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ABSTRACT

The purpose of this report was to review programs carried out by the Oak Ridge Associated Universities (ORAU) during 1969 and 1970 to help design, develop, implement, and evaluate various means for further strengthening traditionally Negro institutions of higher learning. The report summarizes two 4-week summer workshops for faculty members of Black institutions conducted during 1970 in Oak Ridge, and two 1-week workshops for administrators, held concurrently. The purpose of the workshops was to promote greater cognizance of national needs and related government programs through an examination of engineering, the natural sciences, social sciences, and the humanities as individual and collective sources of solutions to specific problems of national concern. An effort was also made to evaluate the relevance of existing governmental programs to scientific and technological capabilities of Negro schools. The report also: (1) traces chronologically the events that led to the 1970 activities and presents the activities and results of the 1969 workshops; (2) briefly discusses the 1970 post-workshop developments and activities; and (3) summarizes the accomplishments of the workshops and presents a projection of the ORAU's future role in activities with, and on behalf of predominantly Black institutions. (AF)

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1969-70



Oak Ridge Associated Universities is a private, nonprofit corporation sponsored by 41 colleges and universities in the South, three of which — Fisk University, Meharry Medical College, and Tuskegee Institute — are predominantly black institutions. The Association was chartered in the State of Tennessee in 1946 and operated for its first 20 years as the Oak Ridge Institute of Nuclear Studies. The pioneer among corporate university management groups of its type in the United States, ORAU conducts programs of education, information, and research under contract with the U.S. Atomic Energy Commission and other governmental and private agencies.

Knoxville College, which joined ORAU in presenting the 1970 Oak Ridge workshops for faculty and administrators of Negro institutions, is a predominantly black, four-year liberal arts college in Knoxville, Tennessee, which will celebrate its 100th anniversary in 1975.

member colleges
and
universities

Auburn University
Catholic University of America
Clemson University
College of William and Mary
Duke University
Emory University
Fisk University
Florida State University
Georgia Institute of Technology
Louisiana State University
Meharry Medical College
Mississippi State University
North Carolina State University
North Texas State University

Rice University
Southern Methodist University
Texas A & M University
Texas Christian University
Texas Woman's University
Tulane University
Tuskegee Institute
University of Alabama
University of Arkansas
University of Florida
University of Georgia
University of Kentucky
University of Louisville
University of Maryland

University of Miami
University of Mississippi
University of North Carolina
University of Oklahoma
University of Puerto Rico
University of South Carolina
University of Tennessee
University of Texas
University of Virginia
Vanderbilt University
Virginia Commonwealth University
Virginia Polytechnic Institute
and State University
West Virginia University

1969-70

oak ridge workshops for faculty
and administrators of traditionally
negro institutions

by W. W. Grigorieff



Oak Ridge Associated Universities
Oak Ridge, Tennessee

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foreword

The purpose of this report is to review programs carried out by Oak Ridge Associated Universities (ORAU) during 1969 and 1970 to help design, develop, implement, and evaluate various means for further strengthening traditionally Negro institutions of higher learning.

The original impetus for this effort was provided by Z. W. Dybczak, dean of engineering at Tuskegee Institute, at the conclusion of a meeting of the ORAU Engineering Education Committee in September 1968 in New Orleans. Dr. Dybczak suggested that ORAU look into, and "do something" about, helping institutions with predominantly black enrollments to improve their offerings.

The activities described herein were made possible by the substantial and substantive support of the Division of Nuclear Education and Training of the U. S. Atomic Energy Commission, and especially of its director, Elliot Pierce, and his colleagues, Russell Poor and George Courtney. Of equal importance were the contributions made by Marion Bowden, assistant for equal employment opportunity programs in the office of the AEC general manager, and by Herman M. Roth, director of the Laboratory and University Division of AEC's Oak Ridge Operations.

Particularly significant as well to the success of this venture was the early endorsement by the Federal Interagency Committee on Education (FICE) and the energetic and enthusiastic cooperation of its former executive director, Emery F. Bacon. Mr. Bacon and his staff were uniquely instrumental in guiding out, planning and in generating interest and financial support through responsible officers of the Office of Education, including Willa B. Player and Paul Carnell, of the Division of College Support, Bureau of Higher Education, and William Thomas Carter, of the Bureau of Educational Research and Development.

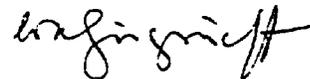
A national advisory committee* of educators likewise contributed wise guidance to the project at the planning stage and several of its members participated actively in the Oak Ridge program.

Knoxville College, its president, Robert L. Owens, and particularly Professor William H. McArthur, chairman of the College's Division of Natural Sciences and Mathematics, made unique contributions to the 1970 workshops; without them the program could not have been launched, nor have achieved the success that it did. Hardy Liston, Jr., assistant vice chancellor of academic affairs at the University of Tennessee, Knoxville, played a major role in the 1969 activities as the first ORAU professor in residence (then on loan from North Carolina A & T State University) and as a program consultant in 1970.

William G. Pollard, executive director of ORAU, provided firm support in developing the program and its various modifications.

It is a pleasure also to acknowledge our appreciation to Professor Arthur Victor Jett, Jr., of Tuskegee Institute, who was ORAU professor in residence during the planning and conduct of the 1970 workshops, to Victor Montgomery of Howard University, and to Marvin Hobby of Georgia Power Company, who were primarily responsible, under Dr. McArthur's direction, for the 1970 program. My warm thanks extend to Lana Kirk and Susie Stevens who were constructively involved and to Sharon Herrell of this office, whose smooth and efficient effort was invaluable.

It is my hope that this activity may bring us closer to a better understanding of the problems and aspirations of traditionally Negro institutions, and to the solution of some of these problems in the '70's.



W. W. Grigorieff
Assistant to the Director
Oak Ridge Associated Universities

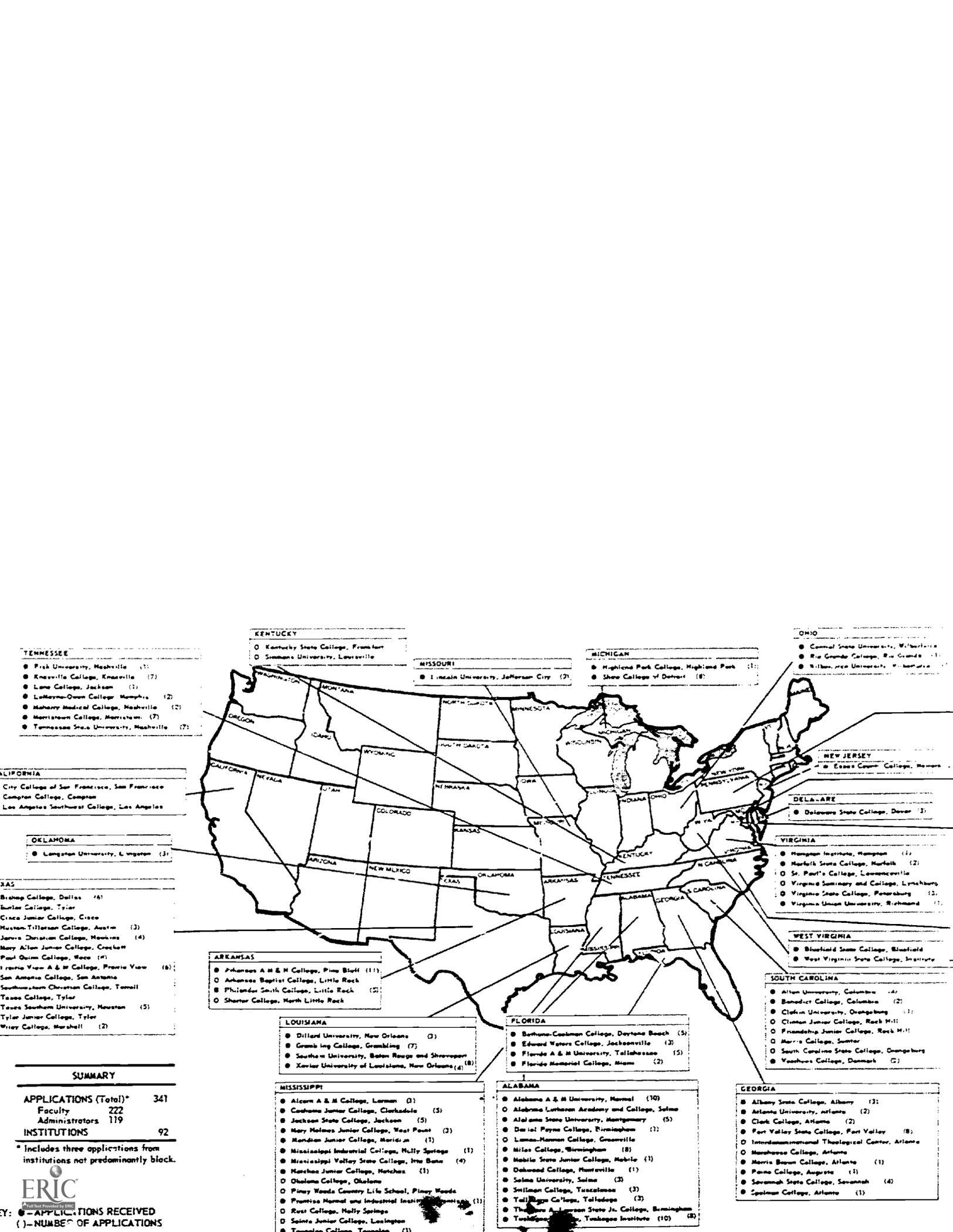
Members of the advisory committee were: Elias Blake, Jr., president, Institute for Services to Education, Inc., Washington, D.C.; Herman R. Branson, president, Lincoln University, Lincoln University, Pennsylvania; Lewis C. Dowdy, president, North Carolina A & T State University, Greensboro; Arthur Hansen, president, Georgia Institute of Technology, Atlanta; Benjamin E. Mays, president, Atlanta Board of Education; Samuel M. Nabrit, director, Southern Fellowship Fund, Atlanta; Joseph M. ... director of adult and continuing education program and ... services, Federal City College, Washington, D.C.; Frederick

D. Patterson, president, Moton Memorial Foundation, New York, New York; Willa B. Player, director, Division of College Support, U. S. Department of Health, Education, and Welfare, Washington, D.C.; Herman B. Smith, director, Office for the Advancement of Public Negro Colleges, Land-Grant Colleges Association, Atlanta; Rembert E. Stokes, president, Wilberforce University, Wilberforce, Ohio; Ralph W. Tyler, director emeritus, Center for Advanced Study in Behavioral Sciences, Stanford University, Stanford, California; and Walter Washington, president, Alcorn A & M State University, Lorman, Mississippi.

introduction

The purpose of this report is fourfold: 1) to summarize two four-week summer workshops for faculty members of black institutions, conducted during June and July 1970 in Oak Ridge, and two one-week workshops for administrators, held concurrently with the faculty sessions; 2) to present chronologically the events that led to the 1970 activities by presenting, in capsule form, the purpose, activities, and results of the 1969 workshop; 3) to sketch briefly the 1970 post-workshop developments and activities; and 4) to summarize the accomplishments of the workshops and present a projection of ORAU's future role in activities with, and on behalf of, institutions of predominantly black enrollment.

