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AUTHOR Stahl, Robert J.; Baker, S. Dennis
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ABSTRACT

This document summarizes a study conducted to investigate the status of population education within the curricula of Florida's secondary schools. A four-page questionnaire, designed to obtain data from classroom teachers on a broad range of topics and areas pertaining to the status of population education was mailed to 300 randomly selected Florida middle, junior high, and senior high schools. Responses received from 45.3% of the public and private school teachers indicated the following findings: (1) size of school enrollment does not affect the inclusion of population education into the school curriculum; (2) classroom teachers are incorporating population education content into a variety of elective and required courses; (3) there is a wide range of length of time spent by teachers on population education; (4) the majority of population education teachers are social studies teachers; (5) population is studied primarily as an integral part of the examination of broader environmental problems and processes; (6) classroom teachers of units on population use objectives developed and written by themselves; and (7) the majority of teachers have not received any college course preparation in the population education area. (BT)

THE STATUS OF

POPULATION EDUCATION IN FLORIDA

SECONDARY SCHOOLS
During 1973 - 1974

P. K. Yonge Laboratory School
College of Education
University of Florida
Gainesville 32611

Research
Monograph
19

THE STATUS OF POPULATION EDUCATION IN FLORIDA SECONDARY SCHOOLS DURING 1973-74

by

Robert J. Stahl[a]
Assistant Professor of Education
School of Education
Mississippi University for Women
Columbus, Mississippi 39701

and

S. Dennis Baker
Advanced-Graduate Assistant
Department of Subject Area Specialization
University of Florida
Gainesville, Florida 32611

[a]Dr. Stahl was a member of the P. K. Yonge faculty from 1970 through 1974.

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THE STATUS OF POPULATION EDUCATION IN FLORIDA SECONDARY SCHOOLS DURING 1973-74

Introduction

Since the popular push for environmental awareness and protection in the mid-1960's, much has been reported on ways in which ecology and environment have been included as topics of study within the precollege curriculum. School curriculums, commercially- and governmentally-produced materials, locally developed resource units, and the like have sought to sensitize students to and instill students with various principles of environmental protection. Proponents of environmental studies have succeeded in many of their efforts to expand existing school programs towards including more ecological content and concepts. As one element of the total environmental studies program, population education has received widespread attention and acceptance within secondary school classrooms.

Although content regarding population is being presented to students, little is known about the exact focus or extent of units which include this content. In other words, what ought to be the focus of population units and what is the focus may not be congruent. To paraphrase Viederman (1972), the study of population should serve a dual purpose: a) to develop an informed citizenry capable of understanding population characteristics and processes as they affect society and capable of making responsible decisions with regard to public policy as it may affect and be affected by these processes, and b) to develop informed individuals who will use this knowledge and understanding to make responsible decisions regarding their own reproductive behavior. The outcome of the study of population should be the development within each individual student of responsible decision-making attitudes towards population-related problems and situations.

While these goals and objectives are noteworthy and critical to the survival of "Spaceship Earth," there is little data available to even suggest that classroom teachers of population units teach content and concepts related to these objectives. Indeed, we do not even know whether teachers stress objectives similar to those stated above. In short, the literature reports little information which actually describes the status of these units as they exist within the precollege curriculum. An in-depth examination of population units within the secondary schools of one state would shed some light on the nature of this subject matter area. The study reported in this article was a deliberate attempt to collect descriptive data pertaining

to the status of population within the curriculums of Florida's secondary schools.[1]

Method

In April, 1974, a four-page questionnaire accompanied by an introductory letter and a stamped, self-addressed envelope was mailed to 300 randomly selected Florida middle, junior high, and senior high schools. The 23-item questionnaire was designed to obtain data from classroom teachers on a broad range of topics and areas pertaining to the status of population education within their respective schools. To ensure teacher response, the introductory letter requested each school principal to forward the questionnaire to a classroom teacher who taught population education units in their own courses. By June 1, 136 teachers from the 300 schools surveyed (45.3%) returned completed questionnaires. This article reports the responses of the 136 classroom teachers who actually included population information within at least one course they taught.

