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RESEARCH AND DEVELOPMENT

at

Morehead State
University

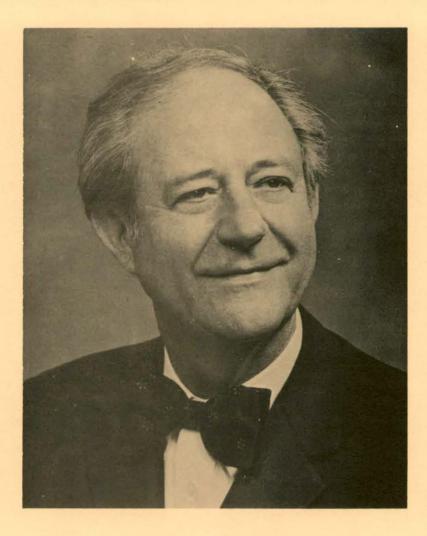
1965-1970



BUREAU FOR RESEARCH AND DEVELOPMENT
Morehead State University
Morehead, Kentucky

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Morehead State University, as a regional university, performs three basic functions. It has a broad undergraduate education program, a strong graduate program leading to the master's degree, and programs of preparation for existing and developing professions.

The research function of the University has grown as the institution has emerged from a state college to university status. Emphasis has been placed on applied research and development, attacking regional concerns in the effort to find solutions to the problems of the area.

Public service is considered a function of the University, which began as a service to the teaching profession and has been expanded to other areas as a need for public service in other areas of business and industry has arisen.

It is our intent to continue expanding our research programs by encouraging faculty members to become involved in the type of research which creates a learning situation for the professors in their disciplines. In sharing their research experiences with the students, we create a learning environment in the classroom which makes the teaching function paramount with research as a supportive function.

Adron Doran President



Research has developed very rapidly at Morehead State University; in fact, most of the development has been since 1964. This can be accounted for by the emerging of the institution from a college to a university, assuming much broader functions.

Efforts are made to achieve a balance between research and the teaching function; however, quality instruction is the primary goal. Research plays a supportive role to the teaching function and assists the University in achieving her short- and long-range goals.

Faculty members are encouraged to do research by the University through providing funds for faculty research grants, providing a Research and Development Center to assist them in securing outside support and permitting reassigned time for research activities on important problems.

Morris Norfleet Vice President Research and Development



EDUCATION BUILDING—The Education Building on the Morehead State University campus is the site of the University Research and Development complex. The complex includes staff offices, a library, conference rooms, a proposal development area and various satellite project centers.

INTRODUCTION

The University has engaged in many diverse areas of research and development since 1954. The range of research areas is varied from measuring the effects of atomic radiation on deciduous trees to evaluating the progress of preschool children.

Research opportunities are utilized by Morehead State University faculty members in other fields including psychology, geology, agriculture, prison reform, recreation, atomic energy, home economics, computerized educational systems, personal development, broadcasting, communications and scientific research.

Many research areas are challenged by Morehead faculty members in an effort to contribute to University and regional development.

RESEARCH AND DEVFLOPMENT CENTER: ROLE AND ACTIVITIES AT MOREHEAD STATE UNIVERSITY

From Cave Walls to Microfiche

Man has exhibited an unquenchable thirst for knowledge and discovery throughout the ages. The development of the wheel, the plow, and the discovery of fire gave mankind the basic tools to begin the pyramiding process of innovation. Man has explored the length and breadth of the globe, peeked into the far reaches of outer space, walked on the moon, and dipped into the murky depths of the sea.

Thirst for knowledge and discovery has been the motivating factor of man's invention and imagination. Man has recorded the results of his research on the cave wall in pictorial writing and today, in the concise form of microfiche.

Morehead State University exhibits a faculty interested in contributing to society. The probing questions of daily life have induced many faculty and staff members to delve into research studies. Research on the Morehead State University campus is in the latter embryonic stages of development. Interest in research studies is growing and the contributions to the University and Appalachia are being realized.

Research in a Changing University

Research has exerted a dynamic impact on the growth of Morehead State University since that day in 1922 when the General Assembly of Kentucky passed an act establishing Morehead State Normal School. From that early beginning, the school grew slowly through the transitions of Morehead State Normal School of 1922 and and Teachers College of 1926; to Morehead State College in 1948; and Morehead State University in 1966.

Through the years, the growth of the school was marked with a deliberate pace until the beginning of the boom initiated in the year 1954. Under the direction of Dr. Adron Doran, president, progress of the University has been underscored through research. Since the inauguration of the seventh president of the school, the physical plant has mushroomed and enrollment is nearly ten times greater than the 1954 student population.

The research function of the University has received increasing emphasis in the institutional development of Morehead State University. In 1964, Dr. Adron Doran appointed Dr. Morris Norfleet to be responsible for initiating an Office of Research and Development to serve the institution in a research capacity. Since inception, the research function has contributed significantly to the dynamic growth of Morehead State University. The Office of Research and Development became firmly entrenched as a contributing factor and resource of University planning.

FUNCTIONS OF THE RESEARCH AND DEVELOPMENT CENTER

The Research and Development Center has four basic functions, namely,

- (1) federal, state and regional relations;(2) institutional and faculty research;
- (3) planning and development, and
- (4) the human resources development center.

Federal, State, Regional Relations

Morehead State University, being state and federal assisted, has a philosophy which projects the need for close cooperative relationships with all local, state and federal agencies. This relationship may lead to special funded programs or to program development requiring no additional funds. The Research and Development Center serves in a liaison capacity for the University with those agencies for developmental purposes.

Institutional and Faculty Research

The growing complexity of university administration is a gigantic problem facing all institutions of higher education and their administrators. The need for data to assist in problem identification and selection for the most appropriate solution with alternative ways of solving the problem is of paramount importance to the university administration. It is the function of the Research and Development Center to develop a system of institutional research, as well as an information storage and retrieval system which provides an accurate base of data for decision making by the university administration.

Research is of utmost importance as one of the functions of the University, and providing the budgetary means for support of faculty research is an obligation the University must fulfill. The Research and Development Center encourages faculty participation in research by conducting workshops in research proposal writing, securing complete information on funding sources for research and assisting in administering the faculty research program.

Planning and Development

Short and long range development plans from a programmatic and physical viewpoint chart the course for any university. The plans for each school and each segment of the University are correlated into a program plan to meet the objectives of the University and its constituents. This plan becomes the basis for short and long range program and physical development plans.

Human Resources Development Center

The broader concept of training which has developed as a result of many of the programs in which the University has been involved has mandated an interdisciplinary approach to the needs of Eastern Kentucky. This concept of training is the primary purpose of the Human Resources Development.

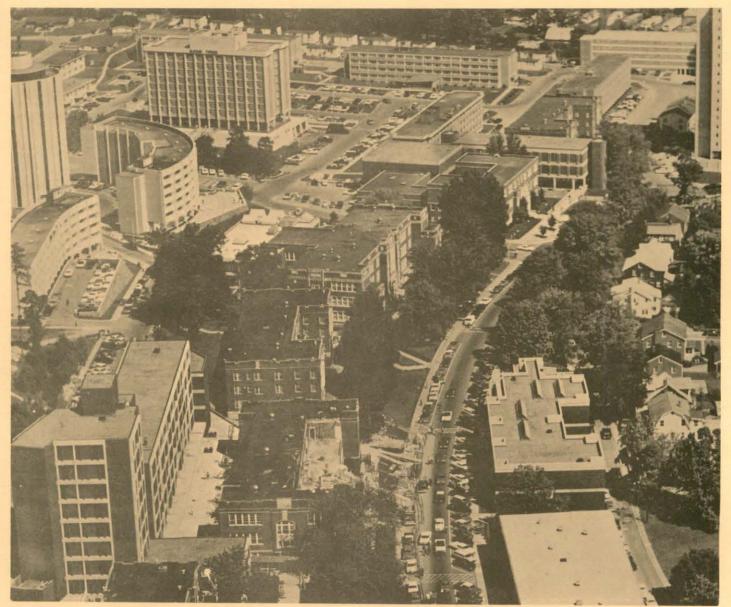
opment Center, accommodating a wide range of trained manpower needs in the human service area.

