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PROGRESS REPORT
to the
AGENCY FOR INTERNATIONAL DEVELOPMENT
on the
AFRICAN MATHEMATICS PROGRAM
October 1, 1966 to December 31, 1966
under
AID Contract RES-21, Amendment 3

**A.I.D. HISTORICAL AND
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PROGRESS REPORT

The following is a progress report to the Agency for International Development on the African Mathematics Program of Educational Services Incorporated for the period October 1 to December 31, 1966. The principal activities during the period under AID Contract res-21, Amendment 3, consisted of 1) planning and organizing the 1967 Workshop to continue the preparation of mathematics texts for Tropical Africa, 2) preparing a preliminary design of a broader evaluation of the effect of the African Mathematics Program on pupils and teachers, 3) maintaining contact with the African university mathematicians who are supervising the AEC Institute correspondence courses, 4) at the request of AID, preparing a draft of a plan for the adoption of modern mathematics in an African country, 5) organizing courses in Malawi, Midwest Nigeria and Tanzania to train teachers of trial classes, head teachers and Ministry officials to use the Entebbe Mathematics Series, and 6) arranging for publication of the manuscripts written at the 1966 Workshop and for the distribution of the Entebbe Mathematics Series to African schools using the material on an experimental basis.

Planning and Organizing the 1967 Workshop

Planning for the 1967 Writing Workshop at Mombasa continued at a meeting of the African Mathematics Program Steering Committee held October 15, 1966 in Boston.

At the 1966 Workshop Professor Emeritus Donald Richmond of Williams College and Professor Hartley Rogers of M.I.T. prepared proposed outlines of a two year Additional Mathematics Course. It is planned to write the text at the 1967 workshop. At the October 15 meeting the Steering Committee suggested several changes in the outline. It is also being reviewed by African members of the Steering Committee who were not

present at the meeting and will be reviewed again at the April 1 and 2, 1967 London meeting of the Executive Committee of the Steering Committee.

At the 1967 Workshop it is planned to write the Primary Six Pupil Book and Teachers' Guide, a Primary Teachers' Handbook for Primary IV-VII and objective tests for Secondary C Two and Primary Four in addition to the two year Additional Mathematics Course.

An outstanding group of African and American university mathematicians and mathematics educators have agreed to participate in the Workshop. A list of the African and American participants is contained in Appendix A. (Invitees whose acceptances are pending are *.)

Broader Evaluation of the Effects of the African Mathematics Program

As was reported in the October 30, 1966 progress report, there is now a common desire on the part of AID and ESI to institute a broader evaluation of the effects of the African Mathematics Program while continuing the preparation at each Workshop of objective type tests designed to measure the pupils' achievement at each successive grade level of text material. A meeting of a subcommittee on evaluation of the Steering Committee was held October 16, 1966 to consider further the feasibility of such a broader evaluation. A preliminary design of such a study is being prepared by Professor Robert Dilworth of California Institute of Technology and Professor Jerome Kagan of Harvard University. The preliminary design will be reviewed at the April 1 and 2, 1967 Executive Committee meeting of the Steering Committee.

ABC Institute - A Related Program

Since the end of the first residential period of the ABC Institute in Nairobi, Kenya, last July, the primary mathematics teacher trainers (A participants), and the

Ministry officials (B participants), have been taking a correspondence course prepared at the Institute by and now being supervised by the university mathematicians (C participants). In December, the Eastern Nigerian C participant held a seminar for his A's and B's. Similar seminars are being planned by C's in other country/regions.

It is expected that most of the 1966 participants will return to Nairobi in July, 1967, for the second residential period. Moreover, recent correspondence indicates that countries which originally did not choose to participate, are now aware of the importance of the Institute and wish to cooperate. Botswana and Lesotho (not participants in the AID Program) and Zambia intend sending participants next summer. Also, Ghana and Eastern Nigeria have reconsidered the suitability of last year's participants and have asked permission to send additional and more suitable participants.

A new group of participants (known as D participants) will be added this year. Each participating country has been asked to nominate a secondary school mathematics teacher to attend the Institute in July. Several nominations have been received to date. Therefore, it is hoped that each participating country/region will be represented by its full complement of 3 A's, 1 B, 1 C, and 1 D.

