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ABSTRACT

Following a brief description of population control in the last 10 years, this paper outlines a Five Year Plan for population education. Four prerequisites to the Plan are presented: a) traditional approaches must be accommodated or bypassed, b) new subject matter must be introduced at the expense of current content, c) value spheres must be included, and d) personnel must be developed to train teachers and teacher educators in this field. The development of the Plan is reported as including the introduction of courses into urban, suburban, rural, and ghetto schools; introduction of in-service courses into community colleges and technical institutions; and proposed emphasis on in-state programs. A 10-item annotated bibliography on population education ends the narrative portion of the report. Appendix I presents a 12-page bibliography; Appendix II, a multidisciplinary approach to population education; Appendix III, a strategy for population education with discussions on needs, current status, general strategy, and tasks. Notes on curriculum design, program development, learning resources, academic programs, research, and evaluation of the strategy are also included. (BRB)

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THE FIRST FIVE-YEAR PLAN FOR POPULATION EDUCATION

(With a Bibliography for Population Center Libraries)

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Since man's first appearance on earth he, like all plant and animal species, has been subject to two opposing forces: life and death.

Alfred Sauvy, 1962

The population literature is burgeoning with comments about death control and birth control, but there is precious little on the topic of life control so that man, in his hallowed dominion over nature, will take care of all life. The family planning literature is heavy with its analyses of cultural constraints against the development of comprehensive delivery systems and with its driving concern about the extension of local, national, and international population policies. Formal programs in sex education have not enjoyed great acceptance/support from many population and family planning personnel. Informal educational programs on contraception and family planning have existed, mostly in clandestine ways, since almost the beginning of history. Formal educational efforts for population awareness are a very recent endeavor characterized overwhelmingly by the piecemeal innovative efforts of a few educators during the past ten years.

The bench mark of population education was set in 1962 by Philip Hauser,¹* one of the foremost demographers in the United States, when he indicted educators in their own prestigious journal, the Teachers College Record:

The facts and implications of population changes are indeed conspicuous by their absence or by their superficial and cursory treatment in American education. The ignoring of demography in the school curriculum is particularly astonishing in view of the fact that the schools themselves have been hard hit by rapid population changes...

* Notes appear at the end of the text.

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It is about time for twentieth century school curricula to incorporate twentieth century demographic findings in the context of their twentieth century implications.

In the mid-1960's The Population Council employed Sloan Wayland from Teachers College, Columbia University, to survey for population and family planning education a number of countries in the Middle East and Southeast Asia, but Wayland found nothing but negative evidence.² Planned Parenthood entered into formal population and family planning education with a major symposium in 1965, from which we now take the challenge for setting up this five-year plan. In the PP-WP discussions concerning curricula, Jerome Zacharias, a leading scientist with special experience in revising high school physics programs, contended that the development of population education would require an array of specialists and at least ten years of very hard work. The physicists had had a field and had known basically what they wanted to develop, but it took them ten years and millions of dollars of support. In reply to this hard analysis of coordinated curriculum development, Alan Guttmacher,³ the president of Planned Parenthood-World Population, rejoined:

It will take more than ten years for a national panel of specialists to debate, test and complete recommendations for secondary school curriculum revision to give proper emphasis to population problems and family planning. But American schools need this guidance sooner; they need it now.

The period from 1966 to 1972 is one of great diversity and generally useful proliferation in population education. Pressures of time-commitment to current population education opportunities in Africa prevent me from developing even a hasty recount of population and family planning developments related to education in Morocco, the Sudan, Tunisia, the United Arab Republic, Ghana, Nigeria, Sierra Leone, Kenya, Mauritius, Uganda, Botswana, Swaziland, Israel, Turkey, Ceylon, India, Iran, Nepal, Pakistan, Indonesia, Malayasia, the Philippines, Singapore, Thailand, the Republic of China, Nationalist China, Hong Kong, Japan, the Republic of Korea, Canada, the United States, Costa Rica, El Salvador, Guatemala, Mexico, Nicaragua, Panama, Barbados, Cuba, the Dominican Republic, Jamaica, Puerto Rico, Trinidad and Tobago, Brazil, Colombia, Ecuador, Peru, Venezuela, Argentina, Chile, Uruguay, Denmark, Sweden, the United Kingdom, France, Switzerland, and UNESCO.⁴

In lieu of the world survey report I am wont to write, I herewith substitute an earlier challenge-plan for population education during the Second Development Decade. This plan has not been funded in the quantities proposed and has had no coordinated development. Yet we have the beginnings of pop ed in more than

the forty nations that had been called for by 1972. The reader's indulgence is requested as he/she considers the social and economic factors of this statement:

Population Education in the 1970's

Through the multifaceted programs of international education -- through established and to be established programs in formal and informal education -- universities, foundations, governmental agencies and international organization have an enormous opportunity in the next decade to influence the outcome of the present threats of population and environmental crisis. Population and family planning programs of the last two decades have been almost exclusively medical and paramedical in their orientations, but during the late 1960's a small number of educators have worked out guidelines for what Education can and should do to develop an awareness of the problems resulting from rapid population growth. The task of the 1970's, in the field of international development operations, may well be to change the few tentative suggestions and research projects of these concerned individuals into comprehensive educational programs.