Latent talent, underachievers, culturally deprived, economically deprived, inadequate educational opportunities all of these challenge to motivate and utilize the vast potential of human resources.

The instigation of the Human Resources Development Center will move the University into prime position to serve the needs of the University and the region in developing institutes, inter-disciplinary in nature, which contribute to each discipline. Furthermore, this concept permits the University to respond more readily to serving the needs of the broad spectrum of federal and state agencies as well as private foundations dedicated to implementing new career training programs.

Responding to the need of developing human resources can best be illustrated by a specific function of the center in organizing and implementing a Personal Development Institute which will provide an opportunity to involve people in the development of their personal potentials beyond the regular classroom experiences. The Institute proposes to involve students who are participating in various University and community activities in a series of experiences designed to provide a facet of their total education not provided in the academic classroom setting.

Other functions which tend to be institutional in nature providing a university and regional service function for human resource development could become a component part of the Human Resources Development Center administered by the Vice President for Research and Development.



A TRANQUIL CAMPUS—A portion of the Morehead State University campus is pictured here in this aerial view. The school has grown ten-fold in the past sixteen years since Dr. Doran first came to Morehead in 1954.

APPALACHIAN ADULT BASIC EDUCATION DEMONSTRATION CENTER

A Demonstration and Developmental Research Project for Programs, Materials, Facilities and Educational Technology for Undereducated Adults

CATALYTIC AGENT

As a catalytic agent, the Appalachian Adult Basic Education Demonstration Center has provided leadership coordinating services in and among state departments of education, training programs, and consultant assistance to states and individual programs. The Center has demonstrated the capability of strengthening, stimulating, and energizing adult basic education for problem solving in the Appalachian counties of thirteen states.

The geographic area of special focus currently includes all or portions of Alabama, Georgia, Kentucky, Maryland, Mississippi, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Virginia, and West Virginia.

A regional leadership structure, including a regional advisory board, state advisory boards, and local advisory boards, has been developed at all levels to insure the satisfaction of and/or the framework to work toward the major objectives.

The Regional Board of Directors of the AABEDC recommends policies within the guidelines of "special projects" directives; they review and evaluate new proposals and project operational activities. The Board has representatives from each of the thirteen states with two members from each State Advisory Committee, including the state director of adult basic education.

State and local advisory committees generally average ten or more representatives of a cross-section of community and professional interests and organizations. These committees are currently functioning in twelve of the thirteen states of the Appalachian region.

All AABEDC activity and leadership units have been interrelated in a system which includes periodic meetings for training, the solution of common problems, and the creation of a spread effect based upon the findings and successes of each field unit activity and those of the AABEDC.

The AABEDC Professional Staff, under the direction of George Eyster, is one of the excellent adult education groups in the United States. The staff has been able to serve the interests of the national adult basic education program, having been selected for key leadership roles in national educational organizations and to serve the activities of the Center as highly qualified and experienced adult education professionals. The AABEDC professional staff has continuously served related agencies dealing with the needs of the culturally unique of Appalachia as resource persons and consultants in furthering the interest of ABE in Appalachia and in rural America.

Positions include specialists in research, evaluation, curriculum, learning labs and diagnosis, media, and teacher training.

DEMONSTRATION

Field Units of State Modules are those demonstration sites and projects in which innovative operational activities are being carried out or developed. Many function under local advisory committees, Currently, seven such field units are operational. Seven new projects are at various stages of planning and development. Two projects are completed; one project or module has changed its objectives radically and several of the seven current projects have modified or changed objectives as demonstration experience yields insight into the nature of ABE problems.

The expansion of the AABEDC can be noted in a review of AABEDC progress. This expansion is predicated on the identification of new areas of concern both in Appalachia and in the nation.

Seven State Module projects were continued in FY 69

Two State Module projects have been completed

The Appalachian counties of seven states of the United States were involved in the AABEDC in FY

Six new states were involved in FY '69:

New York

Pennsylvania

Maryland

North Carolina

South Carolina

Tennessee

Of the six new states, five submitted at least one proposal for demonstration or research development under the auspices of the AABEDC.

RESEARCH

The AABEDC staff has recognized the existence of many problems and potential research activities in ABE which do not lend themselves to study through demonstration procedures or single state module demonstration centers. To meet research needs, the AABEDC has initiated select research components of its program on a regional scale capitalizing upon the unique multi-state leadership structure and related Appalachian population.

The potential for effecting change in the efficiency and effectiveness of the national ABE program as a result of comprehensive study of select regional population has great implications. Examples of the fifteen research projects in progress or under consideration are:

- The relationship between anomie and a sense of control of one's environment and involvement in adult basic education.
- 2. The development and testing of life-centered math materials.
- 3. The relationship between isolation and illiteracy.
- The relationship between parental participation in ABE and the school achievement, attendance, and behavior of their children.
- A dialect study of the speech patterns in Appalachia to help recognize grammar, pronunciation and vocabulary differences for the purposes of teacher training in communication skills and the development of supplementary transitional materials.
- A study of the information-seeking behavior of illiterate adults in Appalachia.
- The relationship between learning rate and adult anxiety.
- Participation of adults in ABE and its impact on total family life in Appalachia.
- Goal formulation and achievement of Appalachian ABE clients and programs.

TRAINING

A regional "Appalachian Adult Basic Education Teacher-Training Workshop" was conducted in July and August, 1969, involving 111 people from 12 of the states. A regional and a state workshop were proposed for the summer of 1970. The regional workshop proposal is designed to develop state trainer teams in the diagnosis, sequence and alleviation of ABE reading difficulties.

Richard Malcolm, director of West Virginia module of AABEDC, demonstrates 3-M Reader-Printer. After reading microfilm or microfiche enlargements on the screen, student operator presses button and machine prints copy of screen image. This copy is seen emerging at the top.

A Masters Degree in Adult and Continuing Education has been developed by the AABEDC at Morehead State University to meet the broad needs of adult education peculiar to one-fifth of the United States — the Appalachian region. Arrangements have been made to provide in-service training for local ABE teachers.

PROPOSALS

The AABEDC will submit several project proposals to other agencies to extend capacities for training program development.

- 1. The Center will resubmit a second major proposal under the Education Teacher Leadership Development, entitled "Appalachian ABE Leadership Development" to provide adult education fellowships. (This proposal was not funded in this fiscal year.)
- The Center will resubmit a second major proposal under the Education Professions Development Act, Teacher Leadership Development, entitled "Appalachian Community Education Center for Community

- School, Life Long Learning Center, Administrators and Directors," to provide community and adult leadership. (This proposal also was not funded in this fiscal year. It should be noted, however, that EDPA funded a minimum of adult education proposals in FY 1969.)
- 3. The Center will resubmit a major proposal to the Mott Foundation for the development of a community school training center as support to the adult basic education project in the Appalachian region entitled: "Appalachian Community Education Regional Development Center."
- 4. A training program may be complemented by a "special project" in Region IV under the auspices of the Southern Regional Education Board entitled "The SREB Project in Adult Basic Education," since Kentucky became part of U.S.O.E. Region IV June 15, 1970.

Other proposals will be developed as the opportunity is presented in support of the AABEDC interests in ABE, Adult Education, and Continuing Education.



INVOLVEMENT AND PRIORITIES

The current level of involvement in the total program of the AABEDC is difficult to estimate. New projects and programs are under continuous development. Two new projects began January 5, 1970. Three additional projects began on February 2, 1970. Two of those involved twenty counties and at least as many classes. Most projects are multi-county and have been used for demonstration purposes in the immediate geographic area. The AABEDC counts as its primary objective and achievement the spread effect of its demonstration efforts in the states, region, and nation. In view of the always needed development of a professional team effort, the delineation of both the basic and the changing ABE needs of the region and nation, and the development of a viable framework through which to work toward these goals, the AABEDC was originally funded in the context of a five-year projection to June, 1972.