Draft of a Plan for the Adoption of Modern Mathematics in an African Country

At the request of AID, a draft of a plan for the adoption of modern mathematics in an African country was prepared. The plan offers a tentative development timetable and outlines the financial and manpower needs for introducing modern mathematics into all levels of education - primary, secondary and teacher training. By 1972 it would be possible for an African country to achieve the potential to complete

the training process and to staff the entire educational system with modern mathematics teachers.

Courses for Tanzania, Midwest Nigeria, Malawi, Liberia and Projected Courses

Earlier reports to AID (March 4, 1964, January 31, 1965, September 30, 1965, December 30, 1965, May 30, 1966 and October 30, 1966) described 24 courses held in the participating countries to train teachers and supervisors of experimental classes as well as participation in other related mathematics improvement efforts in Tropical Africa.

Requests for courses continue to be received. At the end of the period covered by this report one course was underway in Tanzania, three courses were about to begin (Midwest Nigeria, Malawi and Liberia) and participation in two additional conference/institutes was about to be undertaken (W. Nigeria and E. Nigeria).

The following course was underway:

Tanzania (Detailed Report in Preparation)

Site: University College, Dar es Salaam

Participants: 53 Secondary C teachers

U.S. Lecturer: Professor Paul Johnson, UCLA

Date: January 2 to 15, 1967

The following three courses were about to begin:

Midwest Nigeria (See Report - Appendix B)

Site: Midwestern Technical College, Auchi

Director: Dr. Grace A. Williams, Faculty of Education, University of Lagos

Tutors: Mr. J.C. Ojido (ABC Institute participant) P.T.T.C., Abudu
Mr. B.O.E. Irusota (ABC Institute participant) Gov. T.T.C., Abraka
Mr. I. Ikime (ABC Institute participant) Benin Inspectorate

Administrator: Mr. E.C. Summers, Principal, Midwestern Technical College, Auchi

Lecturers: Dr. Vincent Haag, Franklin & Marshall College, Lancaster, Pa.
Dr. Grace A. Williams

Participants: 38 primary teachers, 8 inspectors, 6 tutors, 10 secondary teachers

Date: January 3 to 14, 1967

Malawi (Detailed Report in Preparation)

Date: January 9 to 21, 1967

Participants: Primary teachers

U.S. Lecturer: Professor Emeritus Donald Richmond

Liberia

Date: January 19 to February 6, 1967

U.S. Lecturer: Professor Paul Johnson

In addition, participation was about to be undertaken in two additional conference/institutes. On his way to serve as U.S. lecturer at the course in Malawi, Professor Richmond served as a consultant and adviser to a January 3 to 7 conference to prepare a secondary level syllabus for N. Nigeria. The conference was under the auspices of and held at the Institute of Education, Ahmadu Bello University, Zaria, N. Nigeria. Also, Professor Johnson assisted Dr. Onyerisara Ukeje at the University of Nigeria, Nsukka, from January 15 to 17 in orienting 15 Peace Corps Volunteers who were about to begin teaching Entebbe secondary materials in 21 classes in Eastern Nigeria. (At the time Professor Johnson was on his way from having lectured at the Tanzania course for secondary teachers to the course in Liberia.) During their two

years in Eastern Nigeria these PCV's will be training Nigerian counterparts to teach the material. Dr. Ukeje and Mr. Igboko, the Eastern Nigerian university mathematician (C participant) in the ABC Institute, will hold a two week course in April for the counterparts.

Ethiopia, Ghana, Sierra Leone and Uganda are also presently planning institutes to be held in the next nine months.

Publication and Distribution of the Entebbe Mathematics Series

During this report period, Science Research Associates, Inc. (SRA), a subsidiary of International Business Machines Corporation, under a subcontract providing for SRA to publish and distribute the Entebbe Mathematics Series, completed publication of Secondary C Two Algebra Student Text and Teachers' Guide. The Secondary C Two Geometry Student Text and Teachers' Guides were about to be printed at the end of the report period. In addition, the manuscripts for Primary Five and Secondary Five had been turned over to SRA for publication. It is expected that the Secondary C Three Geometry manuscript will be completed and that Secondary C Two Geometry will be available for distribution during January 1967. Moreover, a manuscript of a Revised Preliminary Edition of Basic Concepts Volumes I and II was submitted to SRA, Inc., Chicago.

SRA, Ltd., Newtown, Reading Road, Henley-on-Thames, Oxfordshire, England, completed reprinting the Primary One Pupil Book and Teachers' Guide for commercial sale in Tropical Africa. It intends also to reprint Primary Two during the Spring or Summer of 1967 for commercial sale in Africa and is considering reprinting Secondary C One.

