, varied experiments have been conducted in educational television programming. This project, the only one of its kind in the country conducted by a state department of education, has been operated with the aim of having all program ideas originate with teachers or groups using the programs. Classroom utilization has been stressed although work has been done in general adult education. Suggested ideas are written and produced for television by the project staff, and at the same time a video recording is made for immediate evaluation and for future use on the air. Programming resources of the University and of many community, cultural and educational groups have been utilized. Most recently, an extended closed-circuit operation has been in progress making use of rented microwave facilities for interconnection with selected schools. A

regular schedule of classroom programs is being beamed to the public high schools and one elementary school in each of two communities, New Brunswick and Highland Park. Running concurrently for the first two weeks of this operation was a complete two-hour-a-day adult program, part of which was produced by Rutgers University, the State University of New Jersey. The adult series has ended but the classroom work will continue until certain evaluations have been made. The Educational Testing Service and

the Metropolitan School Study Council are cooperating with the Commission to develop improved methods for the scientific evaluation of these and other educational television experiments.

The Commission considers it of utmost importance that criteria be established and used in testing the effectiveness of the experimental programs. The Commission proposes to emphasize this evaluation procedure in the work of the research program on educational television programming at New Brunswick.

The Federal Communications Commission

Allocation Hearings

Following the presentation of extensive testimony before the Federal Communications Commission in the winter of 1950-1951, by educators, state officials and others, the FCC, in its final allocation report of April 14, 1952, reserved a total of 242 television channel allocations for noncommercial educational use (including six allocations requested by the State of New Jersey following a preliminary engineering study which indicated that six stations at specified locations would be needed to provide state-wide noncommercial educational television coverage). The FCC imposed the condition that the 242 channel allocations above mentioned would be reserved only until June 2, 1953, and that if applications were not filed for construction permits by that date, these channels might be reallocated for either commercial or other noncommercial purposes.

Construction Permit for New Jersey's First Educational Television Station

On July 28, 1952, Chester Robbins, Acting Commissioner of Education for the State of New Jersey, made formal

application to the FCC on behalf of the State Department of Education for a license for a station on one of the six channels reserved for New Jersey. This station was to operate on Channel 19 reserved for New Brunswick. The studio was to be located on the campus of Rutgers University, the State University of New Jersey. The Trustees of the University, in a resolution adopted June 8, 1951, had agreed to provide the necessary land. It was planned to locate the transmitter and antenna tower in an undeveloped area of Washington Rock State Park. Minor amendments to this application were filed to meet the FCC's requirements, and, on December 3, 1952, the FCC granted the application and issued a construction permit for the proposed station.

Activity in Other States

At the end of February 1953, 22 applications for construction permits for noncommercial educational television stations had been received by the FCC and 14 of these had been granted, including the grant to the New Jersey State Department of Education for the New Brunswick station. In addition, plans are under way for applications for

57 additional permits to apply against the total of 242 allocations reserved for noncommercial educational television use. Educational institutions have also applied for 8 commercial television channels and 4 of these applications

have been granted. Twenty-one states and the District of Columbia are involved in these educational television activities. The first educational television station is not likely to go on the air before April 1953.

New Jersey Commission on Educational Television

Objectives

In October 1952, while the application for New Jersey's educational television station at New Brunswick was pending before the FCC, the New Jersey Commission on Educational Television was appointed by Commissioner of Education Frederick M. Raubinger at the direction of Governor Alfred E. Driscoll. The Commission was asked by Governor Driscoll and Commissioner Raubinger to study:

1. The work done in the field of educational television to date as a part of the projects established in the State of New Jersey.
2. The work done by others in the field of educational television.
3. Appropriate methods of applying television for educational purposes in the State of New Jersey.
4. The means for handling and implementing such a program of educational television.

And further to recommend:

1. A program of educational television.
2. The means for implementing this program.

Investigations Conducted by the Commission

The studies of the Commission soon revealed that, although much had been said about educational television by educational groups, comparatively little had been done by them. There was much enthusiasm regarding the important potentialities of educational television, but very little was known from actual experience regarding the practical applications of television in education. Nearly all the experience which

had been obtained was in indirect or adult education and very little in classroom use. No experience had been obtained in the operation of an educational broadcast station, because the first such station is yet to go on the air. It is fortunate for New Jersey that much of this limited experience has been developed in this state in the pioneering research projects, already referred to, conducted by Montclair State Teachers College and by the State Department of Education on the campus of Rutgers University, the State University of New Jersey. It was apparent that an extensive study and considerable practical experience in on-the-air operation of an educational television station would be required before specific answers to many important questions regarding the establishment of a state-wide educational television system for New Jersey could be formulated.