The AABEDC priorities in the forthcoming six months include:

- Development of new and support of continuing demonstration modules.
- Development, continuation, or completion of varying research activities.
- AABEDC data collection and evaluation for accountability to the field.
- Dissemination of AABEDC findings to the region and the nation.
- Graduate and undergraduate program development.
- AABEDC proposal negotiations for FY 70: Center and Teacher-Trainer.
- 7. Proposal development in related areas: EPDA, Mott Foundation,

SREB, Kettering Foundation, new federal legislation.

8. Required reports to the U.S. Office of Education.

National and association responsibilities.

AVERSIVE CONDITIONING AS A FUNCTION OF TIME OF DAY

"Aversive Conditioning as a Function of Time of Day" was the topic of a recent research study conducted by Dr. Francis Osborne of Morehead State University.

Osborne has long been interested in determining the effect time of day has upon individual performance. Five experiments were held under controlled conditions to measure performance using time of day as the variable.

"None of the experiments," according to Osborne, "provide significant evidence for the effect of time of day when taken alone and each leaves questions which can only be answered by empirical tests. However, as a group, they would seem to indicate that time of day does play an important role in learning in a stressful situation."

Osborne states that often correlations can be drawn between animal and human behavior. He suggests that quite possibly human behavior under stress is affected by the time of day factor. Since human beings are oriented to daylight hours, he concludes that human performance under stress in the evening hours may be less effective or avoided completely.

Based upon the research, it might be projected that students in a classroom situation might perform at different levels of achievement related to the time of day. An evening program of classroom instruction is possibly a poor time for learning to take place for most humans, according to Osborne.

The Osborne study has touched upon a field comparatively new to researchers and investigation. Osborne plans to continue these studies to learn more about time of day, stress, and learning.



RATS STUDIED—Dr. Francis Osborne recently completed a study of the relationships between stress and the time of day factor. Mrs. Osborne is pictured above as she prepares the apparatus for Osborne's experiments.

APPALACHIAN TECHNICAL INSTITUTE

The School of Applied Sciences and Technology of Morehead State University has developed a two-year technical institute to serve the needs of the Appalachian Region. The technical programs will be relevant to the needs of high school graduates interested in a program that blends technical and general education experiences. An Associate Degree will be granted upon completion of a prescribed program of studies.

The Technical Institute is a three million dollar project with the construction of the physical plant to be located on the campus of Morehead State University. Under the guidance of the School of Applied Sciences and Technology, consideration is being given to a proposed curricula that may encompass instrumentation technology, welding technology, highway engineering technology, computer technology, horticulture, nursing, dental assistance, and interior decoration. The curricula will represent the emerging occupations that are vital to the growth and well being of the Appalachian Region.

TECHNICIAN EMPLOYMENT SKYROCKETING

Employment requirements for technicians are expected to double in the next decade. The University is keeping pace with the continued economic expansion by providing this Technical Institute to help satisfy the demand for highly trained technical personnel.

The physical plant site for the Appalachian Technical Institute is an area adjacent to the School of Applied Sciences and Technology. The Technical Institute will provide students with a physical plant equipped with the most modern equipment available for technical instruction. The faculty and staff shall be carefully selected to provide a high quality of instruction to complement the physical facilities.

The funding for the project is a joint effort of Morehead State University and the Appalachian Regional Commission. The target area of the Technical Institute is the growing employment demand requiring technical skills. Unemployment is traditionally a problem in App achia but skilled jobs requiring technical training remain unfilled.

Morehead State University will provide a program for Appalachian students that will prepare them for a productive role in society through a formal preparation in technology.



An Artist's Rendering of the Appalachian Technical Institute



SIMPSON INSPECTS—Dr. William Simpson, Dean of the School of Sciences and Mathematics, inspects part of the apparatus used in the program entitled, "This Atomic World." The program is under the direction of Dr. Charles Payne, Chairman of the Division of Physical Sciences. Payne was instrumental in obtaining "This Atomic World" for Morehead State University.

THIS ATOMIC WORLD

How can nuclear energy be harnessed to furnish electric power for cities? How are radioisotopes used to aid in the diagnosis and treatment of diseases? How can radio-active particles be used to learn more about life processes?

Thousands of Kentucky high school students are afforded the opportunity to hear these and other peaceful uses of atomic energy discussed during their school year when the traveling exhibit, "This Atomic World," is brought to their school by Morehead State University.

"This Atomic World" is a lecturedemonstration program designed to present a realistic and vivid story of nuclear energy and its peaceful uses to students and teachers in the nation's high schools.

The University works cooperatively with the Oak Ridge Associated Universities, Oak Ridge, Tennessee, in presenting the exhibit in Kentucky.

DR. PAYNE HEADS PROGRAM

As ociated Universities, an organization made up of 41 southern universities, handles the nation-wide exhibits program for the Atomic Energy Commission. The Morehead program is under the direction of Dr. Charles A. Payne, chairman of the Division of Physical Sciences.

The exhibit is presented at 40-minute assembly programs in more than 150 Kentucky high schools each school year.

The instructor, who has traveled to Oak Ridge for eight weeks of intensified training in atomic energy and the presentation of the exhibit, also is available at each school for special counseling with interested students and guidance counselors.

The assembly program is designed to interest all students. It covers in student terms such physics highlights as radioactivity, chain reaction, reactors and their uses, transmutation, and the application of radioisotopes in medicine, industry and agriculture.

STUDENTS WILL PARTICIPATE

The students will participate in the science demonstrations. As a follow-up to the demonstrations, a more detailed discussion will be presented in the classroom. Aimed primarily at the students studying science, the topics discussed will include atomic structure, the nucleus, radiation biology, fission and fusion.

Specifically designed electronic equipment, including a radiation counter, a reactor model, a Van de Graaff generator and a number of electronically-activated panels will be used in the presentations to illustrate the explanations and comments of Terry Hoffman, the exhibit manager. Hoffman makes special presentations to biology and chemistry classes.



HALL RECEIVES CERTIFICATE — Don Holloway, Director of WMKY-FM and Adult Radio, presents a certificate of completion to Bethel Hall for successfully completing a course offered by the Lifetime Learning Corporation. Assisting Holloway is Miss Ione Chapman, librarian at Morehead State University.



Mrs. Mary King, one of the coordinators of Cabell County Adult Learning Center, working with a student on Craig Readers.



Former ABE student in West Virginia module of AABEDC, who got G.E.D. and passed diesel mechanics school, returns to Adult Learning Center at Huntington's Oley Junior High School to study Spanish by sound and sight, thus preparing for job in South America with an oil company.

CONTINUING EDUCATION THROUGH BROADCAST UTILIZATION

Mr. Donald Holloway, Director of the Institute of Public Broadcasting, included community research as a part of the development program of WMKY, the campus radio station. One of the first research developments in this area was entitled, "A Community Service and Continuing Education Project Through Broadcast Utilization." It was funded by Title I of the Higher Education Act of 1965. In addition,

the Peter Schweitzer Foundation contributed 50 radios to the program.

The project presented seven radio series produced by The Institute of Lifetime Learning, Long Beach, California. The research focused upon the change which the programs hoped to achieve in the lives of those who enrolled in the seven courses. The project, as well as the programs, was designed for elderly retired and handi-



DUNCAN TOURS WMKY-FM—Dr. Johnson Duncan, Dean of the School of Humanities, recently toured the facilities of WMKY-FM on the University campus. The radio station is conducting several community service projects, including the Adult Radio Program.

capped people. Individuals of all educational and socio-economic levels are encouraged to enroll. The seven series ranged in subjects from music, Shakespeare, psychology, biography, and history, to creative writing.