Now, educators in some twenty nations of the developed and underdeveloped world have expressed interest in "population awareness." During the next few years we will need to have programs for teacher training, for the development of curriculum materials, and for general information diffusion. It is not unreasonable to expect ten additional countries to become active in formal programs of population education during 1970, and we would not be surprised if this second-stage development were to include as many as twenty polities. By 1972 we could have initial population education programs operating in forty nations. If these were costed at \$100,000 each, we could expect to spend \$4,000,000 in that year. (Let us suppose, also, that \$4,000,000 is available each year for population education during 1970 and 1971. This will help us arrive at a crude calculation for the decade.) If in each year subsequent expenditures in these countries were to increase 50 percent, we would have expenses for 1973 of \$6,000,000; 1974, \$9,000,000; 1975, \$13,500,000; 1976, \$20,250,000; 1977, \$30,380,000; 1978, \$45,570,000; 1979, \$68,360,000; and in 1980, approximately \$100,000,000. This is without expansion into nations other than those wherein an interest in population education has already been expressed. The total, including 1980, sets the bill at approximately \$300,000,000. If we were to double the number of nations to eighty by the year 1980 and were to find that by that year we had learned to spend some \$2,500,000 each in the forty fully developed programs

of population education, perhaps an allocation of half as much for the decade could be allocated to the second group of forty nations, i.e., \$150,000,000. This is for a grand total of some \$450,000,000 for a population which will be approximately 4.5 billion. In other words, we are proposing a challenge of spending ten cents per person against the possibility of having world population go to 7.0 billion by the end of the century.

This is our challenge. If you agree with this concept of utilizing education as an agent for developing population and environmental awareness, you owe a dime to pop ed. All funds collected will be given to population and environmental education projects. At the present time funds collected are being given to ECOS, the student-organized environmental group at UNC. If you disagree with this document, you have read it gratis.

Now we can turn to the rudiments of a five-year plan for population education. From UNESCO we have three extremely important base-line documents that should help us to establish important national level recognition of the population variable in social and economic development: Pedro Galindo's Educacion y Poblacion en Ocho Países de America Latina;⁶ The Final Report on the Meeting of Population-Education Experts, Santiago, Chile, October 1970;⁷ and The Regional Workshop on Population and Family Education, Bangkok, 7 September-7 October, 1970, Final Report.⁸ These papers constitute basic reference works to all who aspire to be knowledgeable on the topic of international population education.

The First Five-Year Plan has four prerequisites:⁹ (1) The traditional approaches of disciplines must either be accommodated or bypassed. (2) New subject matter must be introduced at the expense of current content. (3) Population education, if it is to have any real significance, must get into value spheres. (4) Human-power must be developed to train teachers and teachers of teachers in this field.

Our approach must organize itself around a schizoid structuring, for both curriculum development and teacher training must progress fairly simultaneously. For the teacher training component of this challenge, there is no one answer. Some programs are developing in-service training, while others concentrate on pre-service; and, hopefully, others will experiment with combinations of the pre- and in-service personnel. Some programs are primarily to train the teachers of the teachers, and others concentrate on the direct-action route of affecting classroom teaching by mass training programs -- via seminars, the media, and programmed learning. At this early stage of population education, it is predominantly the training of the teachers of teachers that has commanded our attention in the Center for Population and Environmental Education of the UNC School of Education. However, we are now developing an

audio-visual programed learning package for elementary teachers in training. The only large scale teacher-in-service training programs currently underway, with which we are familiar, are in the Ministry of Education of the Republic of the Philippines and in the Division of Education of the University of Valle in Colombia.¹⁰

The curriculum component of the First Five-Year Plan for Population Education has, at present, no comprehensive bibliography of materials. There is a serious lack of extensive exchanges of materials and curriculum experiences. For the "population education purposes" of the Association of Population/Family Planning Libraries and Information Centers, however, such an assertion does not suffice. For librarians, the innovators within this "new" activity of population are duty bound to provide from time to time some statement on the "state of the art" in library materials. The latest extensive bibliographic effort in population education is the 115-item document prepared by Judith Marshall for the Carolina Population Center, October 1971.¹¹ Judith Marshall's work describes the largest organized corpus on population education of which we are aware. The materials listed here are more numerous than any previous bibliography on population education, but Appendix I includes items useful to population education as well as items on population education.¹²

Before turning to the bibliography, however, it is necessary to outline three additional components of our five-year plan: (1) We are sympathetic to infusion and unitary approaches to curriculum innovation, but we feel a concentrated effort should be made in population education in the United States toward developing at least five new courses at the secondary level. (2) We are committed to the development of an infrastructure of population education through the community colleges and technical institutes of North Carolina to serve teachers in reaccreditation and to provide a more adequate civics training to all adult extension students in this state. (3) We are desirous of developing collateral programs with other states of this rapidly growing southeastern region and of exchanging ideas, materials, and personnel with population educators in other regions.

- (1) During the next five years we propose to develop five multidisciplinary courses: (a) A natural science course of "Man and His Environment" with inputs of population from the social sciences. (b) An international social science-civics course with environmental and development education inputs. (c) An inner-city course on urban problems -- population education, such as the experiment in Baltimore this past summer. (d) A suburban, high-population-growth-of-the-middle-class-responsibility course. (e) A rural (black-white-gray) economic deprivation ghetto course.