The 1969 activities were supported directly by the Division of Nuclear Education and Training of the U.S. Atomic Energy Commission. The expanded activities of 1970 continued to benefit from the direct financial assistance of that division; and, in addition, the Office of Education provided funds in support of the program to the workshop cosponsor, Knoxville College, through 1) the Bureau of Educational Personnel Development, Division of Program Resources, and 2) the Bureau of Higher Education, Division of College Support. The Federal Interagency Committee on Education, on which are represented the AEC, Office of Education, and other agencies with educational missions, served both in an advisory and a coordinating role with respect to this federal participation in the Oak Ridge program.



- TENNESSEE**
- Fish University, Nashville (1)
 - Knoxville College, Knoxville (7)
 - Lane College, Jackson (1)
 - LeMay-Owen College, Memphis (2)
 - Mahanay Medical College, Nashville (2)
 - Morristown College, Morristown (7)
 - Tennessee State University, Nashville (7)

- KENTUCKY**
- Kentucky State College, Frankfort
 - Simmons University, Louisville

- MISSOURI**
- Lincoln University, Jefferson City (2)

- MICHIGAN**
- Highland Park College, Highland Park (1)
 - Shaw College of Detroit (8)

- OHIO**
- Central State University, Wilberforce
 - Rio Grande College, Rio Grande (1)
 - Wilberforce University, Wilberforce

- CALIFORNIA**
- City College of San Francisco, San Francisco
 - Compton College, Compton
 - Los Angeles Southwest College, Los Angeles

- OKLAHOMA**
- Langston University, Langston (3)

- Texas**
- Bishop College, Dallas (16)
 - Baylor College, Tyler
 - Cisco Junior College, Cisco
 - Huston-Tillotson College, Austin (3)
 - Jarvis Christian College, Houston (4)
 - Mary Allen Junior College, Crockett
 - Paul Quinn College, Waco (4)
 - Prairie View A & M College, Prairie View (18)
 - San Antonio College, San Antonio
 - Southwestern Christian College, Terrell
 - Texas College, Tyler
 - Texas Southern University, Houston (5)
 - Tyler Junior College, Tyler
 - Wiley College, Marshall (2)

- ARKANSAS**
- Arkansas A & M College, Pine Bluff (11)
 - Arkansas Baptist College, Little Rock
 - Southern University, Baton Rouge and Shreveport
 - Philander Smith College, Little Rock (5)
 - Shorter College, North Little Rock

- LOUISIANA**
- Dillard University, New Orleans (3)
 - Grambling College, Grambling (7)
 - Southern University, Baton Rouge and Shreveport
 - Xavier University of Louisiana, New Orleans (4)

- FLORIDA**
- Bethune-Cookman College, Daytona Beach (5)
 - Edward Waters College, Jacksonville (3)
 - Florida A & M University, Tallahassee (5)
 - Florida Memorial College, Miami (2)

- DELAWARE**
- Delaware State College, Dover (2)

- VIRGINIA**
- Hampton Institute, Hampton (1)
 - Norfolk State College, Norfolk (2)
 - St. Paul's College, Lawrenceville
 - Virginia Seminary and College, Lynchburg
 - Virginia State College, Petersburg (2)
 - Virginia Union University, Richmond (7)

- WEST VIRGINIA**
- Bluefield State College, Bluefield
 - West Virginia State College, Institute

- SOUTH CAROLINA**
- Allen University, Columbia (14)
 - Benedict College, Columbia (2)
 - Clark University, Orangeburg (1)
 - Fort Valley State College, Fort Valley (18)
 - Friendship Junior College, Rock Hill
 - Morris College, Sumter
 - South Carolina State College, Orangeburg
 - Voorhees College, Denmark (2)

- MISSISSIPPI**
- Alcorn A & M College, Lumberton (1)
 - Coahoma Junior College, Clarksdale (5)
 - Jackson State College, Jackson (5)
 - Mary McLeod Bethune College, West Point (2)
 - Morehouse Junior College, Meridian (1)
 - Mississippi Industrial College, Natchez (1)
 - Mississippi Valley State College, Hattiesburg (4)
 - Morehouse Junior College, Natchez (1)
 - Okolona College, Okolona
 - Piney Woods Country Life School, Piney Woods
 - Primmie Normal and Industrial Institute, Natchez (1)
 - Rust College, Holly Springs
 - Saint's Junior College, Lumberton
 - Tougaloo College, Tougaloo (1)

- ALABAMA**
- Alabama A & M University, Normal (10)
 - Alabama Lutheran Academy and College, Selma
 - Alabama State University, Montgomery (5)
 - Daniel Payne College, Birmingham (1)
 - Leland-Harrison College, Greenville
 - Miles College, Birmingham (8)
 - Mobile State Junior College, Mobile (1)
 - Oakwood College, Phenixville (1)
 - Selma University, Selma (3)
 - Tallapoosa College, Tuscaloosa (3)
 - Tallapoosa College, Tallapoosa (3)
 - The George A. Johnson State Jr. College, Birmingham
 - Tuskegee Institute, Tuskegee Institute (10) (8)

- GEORGIA**
- Albany State College, Albany (3)
 - Atlanta University, Atlanta (2)
 - Clark College, Atlanta (2)
 - Fort Valley State College, Fort Valley (18)
 - Interdenominational Theological Center, Atlanta
 - Morehouse College, Atlanta
 - Morris Brown College, Atlanta (1)
 - Paine College, Augusta (1)
 - Savannah State College, Savannah (4)
 - Spelman College, Atlanta (1)

SUMMARY

APPLICATIONS (Total)*	341
Faculty	222
Administrators	119
INSTITUTIONS	92

* Includes three applications from institutions not predominantly black.

1970 oak ridge workshops for traditionally negro institutions

PENNSYLVANIA	
● Cheyney State College, Cheyney	(8)
● Lincoln University, Lincoln University	(3)
MARYLAND	
● Annapolis State College, Annapolis	(2)
● Coppin State College, Baltimore	(7)
● Maryland State College, Princess Anne	(2)
● Morgan State College, Baltimore	(3)
DISTRICT OF COLUMBIA	
● District of Columbia Teachers College, Washington	
● Federal City College, Washington	(9)
● Howard University, Washington	(2)
● Washington Technical Institute, Washington	(1)
NORTH CAROLINA	
● Barber-Scotia College, Concord	(5)
● Bennett College, Greensboro	(2)
● Central Piedmont Community College, Charlotte	
● Elizabeth City State University, Elizabeth City	(4)
● Fayetteville State University, Fayetteville	(1)
● Johnson C. Smith University, Charlotte	(7)
● Kinnell College, Kinnell	(4)
● Livingstone College, Salisbury	(7)
● North Carolina A & T State University, Greensboro	(9)
● North Carolina Central University, Durham	(1)
● St. Augustine's College, Raleigh	(1)
● Shaw University, Raleigh	(7)
● Winston-Salem State University, Winston-Salem	

The 1970 workshops, under the title, "Response to the Needs of Society in the 1970s" were designed to open new lines of development for traditionally black institutions, by broadening the participation of black institutions with the teaching and research resources available to them through both government and private sources. Moreover, these workshops provided the needed time for participating faculty and administrators to become acquainted, to interact, to exchange ideas, to identify common problems. Participants were defined as an unpredicted result of the workshops which developed through the workshops with participating institutions. In a number of cases, they met and got to know colleagues from institutions in other states and less than 100 miles from the

A highly interesting dimension of the project was the inclusion, as full-fledged participants, of students from Knoxville College. They provided a significant stimulus to the discussions and as part of a dialogue among administrators, faculty and students. Their activities included the development of a prospectus for a project of neighborhood development and the planning for a national leadership

Fig. 1 Invitations and Applications, 1970 Oak Ridge Workshops for Traditionally Negro Institutions

1970 oak ridge workshops additionally negro institutions

The 1970 workshops, under the title, "Higher Education's Response to the Needs of Society in the '70's," served to open new lines of development for the academic programs of black institutions, by broadening the acquaintance of participants with the teaching and research resources available to them through both governmental and private sources. Moreover, these workshops provided much-needed time for participating faculty and administrators to become acquainted, to interact, to exchange ideas, and to identify common problems. Participants themselves defined as an unpredicted result the relationships they developed through the workshops with faculty in other institutions. In a number of cases, they met for the first time and got to know colleagues from institutions in the same state and less than 100 miles from their own campuses.

A highly interesting dimension of the 1970 program was the inclusion, as full-fledged participants, of a team of four students from Knoxville College. They provided a striking and significant stimulus to the discussions, especially as part of a dialogue among administrators, faculty, and students. Their activities included the development of a prospectus for a project of neighborhood improvement and the planning for a national leadership conference.

for students from black institutions to consider causes of and solutions to problems resulting in campus unrest.