Results[2]

Of the 136 teachers, 102 (75.1%) taught their population units in public secondary schools with Catholic parochial schools (20 responses or 14.7%), private non-religious schools (10 responses or 7.3%), and private religious schools (4 responses or 2.9%) following in that order. Together the 34 private schools represent 24.9 percent of the responses. This article reports and compares the responses of these 102 public and 34 private school teachers.

These teachers taught their population units in schools with different student enrollments and located in different urban-rural settings. Descriptive data related to these school characteristics are presented below.

Thirty-one of the 102 public school teachers (30.4%) taught in schools with enrollments of between 501 and 1,000 students. Teachers in public schools with enrollments of

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[1] For the purposes of this study, population education was defined as learning to identify changing population phenomena and to recognize their many implications. This definition was included at the bottom of the questionnaire form sent to the teachers.

[2] The percentages reported herein were computed on the basis of the number of teachers who responded to the item rather than on the basis of all possible respondents regardless of their attempts to respond to the particular item being discussed.

from 1,001 to 1,500 students were second in number of responses (26 responses or 25.5%); of 1,501 to 2,500 students were third (23 responses or 22.5%); of more than 2,500 students, fourth (13 responses or 12.7%); of 251 to 500 students, fifth (5 responses or 4.9%); and, of less than 250 students, sixth (4 responses or 3.9%). In nearly the reverse order, 21 of the 34 private school teachers (63.6%) taught in schools with less than 250 students enrolled. Eight teachers (24.2%) taught in private schools with enrollments of between 251 and 500 students with three teachers (9.1%) in schools of much larger size, 1,001 to 1,500 students. One teacher taught in a private school with between 501 and 1,000 students enrolled.

This variety of student enrollments for both public and private schools suggests population education is included in schools regardless of the size of the school's enrollment and that student enrollment does not operate to restrict the addition of this content within a school's curriculum. However, in part, these data may only reflect the differentiation existing in the sizes of Florida's public and private secondary schools rather than illustrate the 'typical' enrollment of schools which include population units.

Public school teachers in urban settings returned more questionnaires than did teachers from suburban or rural schools. Forty-two teachers (44.2%) of the 95 responding to this item identified an urban setting for their school while 27 suburban (28.4%) and 26 rural (27.4%) teachers indicated these labels were appropriate to describe the area served by their respective schools. Meanwhile, a majority of the private school teachers taught in suburban schools (19 teacher or 57.6%) with urban locations second in responses with 11 (33.3%) and rural locations third with only 3 responses (9.1%). Seven public and one private school teachers failed to identify the location of their schools. On initial review of these data, the conclusion might be drawn that population units are more frequently taught in urban public schools and suburban private schools. However, since data were not collected on schools from these settings which did not include such units, this conclusion should be considered with caution.

The respondents were asked whether population information was being included in primarily elective or required courses in their schools. Fifty-one of the 82 public school teachers responding to this item of the questionnaire (62.2%) indicated the required option. Twenty-four teachers (29.3%) marked the elective option while seven (8.5%) indicated such materials were studied in both elective and required courses. Nearly three-fourths of the private school teachers who marked this item, 18 of 25 teachers or 72 percent, indicated the required option while five (20.0%) marked the elective option. Two private school teachers (8.0%) selected the "both" choice.

These findings suggest classroom teachers, regardless of the public-private status of their schools, are consciously incorporating population education content in a variety of courses within their school's curriculums and are including this content within elective and required courses. For those interested in population education, the widespread inclusions of this content in required courses can only be good news.

Besides seeking information as to whether population information was included in elective or required courses, data also were sought as to the identification of the specific courses in the curriculum which contained this content. The questionnaire listed seven courses usually found in the secondary school curriculum and an "other" space respondents could use in order to identify additional courses which included population units.