- (2) During the spring of 1972 the Center for Population and Environmental Education has collaborated with twelve community colleges and technical institutes in North Carolina toward the developing of population inputs in a number of their courses and toward implementing next autumn a series of in-service credit courses for teachers. At the rate of twelve institutions a year, we will reach all fifty-five before our demi-decade elapses.
- (3) Preliminary correspondence has developed with interested educators in Kentucky, Tennessee, Georgia, Florida, Alabama, and Texas. To date we have made no concentrated effort to foment regional population education interest for our in-state programs have top priority, and planning therefore will have to await the second drafting of this five-year plan.

The materials that this paper is calling to your attention should properly be annotated, but the explosion of interest in population education precludes our CPEE staff and corps of fourteen pop ed students from taking on the delicate and arduous task. Rather, to bring this text to a close, I want to cite ten specially useful pop ed items that have come to CPEE in the past year and let you all suffer in a Twainesque manner the remainder of the bibliography:

The very ink with which all history is written is merely fluid prejudice.

from Pudd'nhead Wilson's New Calendar

- (1) For bulk, scope, and challenge the nine volumes on population education developed by the Ministry of Education of the Republic of the Philippines is without equal. For the avant-garde educationist of inquiry education, these materials will appear inferior to many other things; but for anyone who has worked with educational planning and implementation in the developing nations, these materials will be manna. The items are course guides in social studies, in science, and in health - with resource units in family planning, the family and family roles, human sexuality, demography, and ecology. (See, the Republic of the Philippines.)
- (2) For beauty of presentation, for assistance in developing curricula, and for not much use on population per se, we recommend the six-volume set of People and their Environment: Teachers' Curriculum Guide to Conservation Education, including

Grades 1-2-3; Grades 4-5-6; Science 7-8-9; Social Studies 7-8-9; Social Studies 10-11-12; 9-12 Home Economics; Biology; and 1-12 Outdoor Laboratory. (See, Brennan, Matthew J., ed.)

- (3) For national development of and implementation of population education, inspired by the UNESCO Bangkok Conference, Malaysia in its National Workshop on Population Education is exemplary.
- (4) For A World Worth Living In, Fisher and Flammer have developed a beautiful combination of environmental and population resources. This is the most comprehensive in-school effort on environmental and population education that has come our way.
- (5) Basically, the visual materials collaged by Willard Johnson, first national vice president of ZPG, illustrates quickly and easily the quantitative pressures on our world: Population and Quality of Life.
- (6) ZPG member, Lawrence Schaefer, makes a valuable contribution with his 198-page guide to teachers and 26-page unit for secondary students: An Introduction to Population, Environment, and Society.
- (7) From Denver, Zero Population Growth provides us with one of the more readily available (Price \$1.00) items of quality: A Teacher's Guide to Materials on Population.
- (8) Rulon works effectively to promote population awareness free of teachers and has developed a very fine programmed learning sequence covering world views and U. S. perspectives on over-population, age distribution considerations, growth and stabilization materials, and potential solutions for the United States.
- (9) The Center for Population and Environmental Education at UNC summarizes its views in a Strategy for Population Education, outlining need, current status, general strategy, focal points and tasks -- all condensed into 17 pages. No better bit of provincialism is so readily available!
- (10) In conclusion it is important to observe that much of population education has been too provincial on population dynamics. Definitions of pop ed have

escaped this paper, on purpose, and the remaining citation is a challenge to all persons working in the field to keep their hearing and sight well focused on messages from Development Education. The Action for Development Section of the Food and Agriculture Organization of the United Nations is attempting revolutionary work on international social and economic justice. Increasingly, representatives from the developing nations are saying with more conviction than many population and family planning personnel of the developed nations that population is only one variable in their development tasks. A Young World Development Issue Packet of the Freedom from Hunger Foundation and their Population and Development Packet constitute two of the most comprehensive and challenging items educators can utilize to widen their own horizons and those of their students.

Let me end as I began, with a commentary on man's dominion over nature: "HONOR THY CHILDREN SO THAT THEY MAY LIVE THEIR LIVES IN FULL STEWARDSHIP OF ALL LIFE." Now that the first decade of population education has seen the development of a certain infrastructure of personnel and materials, planning in this field is now both possible and mandatory if the best purposes of man's dominion over nature are to be served, that is, stewardship. Last year I developed the thirteenth commandment to summarize my own feelings on the demographic-environmental reformulation we require to enhance life. The semantic shift is from dominance to caring.