Background

A letter to presidents and deans of black institutions in December 1969, exploring their potential interest in a summer workshop program in Oak Ridge, drew 160 expressions of interest by mid-January 1970. Funding by the Office of Education was announced early in March, thus insuring tentative support offered previously by the Atomic Energy Commission. The Federal Interagency Committee on Education (FICE) arranged a broadly representative planning meeting on March 11 in Washington and for a smaller task force a week later. Announcements then were mailed on April 10 to senior academic officers of more than 120 predominantly black colleges and universities.

Although there was a question whether black institutions would respond favorably to the workshops—and although the grant award was late in coming—by May 15, just five weeks after the original mailing, ORAU had received 326 applications for the limited openings; late nominations brought the final figures to 341 applicants from 92 institutions (Fig. 1).

Available funds made it possible to extend invitations to 80 faculty members and 113 administrators. Although originally three workshop sessions of 24 participants each had been planned, the unexpectedly enthusiastic response by the black academic community necessitated modifying these plans to the following final format. Two concurrent workshops were held June 8–July 3, 1970, for 33 faculty members, and July 15–19 for 17 administrators. These were followed in July by two workshops involving 39 faculty, July 6–31,

and 40 administrators, July 20–24. A total of 129 faculty and administrators from 67 black colleges in 20 states and the District of Columbia participated in the summer program. Participants received a stipend of \$75 per week, with a weekly allowance of \$15 per dependent (up to a maximum of 2), and an allowance of \$16 per day for living expenses while in Oak Ridge.

Those attending were from a variety of disciplines in the natural sciences, humanities, and social sciences, with individual interests ranging from physics to philosophy. Natural sciences were represented by 42 participants; social sciences by 21; and the humanities by 16. Among participants in the one-week sessions for administrators, there were two presidents, one vice president, 16 deans, and 38 other administrators.

There were 59 workshop speakers who presented lectures and/or participated in group discussions. Selected on the basis of their knowledge and expertise and ability to communicate, the speakers represented the U.S. Atomic Energy Commission, Department of Health, Education and Welfare, Oak Ridge Associated Universities, Oak Ridge National Laboratory, University of Tennessee, and several public corporations.

Purpose

The purpose of the workshops was to promote greater cognizance of national needs, and related government programs, through an examination of engineering, the natural sciences, social sciences, and the humanities as individual and collective sources of solutions to specific problems of universal concern. The aim was to provide a multidisciplinary focus upon the human condition in the contemporary world, and to develop a deeper

understanding of the impact of science and technology upon society through a coordinated series of formal lectures, seminars, panel discussions, and participation in small work groups. This, in turn, led to a consideration of the relevance of existing governmental programs to scientific and technological capabilities of the traditionally Negro schools.

Program

Prominent federal administrators were brought to the seminars for detailed expositions of present programmatic and probable future involvement of their agencies in the leading action-centered issues that confront the country's scholars in this decade. Major topics of the sessions under the overall theme, "Higher Education's Response to the Needs of Society in the '70's," were: Man and His Institutions, Man and His Environment, Man and The World of Work, and The University's Response.

The program posed, and sought answers to, the essential question of how the participating institutions might gear their activities to address effectively and provide viable solutions to the problems confronting mankind and, particularly, black institutions themselves.

A significant result of the workshops has been the initiative shown by the participants, both during the workshop program and since, in identifying needs, formulating plans, developing projects, and following through on proposals both for individual and cooperative action to strengthen their institutions. Below are listed the major programs and projects developed and reported by the participants through the workshop program. Together they represent grant and contract commitments by the Federal Government, principally through

the Office of Education, Department of Health, Education, and Welfare, totaling \$547,000.

Among 1970 workshop panelists were, from left, Herman M. Roth, director of the Laboratory and University Division of the AEC's Oak Ridge Operations; W. W. Grigorieff, assistant to the director, ORAU, the workshop director; Marion A. Bowden, assistant for equal employment opportunity programs to the AEC general manager; and George W. Courtney, Jr., chief of the University Relations Branch, AEC Division of Nuclear Education and Training.



**PROGRAMS AND PROJECTS
DEVELOPED BY 1970 WORKSHOP PARTICIPANTS**

Title and Principal Investigator

Status

Training Program for Institutional Researchers,
(Mrs.) Freddie Grooms
Florida A & M University

Awarded \$50,000, HEW

Pre-law program to send history majors to Washington, D.C. for internships in
the offices of senators and congressmen
Se Jin Kim
North Carolina Central University

Awarded \$2,000 planning grant, HEW

Experiential Learning, an on-the-job training experience while enrolled in college
Bobby Downing
Knoxville College

Awarded \$47,000 planning grant, HEW

Environmental Science Workshop for Science Teachers,
Charlie Smith
Jackson State College

Awarded \$12,000, HEW

Training in Sensitivity Through Human Ecology,
Willis Brown
Langston University

Awarded \$24,000, HEW

Cooperative Program in Allied Health Professions between Tennessee State University
and Meharry Medical College

Approved by respective governing
boards

Training Program for Adult Educators
Tennessee State University

Approved by Tennessee Board of
Education and awarded \$19,000
planning grant

Correctional Services Program leading to the B.S. degree in Corrections
Tennessee State University

Approved by Tennessee Board
of Education

Title and Principal Investigator

Status

Cooperative Program between Tennessee State University and the University of Tennessee—Nashville to establish the Southeastern Regional Training Center for Pupil Personnel Services Specialists

Awarded \$160,000 planning grant

Operation Springboard,
L. C. Wood and Jean Manning
Paul Quinn College

Awarded \$75,000, HEW

Curriculum Development for Disadvantaged Students,
Cammie L. Sleet
The Shaw College at Detroit

Awarded \$133,000, HEW

Training Program in Cooperative Education for Administrators and Faculty of Developing Institutions
James N. Harris
Tuskegee Institute

Awarded \$25,000, HEW

Environmental Biology, a curricular innovation
Willis Brown
Langston University

Implemented

ENI News Bulletin, abstracts of news items of interest to black institutions

First issue mailed in January 1971 to participants in '70 workshops

Three mini-conferences for evaluation of 1970 workshops and follow up

Held during 1970–71 in Birmingham, Greensboro, and Memphis

Total funds awarded

\$547,000



Mary F. Bacon, former executive director of the Federal Emergency Committee on Education (FICE), addressed July participants on government programs that might support the academic development of black institutions.

Other promising proposals and projects resulting from the workshops and presently under review by granting agencies or being prepared for resubmission after preliminary review are:

Science and Technology and Human Survival, Willis T. Brown, Langston University.

Developing a Sense of Community in Terms of Effective Utilization Indicators of Social Change, Marcheta Z. Davis, Mary Holmes College.

Motivational Upgrading Program for the Administrators, Faculty, and Staff of Paul Quinn College, L. C. Wood, Paul Quinn College

Academic Achievement and Motivational Upgrading Program for Incoming Students of Paul Quinn College, L. C. Wood, Paul Quinn College

Consortium for Interinstitutional Cooperation, Lillie K. Singleton, T. A. Lawson State Junior College

Cooperative Projects and Humanities Course Exchange Between the University of Alabama and Stillman College, Joyce O'Rourke, Stillman College

Preparation of a Comprehensive Questionnaire to Identify Faculty Expertise in TNIs, Wynelda E. Satisfield, T. A. Lawson State Junior College

An Interdisciplinary, Inner-City Internship Training Program, James T. Coleman, Southern University

How to Help Young Drop-Outs Become Productive Citizens, Odessa Nelson, Allen University

An Assessment of the TNIs' Capabilities, William H. McArthur, Knoxville College

An Interdisciplinary Approach to Minorities' Environmental Problems, Joe Hargrove, Arkansas A M & N College

An Interdisciplinary Approach to the Teaching of English and Political Science to Disadvantaged Students, Saralou R. Gifford, Philander Smith College

National Student Leadership Conference for Predominantly Black Educational Institutions. Charles Mason, student, Knoxville College

Neighborhood Environmental Improvement Campaign, James W. Russell, Tuskegee Institute, and Peggy L. Allen, Jackson State College

Life and Physical Science Co-Op Pre-Proposal, Eddie C. Smith, Coahoma Junior College

Summer Workshop in Environmental Education and Curriculum, E. C. Fonsworth, Bishop College

Student Project in Environmental Education, E. C. Fonsworth, Bishop College

Workshop for Teachers in Traditionally Black Institutions, Ernest Berry, Cheyney State College

In-Service Seminar for Faculty and Staff of Junior and/or Community Colleges, Desiree E. Jett, Essex County College

The Role of the Black College in Developing Consumer Awareness, Sylvia Plutchok, Clark College

Scientific Communications Center, Brady Harden, Kenneth Jones, Charles Mason, and Brenda Wiggins, Knoxville College students

Teacher Development for Desegregating Schools, Joseph E. Taylor, Bethune-Cookman College

Center/transdisciplinary Approach to the Humanities, McKinley Newton, Philander Smith College

Professor in Residence (at ORAU to represent black institutions), Paul E. Parker, North Carolina A & T State University

Rehabilitation Work Experience for Students Enrolled at Traditionally Black Institutions, Paul E. Parker, North Carolina A & T State University

ORAU Grants in Lieu of Tuition to Underdeveloped Colleges Whose Students Receive Summer Traineeship Awards. David O. Findley, Virginia State College

Consortium for Dietetic Services, a cooperative venture in which students would spend one year at Selma University and a second year at Tuskegee Institute, Johnnie Prothro and (Mrs.) Rowena Cleveland, Tuskegee Institute and Selma University

Ralph W. Tyler, director emeritus of the Center for Advanced Study in the Behavioral Sciences at Stanford University and founding secretary of the National Academy of Education, was among workshop speakers.





Daily sessions included formal lecture and panel presentations by Oak Ridge and visiting representatives, followed by meetings of small work groups to develop projects and proposals.