RESEARCH REVEALS RELEVANT DATA

Recruitment began by contacting's governmental, civic, and church groups to develop a list of potential enrollees. From fourteen group contacts, 172 potential enrollees were listed.

Another approach was to do a house-to-house survey. Three special field workers were provided the project for two weeks by the Northeast Area Development Council, Olive Hill, Kentucky. The field workers surveyed 220 homes. They found an additional 82 prospective students for the program. Out of the 220 homes surveyed, 203 had one or more television sets, 213 had AM radios and 124 had AM-FM radios. Of the 294 televisions, 163 were UHF, and were capable of receiving educational television channel No. 38, WKMR. One hundred eighteen homes are on the local community antenna system.

PROJECT GOALS ARE TWO-FOLD

The major emphasis was on determination of the extent the field worker's direct contact and the broadcast's indirect contact influenced the motivation of an adult to improve his cultural and educational goal. The behavioral change can be observed as the data from the in-depth interview before the series is compared with results of the interview after the series.

In both cases, the enrollees were asked about their cultural contacts: the papers, magazines, and books they read, the television programs they watch, the concerts and lectures they attend, and the radio programs to which they listen. The mere contact of the programs is a change in their lives... but will this change motivate others? The project was considered a success when 3% of the enrollees in Enjoyment of Music attended a live concert on the university campus and when 1% enrolled in a university class. Other examples of change are obvious.

Some effects of the project were (1) information about the prevalence of radio and television sets in the two communities, (2) an awareness of instruction via radio, (3) information concerning the needs of elderly people which may be alleviated in part via mass media, (4) an interchange among various Appalachian improvement groups, and (5) staff experience in providing such services to the public.

The success of the project was dependent upon the degree to which field workers and enrollees communicated needs. The future will depend upon the ability of the university radio service to design programs which can meet these needs.



HOWE VISITS—Harold Howe, former Commissioner of Education, visits the Computer Assisted Instruction Center on campus. He touted the CAI Program as one of the best in America.

COMPUTER ASSISTED INSTRUCTION (CAI)

Computer Assisted Instruction is a program to assist in the task of instruction and is not a complete instructional package. The drill and practice program in arithmetic currently utilized in Eastern Kentucky is designed to furnish the needed drill and practice on concepts in arithmetic after the teacher has developed the concepts in the classroom. It might rightly be called a sophisticated teaching aid.

The program is a Title III, ESEA, project administered by the Eastern Kentucky Educational Development Corporation (Paintsville Board of Education), the applicant agency for Title III projects in Region VII of Eastern Kentucky. Morehead State University originally coordinated and implemented the program.

The program comes to the Eastern Kentucky area via a long distance telephone line from the Institute for Mathematical Studies in the Social Sciences at Stanford University in Palo Alto, California.

The program is used in grades one through six in participating schools. A daily average of approximately forty students can be served by one teletype terminal.

STUDENTS COMMAND COMPUTERS

A student activates the terminal by typing his pre-assigned number and first name. The first lesson he receives on a concept is in the form of a pretest composed of problems of different levels of difficulty. According to his score on the pretest, he is branched into one of five levels of difficulty on the concept for his next lesson. If he scores between 60% and 85% on this lesson, his next lesson will be on the same level of difficulty. If he scores below 60%, his next lesson will be of less difficult problems; if he scores above 85%, his next lesson goes to more difficult problems. This continual adjustment of difficulty continues throughout a series of five lessons on the concept. His last, or seventh, day



STUDENTS COMMAND COMPUTERS—Students of University Breckinridge School participate in the Computer Assisted Instruction Program. The lessons emanate from Stanford University in Palo Alto, California.

on the concept is a post test composed of problems of the same level of difficulty as the pretest. Comparison of pretest and post-test scores gives some indication of the benefit derived from working the five drill and practice lessons.

Each day the teacher gets a print-out of each child's performance as well as the class as a whole. This gives the teacher information allowing the use of a diagnostic approach in teaching arithmetic. Since installation, this drill and practice program in arithmetic has been used with many different type groups. In addition to regular elementary classes, groups such as special education classes, adult education, and Upward Bound students have participated in the program. The results in each of these have been impressive. An additional study has been conducted to explore future possibilities of computerization in the Eastern Kentucky region.

TWO YEAR GEOLOGICAL STUDY OF COASTAL PLAIN OF NORTH AND SOUTH CAROLINA

A grant has been awarded to Morehead State University by the National Science Foundation to finance a two-year geological study of the North and South Carolina seaboard. Dr. Jules R. DuBar, Chairman of the Department of Geoscience at the University and a nationally recognized authority on the area to be studied, is directing the project. He is assisted by Harry Hoge, an instructor in geology at Morehead.

The purpose of the project is to determine as precisely as possible the land mass changes which have taken place over the past 10 to 20 million years along the inner coastal plain and to combine the results of the study with those obtained in detailed examinations already made of the adjacent outer coastal plain.

It is expected the knowledge gained will be useful in bringing about a more

meaningful correlation of prehistoric events along the Atlantic Coast from Long Island to South Florida.

A number of geologists across the country also are coordinating their studies on the coastal area and will contribute chapters to the DuBar-Oaks symposium. At present, these number 22, representing 15 universities, one private research institution, two industrial firms, two state and two federal agencies and four foreign countries.

The study involves the south flank of the Cape Fear Arch in North and South Carolina.

The area is bounded by the Lumber-Little Pee Dee River Valley on the southeast, by the Orangeburg Scarp on the northwest and by the north-westsoutheast trending lines passing near to Lumberton, North Carolina, on the northeast, and a few miles southwest of Florence, South Carolina, on the southwest.

LAND MASS STUDY WILL BE THOROUGH

The surface geology will be mapped, land mass changes studied, the nature and degree of weathering and erosion noted and all significant outcrops examined in detail. Surface mapping will be supplemented by detailed close-spaced cross sections and a regularly located grid of power auger and rotary drill holes from which samples of the earth's strata will be obtained. The holes to be drilled will number between 350 and 500.

Close-spaced drilling and sampling has proved to be the only firm basis for establishing a three-dimensional concept of stratal units and their relationships with topography.



OUTCROP STUDIED-Dr. Jules DuBar recently conducted a geological study of the terrain in parts of the Carolinas.

MOREHEAD STATE UNIVERSITY HEAD START PROGRAM



HEAD START-Dr. Mary Northcutt confers with a Head Start parent following a closed circuit television program produced on campus.

Morehead State University is currently providing technical assistance to 24 Head Start programs in 21 counties throughout the Eastern Kentucky region. Working in cooperation with the Office of Economic Opportunity, the programs are designed to enrich the backgrounds of culturally different children through a pre-school program.

The goal of the program is to provide experiences and concepts necessary for achievement in school. Many children express a timidity toward entrance into school based upon environmental experiences. Head Start provides a program of activities to overcome this fear by enabling the student to achieve success. Through the enrichment program, the child develops concepts necessary for achievement on a level more nearly equal to that of the peer group.

In addition to the regular Head Start programs throughout Eastern Kentucky, Rural Child Development Projects are operational in Elliott, Morgan, Floyd, and Magoffin counties. The Rural Child Development Projects are for three-and-a-half, four year olds, and five year olds. Teachers apply the same fundamental approach used in Head Start classes in individualizing instruction for first and second grade classes. The Follow Through Program of Floyd County is designed as a continuation of the Head Start philosophy for first and second grade students.

The curriculum is designed for a model kindergarten with emphasis upon concept assimilation and social stimulation. Demonstration lessons are provided by the University through the guidance of the Regional Training Officer, Miss Sue Stephenson. Teachers discuss and observe teaching techniques. Conversation, cleanliness, rhythm bands, motor skills, auditory discrimination, visual abilities, story time, field trips, and art projects are examples of the activities covered in a Head Start program for children.