Before the Commission could do more than make a start in such a long-range study, the grant by the FCC of a construction permit for an educational television station to be operated by the State Department of Education on the campus of Rutgers University, the State University of New Jersey, created an immediate need for basic decisions. This led the Commission to set aside temporarily its long-term program and to devote itself to the development of recommendations which would be of help in connection with these decisions.

The Commission heard reports from those active in educational television research and experimentation in New Jersey and familiarized itself with current

educational television developments in other states. It reviewed plans of the State Department of Education for further experimentation and for the establishment of the television station for which the construction permit was granted. With the assistance of the State Department of Education, it initiated a limited questionnaire survey of New Jersey public school administrators, presidents of boards of education, and mayors having responsibility for educational budgets regarding their attitudes toward the contemplated television programming.

Almost half of the school systems represented by the more than 600 school administrators responding already had one or more television receivers in school use. In about one fourth of these systems, television was being used as a part of regular teaching procedures. A large majority of the school administrators responding declared their support for the use of educational television. An overwhelming majority of the presidents of school boards and mayors responding likewise indicated their support of the plans. A number of the returns expressing doubt or dissent nevertheless were not opposed to educational television but rather questioned the effectiveness of particular programs.

Early in its deliberations, the Commission became convinced of the importance of continuing the research in educational television which the Department of Education was carrying on at New Brunswick in order to facilitate the finding of more definite answers to many important questions involved in planning a state-wide educational television service. This conclusion was transmitted to the Commissioner of Education in December 1952 in the form of a definite recommendation, and the Commissioner of Education assured the Commission that he would make every effort to see that funds would be made available to carry the project to

the end of the present fiscal year.

It is the conviction of the members of the Commission on Educational Television that the potentialities for the application of television in education are tremendous and should be developed expeditiously in the public interest. The FCC upon a voluminous record was convinced of this when it decided to reserve television channels for educational use. It does not seem necessary to say more on this point. The present issue is not whether television is needed in education but rather how it is to be applied, and when and where.

Doubt has been expressed that commercial television stations are as a practical matter to be depended upon to supply all educational television needs. On the other hand, the past contributions of commercial telecasters to education should not be overlooked or their possible future contributions ignored. It may be that the best future application of television to education will be provided by the coordinated use of both commercial and noncommercial facilities. However, the proper role of non-commercial educational stations cannot very well be determined without some experience with such stations.

The Commission therefore considers it important to the orderly and efficient development of educational television for one or more noncommercial educational television stations to go on the air as soon as practical. After three months of careful study of developments in New Jersey and elsewhere, the Commission believes that New Jersey has the necessary know-how and is well prepared to be one of the pioneering operators of such stations.

This Commission cannot come to the conclusion, as stated in the report of February 24, 1953, by the majority of the New York Temporary State Commission on the Use of Television for Educational Purposes, that the state should leave the development, construc-

tion and operation of educational television facilities at this time to others. This report by the New Jersey Commission on Educational Television clearly states that there are problems to solve, but here the Commission is convinced that the State of New Jersey has an obligation to conduct work and to take an active part in the establishment of the best practice for utilizing television in education. New Jersey has taken such an active part in educational television development in the past and is in a singularly favorable position to continue this pioneering. It has experienced personnel at work in television programming research. Plans have been

developed for expanding that program. These plans involve exploration of in-class and out-of-class educational programs for all ages. This expanded program should be carried out. The information and experience obtained will place this Commission in a position to recommend a complete program for the use of educational television, integrating into the plan the services of commercial stations and assistance from all groups in a position to contribute.

These are the facts and the experiences which will be needed by all groups in this country if television is to have its proper place in the educational process.