There is continuing pressure on the program to supply more than the 30 class

sets at each grade level permitted under the AID contract. Those responsible for supervision of the Program in Nigeria and Tanzania have written several times during the report period requesting additional class sets.

In conclusion, ESI wishes to express its thanks to the Office of Technical Cooperation and Research of AID/W, to the Contract Officers of AID/W responsible for Res-21 and to the educational advisors of the AID missions in the participating countries for their cooperation in this joint effort to improve mathematics education in Tropical Africa.

Appendix A

1967 Mathematics Workshop Participants

Co-Chairmen: Prof. W.T. Martin, Massachusetts Institute of Technology, Cambridge, Mass.
Mr. Christopher Modu, West African Examinations Council, Accra, Ghana

African Participants

Dr. D.K. Abbiw-Jackson, University of Science and Technology, Kumasi, Ghana
Dr. Iya Abubakar, Ahmadu Bello University, Zaria, Nigeria
Miss Lucy Addy, Ministry of Education, Accra, Ghana
*Mr. S. Adeniyi, St. Paul's School, Zaria, Nigeria
*Dr. James Adichie, University of Nigeria, Nsukka, Nigeria
Mr. T.A. Agbaje, Ibadan Grammar School, Ibadan, Nigeria
*Mr. S.E. Amisah, Government Technical Secondary School, Takoradi, Ghana
Mr. Theo Q. Armar, West Africa Secondary School, Accra, Ghana
Mr. F.B. Dyck Harding, Milton Margai Training College, Freetown, Sierra Leone
*Mr. Victor O. Johnson, Government Secondary School, Magburaka, Sierra Leone
Mr. Julius Jonah, Prince of Wales School, Freetown, Sierra Leone
Mr. Frank Kazembe, Ministry of Education, Limbe, Malawi
*Mr. Michael Kinunda, Ministry of Education, Dar es Salaam, Tanzania
*Dr. K. Odoom, University of Ghana, Legon, Accra, Ghana
Mr. P.A. Oguntunde, Comprehensive High School, Abeokuta, W. Nigeria
Mr. Jacob Okine, Accra Academy, Accra, Ghana
Mr. Jameson Shakalima, Timothy Mwanakatwe School, Lusaka, Zambia
Mr. Modupe Taylor-Pearce, Secondary Technical School, Freetown, Sierra Leone
*Dr. H.O. Tejumola, University of Ibadan, Ibadan, Nigeria
Dr. Onyerisara Ukeje, University of Nigeria, Nsukka, Nigeria
Dr. Awadagin Williams, Fourah Bay College, Freetown, Sierra Leone

American Participants

Prof. John Green, University of California, Los Angeles, California
Prof. Vincent Haag, Franklin & Marshall College, Lancaster, Pennsylvania
Prof. Clarence Hardgrove, Northern Illinois University, DeKalb, Illinois
Prof. Clarence Heinke, Capital University, Columbus, Ohio
Prof. Shirley Hill, University of Missouri, Kansas City, Missouri
Prof. Peter Hilton, Cornell University, Ithaca, New York
Miss Lenore John, University of Chicago Laboratory School, Chicago, Illinois
Prof. Donald Kreider, Dartmouth College, Hanover, New Hampshire
Prof. Robert Kuller, Wayne State University, Detroit, Michigan
Prof. Peter Lappan, Michigan State University, East Lansing, Michigan
Prof. E.G.K. Lopez-Escobar, University of Maryland, College Park, Maryland
Prof. Robert MacDowell, Antioch College, Yellow Springs, Ohio
Mr. William McNabb, St. Mark's School, Dallas, Texas
Prof. Donald Ostberg, State University of New York, Buffalo, New York
Mr. Richard Pieters, Phillips Academy, Andover, Massachusetts
Prof. Hartley Rogers, M.I.T., Cambridge, Massachusetts
Prof. Leon Rutland, Virginia Polytechnic Institute, Blacksburg, Virginia
Mr. Henry Swain, New Trier Township High School, Winnetka, Illinois
Prof. Paul White, University of Southern California, Los Angeles, California

* Invitees whose acceptances are pending

APPENDIX B

Report of the

Mid-Western Nigeria Mathematics Institute

Held in Auchl, Nigeria, at the Mid-Western Technical College from January 3 to 14, 1967, for 38 primary teachers, 8 inspectors, 6 tutors in training colleges, and 10 secondary teachers, under the auspices of the Mid-Western Ministry of Education and Educational Services Incorporated.