The Head Start agenda is filled with various areas of responsibility to the Eastern Kentucky region. In addition to the workshops on the University campus, Miss Stephenson supervises the regional programs, arranges parent meetings, coordinates the consultation program, advises in the area of curriculum development and provides referral services unavailable in the community.

Morehead State University serves 21 counties through a summer program and five full-year projects. The system participating in the summer program includes: Robertson, Mason, Fleming, Lewis, Bath, Rowan, Elliott, Magoffin, Pikeville, Carter, Greenup, Boyd, Menifee, Morgan, Lawrence, Martin, and Floyd. The full-year participating programs include: Martin County, Paintsville, Bracken, Montgomery, Nicholas, Catlettsburg, Ashland, Fairview, Maysville, University Breckinridge School, and Johnson County.

TRAINING FOR HOME MANAGEMENT IMPROVEMENT

Case workers serving the deprived families of Eastern Kentucky attended an institute on the Morehead State University campus to study the needs of Appalachian families. Emphasis was placed on continuous training for ease workers. The institute was funded by Title I, Higher Education Act of 1965.

Under the direction of Miss Sallie Allen, the project trained case workers in techniques of teaching low-income families correct methods of household care, and budgeting. Two one-week workshops were held at the beginning of the project for the purpose of intensifying training for Kentucky case workers serving the region.

The goal of the in-service program for case workers was to teach the poverty stricken families of Eastern Kentucky personal hygiene, basic child



ALLEN DIRECTS HOME MANAGEMENT-Miss Sallie Allen, Director of the Home Management Program, works with participants at a recent conference at Morehead.

care, simple nutrition, housekeeping procedure, sanitation, and family

health. After receiving the training on campus, the case workers used the information gained during the in-service sessions to better serve the needs of the deprived families.

Morehead State University in cooperation with the Kentucky Department of Economic Security conducted inservice workshops throughout the project. A total of 16 workshop days was spent on campus over a nine-month period of time for each case worker. The workshops were directed by the School of Applied Sciences and Technology with the cooperation of the School of Social Studies. The project encompassed ten Eastern Kentucky counties, including Rowan, Lewis, Fleming, Robertson, Mason, Montgomery, Powell, Menifee, Bath and Nicholas.



ZEIMER FEATURED—Dr. Gregor Zeimer, Director of the Lifetime Learning Institute of Long Beach, California, was the keynote speaker for a conference held on campus studying problems of the aging. Dr. Morris L. Norfleet hosted the conference, which received statewide representation.

INSTITUTE ON THE AGING

An innovation for Kentucky – the Institute on the Aging – has been established on the Morehead State University campus to serve the needs of the elderly in 15 Eastern Kentucky counties. The program operates on a budget funded by the Older Americans

Act, Title III, awarded through the Kentucky Commission on the Aging.

The Institute is an outgrowth of the regional Conference on the Aging held at Morehead State University January 13, 1969, and serves to attack problems of the elderly through three phases of development.

The first phase was exploratory development. The staff of the Institute on the Aging contacted state and local agencies, business organizations, private foundations and similar interested parties to determine existing services available to older Eastern Kentuckians. This phase stressed the development of communications between the agency leaders and the Institute staff. The Institute on the Aging has readily available all information regarding services for the elderly in the areas of health, education and welfare.

During the second phase of operation, the Institute on the Aging will work with leaders in business, religion, civic life, government, education and the older citizens of the region to develop a plan for each of the three Area Development Districts. The planning stage will utilize a total community involvement as a practical method of development.

The third stage of operation began with implementation of new projects and services.

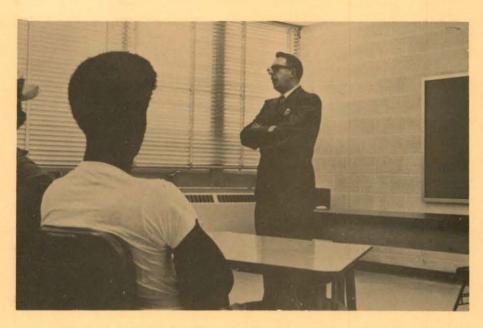
PROJECT NEWGATE

Morehead State University's Project Newgate is one of five federally funded demonstration projects in correctional education designed to provide an intensive college preparatory and college level educational program for a select number of federal prisoners confined at the Federal Youth Center in Ashland, Kentucky. The remaining four projects are located in Oregon, New Mexico, Pennsylvania, and Minnesota. Created initially as an extension of the Upward Bound Program, Project Newgate remains under the direction of the Office of Economic Opportunity.

The purpose of the Newgate Project is to determine the value of post high school education in the rehabilitative efforts of correctional institutions. Common sense would lead one to believe that education could produce nothing but positive results; however, many such common sense opinions have proven false when put to the empirical test. Therefore, it is the purpose of this project to determine whether the educational process is the key to developing confined individuals into useful contributing citizens or whether such a program merely provides a means for promoting and/or conditioning their pursuit of a criminal career.

The Newgate staff consists of a full-time director, assistant director, guidance counselor, college preparatory coordinator, field worker, and secretary. Several part-time student tutors were used throughout the year.

A total of 56 students was enrolled in the 1969 Newgate Program. Forty were selected for the summer term



INCARCERATED REHABILITATION—Project Newgate is operated at the Federal Youth Center in Ashland, Kentucky. Dr. Morris Norfleet directs a discussion session with young inmates planning to pursue a college education.

and the remaining 16 were added in the fall. A breakdown of the current status of these students as of December 31, 1969, reads: 19 in the college preparatory class; 14 in the institutional college program; 4 in the study release program; 7 released; and 12 removed from the program either by choice or action of the staff.

The Newgate Program consists of a summer (June 1 — August 15) and a fall (September 15 — December 19) session. Each session is designed to offer a variety of activities including college preparatory and college level instruction, a special program designed to improve communicative skills, a session on personal development, a number of special interest groups, numerous field

trips, and several lectures by outside resource figures. A special feature of the fall term was the study release program which allowed seven Newgaters to attend classes on the Ashland Community College campus.

Future plans call for a format designed to more effectively utilize abilities and talents of the Newgate staff. Key among the new innovations will be the introduction of a prep school curriculum to bridge the gap between the G.E.D. and college programs. This innovation, along with a number of others, has been a result of the many lessons learned throughout the first calendar year of operation. Future programming and design will continue to incorporate such knowledge.

OPERATION TALENT SEARCH



OPERATION SEEKS TALENTED YOUTH—A group of students from Louisville, Kentucky is pictured with Operation Talent Search Director, Frank Sandage, on a recent visit to campus. Operation Talent Search (OTS) seeks to identify creative youth and steer them toward productive lives through group and individual guidance programs.

Operation Talent Search is a program directed specifically to those of educational, social and economic deprivation whose need is acute and continuous. The main thrust of the program is to encourage students to finish high school and continue their education with additional training.

Under the direction of Frank Sandage, the project staff seeks to identify students who can be helped through counseling to realize today's opportunities. The program will work primarily on a person-to-person basis with young people in urban ghettos and depressed rural mountain areas.

Tutor counselors are employed by Talent Search to work with the iden-

tified high school student groups. The tutor counselors assist guidance counselors with field trips, record keeping and program planning. As products of economic and cultural deprivation, the tutor counselor is a model of the student who is succeeding in college with the help of a financial aid package.

Talent Search got underway by working cooperatively with high schools throughout Eastern Kentucky. During the first year of operation, students of 28 senior high schools visited college campuses, to review the opportunities for educational growth. Twelve hundred students were identified and received individual and group counseling from the Talent

Search staff. Currently, students have enrolled in 27 colleges and universities throughout Kentucky as a result of the project's efforts. More than 200 of the students are enrolled at Morehead State University.

Operation Talent Search (OTS) has also developed Opportunity Clubs, Discovery Committees, and Talent Clubs. The clubs are composed of identified needy talented youngsters. This program will assure efficient and regular group guidance to a number of needy talented students.