Findings and Conclusions of the Commission

Continuation of the New Brunswick Research Project

As has been mentioned on page 6, the first action taken by the Commission was to recommend the continuance of the New Brunswick television research project of the State Department of Education for the balance of the fiscal year 1952-53. This project was conceived not only to develop experience with closed-circuit educational television operations but also to provide an efficient transition to educational television broadcasting operation for the New Brunswick station. Both needs for the project will continue throughout the fiscal year 1953-54. Much remains to be learned about educational television programming, particularly with regard to in-class use. The Commission is firm in its conviction that this work is all important and should be continued on a somewhat expanded scale. It is upon the results of this program that a definitive plan for television in education will be based. The Commission believes that the legislature should be requested to appropriate funds to continue the re-

search in educational television programming at New Brunswick for the fiscal year 1953-54, in the amount of \$190,000, in accordance with the estimate prepared by the Department of Education (See Exhibit A attached).

Establishment of the New Brunswick Station

The Commission believes that the proposed New Brunswick noncommercial educational television broadcasting station should be established as planned, but initially as a continuation of the research program. As heretofore mentioned, Rutgers University, the State University of New Jersey, has agreed to provide land for the studio, presumably on its University Heights campus. Also, as above stated, present plans call for the location of the transmitter and antenna tower in an undeveloped area of Washington Rock State Park. An engineering study initiated by the Commission confirmed the earlier choice of this location as a particularly advantageous one because of its elevation on top of the Watchung Mountain range, provid-

ing line-of-sight coverage over a considerable area using a lower tower than otherwise would be required, at a considerable saving in cost. The use of this transmitter site is subject to the approval of the State Department of Conservation and Economic Development. The Commission urges that Department to approve this transmitter location as being in the best interests of all the citizens of this state. The location of the transmitter and antenna on undeveloped park property, with proper care in design and construction, should not detract from the appearance of the park or its usefulness.

Experimental Nature of the New Brunswick Operation

The Commission believes that the legislature should at this time be requested to appropriate funds in the amount of \$425,350 estimated by the Department of Education (See Exhibit B attached) to be necessary to construct a studio on the campus of Rutgers University, the State University of New Jersey (utilizing so far as possible buildings and facilities now available) with a 5-kilowatt transmitter and antenna at Washington Rock State Park, in accordance with the construction permit granted by the FCC. This experimental operation will permit orderly growth into a full-scale test of noncommercial educational television. On the basis of the experience thereby gained, plans can be made for state-wide coverage and use. When such plans are made, the need for additional facilities for the New Brunswick station will likely be indicated, such as a studio building and more extensive studio equipment.

It is estimated that the cost of operation of this station for the year beginning July 1, 1954 will be approximately \$194,000. While no appropriation is needed now since this is for the fiscal year beginning July 1, 1954, the estimate is included here as information on

the cost of operation for that year. This estimate of cost for the operation of the New Brunswick station includes provision for personnel and facilities to operate and maintain the studio and transmitter, and, in addition, a skeleton force to guide in the preparation of program material and program properties and to assist in program production.

Experience to date has shown that there is a wealth of program material to use in the experimentation, and that there are many who are anxious to cooperate in presenting this material. This situation will continue at least throughout the period of experimental operation. It may be that, for educational stations of the kind contemplated in this report, only a part of the programs will be produced by a central agency. Perhaps the larger portion will be prepared and produced in cooperation with local schools, school systems, educational groups and foundations, and individual educators. These programs would be a contribution of the originating group to the educational schedule.

Here again the research project of the State Department of Education at New Brunswick is one of the important sources of information and experience. The Commission will undertake as one of its objectives a study of matters of program sources, program costs and program scheduling in in-class, out-of-class, teacher training and adult education. This experience will then be available to guide in the establishment of a system of educational television for New Jersey.

Ownership of the New Brunswick Station

The ownership of the New Brunswick station by the State Department of Education, and its operation by that Department for the benefit of the educational activities and interests of the entire state, should be continued. The Commission's recommendation for ownership

and operation by the State Department of Education is limited to the developmental period while plans are being formulated for a state-wide educational television system. The Commission does not feel that it is in position to decide at this time regarding the ultimate organizational setup for the operation of the complete state-wide system.