Human Resources Development, Margaret W. Knighton of Southern University and Joseph W. Letson, Central State University

Cooperative Research Involving Demographic Survey of TNJ Communities, Walter W. Gibson, LeMoyne-Owen College

TNI Clearing House, Lester B. Johnson, Savannah State College

Research Course in History/Interim, Charles Mason, student, Knoxville College

Community Involvement Course, Charles Mason, student, Knoxville College

Black Temporary Philosophy Course/Interim, Charles Mason, student, Knoxville College

Effect of Demography on Black Psychology and Sociology, Paul E. Parker, North Carolina A & T State University

The Impact of Ecology on the Economically and Socially Deprived Community, Ernest Berry, Cheyney State College

Making College Education Relevant: Answering the Needs of the '70's, Elaine Ferguson, Essex County College

An Interdisciplinary Approach to the Teaching of Health Science Technology, Little K. Singleton, T. A. Lawson State Junior College

Oak Ridge Institute for Black GI's Not Already Learning (O.R.I.G.I.N.A.L.), Roscoe S. Brown, Grambling College

Institute for Counselor Rehabilitation, Freddie L. Grooms, Florida A & M University

Extending the Dimensions of Developing Manpower Resource Potential for Employment in Area of Nuclear Energy Applications to Peaceful Uses, Willis L. Brown, Langston University

Training for Developing Black Leadership, Garrett F. Weaver, West Virginia State College

Post Workshops Activities and Participant Evaluation

A precise evaluation of the impact created by the workshop is a challenging task and, possibly, an unattainable goal. One of the evaluative devices used was to reconvene the participants in small groups at different campuses. Three such "mini-conferences" were held: October 28 and 29, 1970, in Birmingham, Alabama, at T. A. Lawson State Junior College; November 19 and 20, 1970, in Greensboro, North Carolina, at North Carolina A & T State University; and January 28 and 29, 1971, in Memphis, Tennessee, at LeMoyne-Owen College. These conferences gave an excellent insight into

the participants' reactions to their experiences in Oak Ridge and provided a variety of new ideas and suggestions for additional activities. There were an average of 20 participants at each of the three conferences, which became forums for discussion of institutional, post-Oak Ridge activities and for development of inter-institutional teams of faculty and administrative staff to initiate new activities.

One result was the establishment of a newsletter to satisfy the need for interinstitutional communication of new ideas and occurrences. The first issue of a "TNI News Bulletin" was sent out by ORAU to all workshop participants in January 1971 and was well received by its audience.

At the conclusion of the series of three follow up conferences, a small representative group of the participants was invited to meet as a task force to discuss plans for and to advise ORAU on the directions of its future relationships with black institutions. This group (LINC) comprises the following members: George Ferguson, Howard University, Chairman; Calvin O. Atchison, Tennessee State University; Z. W. Dybczak, Tuskegee Institute; Sister M. Eucharista, Xavier University of New Orleans; W. W. Grigorieff, ORAU; Freddie L. Grooms, Florida A & M University; Joe Hargrove, Arkansas A M & N College; Hardy Liston, Jr., University of Tennessee; James U. Lowe, Meharry Medical College; William H. McArthur, Knoxville College; Paul E. Parker, North Carolina A & T State University; Lillie K. Singleton, T. A. Lawson State Junior College; and Herman B. Smith, N



The new committee has met on two occasions and has

Faculty participants Joyce O'Rourke, Stillman College, Tuscaloosa, Alabama, and Hattie L. Perkins, Grambling College, Grambling, Louisiana, with Dr. Grigorieff; William H. McArthur, chairman of the Division of Natural Sciences and Mathematics at Knoxville College, who was workshop coordinator; Elliot S. Pierce, director of the AEC Division of Nuclear Education and Training; and Knoxville College student body president Charles Mason, one of four undergraduate participants in the 1970 workshops.





Attendance at the 1970 workshops during June and July totaled 129 faculty members and administrators from 67 black colleges.

delineated the following purposes for its continuing program of work:

1. To make itself known to TNI's, governmental agencies, foundations, and other educational organizations.
2. To keep informed of ongoing and projected programs of ORNL-ORAU, and other governmental agencies and foundations to:
 - a. Express to ORNL, OFAU and others the consciences and aspirations of the black educational community and to evaluate programs (proposals) as they relate to TNI's.

Urge, through existing organizations, such as the Office for the Advancement of Public Negro Colleges, Institute for Services to Education, College Service Bureau, Federal Interagency

Committee on Education, and others, a deeper interest and involvement on the part of TNI's in ORNL-ORAU, and other governmental and foundation programs.

The composition of the group will, in general, remain as it now exists although there may be changes both in the designation of individual members and in the chairmanship. Various resource persons will be invited to meet with the group as such needs become apparent.

One further result from the 1970 workshops has been three visits under the Research Associates program to the Oak Ridge National Laboratory by faculty of black institutions and one appointment under the Faculty Research Participation program of ORAU.

1969 workshop for six black institutions offering undergraduate degrees in engineering

In keeping with the national interest in promoting and improving education in all sectors, Oak Ridge Associated Universities conducted a four-week workshop, August 4-29, 1969, to acquaint faculties of six traditionally Negro institutions having engineering curricula with opportunities for their development through participation in programs of the AEC, its contractors, and other government agencies.

Fourteen faculty members of institutions offering engineering degrees and three from science departments of liberal arts institutions participated, for varying periods, in the workshop. Five attended the entire session.

The six institutions represented were: Howard University, Washington, D.C.; North Carolina A & T State University, Greensboro; Prairie View A & M College, Prairie View, Texas; Southern University, Baton Rouge, Louisiana; Tennessee State University, Nashville; and Tuskegee Institute, Tuskegee, Alabama.

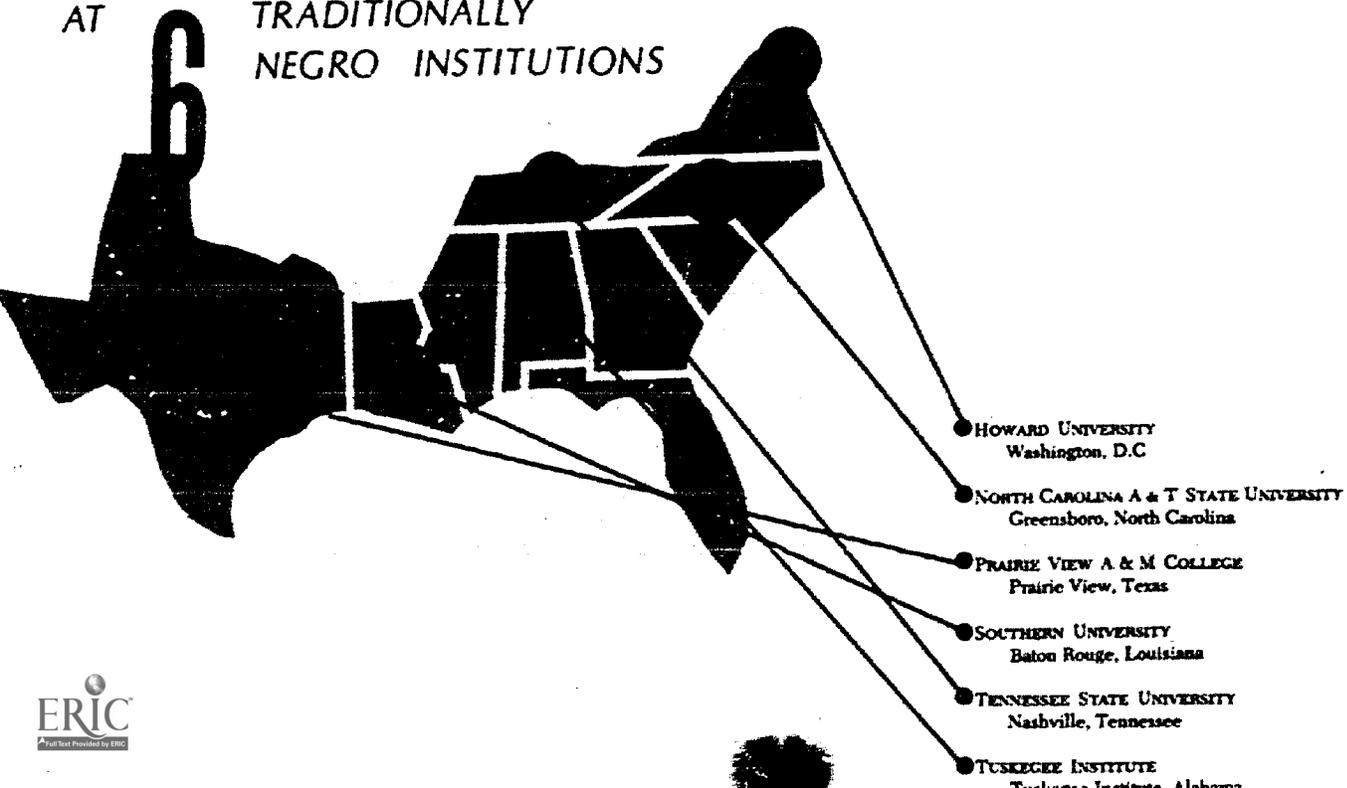
Contributing to the program as speakers and discussants in both formal sessions and informal workshops were more than 70 persons representing Oak Ridge Associated Universities; the Atomic Energy Commission and its Oak Ridge, Chicago, and Savannah River Operations; the Nuclear Division, Union Carbide Corporation; E. I. duPont de Nemours & Company; Argonne, Brookhaven, and Oak Ridge National Laboratories; Lawrence Radiation Laboratory; the National Science Foundation; U.S. Department of Health, Education, and Welfare; National Aeronautics and Space Administration; Federal Interagency Committee on Education; and the University of Tennessee.

The workshop sessions were largely unstructured to allow dialogue and opportunities for exploring sources of

Fig. 2 Development Proposal Resulting from 1969 Oak Ridge Workshop

proposal to strengthen

ENGINEERING EDUCATION
AT 6 TRADITIONALLY
NEGRO INSTITUTIONS



support and possibilities for expansion of institutional development.