Of the seven specific courses listed, the 102 public school teachers indicated the following as the courses which contained population content: Contemporary Issues (37 responses or 36.3%); World History (33 responses or 32.4%); Biology and Marriage and the Family (each with 29 responses or 28.4%); Home Economics (28 responses or 27.5%); the General Science and Problems of Democracy (each with 26 responses or 25.5%). Of the 34 private school teachers, Contemporary Issues received the most responses (15 or 44.1%); followed by Biology (13 responses or 38.2%); World History (12 responses or 35.3%); Problems of Democracy (6 responses or 17.6%); General Science and Marriage and the Family (each with 5 responses or 14.7%); and Home Economics (2 responses or 5.9%).

Forty-nine public (48.0%) and thirteen private (38.2%) school teachers indicated "other" courses in addition to those listed in the questionnaire. Ten public school teachers indicated Geography and Civics as other courses in their schools' curriculums which included population units with Sociology (9 responses) and 11th grade American History and general middle school social studies (7 responses each) the next most frequently indicated "other" courses. Private school teachers listed general social studies, Geography, American History, and Religion first with three responses each. In addition, five public and two private schools taught separate courses entitled either Ecology or Environmental Science. In total, the seven originally designated courses were joined by 17 different "other" courses which included population education materials.

Except for the specific semester or year long courses in Ecology or Environmental Science, the population education units these teachers taught were included in various courses they taught and these units varied in their length as well. Thirty-six of 78 public school teachers (46.2%) identified the lengths of these units as being one week.

The next most popular length for these units was 'less than a week' (13 responses or 16.7%), with one month (8 responses or 10.3%), nine weeks (6 responses or 7.7%), and one day units (5 responses or 6.4%) following in that order. Seven of these teachers stated the lengths of these units varied since population education information was included when, where, and as appropriate to their regular courses of study.

Less-than-one-week units were the most popular among the private school teachers (6 responses or 27.3%) with the other lengths following closely behind in the frequency of use: one week units (5 responses or 22.7%); one month units (3 responses or 13.6%); and one day units and nine week units (each with 2 responses or 4.5%). Among the "other" lengths listed by the 14 teachers who checked this option were included units two-and-a-half, three, and twelve weeks in length as well as individualized learning packets.

Considering the fact that nearly all of these teachers taught courses not directly related to population education, the diversity of lengths for these units as illustrated above is not unusual. These data indicate these teachers were making concerted efforts to at least introduce population concepts and materials to students in forms as varied as individualized packets to instructional units 12 weeks in length. However, reading between the lines of these figures, the most accurate description of the length of population units may be as long as need be and where and when appropriate within the scope of regular courses taught by teachers.

Data presented earlier suggested that the majority of population study units were included for various lengths of time primarily within social studies courses taught at the respective schools of these respondents. Additional support towards the verification of this conjecture was found upon analysis of the results of the data regarding the respondents' identification of the department or departments in their schools they expected to find population education units taught.

Ninety-seven of the 102 public school teachers (95.1%) reported they expected to find the social studies department in their schools teaching population content and information. A distant second place position was filled by the science department (54 responses or 52.9%), with home economics third with 44 responses (43.1%), health education fourth with 30 responses (29.4%), and physical education fifth with 8 responses (7.8%). Although they had indicated "other" departments in their school were expected to include such content, fourteen respondents (13.7%) failed to specify a department. Among private school teachers, 31 of the 34 respondents (91.2%) indicated the social studies department first with the science department again a distant second place finisher with a mere 14 responses (41.2%). Home

economics, health education, and physical education followed in that order the 4, 3, and 2 responses, respectively. Eight of the 11 private school teachers who indicated "other" departments failed to specify a department.

In sum, 128 of the 136 teachers (94.1%) who responded to this questionnaire indicated their expectation that the social studies department in their schools included population units in their regular course offerings. At the same time, only one-half of these teachers (68 responses or 50.0%) expected these units to be included in science department courses with barely a third (35.3%) suggesting the home economics department taught this content. Interestingly, these teachers did reveal their expectations (or hopes) that their schools' language arts, pre-vocational education, career education, and religion departments (4, 3, 2, and 2 responses, respectively) included such content. Why more science courses were not expected to include population content and materials was not revealed by this questionnaire.