Review of Program Content

The Commission is of the opinion that decisions regarding the character and content of programs for the proposed station and subsequent stations should be subject to check and review by a board of citizens representing broadly the various interests in this state concerned with education. They believe that such a check and review is important to prevent the misuse of the great power which the control of a television system provides and to insure the constructive operation of the stations to preserve the rights and advance the interests of all the citizens. For the developmental period, while plans are being formulated for a state-wide educational television system, this Commission is in position to provide this check and review as a part of its evaluation of the experimental operations. For the subsequent period of regular operation, the Commission has under consideration the advisability of recommending that the final authority for television programming policy and content be vested in a board of citizens established for the purpose. The Commission intends to continue its study of ways and means for providing suitable safeguards, and expects to submit recommendations on this point in a later report.

The Proposed Expenditures Viewed in Perspective

The State of New Jersey for the fiscal year 1952-53 appropriated almost fifty million dollars for educational purposes. The cost of continuing the re-

search on educational television programming at New Brunswick for the fiscal year 1953-54 and the cost of constructing the first stage of an educational television broadcasting station at New Brunswick, as herein recommended, total \$615,350, or a little over one per cent of the above mentioned state contribution to education. The Commission believes that the expenditure of such an amount is appropriate as assurance for the future that the potentialities of television will be available to the citizens of the state, that the New Jersey channel assignments will be continued by the FCC, that studies will unfold the best means to apply television in the areas of in-class school service and adult education, and that New Jersey will continue as a pioneer in this effort.

Extension of Time Needed To Develop Long-Range Plans

As heretofore mentioned, the non-commercial educational television channel allocations will be reserved until June 2, 1953, after which, if construction permits have not been applied for by educational interests, they may be reallocated to other uses. It is the opinion of this Commission that a reasonable time must elapse after the New Brunswick station has been constructed and is on the air before sufficient data will have been made available to make a recommendation respecting the remaining five channel allocations reserved for New Jersey. Accordingly the Commission recommends that the Governor and the Commissioner of Education petition the FCC to amend its rules to provide for an extension of time for a period of two years within which to apply for the New Jersey channels now reserved for noncommercial educational use, thus permitting ample interim experimentation and a thorough study of the means to accomplish the most efficient development of educational television in New Jersey.

Television Equipment in the Schools

As educational television programs become available, receiving equipment will be needed in the schools. It is the view of the Commission that it is the obligation of the Boards of Education to provide the television facilities which are needed in the various schools. The Commission is now in the initial stage of an investigation to develop a clearer understanding of what kinds of receiving apparatus are needed, under what environments and in what quantities. The research program on educational television programming will provide experience and information which can be translated into recommendations and apparatus specifications. In this area, the Commission will strive for evaluations for practical use by the school systems.

Planning for the Future

Television is still a new medium. Its peak of efficiency has yet to be reached even by the most experienced of commercial telecasters. Many specialized applications are almost wholly unexplored and undeveloped. There has not been sufficient time since the establishment of educational channels for the development of educational television experience to the point where the expenditure of public funds for state-wide educational television systems can be clearly justified. It is imperative that education have the time necessary to explore fully television's potential and to develop from experience, plans for its most effective use.

Not only must new educational techniques and methods be developed, but also new techniques, organization and practice for the cooperation of educational and governmental agencies. Joint or collective decisions will be required at many points. While the State Department of Education has taken the lead in New Jersey in the establishment of an

educational television system for the whole state, it must be recognized that the full effectiveness of educational television cannot be achieved in New Jersey on the basis of plans and decisions by the Department of Education alone. All decisions must take into account the needs and practical requirements of local public school systems, private schools, colleges and universities, and community, cultural and civic groups.

New Jersey's educational television channels are all in the ultra-high-frequency region of the spectrum, and in this region at the present time only one nonexperimental television station has been in operation for more than three months. The television equipment manufacturers have made extensive field tests of ultra-high-frequency television but predictions of coverage are not at the present time possible with a high degree of accuracy. Through the courtesy of the Allen B. DuMont Laboratories, Inc. and the Radio Corporation of America, the Commission has had available the advice of experts in the field of ultra-high-frequency television propagation in its consideration of possibilities for state-wide coverage.