The general projects developed by the workshop have to date brought assistance totaling \$310,000 to the participating institutions. In addition, projects proposed by individual faculty members have been supported by grants of \$253,444, for a total of \$563,444 resulting from the 1969 activities.

A number of the positive results of the workshop are described in the paragraphs that follow on specific new activities stimulated by this first Oak Ridge program for Negro institutions.

Pre Co-op Program

The 1969 workshop participants unanimously agreed that fresh and innovative approaches must be taken to increase the enrollment in scientific and engineering disciplines at predominantly black institutions. At the mid-point of the four-week workshop, they came up with the idea of a pre-co-op scheme that would provide a high school graduate work experience during the summer prior to entering the university and, subsequently, financial assistance during the freshman year of a regular co-op program.

It was enlightening and exciting to witness and to participate in the development of this new program. On Thursday of the second week, the group had been invited to visit the Savannah River Laboratory, operated by the Du Pont Company for the AEC. A general presentation of the Laboratory's activities and conducted visits to selected points of interest were followed by a general discussion session. Isaac Porche of Southern University raised the question whether there were mechanisms or activities at Savannah River Laboratory or other AEC laboratories to make it possible for high school seniors to participate in a summer

program preceding their freshman year at an engineering school as a cooperative student. The answer was that this type of arrangement was not available but it certainly was not impossible to conceive.

The following day, back in Oak Ridge, participants pursued the idea further and identified some of the necessary ingredients to make the program meaningful: 1) stipends during the pre-freshman summer, 2) financial assistance for books and fees in the freshman year, and 3) partial financial support of the faculty member coordinating this activity on the campus. At this point, ORAU staff contacted Charles Kuykendall, director of the Central Employment Office of Union Carbide's Nuclear Division, to inquire about the feasibility of such an undertaking. A joint conference was rapidly arranged, which resulted in agreement in principle by Union Carbide that the proposal was in line with their general thinking and that there was no specific reason why it could not be funded.

By the third week of the workshop, a formal proposal had been prepared by the six institutions and submitted to Union Carbide. On the day before the participants left Oak Ridge, Roger F. Hibbs, president of Nuclear Division, met with the group and assured them that, barring unforeseen circumstances, the project would be funded and would start in the summer of 1970. The yearly cost of this activity was estimated at \$61,000, not including payments to the students. The total cost of the three-year program was estimated at \$600,000. The result was a splendid example of satisfying a demonstrated need with a significant new activity.

Five black schools (Howard University, North Carolina A & T State University, Southern University, Tennessee State University, and Tuskegee Institute) recruited 29 high-

school graduates for the program, 19 of whom spent the summer of 1970 in Oak Ridge; the remaining 10 were younger than 18 and had to find different summer activities. By the end of the 1970-71 fall semester, 28 of these students were participating in the regular co-op programs of the five participating institutions.

A further interesting result is the establishment of a similar program by the Du Pont Company at the Savannah River Laboratory, involving three entering freshmen each from two institutions: North Carolina A & T and Tuskegee. All six students spent the summer of 1970 at Savannah River and became enrolled at their respective colleges in the fall.

After results of the three-year pilot study are evaluated, it is envisaged that the program may be extended to other schools and industries. In the meantime, the 34 black students represent a significant addition to the available manpower pool of black scientists and engineers, very few of whom would have been able to go to college without the assistance of this program.

Developmental Proposal for Engineering Education

The six traditionally Negro schools of engineering, from which 70 percent or more of the nation's Negro engineers have been graduated, undertook, at the suggestion of President A. I. Thomas of Prairie View A & M College, a self study and developed with staff assistance from ORAU a long-range program to strengthen existing programs of engineering education. Following an organizing meeting at Prairie View in March 1969, a series of work sessions were arranged with representatives of engineering of the six schools by Hardy Li

Mechanical Engineering at North Carolina A & T State, who was then serving as professor-in-residence at ORAU.

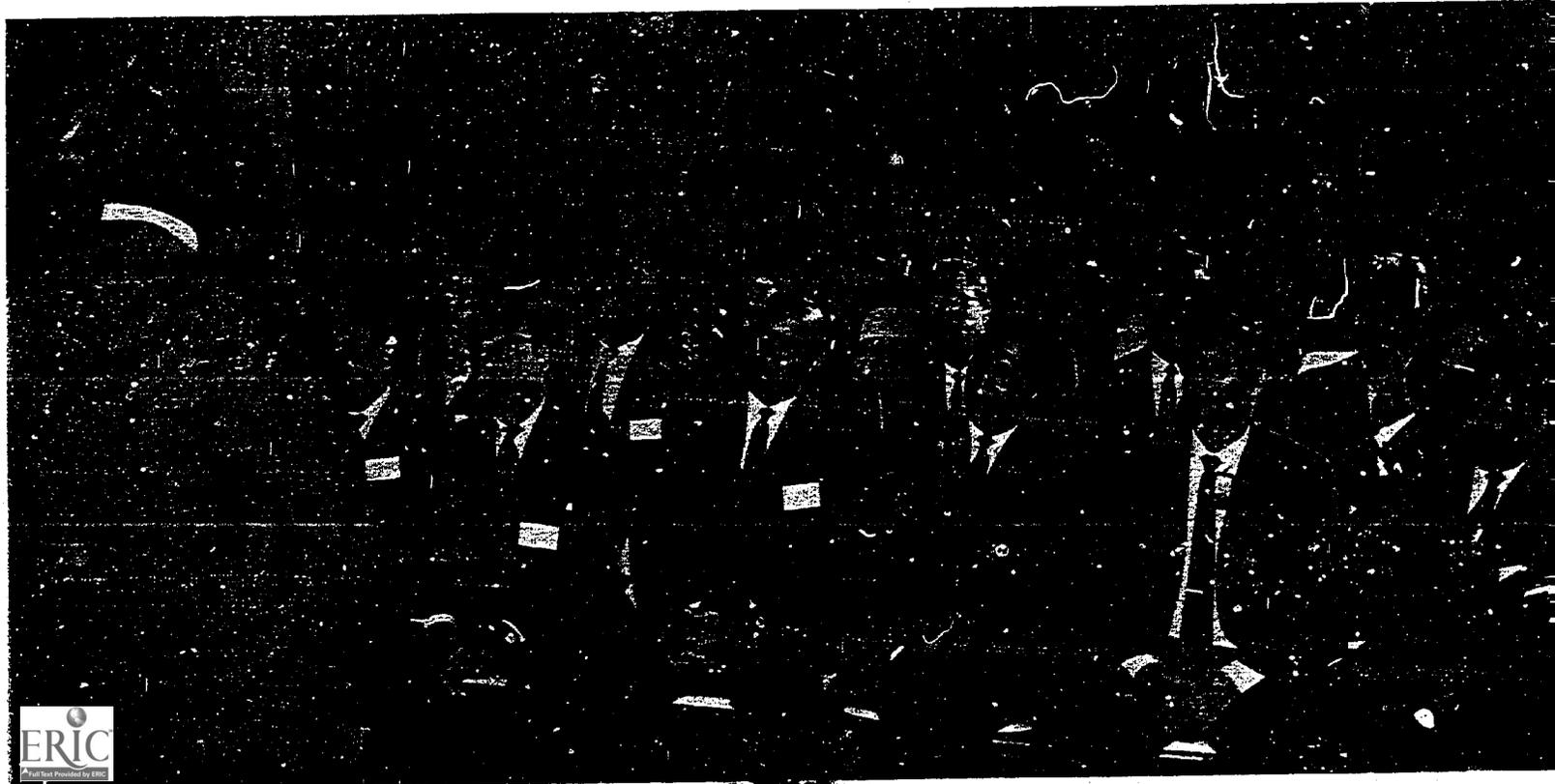
A broad four-year program was formulated to develop faculties, curricula, physical plants, library resources, student recruitment and counseling, administration, supporting services, research, and long range planning. Meetings were arranged by Marion Bowden, assistant for equal employment opportunity programs, Office of the General Manager, AEC Headquarters, with the presidents of the six institutions, representatives of the U.S. Atomic Energy Commission, Roger F. Hibbs of Union Carbide, and, finally, with high ranking executives of 16 major companies in June 1970 in New York City to present the formal proposal, which requested \$18,152,320 in development assistance for the six institutions over a period of four years.

Although the large total requested has not been subscribed to by the industrial concerns, a grant of \$270,000 for a three-year span has been made by the Du Pont Company. Another grant of \$30,000 for one year by Westinghouse and several others are being processed. ORAU has offered to assist the six institutions in broadening the base of possible support and will be working with a large number of industrial concerns to secure additional funding.

Professor-in-Residence

At the start of ORAU's activities with black institutions, it was realized that a more complete knowledge of educational problems confronting the blacks and a valid line of communication between the Negro and the white educational thinking were necessary. One solution was to create at ORAU the position of "Professor in Residence," to be staffed for periods of a semester or so by a faculty member of a black

Planning for 1969 workshop began in January 1969 at a meeting in Oak Ridge for deans of engineering and faculty representatives of traditionally Negro institutions and their counterparts in neighboring, predominantly white institutions. The group met under ORAU auspices with representatives of the Atomic Energy Commission, Oak Ridge National Laboratory, and the Nuclear Division, Union Carbide Corporation, which operates the major Oak Ridge nuclear production and research facilities for the AEC.





First ORAU workshop in August 1969 involved 17 faculty members from the six black institutions that offer baccalaureate-level programs in engineering. Represented were: Howard University, Washington, D. C.; North Carolina A & T State University, Greensboro;

Prairie View A & M College, Prairie View, Texas; Southern University, Baton Rouge, Louisiana; Tennessee State University, Nashville; and Tuskegee Institute, Tuskegee, Alabama.

institution. The first incumbent was Hardy Liston, Jr., of North Carolina A & T State University, who served with ORAU from June through December 1969. The development, organization, and conduct of the 1969 workshop and the gathering and blending of a multitude of resources to produce the \$18,000,000 proposal were among his major contributions.

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Upon his return to his campus, Professor Liston accepted an appointment as assistant vice chancellor for academic affairs at the University of Tennessee, Knoxville.