EFFECTS OF RADIATION ON DECIDUOUS TREE SEEDS AND SEEDLINGS

The increasing use of atomic energy for peaceful purposes is an area of growing concern for mankind. Morehead State University, in cooperation with the Atomic Energy Commission, is sponsoring a research project in the Biology Division of the School of Sciences and Mathematics in an attempt to determine the long range effects of radiation on tree species. Under the direction of Dr. Margaret B. Heaslip, the project is designed to determine effects of gamma rays and fast neutrons on tree seeds and seedlings.

The Atomic Energy Commission has selected Morehead State University to conduct this research because of its strategic location in the foothills of the Daniel Boone National Forest and the continuing interest of the science faculty in research.

Tree seeds are more resistant to both gamma and fast neutron radiation than higher animals, but there is great variation in radiosensitivity from species to species. Trees vary in radiosensitivity from species to species. Trees grown from irradiated seeds have been planted in permanent sites in the Daniel Boone Forest surrounding the University dam and at Oak Ridge, Tennessee by Dr. Heaslip. These trees are now bearing seeds that are being tested for relative radiosensitivity. The University has studied the radiosensitivity of various tree species, the underlying causes of the tree and seed radiosensitivity and the effects of seed irradiation on growth, reproduction, and following generations.



SPECTROSCOPY AND RADIATION—Dr. Margaret Heaslip uses infrared spectroscopy to determine the amount of radiation in the ash of deciduous trees exposed to radioactive materials. Assisting Dr. Heaslip in the project is Dr. Randy Falls.

NUCLEAR WASTE DISPOSAL METHODS ARE STUDIED

Nuclear wastes are now being disposed at Maxey Flats by Nuclear Engineering Incorporated about eight miles from Morehead. The Physics Department at Morehead State University and the directors of Nuclear Engineering, Incorporated have designed and constructed a radiation chamber that is available for various research projects. Dr. Randy Falls, Assistant Professor of Physics, began to assist Dr. Heaslip with this project in 1966. Walnut, ash, and white oak were irradiated while dormant in the fall of 1967, and when physiologically active in the spring of 1967. Ash was found to be the most radio-resistant of all the species tested. Dormant seedlings are more radio-resistant than active seedlings of each specie investigated.

The study found that radiation could be a population control mechanism for both flora and fauna.

The conifers exhibit greater radiosensitivity than deciduous trees. Three species of pine were thus planted over the nuclear waste disposal pits in November of 1966 as a biological check on the nuclear burial methods being employed in this area. The study will further evaluate the nuclear burial procedures being used today.

PROJECT SHEDS LIGHT ON RADIATION EFFECTS

Atomic research at the University will point to many answers that will facilitate mankind's understanding of the peaceful uses of atomic energy. Morehead State University, through the School of Sciences and Mathematics, hopes to increase the knowledge of radiation and its effect on man.

PERSONAL DEVELOPMENT INSTITUTE

"A Look at the First Year"

The Personal Development Institute has been established to encourage the development of character, morals, ethics and human development on the Morehead State University campus.

The Personal Development Institute has been under the direction of Mrs. Adron Doran since its inception on February 10, 1969, and the first experimental session was conducted on January 20, 1969. Mrs. Doran has traveled extensively studying innovative programming in the area of personal development before designing the Morehead project. During the first year of operation, Mignon Doran has attended conferences, conducted demonstrations and delivered speeches on personal development throughout Kentucky and cities outside the State, including Washington, D. C., Chicago and New York.

The First Lady has concentrated her efforts within the State of Kentucky and on the campus of Morehead State University. She has worked with many students including virtually every fraternity, sorority, and social club on campus. She has also traveled to Louisville, Ashland, Owingsville, Owensboro, Pippa Passes, Lexington and other communities in Kentucky to present Personal Development Institute workshops and programs.



THE DORANS CONGRATULATE—Dr. and Mrs. Adron Doran present a recent graduate of the Personal Development Institute. Mrs. Adron Doran has been director of the Institute since its inception in February of 1969.

MRS. DORAN WORKS WITH INCARCERATED YOUNG PEOPLE AT ASHLAND FEDERAL YOUTH CENTER

The Institute has delved into problems facing the community and our society. Mrs. Doran has inaugurated a pilot program to rehabilitate inmates at the Ashland Federal Youth Center in preparation for their return to productivity in society. The thrust of the personal development model at the Ashland Federal Center is to present a series of programs to prepare the young people for social acceptance in their respective communities. Recognizing the national crises associated with youth and crime in the United States,

the Ashland Federal Youth Center component of the Institute has been developed to be a model program that could be implemented on a nationwide basis. The programs presented at the prison are designed to meet the needs of the inmates, recognizing their dignity and potential contributions to society. The first year at the prison has been acclaimed by observers from education, penal institutions, the press, the community, state government and federal agencies as a unique breakthrough in

the dynamic rehabilitation of youthful inmates.

The Inmate Rehabilitation Program delivered by Mrs. Doran through PDI has presented the program to a total of 70 prisoners. Fifteen of these individuals are enrolled in a university or a college presently. These individuals are also competing on an above average level with other students.

Participation in the special PDI course is on a voluntary basis; the young inmates come on their own free

time. Enrollment figures indicate 29 graduated in the summer of 1969, 18 graduated in the fall of 1969, and 23 graduated in the spring of 1970. Mrs. Doran travels to Ashland each week to present PDI programs to the prisoners.

During the summer of 1969, PDI worked extensively with the Upward Bound project and the deprived youth of Appalachia. Beginning with morning sessions, the director and resource people met with the Upward Bound students daily, with evening meetings arranged for individuals wanting additional counsel. The goal of the director was to identify the unique needs of individuals participating in the Personal Development Institute and to provide programs to meet these needs. One of the high points of the Institute was working with the individual high school students. One of the participants in the Personal Development Institute, Belinda Eastham, was named Miss Upward Bound of Kentucky, the highest honor one can attain in the program.

The Personal Development Institute personnel are interested in helping others develop programs similar to the one established on the Morehead campus. Upon the invitation of interested groups, Mrs. Doran has traveled throughout Kentucky to assist others in originating development programs.

On the campus of Morehead State University, Mrs. Adron Doran has worked extensively for many years in development activities. Since coming to Morehead in 1954, the First Lady of Morehead has provided many activities and work sessions to strengthen the personal interaction skills of university students. She has instituted a program on campus entitled, "The Modern Mister" featuring the latest in fashion, etiquette and grooming for the modern man. A similar related program for the young lady was also launched by Mrs. Doran entitled, "The Multi-faceted

Female," through the Personal Development Institute. PDI not only provides the personal services of the director, but incorporates in the program talents of university personnel, community leaders and speakers from state and national levels. Several volumes of material have been written by the director based upon personal development in the form of potpourri. This material is on subjects ranging from stage fright to the job interview, from common courtesies to jogging, from the successful woman to a guide to pronunciation. The group sessions are designed to give each student the opportunity to fully participate and express his views.

The classes are best evaluated by student reaction — far more students have applied for admission than can be readily accepted. However, all student applicants seriously desiring entrance in the Personal Development Institute have been accepted.



PDI SOCIAL WORKERS INSTITUTE—Mrs. Adron Doran, Director of the Personal Development Institute, is shown with a group of social workers attending Personal Development classes.

Morehead State University received a grant from the Office of Economic Security of Kentucky to expand academic offerings in the field of social work.

The present offerings, coupled with added courses, enabled Morehead State University to provide a comprehensive undergraduate program of study. "The University is seeking to provide a con-

EXPANSION IS EVIDENT IN THE FIELD OF SOCIAL WORK

tinuous plan of expansion in the academic area of social work," said Dr. Adron Doran, the president.