FOOTNOTES

- 1 Philip M. Hauser, "Population -- Gap in the Curriculum," The Teachers College Record, 63 (6) (March 1962), pp. 425-433.
- 2 Sloan R. Wayland, "How Schools Abroad Meet the Problem," in Family Planning, Population Problems, and the Secondary School Curriculum, ed. by Dorothy L. Millstone (New York: Planned Parenthood-World Population, 1966), pp. 8-11.
- 3 Alan F. Guttmacher, "How Communities Can Take Initiative Now," in Family Planning, Population Problems, and the Secondary School Curriculum, ed. by Dorothy L. Millstone (New York: Planned Parenthood-World Population, 1966), pp. 19-23.
- 4 This is my own list of nations who are beginning or already confronting a variety of aspects of population education, including population awareness, family living, and reproduction education.
- 5 This was a little satire prepared to raise money for ECOS. December 16, 1969.
- 6 This paper should be available from the Population and Family Planning Education Section, Department of School and Higher Education, UNESCO, Paris, France.
- 7 Ibid.
- 8 Ibid.
- 9 These four prerequisites are a paraphrase of the obstacles outlined by the Population Reference Bureau in their Bulletin on population Education. Population Bulletin, XXVI (3).
- 10 This is based upon personal communication from Mr. Donald Chauls, In care of the Ministry of Education, Manila, the Philippines, and Dr. Pedro Galindo, Division of Education, University of Valle, Cali, Colombia.
- 11 See Appendix III.
- 12 I find it increasingly difficult to distinguish between items useful to pop ed and items on pop ed.

APPENDIX I

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APPENDIX II

THE UNIVERSITY OF NORTH CAROLINA
AT
CHAPEL HILL

SCHOOL OF EDUCATION

Report of Work Group 3
by Noel-David Burleson
PRB National Conference
November 11-13, 1971

THE MULTI-DISCIPLINARY APPROACH: HOW CAN IT BEST BE HANDLED?

(THE HIDDEN AGENDA)

The comparative ease and the great appropriateness with which population education can be incorporated into traditional settings has confused its major proponents and they have avoided the task of developing separate, multidisciplinary courses. The multidisciplinary and interdisciplinary approaches represented in our work-group impelled us to recognize that the time has come for infusionists to tie a large cord around the topical inputs and unitary inputs presently being used. In addition to pop ed efforts through the traditional curricula we owe to vital education, contributions of new course approaches. We all recognized that there are major disciplinary and administrative barriers to the acceptance of a new curriculum in already over-loaded systems, but the urgency of the environmental-population problems and the multidisciplinary aspects of population topics in the last third of the twentieth century are such that a newness is mandatory.

There is an ordeal of change, moving from trying to get teachers to infuse population awareness into math, civics, biology, home economics, history, etc., to creating new credit units in the bookkeeping systems of our schools. Nevertheless, we concluded that we may well need five multidisciplinary courses: (1) a natural science oriented course of MAN AND HIS ENVIRONMENT with inputs of population from the social sciences; (2) an international social science-civics course with environmental and development education inputs; (3) an inner-city course on urban problems -- population education, such as the experiment in Baltimore this past summer; (4) a suburban, high-population-growth-of-the-middle-class-responsibility-course; and (5) a rural (black-white-gray) economic deprivation ghetto course. The ground rules of each of these innovations have already been experienced, but no one has brought together a report for others concerned with developing their locally appropriate, multidisciplinary courses.

We have found that we do not have a "how best" response. Rather, we discussed in great detail the reality of a number of good approaches. It appears that an immediate need in this area is the publication of student and teacher study guides. This may be via the publication of materials, of model courses (mini and/or maxi) and of debate questions. Prior to undertaking these efforts or simultaneous thereto, we need some kind of evaluation service of currently available items. (This bibliographic service may use the following labels: "bad," "worse," "lousy," "horrendous,"

"impossible," "dishonest," and "prepared by one of us.") Some teachers are simply asking: "What should be included?"

With these observations it is now time to expose our agenda and leave this national conference. We propose to leave our mark not only by thanking the Population Reference Bureau for this opportunity of pop ed exchange, but also by telling the PRB where they should go. We recommend that the educational program of the Bureau should assist all of us as quickly as possible in implementing the five recommendations of the Manresa Declaration on Population Education:

- (1) Make population education a subject of concern to your administration and organization.
- (2) Commit funds to the development of programs in population education at all levels of academic endeavor, both public and private.
- (3) Support and sustain those who work in the field of population education.
- (4) Actively seek means of enlisting all professional educators, governmental policy makers, religious leaders and civic leaders in a concern for population education and supportive legislation.
- (5) Use mass communications media to convey the urgent need for population education to the public, enlisting these media as an essential part of the educational process itself. (Population Bulletin Vol. XXVI, No. 3)

Furthermore, The PRB should:

- (1) Organize, edit, and diffuse a Population Education Newsletter (PEN) to provide current information on programs, materials, resources, methodologies, etc.
- (2) Create a major collection of resource materials for use similar to that of the fine reference library that now exists. (This is not the clearing house task, that might better be left to ERIC (Educational Resource Information Centers).
- (3) Explore the possibility of establishing a speakers' bureau, or at least organize a list of available resource agencies and persons.
- (4) Survey the cultural, political, and educational constraints hindering the development of population education nationally, regionally, on the state levels and locally. (We propose that this service would assist the few "haves" of population education to explode their numbers by overcoming administrative and legislative barriers.)
- (5) Stimulate the organization of regional teacher training pop ed workshops by universities, schools, state offices of education, and professional organizations.

We congratulate the PRB on the excellent organization and development of this conference and we thank the entire staff for helping us to perceive more clearly common tasks.