The second ORAU Professor in Residence, for the period of February 2 to August 31, 1970, was Professor A. V. Jett, on leave of absence from his position as manager of the Computer Center at Tuskegee Institute and enroute to Purdue University to assume an NSF faculty improvement appointment. He very ably and successfully helped ORAU to produce the 1970 workshops, and to evaluate and summarize this activity.

A modified scheme was arranged for the 1970-71 post-

workshop period; Professor William H. McArthur, chairman of the Division of Natural Sciences and Mathematics at Knoxville College, who spent about a quarter of his time at ORAU during the 1970-71 academic year, was primarily responsible for the conduct of the first three mini-conferences and for the main thrust of ORAU's assistance in the development of proposals by workshop participants.

Resident Representatives

One direct consequence of the 1969 workshop was the establishment of "ORAU Resident Representatives" on the campuses of black institutions. This program offered travel contracts to participants in the workshop, providing them travel expenses for a limited number of trips connected with projects initiated in Oak Ridge.

Research Associates

A program of "Research Associates" was initiated in the summer of 1969. It provides an opportunity to faculty members to establish meaningful contacts with scientists and engineers of the Oak Ridge area in the expectation that such periodic contacts either in Oak Ridge or back on their own campuses would result in research activities mutually beneficial to both parties involved. In the academic year 1969-70, three such arrangements were started.



**PROGRAMS AND PROJECTS DEVELOPED BY THE
1969 WORKSHOP PARTICIPANTS**

Cooperative Activities

Status

Pre-Co-op Program to increase student enrollment in science and engineering through work experiences	28 students involved in 1970
Prospectus for three 1970 Oak Ridge workshops	Four workshops conducted with 129 participants
Mobile laboratory for 4- to 5-week teaching program at Negro institutions	Awarded 10,000 by AEC; visits to Prairie View, Southern University and Tennessee State scheduled in '71
<i>Resident Representatives</i> , a two-way reciprocating channel between black faculty and ORAU	Initiated
<i>Research Associates</i> , a program of interaction between black faculty and Oak Ridge scientists and engineers	Three visits to Oak Ridge by black faculty in 1970
\$15 million proposal for financial assistance from industry	Dupont awarded \$270,000; Westinghouse awarded \$30,000
	<hr/>
	Total \$310,000

Individual Projects

Howard University

Physical Chemical Studies of the Interactions Between Metal Ions and Biologically Important Molecules, Peter Hambright, principal investigator.

Awarded \$28,000, AEC

Thermoluminescence and Infrared Absorption of Radiation Damage in Optically Transparent Materials, A. N. Thorpe, principal investigator.

Awarded \$20,000, AEC



Theoretical Study on the Fine and Hyperfine Structure of a Rovibronic Linear Triatomic Molecule, Liu-Yung Chow Chiu, principal investigator.

Status
Awarded \$25,000, AEC

North Carolina A & T State University

A Study of Sandwich Cylinders with Various Moduli, Paul E. Parker, principal investigator

Awarded \$12,000, Union Carbide Nuclear Division

A Proposal to Study the Effect of Surface Treatment on Rate of Reaction of Gases with Uranium, B. M. Botros, principal investigator.

Awarded \$25,000, Union Carbide Nuclear Division

Southern University

Development of Slide-Tape Lectures, Civil Engineering in the Nuclear Age, Ray E. Ingram, principal investigator.

Awarded \$6,168, AEC

Distorted Wave Calculations and Angular Correlation Studies, K. H. Liu, M. A. Toosi, Zorawar Singh, and Edgar Link.

Awarded \$51,431, AEC

Chelation of Transition Metals by Derivatives of 3-Nitroso-2-Pyridinol and 5-nitroso-4-Pyrimidol, Curtis M. McDonald, principal investigator.

Awarded \$22,000, AEC

Tennessee State University

Gaseous Ion Chemistry: Analytical Applications, R. P. Torrey, principal investigator.

Awarded \$39,845, AEC

Tuskegee Institute

Traineeships Program in Nuclear Engineering, Z. W. Dybczak, principal investigator.

Awarded \$24,000, AEC

Depository Library at Tuskegee Institute, a book collection to be given to the
by AEC

Established in January 1971

\$253,444

Total

Grand Total (Cooperative Activities and Individual Projects)

\$563,444

summary and reflections

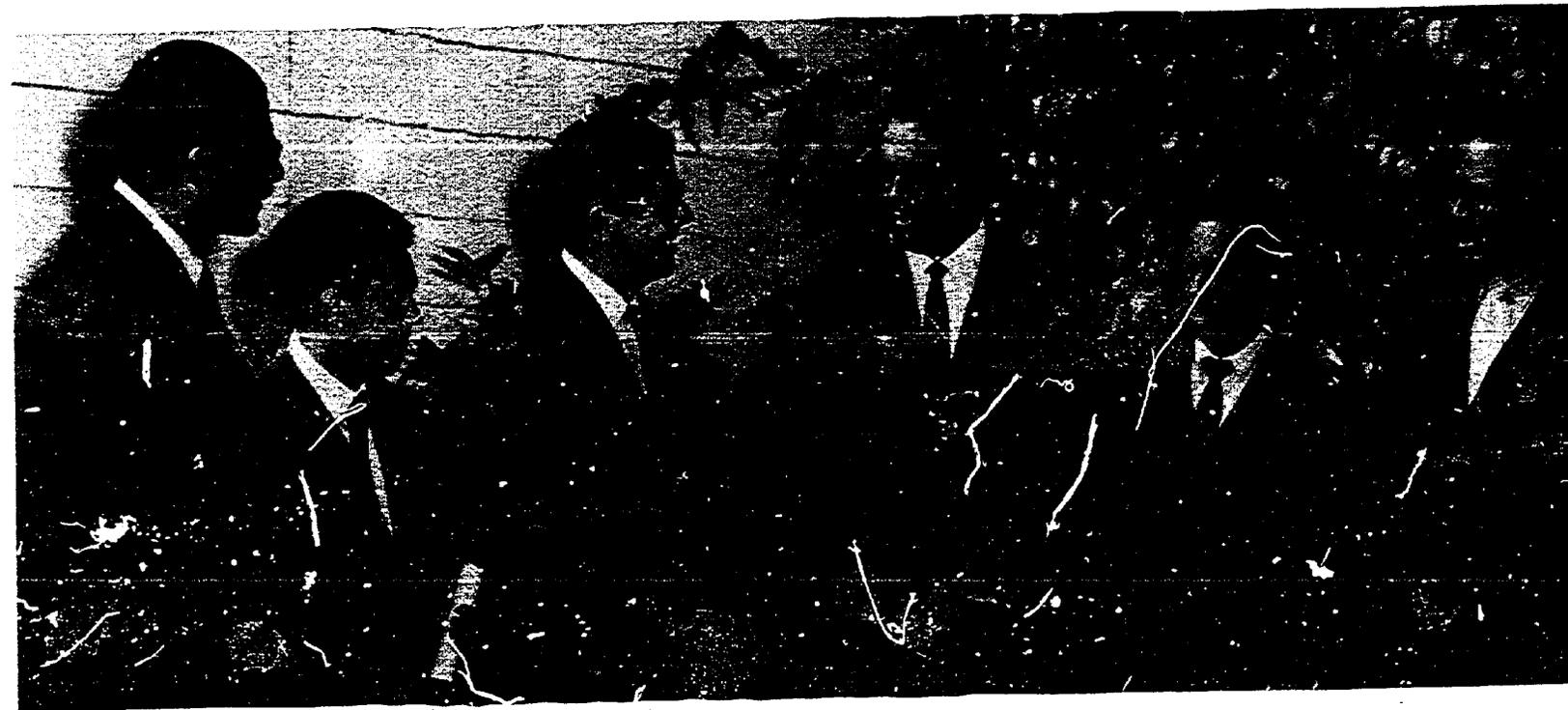
The preceding sections of this report describe the concept, operation, and principal results of the workshops conducted in Oak Ridge during the summers of 1969 and 1970 for faculty and administrators of traditionally Negro institutions of higher learning.

The most important and tangible impact of these activities is, without doubt, the substantial funding already awarded to the participating black institutions, both by governmental and private sources, for new projects and programs of their own design.

The sum of these contract and grant commitments both for cooperative activities among institutions and for individual projects stimulated by the 1969 workshop is now \$563,444. For 1970, with many proposals from participants still under review by federal agencies and other funding sources, the total is \$547,000—again representing both individual project support and funding for cooperative activities.

Thus, over the two-year period beginning in 1969, new programs totaling more than \$1.1 million have been initiated at black institutions as a result of participation by their faculties and administrators in the Oak Ridge workshops. This sum, while modest in relation to the urgent, overall financial needs of these schools, is nonetheless indicative of the effectiveness and promise of the workshop-type activity in helping these institutions 1) to realize their own potentials more fully and 2) to bring to fruition many promising new avenues for further strengthening and development of their academic programs.

ORAU obviously has benefited in many ways from its participation with traditionally Negro institutions in these workshops and developmental activities. It is not as easy, however, to define the specific contributions ORAU has been



Participants in pilot cooperative education program that grew out of shop met with Roger F. Hibbs, president of Union Carbide Corporation's Nuclear Division, for briefing on the program. They are, from left, Harry Liston, Jr., then chairman of the Department of Mechanical Engineering at North Carolina A & T State University;

Isaac R. Porche, Jr., professor in the Department of Electrical Engineering, Southern University; Mr. Hibbs; George A. Ferguson, director of cooperative education, Howard University; Andrew Minor, director of cooperative education, Tennessee State University; and George Howard III, director of cooperative education, Tuskegee Institute.

First two ORAU professors in residence from black institutions were Hardy Liston, Jr., left, then chairman of the Department of Mechanical Engineering at North Carolina A & T, who served a seven-month appointment in 1969, and Arthur Victor Jett, Jr., manager of the Computer Center at Tuskegee Institute, whose assignment covered a similar period in 1970.



able to make, through the same activities, to the further strengthening of black institutions of higher learning. Perhaps this most logically would include assistance in the identification of strengths and needs of these institutions, especially for the 1969 group, or a helping hand in the development of new interdisciplinary activities and projects, or knowledge of educational interests of various governmental, industrial, and private organizations and working experience with their key personnel.