Educational television, particularly television in the classroom, is a new and rapidly developing service. During the next year much will be learned about its practical use, in other states as well as in New Jersey. The problems of its most efficient application will not be all solved by any means when New Jersey's first educational television station goes on the air. In addition to day-to-day operation of that station, research and experimentation in the development of new applications and techniques should continue. The comprehensive study which this Commission has begun should also be continued. Another report should be prepared not more than a year from now reviewing progress and recommending more detailed plans for the future. Sometime during the year the question must be

faced whether or not to apply at that time to the FCC for additional educational television station licenses and to request the appropriation of funds for their construction. The ultimate plan for state-wide coverage should be kept in accord with the latest information and experience with ultra-high-frequency television propagation and educational television uses.

It is for the foregoing reasons that the Commission has recommended that future planning be initiated by it to take full advantage of the experience gained in the continuing research in television programming and in the construction and operation of the New Brunswick station, including the authorization of engineering and other surveys, so that this Commission will be possessed of adequate data upon which to make recommendations with respect to addi-

tional educational television stations to provide state-wide coverage. Further studies will include investigation of what this Commission now conceives to be a reasonable approach to state-wide coverage, viz.:

STAGE 1. Initial station with studio on the campus of Rutgers University, the State University of New Jersey, and with transmitter and antenna in Washington Rock State Park.

STAGE 2. Two additional stations:
(a) in the vicinity of Montclair,
(b) studio in the Camden area with transmitter and antenna in the vicinity of Mount Holly*

STAGE 3. Three additional stations:
(a) in the vicinity of Freehold,
(b) in the vicinity of Hammonton,
(c) in the vicinity of Andover.

* Involves possible modification of FCC channel assignment applicable to Camden area.

Recommendations

1. It is recommended that the legislature be requested to appropriate \$190,000 (in accordance with an estimate prepared by the Department of Education as set forth in Exhibit A attached) to continue research in educational television programming (the New Brunswick project) for the fiscal year July 1, 1953 to June 30, 1954.

2. It is recommended that the legislature be requested to appropriate \$425,350 (in accordance with an estimate prepared by the Department of Education as set forth in Exhibit B attached) to construct an educational television station:*

- (a) with a studio on the campus of Rutgers University, the State University of New Jersey, utilizing so far as possible buildings and facilities now available; and

* A construction permit for this station has already been granted by the FCC.

- (b) with a 5-kilowatt transmitter and antenna at Washington Rock State Park.

The experimental operation of this station will permit orderly growth into a full-scale test of noncommercial educational television. On the basis of the experience thereby gained, plans can be made for state-wide coverage and use. The present proposal includes only those techniques and facilities needed for experimental operation and defers for later action complete studio facilities, and the erection of a studio building.

3. It is recommended that the Governor and the Commissioner of Education petition the Federal Communications Commission to amend its rules to provide for an extension of time for a period of two years within which to apply for the New Jersey channels now reserved for noncommercial educational use, thus permitting ample interim experimentation and a thorough study of

the means to accomplish the most efficient development of educational television in New Jersey.

4. It is recommended that future planning be initiated promptly by this Commission to take full advantage of the experience gained in the construction and operation of the New Brunswick station, including the authorization of engineering and other surveys, so that this Commission will be possessed of adequate data upon which to make recommendations with respect to additional educational television stations to provide state-wide coverage. Further studies will include investigation of what this Commission now conceives to

be a reasonable approach to state-wide coverage, viz.:

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* Involves possible modification of FCC channel assignment applicable to Camden area.

Respectfully submitted,

NEW JERSEY COMMISSION ON
EDUCATIONAL TELEVISION

E. W. ENGSTROM, *Chairman*

MRS. A. HOBART ANDERSON
SAMUEL L. BODINE
ALLEN B. DUMONT
CHAS. W. HAMILTON

THOS. J. HILLERY
ROBERT B. MACDOUGALL
SAMPSON G. SMITH
H. W. VOORHEES

Supplementary Statements by Commissioners

BY SENATOR SAMUEL L. BODINE:

I have signed the report of the Commission but do so with the reservation that as a member of the Legislature, knowing that funds are not available at this time to support the recommendations that have been made, that my signature is predicated on the belief in the principle of continuing the research, but that I cannot approve the recommendation for all of the funds that have been requested for the coming fiscal year.