In analyzing the responses of these teachers, these data reveal that not only do teachers expect population information to be taught in a variety of courses and departments in their schools, but that this information was in fact being included in courses taught in several different departments. These findings lend support for the earlier speculation that schools and teachers are making an effort to at least introduce students to population concepts and information and that this effort is not restricted to elective, social studies, or semester or year long courses. Furthermore, these data suggest schools are focusing their efforts to include these units in numerous courses within their curriculums and are not restricting these units to any specific length of time.

These findings reveal that population study units are found most often within regular social studies courses and are expected to be found there. Indeed, these data revealed that the majority of population education teachers are social studies teachers. One may speculate that administrators and teachers perceive population study as a social science rather than a science subject matter area. If this is the case, then one wonders whether students enrolled in population-oriented units are acquiring an adequate understanding of the basic scientific content and concepts needed to understand the literature or to solve problems related to population.

The respondents were asked to identify the objectives they set for the population units they taught (see Table I). Ten objectives commonly cited for units on the secondary school level were listed in the questionnaire for the convenience of the respondents. Each teacher could select any number of objectives from those listed which were appropriate for their own units. The item also included an invitation for the respondents to write-in additional objectives not listed on the survey form. A number of the 134

Table I

The Objectives the Public and Private School Teachers Set For Their Population Education Units*

Objectives	Public School Teachers F	%	R	Private School Teachers F	%	R
Studying population as one aspect of the whole environmental crisis situation	74	73.3	1	17	51.5	1
Identifying and examining characteristics of past, present and future population growth	66	65.3	2	15	45.5	3
Identifying and exploring the possible consequences of continued population growth	64	63.4	3	14	42.4	4
Drawing inferences and formulating hypotheses about human population growth	58	57.4	4	16	48.5	2
Studying the effects of crowded conditions on individual personality and group behavior	56	55.4	5	12	36.4	5
Reading and interpreting population data presented in different forms such as statistics, graphs, etc.	54	53.5	6	10	30.3	6
Identifying and examining the students' role in the population problem	44	43.6	7	8	24.2	8.5
Studying the effects of population growth on internal and international politics, economics, etc.	43	42.6	8	9	27.3	.7
Defining basic demographic terms	39	38.6	9	8	24.2	8.5
Examining various actions through which inidividuals can influence population changes	38	37.6	10	6	18.2	10

*Percentages based on the 101 public and 33 private school teachers who responded to this item of the questionnaire.

$r_s = .94$ ($p < .01$)

teachers who responded to this item marked several objectives as being appropriate.

The three top-ranked objectives cited by the public school teachers were: a) studying population as one aspect of the whole environmental crisis situation (74 responses or 73.3%); b) identifying and examining characteristics of past, present, and future population growth (66 responses or 65.3%); and c) identifying and exploring the possible consequences of continued population growth (64 responses or 63.4%). The private school teachers ranked these same three objectives first, third, and fourth, respectively. The second choice among the private school teachers was the objective to draw inferences and formulate hypothesis about human population growth (16 responses or 48.5%). The close agreement between these two groups of teachers was maintained throughout the entire set of objectives (r_s = .94, $p < .01$).

Among the more clearly stated "other" objectives these teachers set were: to examine the world of work in a changing population; to examine changing choices for working and contributing economically and culturally; to assist students in clarifying their values in regard to population-related issues; and, to assist each student in recognizing himself as an individual and accept his responsibility as an individual within a population group. Five teachers (3.7%) indicated that none of the ten objectives listed reflected those used by them in planning and teaching their population units. However, not one of these five listed an objective they did set.