Purpose of the Institute: To train a corps of primary teachers in 17 schools in three districts of the Mid-Western Region to bring Entebbe One in their classes next term, and to orient the secondary teachers in the Entebbe Secondary program preparatory to its adoption in a few schools.

Daily Schedule:

8:00 - 9:00	Primary lecture, secondary seminar
9:00 - 10:00	Primary tutorials, secondary lecture
10:00 - 10:30	Coffee break
10:30 - 11:30	Primary lecture, secondary seminar
11:30 - 12:00	Discussions
2:00 - 3:00	Primary tutorials, secondary lecture
3:00 - 4:00	Plenary session, or film strips, or demonstrations
4:00 - 4:30	Tea
5:00 - 6:00	Personal conferences with staff

Staff:

Director: Dr. Grace A. Williams, Faculty of Education, University of Lagos

Tutors: Mr. J. C. Ojidoh, ABC member from P.T.T.C., Abudu
Mr. B. G. E. Irusota, ABC member from Gov. T.T.C., Abraka
Mr. I. Ikime, ABC member from Benin inspectorate

Administrator: Mr. E. C. Summers, Principal, Mid-Western Technical College, Auchl

Lecturers: Dr. Williams
Prof. V. Haag, Franklin and Marshall College, USA

Official Visitors: Mr. S. F. Edgal, Chief Inspector of Education
Mr. S. A. Eborieme, Principal Inspector
Mr. G. O. Mesiri, Principal Inspector
Mr. John Buchanan, Peace Corps Director in Mid-Western Region

Facilities: The technical college in which the institute was housed is only a year old and has excellent housing, dining and teaching facilities, including electricity. The participants were comfortable and well fed; the lecture, tutorial and other rooms were ideal for the purposes of the institute, including a darkened room for showing film strips and an assembly hall for plenary sessions. Mr. Summers and his staff spared no pains in accomodating our needs, including typing and duplicating services, purchasing and distribution of supplies and lodging of lecturers in homes of staff members of the college.

Programme:

After a short opening plenary session, books and supplies were distributed and the above schedule was begun. Dr. Williams gave 14 lectures to the primary group and 6 to the secondary group; Prof. Haag gave 6 lectures to the primary group and 14 to the secondary. Each lecturer led the secondary seminar at various times and supervised the three primary tutorial groups. The lectures, tutorials and discussions concerned the materials, methods and concepts of Entebbe Primary One for the group of primary teachers, and Entebbe Secondary One and Two for the group of secondary teachers. Collateral reading was assigned in the Teachers Handbook and Basic Concepts I for the primary group and in Secondary C I and Basic Concepts II, III, IV for the secondary group. The 3 o'clock hour each day was devoted to demonstration lessons given by participants in tutorial groups, to plenary sessions for discussion of future plans, or for group discussions on matters related to teaching. One session was used to show some films strips to the secondary group, but the content of the strips was so far out of date that no more were shown. On Monday nights the college showed full length American movies in the assembly hall, a welcome recreation for the participants. The final plenary session was held on Saturday, January 14, and was attended by four representatives of the Ministry of Education of the Mid-Western Region; final reports and recommendation was made by Dr. Williams, representing E.S.I. and by the Rev. J. K. Diei, representing the participants, with Mr. Edgal, Chief Inspector, responding. (See attached Memorandum).

Reactions of Participants:

The primary teachers and inspectors seemed unanimously enthusiastic and receptive from the start of the institute. To them this was not merely a study of an experimental programme; none of them needed to be convinced that an approach such as Entebbe's is needed in the schools. The three local ABC people in attendance undoubtedly had a major role in creating this attitude, and the fact that their major lecturer, Dr. Williams, is a fellow Mid-Westerner and a forceful and articulate person cannot be overemphasized. It was heartening to this writer to see, at last, one situation precisely as hoped for in ESI's African projects, namely: a solid teacher-training programme handled effectively and entirely by local Africans, in spite of the usual problems of communication and the usual feet-dragging of Ministries.