Most probably, however, the main contribution has been simply to bring together, in some cases for the first time, white and black educators to discuss, design, and develop new activities.

Future relationships with the black institutions might involve a variety of activities. A principal contribution would be to help initiate new activities in cooperation with and on behalf of either individual institutions or cooperating groups of institutions. It seems to be extremely important that ORAU should continually strive to divest itself of operating responsibility for projects that could and should be conducted by the institutions themselves.

consultative and advisory assistance; assistance in the initiation, promotion, operation, and follow through of pilot projects; joint cooperative projects with black schools and other minority institutions; subcontractual arrangements from black institutions to ORAU for conducting certain parts of a program; continuation and broadening to other disciplines of the "professorship in residence" at ORAU; establishment of a conference series at black campuses, similar in concept to the Gordon Research Conferences of the American Association for the Advancement of Science, to facilitate communications among institutions; and other services, such as the "TN! News Bulletin," designed to strengthen communications both between and among institutions on problems of common interest and with governmental and private sources of support for academic development.

The establishment of the new advisory committee, LINC, under the chairmanship of Professor George Ferguson of Howard University, provides a mechanism for continuing renewal and extension of this partnership between ORAU and the black academic community. For its part, ORAU welcomes and pledges its continuing assistance to what has been, and promises to continue, a mutually rewarding and strengthening relationship through these cooperative activities.

Conceivably, services to be rendered might involve

appendix a

**1970 WORKSHOP SCHEDULES, SPEAKERS,
AND PARTICIPATING
FACULTY AND ADMINISTRATORS**

first faculty session

JUNE 8-JULY 3, 1970 • OAK RIDGE, TENNESSEE

Monday, June 8	Tuesday, June 9	Wednesday, June 10	Thursday, June 11	Friday, June 12
9:00 a.m. Welcomes and Introduction H. M. Roth W. H. McArthur W. W. Grigorieff	9:00 a.m. MAN, ENVIRONMENT AND THE WORLD OF WORK J. L. Liverman	9:00 a.m. SUMMARY AND EVALUA- TION OF 1969 WORK- SHOPS Hardy Liston, Jr.	9:00 a.m. LANGUAGE ARTS III Charline Conyers	9:00 a.m. NATIONAL ENVIRONMEN- TAL POLICY David J. Rose
10:30 a.m. PROJECTIONS E. Pierce	2:00 p.m. SPACESHIP EARTH W. C. Pollard	10:30 a.m. MODEL CITIES Johnny Ford	1:00 p.m. Tour to ORNL, TVA, Other Facilities, American Museum of Atomic Energy, City	11:00 a.m. USAEC PROGRAMS S. R. Sapirie
2:00 p.m. THE POLITICS OF CHANGE Elias Blake, Jr.	3:30 p.m. DTIE Don Sample	2:00 p.m. PLANNING FOR DEVEL- OPMENT OF SCIENTIFIC STUDIES IN COLLEGES Alexander Hollaender		2:00 p.m. THE POPULATION PROBLEM R. M. Kniseley
5:00 p.m. Mixer, Courtesy of ORAU	7:00-9:00 p.m. LANGUAGE ARTS I Charline Conyers	4:00-6:00 p.m. LANGUAGE ARTS II Charline Conyers		
Monday, June 15	Tuesday, June 16	Wednesday, June 17	Thursday, June 18	Friday, June 19
9:30 a.m. URBAN DEVELOPMENT James Jordan	9:00 a.m. TRAINING AND TECH- NOLOGY Wendell Russell	9:00 a.m. ENVIRONMENTAL QUALITY AND PUBLIC POLICY Interactive Seminar by Oak Ridge National Laboratory Panel	9:00 a.m. Workshop II CLINIC ON PROPO- SALS A Paul Carnell J. N. Orcutt	9:00 a.m. Workshop IV CLINIC ON PROPO- SALS B Paul Carnell J. N. Orcutt
2:00 p.m. Workshop I M. Bowden H. M. Roth W. W. Grigorieff G. Courtney	2:00 p.m. TECHNOLOGY AND SOCIETY Edgar G. Epps	2:00 p.m. RESOURCES W. G. Pollard	2:00 p.m. Workshop III STUDENTS' VIEWS Brady Harden Kenneth Jones Charles Mason Brenda Wiggins	2:00 p.m. Workshop V ADMINISTRATORS' VIEWS
		6:00 p.m. Picnic for Participants and Interested Oak Ridgers	3:30 p.m. ENERGY AND ENVIRONMENT A. M. Weinberg	

Monday, June 22	Tuesday, June 23	Wednesday, June 24	Thursday, June 25	Friday, June 26
9:00 a.m. Workshop VI CURRICULAR REVISION W. H. McArthur Staff 3:00-5:00 p.m. READING Orlando Taylor	9:00 a.m. THE ROLE OF TECHNOLOGY AND ORGANIZATION IN HIGHER EDUCATION R. A. Horton 1:00 p.m. Tours: Depart Teacher Training Building for Biology Division, Y-12 3:00 p.m. Depart Biology Division, Y-12, for Regional Science Experience Center	9:00 a.m. Tour: Depart Teacher Training Building for Daniel Arthur Rehabilitation Center 11:15 a.m. Forum: THE ENVIRONMENT: A MULTI-DISCIPLINARY APPROACH 1:00 p.m. Workshop VII: STUDENT PROJECTS 3:15 p.m. Workshop VIII FACULTY RESEARCH	9:00 a.m. USAEC RESEARCH Paul W. McDaniel 2:00 p.m. Forum BLACK INSTITUTIONS AND THE SOCIAL ORDER 3:30 p.m. A. M. Weinberg	9:00 a.m. Workshop IX WHENCE? 2:00 p.m. THE UNIVERSITY'S RESPONSE Arthur G. Hansen
Optional: EPDA COMPONENT-OAK RIDGE WORKSHOPS Tuesday, June 23 / 10:30 a.m.-12:30 p.m. / READING / Orlando Taylor Wednesday, June 24 / 1:00-3:00 p.m. / READING / Orlando Taylor				
Monday, June 29	Tuesday, June 30	Wednesday, July 1	Thursday, July 2	Friday, July 3
9:00 a.m. Task Group Meetings to Formulate Ideas, Conclusions, Plans, for Implementation 3:15 p.m. Workshop X STUDENT PROJECTS Participants	9:00 a.m. Task Group Meetings to Formulate Ideas, Conclusions, Plans, for Implementation 1:00 p.m. DEMOGRAPHY Everett Lee 3:15 p.m. Workshop XI FACULTY RESEARCH Participants	9:00 a.m. Task Group Meetings to Formulate Ideas, Conclusions, Plans, for Implementation, Proposed Solutions 3:15 p.m. INSTITUTIONAL OUT-REACH Andrew Goodrich	9:00 a.m. Workshop XII INTERACTION BETWEEN THE TWO-YEAR AND FOUR-YEAR COLLEGES Andrew Goodrich 1:00 p.m. Task Group Reports-Ideas, Conclusions, Proposed Solutions, Plans for Implementation 3:00 p.m. Evaluation	9:00 a.m. GRADUATION
Optional: EPDA COMPONENT-OAK RIDGE WORKSHOPS Robert Kansky				
Monday, June 29 9:00 a.m. THE HISTORY OF THE TEACHING OF MATHEMATICS 1. WHY MATHEMATICS? 3. WHAT MATHEMATICS SHOULD BE TAUGHT?	Tuesday, June 30 9:00 a.m. PARADIGM FOR DISCOVERY TEACHING IN MATHEMATICS (WITH EMPHASIS ON MOTIVATING STUDENTS)	Wednesday, July 1 9:00 a.m. CURRICULUM PROJECTS IN MATHEMATICS- GRADES 8-12 (WITH SPECIAL EMPHASIS ON LOW ACHIEVERS)		

second faculty session

JULY 6-31, 1970 ● OAK RIDGE, TENNESSEE

Monday, July 6	Tuesday, July 7	Wednesday, July 8	Thursday, July 9	Friday, July 10
9:00 a.m. ORIENTATION W. H. McArthur A. V. Jett, Jr. W. W. Grigorieff	9:00 a.m. ENVIRONMENT J. L. Liverman	9:00 a.m. TRAINING AND TECHNOLOGY Wendell Russell	9:00 a.m. DEMOGRAPHY Everett Lee	9:00 a.m. POLITICS OF CHANGE Elias Blake, Jr.
10:30 a.m. USAEC PROGRAMS S. R. Sapirie	1:15 p.m. LANGUAGE ARTS I Charline Conyers	1:15 p.m. LANGUAGE ARTS II Charline Conyers	1:15 p.m. LANGUAGE ARTS III Charline Conyers	1:00 p.m. Tour I—Oak Ridge Facilities
1:15 p.m. DNET PROJECTIONS E. Pierce	3:30 p.m. Workshop I Staff	3:30 p.m. Workshop II Staff	3:30 p.m. Workshop III Staff	6:00 p.m. PICNIC (Dutch)
Monday, July 13	Tuesday, July 14	Wednesday, July 15	Thursday, July 16	Friday, July 17
9:00 a.m. EDUCATIONAL ASSIST- ANCE G. C. Kyker	9:00 a.m. MODEL CITIES Johnny Ford	9:00 a.m. RESOURCES W. G. Pollard	9:00 a.m. SAFETY J. A. Lenhard	9:00 a.m. NATIONAL ENVIRON- MENTAL POLICY D. J. Rose
1:15 p.m. Workshop IV Staff	1:15 p.m. Workshop V Staff	1:15 p.m. Workshop VI Staff	1:15 p.m. Tour II 1. Science Center 2. Daniel Arthur Rehabil- itation Center	1:15 p.m. TECHNOLOGY AND SOCIETY E. G. Epps
				3:30 p.m. REFLECTIONS AND PROSPECTIVES W. W. Grigorieff