Under the direction of Dr. Roscoe Playforth, Dean of the School of Social Sciences, the grant was used to employ additional instructional personnel and broaden resources. Expanded academic offerings included Public Welfare Administration, Social Case Work, Child Welfare Services, Community

Organizations, Field of Social Work, Orientation and Practicum in Social Work.

The program was developed and initiated by Dean Roscoe Playforth of the University. According to Dean Playforth, "It is the goal of Morehead State University to graduate social workers capable of contributing to the needs of the State and particularly Eastern Kentucky."



FIRST DEGREE—Dr. Roscoe Playforth, Dean of the School of Social Sciences, awards the first certificate to Miss Nettie Miller in the field of school social workers.

PROJECT UPWARD BOUND

TEACHING IS A TEAM EFFORT

The teaching staff of Upward Bound is comprised of two-thirds secondary teachers and one-third University staff. The University staff participants are drawn from the five academic schools involved in Upward Bound; secondary teachers are drawn from the secondary school systems from which students are selected.

University students serve as tutorcounselors. They live in the dormitories with the Upward Bound students during the summer program.

The summer program begins in the middle of June and runs through early August. During this time, students attend classes in English, speech, social studies, fine arts, applied sciences and technology, physical education, math and science.

FIELD TRIPS ENRICH EXPERIENCES

In conjunction with in-class academics, several field trips are taken to provide the students with a wide range of experiences for cultural and social enrichment as well as the academics. During the academic year, the students return to the University campus each month for a program of academics and entertainment.



UPWARD BOUND PROJECT—Members of Upward Bound work on various projects during the summer program.

Upward Bound is a pre-college preparatory program designed to generate the skills and motivation necessary for success in education beyond high school among young people from low-income backgrounds and inadequate secondary school preparation. Under the direction of Ben Tackett, it acts to remedy poor academic preparation and motivation in secondary school, thereby increasing the student's chances for acceptance and success in a college environment. Upward Bound is supported by the U.S. Office of Education in Washington, D. C.

For the past three summers Project Upward Bound at Morehead State University has involved 100 high school students. These students were selected from the following eleven counties in Eastern Kentucky: Bath, Boyd, Elliott, Carter, Greenup, Fleming, Johnson, Magoffin, Mason, Morgan, and Rowan.



UPWARD BOUND BANQUET—The Upward Bound Project recently conducted a conference and orientation banquet. The program featured a welcome by Dr. Morris L. Norfleet and presentation of Miss Upward Bound of Kentucky, Belinda Estep.

VOCATIONAL TRAINING STRESSED

The students are presented with a wide range of programs exposing them to the many opportunities in industry. Opportunities for vocational education are stressed to give the students not interested in attending college an opportunity to see different areas available for them to pursue.

MOREHEAD STATE UNIVERSITY

Morehead State University, located in the city of Morehead, Kentucky is a state supported university encompassing a 455-acre campus.

Dr. Adron Doran is the seventh president of Morehead State University, coming to the school in the year 1954. Dr. Doran has served on the President's Commission on Higher Education, was named "Kentuckian of the Year" in 1959, and served as a former Speaker of the House of Representatives in the State of Kentucky.

Facilities include more than fifty major structures on campus, including a regulation nine-hole golf course and scenic lake.

University Schools include – Applied Sciences and Technology Dr. Charles F. Ward, Dean Business and Economics
Dr. Thomas C. Morrison, Dean
School of Education
Dr. James Powell, Dean
School of Humanities
Dr. Johnson Duncan, Dean
School of Sciences and Mathematics
Dr. William C. Simpson, Dean

School of Social Sciences

Dr. Roscoe Playforth, Dean

Degrees offered include —
Bachelor of Business Administration
Bachelor of Arts
Bachelor of Science
Master of Arts
Master of Science
Master of Music
Master of Higher Education
Master of Arts in Education
Associate of Applied Sciences
Bachelor of Music
Bachelor of Music Education
Master of Business Education

Master of Music Education Master of Adult and Continuing Education

Student body has more than 6,500 students from 40 states and several foreign countries.

The faculty numbers more than 300.

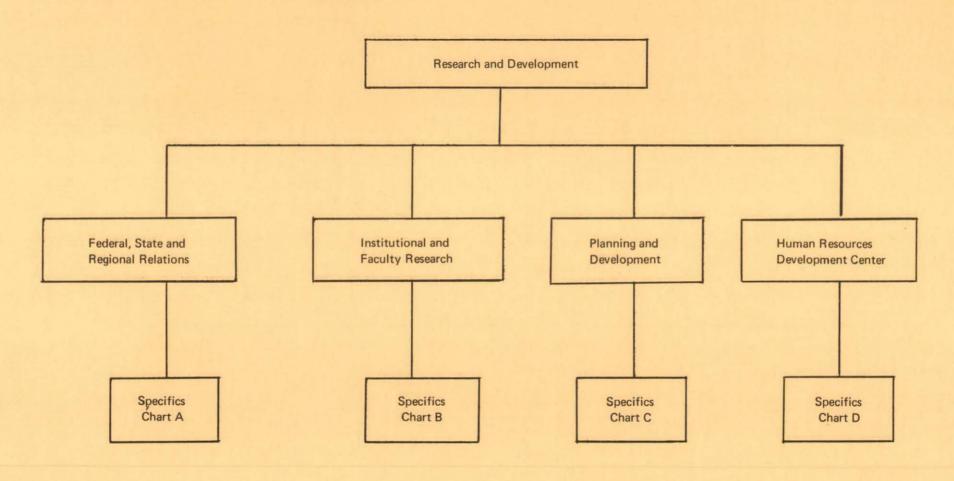
Accreditation has been extended to Morchead State University by the Southern Association of Colleges and Universities, the National Council for Accreditation of Teachers, and the National Association of Schools of Music.

The University seal bears the symbolic representation of a book, a torch and a quill. In the foreground a clasped handshake extends the hospitality of the University; the book symbolizes an opportunity for the quest for knowledge; the torch lights the path of the student; the quill represents the instrument for recording student learning.