Our epic-logic advice on multidisciplinary work comes from Mark Twain:

Behold, the fool saith, "Put not all thine eggs in one basket" -- which is but a manner of saying, "Scatter your money and your attention"; but the wise man saith, "Put all your eggs in the one basket and WATCH THAT BASKET."

The work groups were:

1. Population Education via the Sciences
(Library Room, Fifth floor)
Chairman: Mr. Lawrence Nilson
Weston High School
Weston, Massachusetts
2. Population Education via the Social Studies and Humanities (Library Room, Sixth floor)
Chairman: Professor Byron G. Massialas
Department of Social Studies
Education
Florida State University
3. The Multi-disciplinary Approach: How Can it Best be Handled?
(Library Room, Seventh floor)
Chairman: Dr. Noel-David Burleson
Carolina Population Center
University of North Carolina
4. Teacher Training: How Can Teachers Learn Quickly What They Need to Know About Population? (Library Room, Eighth floor)
Chairman: Mr. Tom Collins
Center for War Peace Studies
New York, New York
5. The Time Horizon Problem: How Can Students be Encouraged to Extend Their Time Horizons to Cope With Such a Long-Range Subject as Population? (Library Room, Ninth floor)
Chairman: Dr. Sloan R. Wayland
Teachers College
Columbia University
6. Research and Evaluation Concerning Population Education: What Do We Need to Know to Design Good Programs? How Can We Tell Whether We Are Accomplishing Anything? (Woodmont East)
Chairman: Mr. Stephen Viederman
The Population Council
7. Strategies for Bringing About Change in School Curricula to Include Population Education
(Library Room, Tenth floor)
Chairman: Dr. Mary L. Molyneaux
Pittsburgh Public Schools

APPENDIX III

STRATEGY FOR POPULATION EDUCATION

Center for Population and Environmental Education

School of Education

University of North Carolina

November, 1971

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1. Need

The recently published interim report to the President and the Congress prepared by the Commission on Population Growth and the American Future clearly identifies the problem of population growth. The report suggests that "population growth of the magnitude we have had since World War II has aggravated many of the nation's problems and made their solutions more difficult. And, the longer we delay addressing the issue, the more costly and arduous the task becomes because the population, and the number of potential future parents, will have grown that much more in the intervening years."

The report further states that "the tension between population and the economy, population and the environment, population and government services, is with us at all times in different focus and degrees. Whether we wish to alter it or to live with it WE CANNOT AFFORD TO IGNORE IT. (Capitals provided) It is time that population issues were given deliberate, impartial consideration." It becomes manifestly clear that the effects of population growth will have significant implications with regard to world's resources and the quality of water, air and land. Although population growth is not the primary cause of environmental deterioration it probably magnifies the problems which stem from the way resources and technology are used.

The Commission concludes its interim report with the following statement: "it is not simply population growth that is the issue, but rather the quality of life that can be influenced so fundamentally by population. We have the challenge, and indeed the responsibility, to prepare for the future of coming generations of Americans." The population problem has long been identified as one which requires serious attention. However,

complexities in attempting to address the problem and identify viable solutions have hampered potential progress.

Although governments have over the years developed policies and programs directed towards influencing population growth, up or down, there is little conclusive evidence as to effectiveness of such policies or programs. In the final analysis, the number of births and resulting rates of growth are directly related to the multiplicity of decisions, positive or negative, and of actions on the part of individual citizens. Each of these based on their own perceptions as to what constitutes their own self-interest. Understanding the impact of such individual decisions and actions appears to be the keystone to any long-range approach dealing with the subject of population growth.

Population Education--Definition--Goals

Fundamentally we view population as a "variable" to be comprehended not as a "problem" to be solved but first, let us establish what Population Education is not.

It is not an attempt to disguise sex education.

It is not a subterfuge to introduce into the classroom such topics as fertility, sexuality, abortion, and the use of contraceptives.

Rather it seeks to present knowledge dealing with population processes, population characteristics, causes of population change and consequences of such change for the individual and for the society. It is through the process of education that the student learns the consequences of individual acts such as having children or moving from place to place. These acts have implications, social and biological for the family and for the society which in turn affect the individual. The related decisions are basic to achieving a satisfying quality of life.

The goal of population education is to get concepts and materials related to population into the curriculum so to educate future generations, to enable them to make intelligent decisions with regard to population matters.

2. Current Status

Recently The Population Reference Bureau and The Population Council (for presentation to the Commission on Population Growth and the American Future), surveyed the field of Population Education. Comments which follow are extracted from the surveys mentioned, and are based on our own observations.

Few educators seem to be concerned with population. A conference of some fifteen deans representing leading teacher training institutions in the United States, held in May 1971 at Chapel Hill, North Carolina revealed that at institutions represented, population education activity was relatively minor and that future actions were uncertain. Additionally visits to twenty-two North Carolina Teacher Training Institutions indicated little or no Population Education activity. What seemed to be lacking was knowledge, leadership and funding support.

There is a tendency to oversimplify complex problems. The emphasis is on population growth with little attention given to other characteristics. Also, population growth problems are generally portrayed as the burden of developing nations. This combination cannot give rise to good education for our citizens.