In reviewing the priorities assigned to these population education unit objectives, the rankings suggest that population was primarily studied as an integral part of the examination of broader environmental problems and processes. The approach stressed by the highest ranked objectives may best be described as a historical and consequential analysis of population-related problems. However, after examining the four least supported objectives these teachers appear to have expected students to analyze population and environmental problems and data without having first acquired the conceptual tools needed to do the job adequately. Furthermore, these teachers appear to have de-emphasized student participation in helping solve environmental problems as if to infer their students were incapable of doing anything positive to help resolve population-related problems or that it is too late to do anything about these problems. Finally, the ratings assigned these objectives suggest that teachers and students may spend a great deal more time 'talking about' population-related content problems than they do 'studying' population phenomena. Support for this interpretation came

from several of the teachers. One stated that "population education is important so long as it is placed in a logical perspective, e.g., to include refraining from the people on top of each other myth being exposed as 'just around the corner.'"

Two other questions related to instructional objectives for population units were included in the questionnaire. The respondents were asked if instructional objectives had been developed for these units by their school and if they had used these objectives within the scope of their own units. Ninety-one public (91.0%) and 24 private (70.6%) school teachers reported their schools had listed such objectives for this area of the curriculum. Despite this large number, only 12 public and 9 private school teachers indicated they used these objectives in courses they themselves taught. Apparently these teachers saw these school-set objectives as being too confining or inappropriate or of too little value to their own units for them to adapt or adopt them for their own course use.

If these data are representative, then it would appear classroom teachers of population primarily teach units whose objectives are developed and written by the teachers themselves rather than adopting objectives listed by their school (or county). If this is the case, one wonders what value the establishment of such objectives by environmentalist groups would have in shaping the content and scope of population units as they are taught within the secondary school curriculum. These data suggest they would have no value.

In an effort to gain further information pertaining to the specific content and topics included within the population units taught by these teachers, a list of 17 topics and concepts generally accepted as being relevant to the study of population was included in the questionnaire (see Table II). The respondents were required to check all of those topics and concepts which they discussed and studied in their classrooms. These teachers were also invited to add other topics not already listed but which were studied within these units.

The topics and concepts most covered by the public school teachers were: a) the effects of crowding (70 responses or 70.0%); b) population and environment (66 responses or 66.0%); and, c) the birth rate, Florida's population, growth rates, and the population explosion (each with 63 responses or 63.0%). The topics of immigration, the birth rate, and the effects of crowding tied for first place among the private school teachers with 21 responses each (61.8%). These three topics were followed in frequency of study by the topics population and environment (19 responses or 55.9%), the census (18 responses or 52.9%), and growth rates (17 responses or 50.0%). When the responses of both

Table II

The Topics and Concepts Included by the Public and Private School Teachers in Their Own Classroom Units*

Topic or Concept	Public School Teachers F	%	R	Private School Teachers F	%	R
Effects of crowding	70	70.0	1	21	61.8	2
Population and environment	66	66.0	2	19	55.9	4
Birth rate	63	63.0	4.5	21	61.8	2
Growth rate	63	63.0	4.5	17	50.0	6
Population explosion	63	63.0	4.5	16	47.1	7.5
Florida's population	63	63.0	4.5	15	44.1	9
Population and economics	60	60.0	7	16	47.1	7.5
Immigration	58	58.0	8.5	21	61.8	2
Population distribution	58	58.0	8.5	13	38.2	12
Census	56	56.0	10.5	18	52.9	5
Population projections	56	56.0	10.5	14	41.2	10
Zero population growth	49	49.0	12	13	38.2	12
Age structure	41	41.0	13	9	26.5	16
Birth control	38	38.0	14	13	38.2	12
Demographic transition	32	32.0	15	10	29.4	15
Sex-role stereotyping	24	24.0	16.5	11	32.4	14
Geometric growth	24	24.0	16.5	6	17.6	17

*Percentages based on the 100 public and 34 private school teachers who responded to this item of the questionnaire.

$r_s = .82$ ($p < .01$)

groups of teachers were combined, the effects of crowding (91 responses); population and environment (85 responses); and the birth rates (84 responses) were ranked one, two, and three, respectively.