The reaction of the secondary teachers was a different matter. Of 30 teachers invited, only ten appeared, plus three Peace Corps volunteers who wanted to learn more about the Entebbe programme. Of these ten, three or possibly four, are dedicated teachers. The rest are marking time until they can enter a university, or find a ministry job. Too many of them exhibited the dangers of a "little learning" and were certain they had little to learn at such an institute. Finally, near the end of the course some of them began to give signs of an awareness of the possibilities in the new approach to mathematics. In the writer's opinion this phase of the institute was somewhat short of successful.

Reaction of Ministry:

Committees of participants spent many hours forming and polishing a statement of recommendations to the Ministry. They were particularly painstaking in their drafting of the recommendations because they anticipated a luke-warm attitude from the Ministry, as in the past. Thus it was a pleasant surprise to them at the final plenary session when Mr. Edgal, Chief Inspector, virtually endorsed all of their recommendations and spoke glowingly of the Ministry's future support of the Entebbe programme. The writer suspects that we must let future actions determine the Ministry's reactions.

Appraisal:

The primary portion of the Auchi Institute appears to have been an unexpected success and a portent of possibilities for the future. It took Dr. Williams almost two years of pleading before she was allowed by the Ministry to organize a training program in the Mid-West. When it finally happened, the arrangements were so sloppily made by the Ministry that Dr. Williams had to play the whole affair "by ear" until the last moment. In spite of these difficulties, her ideas proved sound; she reasoned that a pilot program would have better chances of success than a broadside program involving many scattered schools. Hence, the primary teachers were invited from 17 schools in three distinct areas in which ABC people are available to supervise classes. She also decided to gear the institute to a specific objective, namely, that of learning to teach Entebbe Primary One. This proved effective, in this writer's opinion, compared to other institutes in which more broad objectives were set, such as a general upgrading in mathematics. The technique of teaching directly from the Entebbe primary materials is effective because it puts the teachers in the role of the pupil and gives direct encounters with the mathematics and the methods that the teachers will actually use.

This observer was even more pleased with the fact that the primary phase of the Auchi Institute provided an existence proof that the objectives of the E.S.I. African Programme can be met. Here was an example of a local mathematician and educator (Dr. Williams) organizing and conducting a teacher training institute for primary teachers with the help of local tutors (the ABC people). (The American lecturer devoted most of his time to the secondary teachers and was not needed for the primary program.) In other words, here was a training programme, as successful as any this writer has seen in Africa, organized and manned entirely by local representatives of the E.S.I. venture.

It should be added here that the ABC people were surprisingly competent in their roles as tutors (surprisingly, because one never ordinarily sees local people at this educational level with such sound mathematical sense.) After watching these ABC people at work and after conversations with them it was evident that their experiences in the ABC programme in Nairobi last summer made the difference, and that the whole concept of the ABC Programme has already begun to pay dividends.

The secondary phase of the Auchi Institute was an experience that suggests we should take a more careful look at our objectives and methods relative to teacher training for secondary teachers.

Recommendations:

1. For primary teacher training the choice of materials and balance between lectures and tutorials in this institute were good, but it is recommended that a few demonstration classes be organized at future institutes. (This was the only feature missing in an otherwise excellent programme.)

2. Before other secondary teacher training institutes are organized it is recommended that the Steering Committee take a hard look at the objectives of such institutes and the possible ways to make them effective.

3. The ABC participants who served as tutors at the Auchi Institute demonstrated the value and the potential of the ABC Programme. Unfortunately, some of them are not being assigned by the Ministry to posts in which they deal with mathematics. It is recommended that continued pressure be put on the Ministries to use these people in mathematics posts.

4. After watching Dr. Williams at work and listening to her plans for the West, the Mid-West and Lagos, one gets the impression that she could work wonders in Nigeria if she had enough time and energy. It is recommended that E.S.I. hire a full time assistant for her, a local educator, to help her with arrangements, visitations and programmes. Dr. Williams has such a person in mind, a local person who already knows the people and the problems and is competent to assist in administrating the Entebbe Programme. The cost would be nominal, but the effect would be far-reaching.