No school system in the country is doing an adequate job in population education. There is no systematic attempt to develop a K through 12 infusion of population concepts, to equip teachers to introduce these concepts in all the major disciplines and to provide supporting materials

necessary to accomplish this task. No comprehensive clearing-house for selected readings, audio-visual materials, books or curriculum studies has made population education a matter of high or even modest priority.

Although several bright signs are visible in the form of individual effort, they are not system-oriented, nor are they part of a programmed effort directed at the educational structure.

3. General Strategy

In response to the national concern with problems of the environment and population, and the recognition of the criticality of these issues as indicated by actions on the part of the Federal and State governments, the Dean of the School of Education and the Director of the Population Center entered into an action-oriented dialogue which culminated in the establishment of a Population Committee within the School of Education in the fall of 1970. This Committee has been engaged in identifying viable approaches to population education. In addition the Carolina Population Center has provided personnel to establish the nucleus for the Center for Population and Environmental Education.

Location of a Center for Population and Environmental Education in this community offers an extraordinary opportunity in that unique resources in R.T.I., CPC, Duke, N.C. State, UNC are immediately available. More specifically, the School of Education offers outstanding talent in fields vital to population education; these include curriculum, audio-visual, educational sociology, educational psychology, early childhood, methods and many others. Credentials of members of the CPEE Staff are enclosed at TAB Orange.

Although the Center has been operational for a relatively short time it has taken many significant steps. These include development of

educational materials specifically for elementary level, forging of linkages with other institutions, conduct of a full credit population Seminar for graduate students, and establishment of a resource for faculty and for students in the School of Education in dealing with population studies. Organization and functions of the CPEE at TAB Blue.

The need for this type of support is evidenced by the positive response of faculty and students. Graduate and undergraduate students are involved in specially oriented projects in population education integrated into work in their major field. Many of the faculty are taking advantage of the resources of the CPEE by obtaining information and assistance with regard to the population question as pertains to their disciplines.

Our present effort is focused largely on strategy development which will result in population concepts entering the educational system. Three approaches were considered: major curriculum reform, special units for existing courses, and infusion of population concepts into the entire school system. Considering time, effort, practicability, and all other factors, we favor the infusion route.

It is appropriate to quote a member of this faculty, Dr. Burleson, one of the pioneers in population education.

"The development of population education does not require the introduction of new courses into already overloaded curricula. Rather, incorporation of new population education materials into a variety of fields such as civics, geography, history, sociology, mathematics, biology, hygiene, psychology and home economics seems preferable. This technique minimizes the jarring reaction which usually results when teachers are handed new unfamiliar material. Moderate substitution leaves the teachers' primary material practically the same."

The State of the Art makes it clear that there is but a little to build on; the task is complex and huge. A forward looking yet practical

approach needs to be followed. Our strategy is an attempt to plan ahead in a practical, innovative and systematic manner.

A pilot undertaking based regionally is basic to our plans. We think it would be manageable yet broad enough to reach the necessary people and groups. There are clear advantages in limiting our target area to the HEW Southeastern region #IV. The time and distance factors, resource utilization and diversity of school systems, are the major considerations which would lead to the Regional approach. Additionally, Region #IV is the fastest growing region in the United States.

4. Focal Points

Within the geographic confines of HEW region #IV, practically all of the potential population education activity will take place in TWO ARENAS:

- A. Public Schools
- B. Teacher Training Institutions.

Therefore, the major thrust of our strategy will be toward these two clusters of institutions.

Curriculum development has most often preceeded the teacher training necessary for implementation. As a result teachers have been asked to present new materials without adequate preparation. Our intention is to work simultaneously and systematically with Teacher Training Institutions and Public Schools.

Although these two arenas are at different levels with the educational system, there are certain common functions which must be accomplished to pursue the desired strategy. These functions are:

- A. ASSEMBLE existing materials, and draw together appropriate resource personnel.

- B. DEVELOP new materials; staff personnel; teams appropriate to the needs of the project; community interest.
- C. TRAIN own staff; new personnel pre-service teachers, in-service teachers, administrators; PUBLIC SCHOOL STUDENTS.
- D. DISSEMINATE AND IMPLEMENT materials into Public Schools, and teacher training institutions.
- E. EVALUATE specific programs and outcomes; effectiveness of total project.