Monday, July 20	Tuesday, July 21	Wednesday, July 22	Thursday, July 23	Friday, July 24
9:00 a.m. TWO-YEAR COLLEGES Andrew Goodrich	9:00 a.m. URBAN DEVELOPMENT James Jordan	9:00 a.m. CLINIC ON PROPOSALS Paul Carnell J. N. Orcutt	9:00 a.m. CLINIC ON PROPOSALS Paul Carnell J. N. Orcutt	9:00 a.m. ENVIRONMENTAL QUALITY SEMINAR George Joseph
10:30 a.m. PROJECTIONS E. Bacon R. W. Tyler	10:30 a.m. EXPECTATIONS R. W. Tyler	1:15 p.m. READING III Ronald Williams	1:15 p.m. THE BLACK COLLEGE 1970—SOME INEVI- TABLE INSTITUTIONAL IMPERATIVES Herman Smith	10:30 a.m. TECHNOLOGY FORE- CASTING R. H. Rea
1:15 p.m. READING I Ronald Williams	1:15 p.m. READING II Ronald Williams	3:30 p.m. Workshop IX Staff	2:30 p.m. ENERGY AND ENVIRON- MENT A. M. Weinberg	1:15 p.m. VIEW FROM WASHING- TON, D. C. C. E. Larson
3:30 p.m. Workshop VII Staff	3:30 p.m. Workshop VIII Staff		6:00 p.m. PICNIC (Dutch)	
5:30 p.m. RECEPTION				
Monday, July 27	Tuesday, July 28	Wednesday, July 29	Thursday, July 30	Friday, July 31
9:00 a.m. POPULATION POLICIES J. H. Gibbons	9:00 a.m. SPACESHIP EARTH W. G. Pollard	9:00 a.m. EXCHANGE PROFESSOR- SHIPS Hilton Smith	9:00 a.m. EVALUATION AND PLAN- NING W. H. McArthur W. W. Grigorieff	9:00 a.m. GRADUATION
1:15 p.m. MATHEMATICS I Edward Carroll	1:15 p.m. MATHEMATICS II Edward Carroll	1:15 p.m. MATHEMATICS III Edward Carroll	1:15 p.m. FILMS	
3:30 p.m. A. M. Weinberg	3:30 p.m. Workshop X Staff	3:30 p.m. Workshop XI Staff	2:30 p.m. SCIENCE POLICY A. M. Weinberg	
			8:00 p.m. RECEPTION	

NOTE: Second workshop for administrators shared program for week of July 20.

speakers

Emery Bacon, Executive Director
Federal interagency Committee on Education
Department of Health, Education, and Welfare
4065, 400 Maryland Avenue
Washington, D. C. 20202

Elias Blake, Jr., President
Institute for Services to Education, Inc.
1527 New Hampshire Avenue, N.W.
Washington, D. C. 20036

Marion A. Bowden
Assistant for Equal Employment Opportunity
Programs
Office of General Manager
U. S. Atomic Energy Commission
Washington, D. C. 20545

Paul H. Carnell, Assistant Director
Division of College Support
Bureau of Higher Education
U. S. Office of Education
330 Independence Avenue
Washington, D. C. 20201

Edward Carroll, Associate Professor
Department of Mathematics Education
New York University
New York, New York 10003

Peter H. Cohan, Executive Director
Cooperative Science Educational Center, Inc.
Oak Ridge, Tennessee 37830

Charline Conyers, Professor
Department of English
State College
Pennsylvania 19319

George W. Courtney, Jr., Chief
University Relations Branch
Division of Nuclear Education and Training
U. S. Atomic Energy Commission
Washington, D. C. 20545

James W. Curlin, Project Leader
Watershed Ecosystem
Ecological Sciences Division
Oak Ridge National Laboratory
Oak Ridge, Tennessee 37830

Edgar G. Epps
Carver Research Foundation
Tuskegee Institute
Tuskegee Institute, Alabama 36088

Johnny Ford, Director
Model Cities Program
City of Tuskegee
Tuskegee, Alabama 36084

John H. Gibbons, Director
Environmental Quality Study Project
Oak Ridge National Laboratory
P. O. Box "X"
Oak Ridge, Tennessee 37830

Andrew Goodrich, Director
Minority Group Programs
American Association of Junior Colleges
One Dupont Circle, N.W.
Washington, D. C. 20036

W. W. Grigorieff
Assistant to the Director
Oak Ridge Associated Universities
P. O. Box 117
Oak Ridge, Tennessee 37830

Arthur G. Hansen, President
Georgia Institute of Technology
Atlanta, Georgia 30332

Alexander Hollaender
Senior Research Adviser
Biology Division
Oak Ridge National Laboratory
Oak Ridge, Tennessee 37830

Robert A. Horton, Assistant to the Mayor
107 Metropolitan Courthouse
Nashville, Tennessee 37201

Arthur V. Jett, Jr., Manager
Computer Center
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appendix b

1969 WORKSHOP SCHEDULE, CONTRIBUTORS, AND PARTICIPANTS

SCHEDULE ● AUGUST 4-29, 1969 ● OAK RIDGE, TENNESSEE

Monday, August 4	Tuesday, August 5	Wednesday, August 6	Thursday, August 7	Friday, August 8
9:00 a.m. WELCOME ORAU - W. G. Pollard ORO - H. M. Roth USAEC - M. A. Bowden UCNC - R. F. Hibbs	9:00 a.m. ENGINEERING AT ARGONNE NATIONAL LABORATORY M. Levenson	9:00 a.m. TECHNICAL INFORMA- TION R. L. Shannon	9:00 a.m. PHYSICS J. L. Fowler T. A. Welton	9:00 a.m. CHEMISTRY E. H. Taylor R. Livingston
9:45 a.m. DNET PROGRAMS E. S. Pierce	10:30 a.m. ENGINEERING AT BROOKHAVEN NA- TIONAL LABORATORY C. Williams B. G. Nimmo	2:00-4:30 p.m. INFORMATION CENTERS F. Kertesz	10:30 a.m. Lab Visit	10:30 a.m. Lab Visit
10:45 a.m. F.I.C.E. E. Bacon	2:00-4:30 p.m. Workshop I		2:00-4:30 p.m. Workshop II	2:00-4:30 p.m. Workshop III
11:40 a.m. THE PLAN OF THE WORKSHOP W. W. Grigorieff H. Liston	6:30 p.m. DINNER (Dutch) WITH AEC Commissioner T. J. Thompson			
2:00-4:30 p.m. ENGINEERING AT ORNL S. E. Beall				
5:30 p.m. Social				
Monday, August 11	Tuesday, August 12	Wednesday, August 13	Thursday, August 14	Friday, August 15
9:00 a.m.-12 noon ENGINEERING AND PRODUCTION P. R. Vanstrum W. J. Wilcox, Jr. W. J. Yazgi	9:00 a.m. BIOENGINEERING J. L. Liverman	9:00 a.m. BIOLOGY H. I. Adler	VISIT TO SAVANNAH RIVER LABORATORY	9:00 a.m.-4:30 p.m. Workshop V
2:00-4:30 p.m. ECOLOGY J. S. Olson J. W. Curtin	2:00-4:30 p.m. Workshop IV	4:48 p.m. DEPART FOR AUGUSTA, GA.	RETURN TO OAK RIDGE	
	7:00 p.m. DINNER (Dutch) E. Bacon, Executive Director, F.I.C.E. M. Donahue D. Carlisle	7:30 p.m. DINNER WITH SRL/SRO OFFICIALS		

Monday, August 18	Tuesday, August 19	Wednesday, August 20	Thursday, August 21	Friday, August 22
AEC PROGRAMS (Long Range)			9:00 a.m. NSF PROGRAMS T. D. Fontaine	9:00 a.m. FELLOWSHIPS G. C. Kyker
9:00 a.m.—12 noon DIVISION OF REACTOR DEVELOPMENT AND TECHNOLOGY (Engrg.) D. Cope	9:00 a.m.—12 noon DIVISION OF BIOLOGY AND MEDICINE J. R. Totter	HIGHLIGHTS OF NEW APPROACHES TO ENGI- NEERING EDUCATION F. N. Peebles	10:00 a.m. HEW PROGRAMS P. Valien	10:00 a.m. FACULTY PARTICIPA- TION L. A. Rayburn
2:00—4:30 p.m. DIVISION OF RESEARCH D. R. Miller W. E. Hughes H. J. Foster	2:00—4:30 p.m. DIVISION OF ISOTOPES DEVELOPMENT R. L. Butenhoff P. S. Baker		11:00 a.m. NASA PROGRAMS F. Hansing	11:00 a.m. EDUCATION AT OAK RIDGE NATIONAL LABORATORY L. Nelson
			2:00—4:30 p.m. Workshop VI	2:00 p.m.—F. L. Culler 3:00—4:30 p.m. RECRUITMENT: CON- FERENCES AND INSTI- TUTES
Monday, August 25	Tuesday, August 26	Wednesday, August 27	Thursday, August 28	Friday, August 29
9:00 a.m. AEC ASSISTANCE H. M. Roux	University Participation	SUB-GROUP WORK SESSIONS	"Back-Talk"	SUMMARY—CONCLUSIONS
10:00 a.m. ENVIRONMENTAL MUTAGENS—SYMPOSIA A. Hollwender	9:00—10:30 a.m. AT ARGONNE NATIONAL LABORATORY M. D. Peterson L. W. Dini J. A. Wagner		RECAPITULATION— PLANS FOR FOLLOW-UP	9:00 a.m.—12:00 noon M. Bowden G. Courtney E. S. Pierce H. M. Roth W. G. Poilard H. Liston W. W. Grigorieff
11:00 a.m. TRAINING AND TECHNOLOGY W. H. Russell	10:30 a.m.—12:00 noon AT BROOKHAVEN NA- TIONAL LABORATORY R. C. Anderson		6:00 p.m. PICNIC (Dutch)	
2:00—4:30 p.m. Workshop VII	2:00—4:30 p.m. Workshop VIII			



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