These teachers also tended to agree on the concepts and topics they least studied in their courses. The three topics least studied in public school population units were geometric growth and sex-role stereotyping (each with 24 responses or 24.0%) and demographic transition (32 responses or 32.0%). Private school teachers ranked geometric growth (6 responses or 17.6%), age structure (9 responses or 26.5%), and demographic transition (10 responses or 29.4%) 17th, 16th, and 15th, respectively. As with the objectives listed for these units, these two groups of teachers strongly agree on the level of priority to assign each of the topics and concepts listed ($r_s = .32$, $p < .01$).

Some teachers responded to the invitation to identify other topics they included in their courses. An analysis of their responses identified these topics: death rate data (3 responses); city/urban planning (3 responses); and family planning, life expectancy, and the effects on ecology (1 response each). Of special interest were comments made by these teachers in response to the 'birth control' option for this item. One teacher said she taught birth control 'very tactfully.' Two others indicated they taught birth control subject matter as an 'issue' rather than as a focus of instruction.

These Florida teachers reported they would like to see a number of different types of instructional resources and aids relating to population made available to them for their use (see Table III). These teachers indicated the specific forms of materials and aids they desired as well as listed 'other' materials they would find useful for their teaching of population content.

The resources most wanted by public school teachers were: a) filmstrips (70 responses or 70.0%); b) student workbooks (68 responses or 68.0%); and, c) cassette tapes (61 responses or 61.0%). In a slightly different order, the private school teacher selected these same three as their top choices: a) student workbooks (16 responses or 48.5%); b) filmstrips (14 responses or 42.5%); and, c) cassette tapes (13 responses or 39.4%). While both groups agreed on their least preferred type of instructional aid, bibliographies (14 and 2 responses for public and private school teachers, respectively), they disagreed as to their next two least preferred choices. Public school teachers identified 35mm slides (21 responses or 21.0%) and textbooks (24 responses or 24.0%) for these two near-bottom ranked positions while the private school teachers listed transparencies (4 responses or 12.1%) and super-8 filmloops

Table III

The Types of Instructional Resources Desired by These Public and Private School Teachers*

Type of Instructional Resource	Public School Teachers F	%	R	Private School Teachers F	%	R
Filmstrips	70	70.0	1	14	42.4	2
Student workbooks	68	68.0	2	16	48.5	1
Cassette tapes	61	61.0	3	13	39.4	3
Super-8 filmloops	56	56.0	4	5	15.2	15
Visiting lecturers	45	45.0	5	11	33.3	7.5
Films	38	38.0	6.5	12	36.4	5
Simulation games	38	38.0	6.5	11	33.3	7.5
Materials for slow learners	37	37.0	8.5	8	24.2	10.5
Value sheets	37	37.0	8.5	6	18.2	13.5
Case studies	34	34.0	10	12	36.4	5
Small paperbacks	33	33.0	11	12	36.4	5
Posters	29	29.0	12.5	7	21.2	12
Transparencies	29	29.0	12.5	4	12.1	16
Newsletter for teachers	28	28.0	14	6	18.2	13.5
Textbooks	24	24.0	15	8	24.2	10.5
35mm slides	21	21.0	16	10	30.3	9
Bibliographies	14	14.0	17	2	6.1	17

*Percentages based on the 100 public and 33 private school teachers who responded to this item of the questionnaire.

$r_s = .63$ ($p < .01$)

16

(5 responses or 15.2%) in these two positions. Only one teacher identified another aid not listed among the choices provided. This teacher desired more population films on television so that the school could record them on videotape for later replay.

However, the desire for materials must be put into its proper perspective. Some schools still censure population-related materials. One teacher stated that my county "is very conservative--to the point where the media center won't purchase or order Tragedy of the Commons." Should inexpensive or free materials be sent to teachers, there is no guarantee they will be used correctly. Much of the failure of the so-called 'curriculum revolution' of the 1960's was the result of the inadequate preparation classroom teachers had received in the content and methodology necessary to handle the new instructional materials. It may be more effective to identify a few teachers, provide them with the content background and conceptual understanding, teach them the methodologies, and then make available population materials to individuals who will then possess the skills needed to use these materials effectively.