5. Tasks

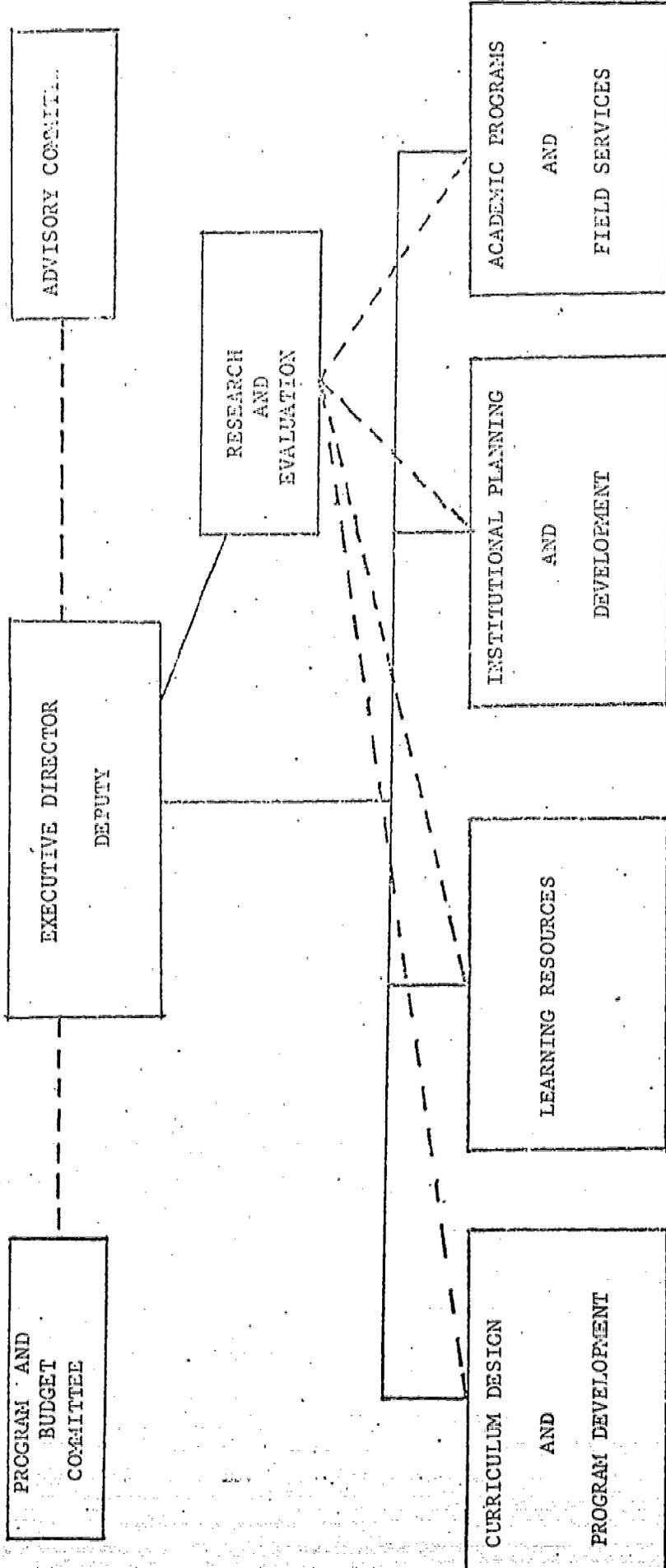
The broad functions described above translate into action-oriented tasks with regard to both arenas, public schools and teacher training institutions. The first tasks as listed focus on public school systems; others focus on teacher training institutions; the final task applies to both. Our intention however is to synchronize our work in both systems.

- A. Scope and Sequence K through 12
Determine appropriate population concepts appropriate at the various levels. Examine present curriculum to determine effective point of infusion.
- B. Assemble and/or develop supporting materials for Public Schools.
- C. Develop and implement a systematic and viable approach for introduction of population concepts in Public Schools.
- D. Scope for Teacher Training -- Pre-Service and In-Service
Determine appropriate population concepts and methods teacher training in population requires.

- E. Assemble and/or develop supporting materials for Teacher Training.
- F. Develop and implement a systematic and viable approach for introduction of population concepts into Teacher Training Institutions.
- G. Develop and implement a systematic and viable approach for introduction of population concepts for in-service teacher training.
- H. Evaluate specific programs and outcomes generated within this project.

We would also undertake to develop a method for evaluating the effectiveness of the program as outlined in this strategy.

CENTER FOR POPULATION AND ENVIRONMENTAL EDUCATION



Dr. Jack E. Blackburn

- B.S. - Florida State University
M.A. - George Peabody College for Teachers
Ed.D. - New York University

Co-Director; Curriculum design and program development

Dr. Blackburn is a specialist in curriculum and teacher education. During the past 15 years he has been involved in teaching and supervision at the Public School level, and teacher training at the University level. For a period of three years he was the Director, Fifth Year, Master of Arts in Teacher Education Program at the University of North Carolina. He is the Chairman, Division of Curriculum and Teaching, School of Education, University of North Carolina.

In conjunction with his abilities in the MAT program, Dr. Blackburn has demonstrated exceptional ability in developing and administering creative graduate teacher education programs.

Dr. Paul B. Hounshell

- B.S. - University of Virginia
M.S. - University of Virginia
Ed.D. - University of North Carolina

Co-director; Curriculum design and program development

Dr. Hounshell is a specialist in Science Education. Over the past 5 years Dr. Hounshell has served as a Director of a variety of academic-year Institutes, Summer Institutes and in-service workshops designed to improve the quality of science instruction in Public Schools. Most of his activities have been supported by funding from the N.S.F. and have included cooperative relationships with the various service departments on the UNC campus. In addition, Dr. Hounshell is heavily involved in pre-service education of teachers.

For two years Dr. Hounshell was the Director of the Fifth Year Program. He has also served as Chairman of the N.C. State Task Force on the Environment and Natural Resources.