BY MR. HERBERT W. VOORHEES:

I have signed the First Report—"A Program for Educational Television in New Jersey,"—since I am in hearty support of the project to study through research the facilities of television in our state's educational system. With this reservation, however,—I cannot at this time recommend the expenditure of the entire sum of money suggested in this report because of needs of greater current importance already existing in our educational system. Until we find additional sources of state revenues on a broadened tax base, some of the important projects will of necessity be postponed.

BY MR. J. LINDSAY DE VALLIERE:

I am unable to sign the first report of the Educational Television Commission because as Chief Fiscal Officer of the State I know that the State's finances are such at this time that the Legislature would be unable to appropriate a sum in excess of \$600,000 in the next fiscal year without the imposition of new taxes. This statement applies not only to the educational project but also to any other project.

It is my belief that the Commission should continue its study for the next fiscal year so that they will be in a position to make a final report to the Legislature in 1954, at which time it may be possible that funds may be made available for not only the initial proposal but for an expanded program.

ESTIMATED COST OF OPERATION
Research in Educational Television Programming
(NEW BRUNSWICK PROJECT)

For the Fiscal Year 1953-1954

PERSONAL SERVICES

FULL TIME POSITIONS—PRODUCTION

Television Director, Program Manager, Program Assistants, and Clerk Stenographers. Station management will be directly under the TV Director, both program and technical operation. The Program Assistants will act as producer-directors, announcers, script writers, and contact personnel, and will be responsible to Program Manager \$ 52,000

FULL TIME POSITIONS—TECHNICAL

Administrative Engineer, Station Supervisor, Studio Engineers, Transmitter Engineers. This technical staff will be needed to operate an air station under limited conditions. Staff will be hired within this framework as equipment is made available 38,000

PART TIME POSITIONS

For assistance in program production, 10,000 student man-hours at \$1.00 an hour based on 8-hour day rehearsal and air time, 5 days a week, with a 5-man student crew 10,000

CONTRACTUAL SERVICES

This item includes all items for which services will be let on a contract basis such as staff travel expenses, electric power, telephone, rentals of various types, etc. Included also are two telephone remote facility items, \$2,500 and \$18,200. The first represents costs after the station remote-pickup equipment is delivered and the latter represents costs to continue closed circuit school operations until that time. \$13,000 has been included for TV Commission expenses and engineering consultants fees 54,000

SUPPLIES AND MATERIALS

This item includes basic supplies such as motor vehicle supplies, office supplies, postage, etc. Three major items are video recorder supplies, \$15,600; equipment tubes and parts, \$11,500; and program expenses, \$5,000. 36,000

TOTAL \$190,000

This estimate has been prepared to include the cost of operating the New Brunswick television broadcasting station until June 30, 1954, if it is constructed before that date. Certain items of cost will be modified depending on the availability of this station, but the total will be approximately the same in any case because the increased cost of technical staff in preparation for station operation will be offset by the elimination of closed-circuit interconnection costs when the station is on the air.

FEBRUARY 25, 1953

**ESTIMATED CONSTRUCTION COST
NEW BRUNSWICK EDUCATIONAL TELEVISION STATION**

Experimental Phase—Fiscal Year 1953-1954

This estimate covers the cost of the construction of an educational television station:

- (a) with a studio on the campus of Rutgers University, the State University of New Jersey utilizing so far as possible buildings and facilities now available; and
- (b) with a 5 kw transmitter and antenna at Washington Rock State Park.

BUILDINGS, ALTERATIONS AND EQUIPMENT

1. Transmitter building on Washington Rock site to be approximately 30 feet by 30 feet, with concrete floor. Single story, complete with utilities and power wiring	\$ 20,000
2. Alter existing buildings on Rutgers University campus so that two complete studios and necessary storage, office and technical areas will be available	50,000
3. Power line and poles to transmitter	5,000
4. Office equipment	600
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Buildings, Alterations and Equipment Total	\$ 75,600

TECHNICAL EQUIPMENT

The following items include installation material and necessary labor not provided by use of operating personnel.

1. 5 kw transmitter, high-gain antenna, 405-ft. guyed tower, transmission line, microwave studio-transmitter link	\$162,250
2. Audio and video studio equipment, studio lighting equipment, mobile pickup unit	165,000
3. Video Recorder \$31,000 less credit for \$8,500 rental	22,500
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Technical Equipment Total	349,750
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GRAND TOTAL	\$425,350

FEBRUARY 25, 1953