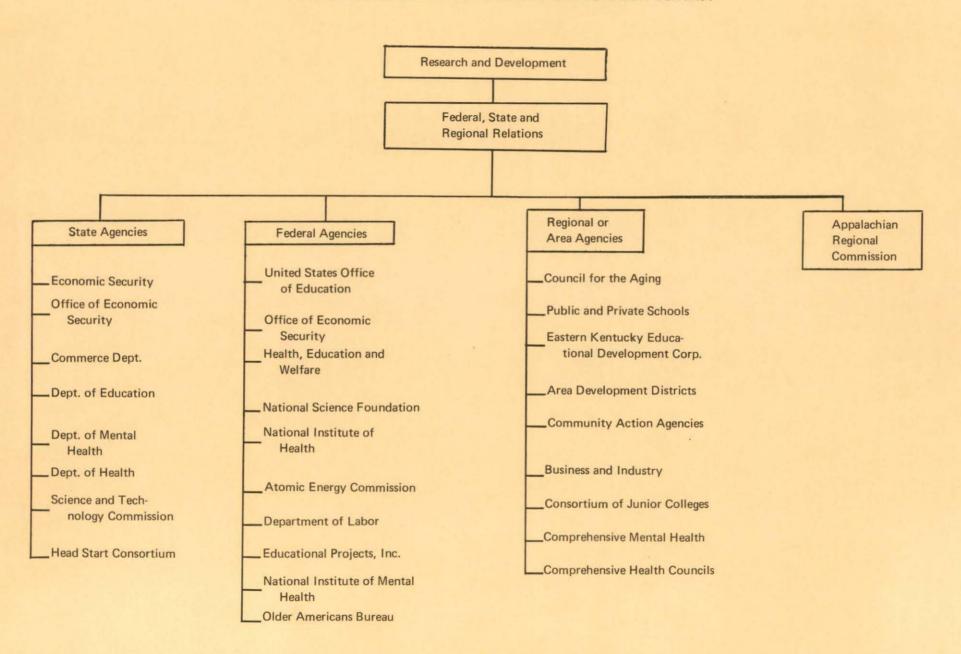


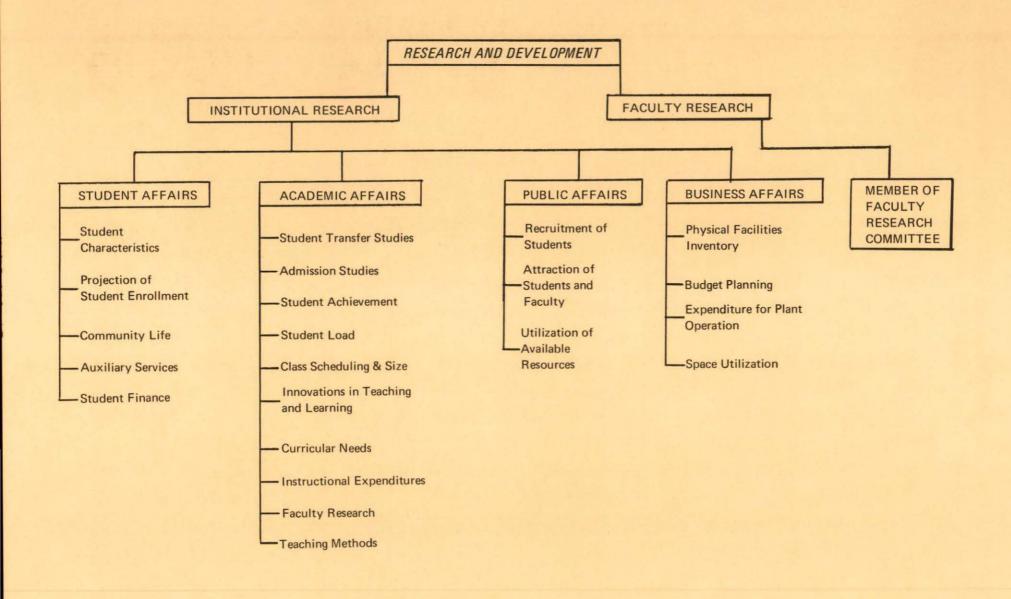
POWELL OBSERVES MICRO-TEACHING—Dr. James Powell, Dean of the School of Education, is shown part of the micro-teaching equipment used by Mrs. Elaine Kirk in the student teaching program.

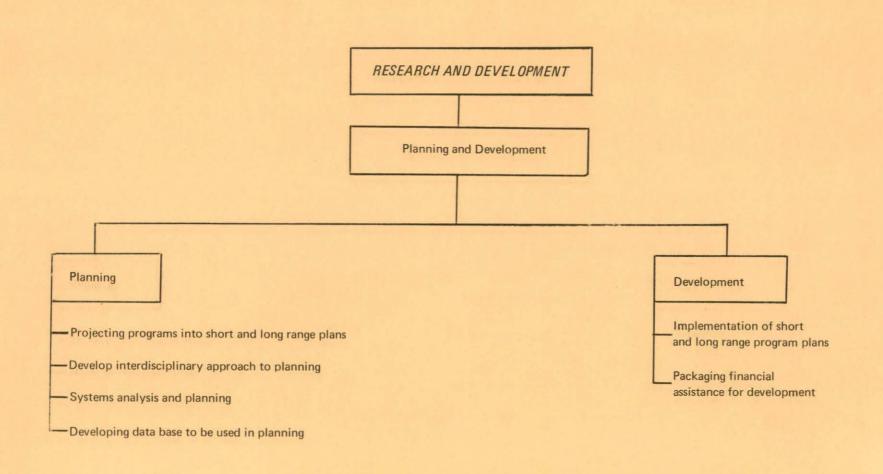
THE RESEARCH AND DEVELOPMENT CENTER ORGANIZATION

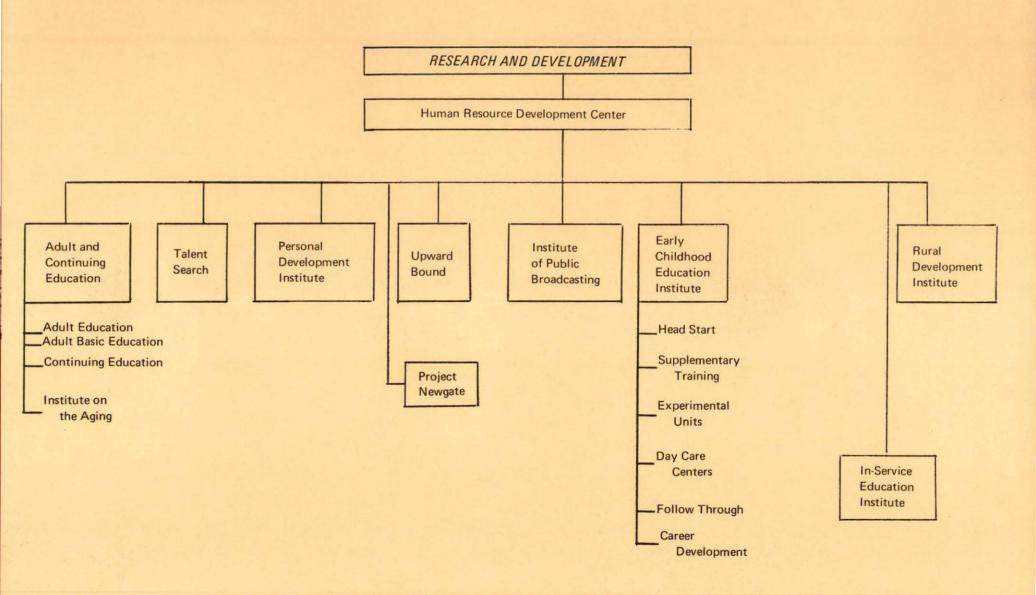


SPECIFIC BREAKDOWN OF ACTIVITIES AND ORGANIZATIONS WITH WHICH RESEARCH AND DEVELOPMENT IS IN CONSTANT CONTACT

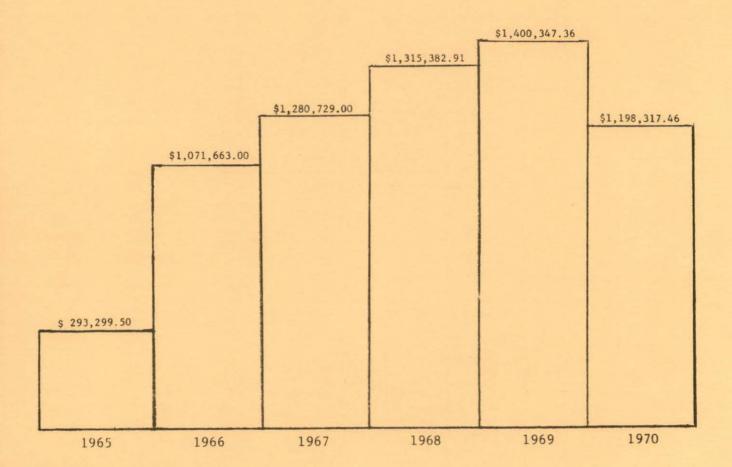








GROWTH OF RESEARCH AND DEVELOPMENT GRANT CONTRACTS AT MOREHEAD STATE UNIVERSITY



The above data represent grants received for research and development contracts at Morehead State University from the inception of the Research and Development Center in 1965 through 1970. These figures do not include monies received by the University for student financial aid and funds for facility construction under the Higher Education Facilities Act.

The decrease in grants during 1970 reflects the national reduction in the availability of federal funds for educational research and development. These funds have assisted Morehead State University in reaching her objectives of greater service to the people of Kentucky, providing new knowledge through research to societal problems, and improving the quality of instruction thereby enhancing the educational opportunity for each student who desires to pursue such an endeavor.