Dr. Ralph E. Wileman

- B.S. - Otterbein College
M.A. - Teachers College, Columbia
Ed.D. - Teachers College, Columbia

Director of Learning Resources

Dr. Wileman is presently Associate Professor of Education, UNC. He is a media specialist and most of his current duties are connected with this specialty.

Dr. Wileman has had extensive experience in assisting teachers and University colleagues in presenting learning activities through the creative use of media.

Dr. Wileman has had considerable experience in non-academic settings in addition to his extensive experience at university level. He has demonstrated exceptional leadership ability both within the local faculty and at the national level. Last year, for an example, he was responsible for organizing a multi-media presentation which was a part of the program of the national meeting of the Association for Educational Communications and Technology.

Dr. Noel-David Burleson

- B.A. - University of Missouri
Graduate
Studies- University of Oregon, University of London, Harvard
University
Ph.D. - Harvard University

Director, Academic Programs and Field Services

Dr. Burleson currently directs a masters program in population education within the School of Education, and is instrumental in initiating population projects throughout the State and region.

He helped to organize and conduct a unique workshop in population education in Maryland in the Spring of 1970, and is stimulating similar efforts in North Carolina.

Dr. Burleson has worked in population education internationally and has viable contacts with International Organizations involved in Population matters.

Dr. Charles T. Faneuff

- B.S. Ed. - Ohio University
M.S. Ed. - Hofstra University
Ed.D. - University of Oregon

Director, Institutional Planning and Development

Dr. Faneuff has worked in Population Education in India, Thailand and the Philippines. He recently completed a population education model study in India which empirically tested: knowledge level gains; attitude change; student differentiation by socio-economic levels, caste, and parental educational levels.

Prior to coming to UNC, Dr. Faneuff was the Program Director - Asia for The Pathfinder Fund, Boston and attached to Harvard University - Department of Population Studies, School of Public Health.

Dr. Faneuff has 15 years experience in U.S. public school systems as teacher and administrator.

Dr. Marian J. Smallegen

- A.B. - Hope College
M.A. - University of Illinois
Ed.D. - Boston University

Dr. Smallegen holds a joint appointment in the School of Public Health and the School of Education. The major thrust of her population related activities has been twofold: family planning, and population education. In both fields she has contributed extensively through her exceptional ability in dealing with groups, from the rural areas of the region to on-campus.

Dr. Smallegen's general field of training is in small group and organizational behavior; she has done extensive training and consultation in both fields, especially for educational and health groups.

Dr. Thomas S. Baldwin

- B.S. - Psychology - University of South Carolina
M.A. - Psychology - University of South Carolina
Ph.D. - Industrial Psychology - Ohio State University.

Director of Research and Evaluation

Dr. Baldwin has extensive experience as a research psychologist and as teacher. He has been extremely active in the field of measurement of student learning, and has several publications in this field, including "Evaluation of Learning in Industrial Education."

Dr. Baldwin has been a member of the faculty of the School of Education, University of North Carolina since 1970.

CURRICULUM DESIGN AND PROGRAM DEVELOPMENT

Develop recommended scope and sequence of elementary (K-6) and secondary (7-12) grades or equivalent levels based on evaluation of population education programs and related materials currently available.

Develop population concepts suitable for emphasis in population education programs.

Develop curriculum packages for grades K-12 made up of suitable selection of such components as:

- A) Teacher resource guides.
- B) Teaching units or "mini-units".
- C) Test and/or supplementary materials required for the recommended scope and sequence.

Conduct workshops with representatives of universities and schools.

Test sample curricula and analyze data.

Establish population education programs in a suitable number of demonstration schools.

Develop topical outlines concerned with population education which can be made available to population education leaders.

LEARNING RESOURCES

(Serves both domestic and international needs)

Produce and organize a model collection of instructional materials.

Evaluate commercially and locally produced materials.

Develop instructional materials.

Disseminate information regarding instructional materials.

Plan and conduct workshops and other learning activities for teachers.

INSTITUTIONAL PLANNING AND DEVELOPMENT

Encourage and stimulate LDC institutional contacts.

Coordinate CPEE institutional contacts in LDC's.

Coordinate leadership development programs for population education within and outside the United States.

Act as liaison on CPEE matters between U.S. based funding agencies with foreign representatives.

Provide primary contact for population education fellowship recipients.

ACADEMIC PROGRAMS AND FIELD SERVICES

Coordinate graduate training in population education.

Assist in the development of undergraduate programs.

- A) Within the School of Education.
- B) Within the University of North Carolina.

Coordinate field services.

- A) For individual students.
- B) In collaboration with organizations
(for an example, ECOS) in related fields.

RESEARCH AND EVALUATION

Conduct evaluative and experimental research studies in support of other divisions to determine effectiveness of alternative curricula, media, and other programs.

Develop standardized instruments to establish baseline data on attitudes, values, knowledge, and other variables bearing on population.

Using above instruments, initiate longitudinal studies of various segments of the population to establish (1) baseline data, and (2) trends in relevant attitudes, values, and knowledge.

Apply mathematical modeling technique to historical and experimental data on population growth rates. Through cross cultural and cross species studies attempt to discover generalities that are applicable to various population growth curves.

Conduct simulation studies of population growth problems. For example, the application of Bayesian statistics (subjective vs. objective probability) to decision making regarding family size.