Submitted respectfully,

V. Haag
Franklin and Marshall College

Attached:

List of participants
Memorandum prepared by participants
Photograph of the participants

MEMORANDUM TO THE MINISTRY OF EDUCATION MID-WESTERN NIGERIA

BY THE MID-WESTERN MATHEMATICS INSTITUTE, AUCHI 1967

Official representatives of the Midwestern Nigeria MINISTRY of Education, Benin City, on behalf of the members of the Midwestern Mathematics Institute, Auchi 1967, we sincerely express our deep gratitude to you for the opportunity offered us in participating in the activities of this preliminary course in the new approach to mathematics. We jointly believe that our experiences here could have been impossible without your kind invitation; nevertheless we shall not omit to emphasize the fact, that but for the joint inspiration of Dr. Grace Alele Williams and Professor Vincent Haag, both members of the steering committee of the African Mathematics Programme of the E.S.I., our stay here could not have been a success. In this regard, we wish to express our indebtedness to Mr. Summers, the Principal of the Midwestern Technical College, Auchi for making it possible for the course to be residential in his College; and what is more for his alertness in seeing that we are all well catered for.

As teachers in your region of jurisdiction, it is a matter not only of necessity but also of urgency that we should reveal to your MINISTRY our sincere feelings about the course and the need to promote its advancement.

Sirs, within this period of our course in the new approach to mathematics, we have been able to see that our students will be better in mathematics if they are exposed to this modern approach. To this end we very strongly believe that the effect of this course will not be fully realized without the gearing force from the MINISTRY of Education. We therefore suggest:-

- (1) That a special department be created in your MINISTRY to supervise this project. This may not necessarily imply employing more staff; as any of the qualified teachers who have participated in this could be co-opted to work in conjunction with personnel in the MINISTRY of Education who had been trained at Nairobi under the auspices of the E.S.I.
- (2) In order to train more teachers for this project and to improve on the existing knowledge of the participants of this course, we suggest that there should be a gradual expansion of the programme at all levels (primary, teacher training and secondary grammar). There should be sound arrangements for follow-up courses.
- (3) We cannot over-emphasize the need for books as a sine qua non in the promotion and continued success of this project, and, as we have been reliably informed that funds may be made available by the U.S.A.I.D. for the purchase of necessary books, provided that application for such funds is made by the MINISTRY, we implore the MINISTRY to explore this avenue in order that necessary books may be made available for the project.
- (4) We are aware that the effectiveness of this new approach to mathematics in the Secondary Grammar Schools depends much on its sterling success in the primary schools. For this reason we pray the MINISTRY to give the necessary directives to enable this new approach to be introduced in Teacher Training Colleges.

(5) Mathematics is wrongly taken by many of our students as an impossible subject as a result of the prejudice passed on to them by teachers not really interested or adequately informed in the subject; we therefore recommend that, in future, teachers nominated for this course from teacher training, secondary grammar schools and primary schools should be practising mathematics teachers. For this reason we also feel that teachers who have attended this course should be assigned to teach primary one or the appropriate class for which the course was conducted.

(6) In order to promote the continuity of the programme, we strongly recommend that the MINISTRY of Education should advise school proprietors against unnecessary and indiscriminate transfers of teachers who have participated in this course.

(7) Further, we consider that the month of January is a wrong period for such a course in view of the G.C.E. examinations - this accounted for the absence of many teachers who were invited for this course. We therefore suggest that the MINISTRY should include modern approach to mathematics course when arranging vacation courses for teachers in future - preferably during the second term holidays.

Finally we would like to end this short address by expressing once more our profound gratitude to the MINISTRY for giving us this rare opportunity to enhance our knowledge in the new approach to the teaching of mathematics. We would also like to express our indebtedness to Dr. Grace Alele Williams and Professor Vincent Haag for their most inspiring lectures and to our hosts - the Principal and staff of the Midwestern Technical College, Auchi for their immense hospitality.

Signed for and on behalf of the members of Midwestern Mathematics Institute:

- (1) Revd. J. K. Diei, Chairman
- (2) Mr. P. T. O. Ileleji
- (3) Mr. J. C. Ojidoh) Joint Secretary
- (4) Mr. D. E. Okumagba
- (5) Mr. B. I. Omokaro
- (6) Mr. S. I. Aisueni
- (7) Miss N. Stanffer
- (8) Mr. J. I. Evone

Midwestern Nigeria Mathematics Institute

List of Participants

Primary Teachers, Inspectors, etc.

Mr. J.I. Idehen, Govt. School, Benin City
Mr. G.E. Edebor, Govt. School, Benin City
Mr. D.A. Ighile, Govt. School, Benin City
Mr. S.I. Aisueni, St. Peter's Ang. School, Benin City
Mr. J.A. Shiwonzea, St. Peter's Ang. School, Benin City
Mr. S.A. Ehomwenrenren, St. Peter's Ang. School, Benin City
Mr. N.I. Aigbuza, St. Peter's Ang. School, Benin City
Mr. E.O. Ighodaro, St. Peter's Ang. School, Benin City
Mr. J.O. Onaghise, St. Joseph's R.C.M. School, Benin City
Mrs. E.I. Okwuadi, St. Joseph's R.C.M. School, Benin City
Mr. R.O. Ogiemudia, Ebenezer U.N.A. School, Benin City
Miss E.E. Obasohan, Ebenezer U.N.A. School, Benin City
Mr. P.E. Omoruyi, Ebenezer U.N.A. School, Benin City
Mr. B.I. Omokaro, Benin Baptist School, Benin City
Mrs. C.I. Ogbođu, Benin Baptist School, Benin City
Mr. S.I. Ogunseri, Benin Baptist School, Benin City
Mr. B.E. Ebose, B.D.C. School #4, Benin City
Mr. F.I. Agho, B.D.C. School #4, Benin City
Mr. P.E. Ogbodu, N.B.C. School, Ogbe-Benin City
Mr. L.N. Oboli, N.B.C. School, Warri
Mrs. P. Fekarurhobo, N.B.C. School, Warri
Mrs. E. Ezeadichie, Catholic School #1, Warri
Miss R. Oputa, Catholic School #1, Warri
Mr. I.O. Kaido, Catholic School #1, Warri
Mr. E.E. Imoukhuede, St. Andrew's Ang. School, Warri
Mr. D.F. Djomah, Sido Prep Day School, Warri
Mr. J.O. Jarikre, Sido Prep Day School, Warri
Mr. F.U.A. Aggreh, Sido Prep Day School, Warri
Mr. P.A. Nana, P.T.T.C. Demon School, Warri
Mr. J.E. Akpomedaye, P.T.T.C. Demon School, Warri
Mrs. E.N. Nwaphor, St. Patrick's R.C.M. School, Asaba
Mr. J.A. Ijomah, St. Patrick's School, Asaba
Mr. P.C. Oba, All Saints Ang. School, Asaba
Mr. D.C. Osadebe, All Saints Ang. School, Asaba
Mr. M.N. Obaloje, Pilgrim Baptist School, Asaba
Mr. B.C. Onyeachonam, L.A. School, Asaba
Mr. D.C. Igboanugu, St. James's Ang. School, Agbor
Mr. E.A.M. Osemeikhian, Govt. T.T.C., Abraka
Mr. B.O.R. Irusota, Govt. T.T.C., Abraka (ABC)
Mr. J.C. Ojidoh, P.T.T.C., Abudu (ABC)
Mr. J.I. Ewone, Sacred Heart College, Ubiaja
Mr. M.M. Momodu, I.A.I., Abudu (Benin Division)
Mr. G.G. Okhuereigbe, I.A.II, Ekpoma (Ishan Division)
Mr. S.K. Orife, I.A. II, Warri (Warri Division)
Mr. B.I. Addeh, I.A.II, Ehor (Benin Division)
Mr. R.A. Usuanlele, I.A.II Agbor (Asaba Division)
Mr. B.U. Unoka, I.A. II, Ubiaja, (Ishan Division)
Mr. D.E. Okei, I.A.II, Asaba (Asaba Division)
Mr. I. Ikime, I.A.II, Benin City (Benin ABC)

Secondary Teachers

Miss M. Bacon, Ang. Women's T.T.C., Benin City
Rev. J.K. Diei, Pilgrim Baptist Grammar School, Isele-Uku
Mr. P.A. Dunkwu, St. Anthony's Co., Ubulu-Uku
Mr. P.C. Egbe, St. Pius X Grammar School, Onitsha-Ugbo
Mr. Patrick O. Eanyi, Government College, Ughelli
Miss Rosee Franke, St. Thomas's T.T.C. Ibusa
Mr. Philip T.O. Ileleji, Urhobo College, Effurun, Warri
Mrs. I. Musa, Anglican Girls Grammar School, Benin City
Mr. E. Obi, Government College, Ughelli
Mr. D.E. Okunagba, Urhobo College, Effurun via Warri
Mr. N. Srinivasa, Academy Grammar School, Sapele
Miss N. Stauffer, Sacred Heart College, Ubiaja
Mr. E.C. Uzoka, St. Peter Claver's College, Aghalokpe- Sapele