The possibility of offering population workshops as part of pre-school or inservice workshops, summer institutes, and short courses is great. The fact that 96 public and 27 private school teachers have already attended such workshops attests to their widespread use as vehicles for providing this instruction. Only 11 teachers (8.2%) indicated they had not already attended some type of population education workshop.

When asked if they would attend a population workshop should the opportunity become available to them, 86 public (84.3%) and 27 private (84.4%) school teachers responded with a "yes" answer. Of the 136 teachers, only 21 stated definitely they would not attend such a workshop. These data indicate that teachers in both public and private school settings are equally enthusiastic about learning more about population principles and concepts. They report they have attended workshops in the past related to this area and, if given the opportunity, would again attend such workshops. That such an attitude exists among these teachers must be encouraging news to those concerned with improving the quality of this subject matter area.

The role of and need for these workshops becomes even more apparent when one realizes that 70 of these teachers had never taken a course in college which stressed the study of population or population-related material. Fifty-four of the 68 public school teachers (79.4%) and 16 of the 24 private school teachers (66.7%) responding to this item stated they had never attended environmentally-oriented courses during their college preparation. Thirty-nine more

teachers (32.4% of 136 teachers) did not respond to this item. These responses may be interpreted to mean that 39 teachers in addition to the 70 population education teachers identified earlier may not have received any college course preparation in this content area. If this is a correct interpretation, then 109 of the 136 teachers who taught population education units in Florida secondary schools had never completed a single course in college related to the subject matter they were teaching.

Eight public (11.8%) and four private (16.7%) school teachers reported they had completed two college courses stressing population. Five public and two private school teachers completed one course each. One private school teacher reported having taken two courses while another indicated having completed eight courses related to this content area.

In summary, these data suggest that in general these teachers were not adequately prepared to teach the subject matter they have been asked to include or chose to include within their regular courses. However, one should not equate the number of college courses taken with the extent of knowledge an individual may possess relative to any given field of study. Since most environmental courses on the college level are relatively recent entries into the college curriculum, many of these teachers did not have the opportunity to enroll into such courses during their college preparation programs. One of the reasons these teachers were so willing to attend inservice workshops appears obvious from these data. These teachers appeared to have recognized the fact that they lacked the knowledge of population education content necessary to do an effective job in their own classrooms. They have admitted their desire to attend workshops to enhance their skills and knowledge in this area. The stage is set for some individual or group to begin the work these teachers have indicated needs to be done.

The preference for more inservice education is especially significant in light of the responses revealing 92 public (92.0%) and 27 private (79.4%) school teachers considered it important to include population content within the secondary school curriculum. Interestingly, despite the fact they taught such content, 15 teachers indicated they did not think population information was important to the curriculum.

Summary and Conclusions

Among the more important findings relative to the status of population education in Florida are the following:

a) classroom teachers in a wide variety of subject areas included population content and units within their regular courses;

b) the units taught by these teachers stressed different objectives, content, and concepts;

c) the units taught by public and private school teachers were very similar in objectives, content, and concepts stressed;

d) the units varied in length;

e) social studies teachers were expected to and, in fact, did teach a majority of the units on population education;

f) population education teachers desired more instructional aids and inservice workshops to help them improve their courses; and,

g) a vast majority of the teachers had taken no formal college course which focused on population content.

From these findings it would appear that proponents of population education have had an impact on shaping school curriculums.

While individuals varied among themselves on the basis of their population education instructional units, the survey data revealed a tremendous similarity between public and private school teachers (as separate groups) and their population units (when taken collectively). The significant correlations ($p < .01$) between these two groups of teachers for course objectives, course content, and desired audio-visual aids serve to indicate the degree of this similarity. Considering the differences among and between public and private schools on the basis of student enrollments, available money, and clientele, this level of agreement across all three areas of comparison was unexpected.

One explanation for this similarity would be to suggest these teachers included population education content in their courses because they personally believed this information was important rather than because this material was part of their school's or county's curriculum plan. The data relative to the infrequent use of the school's formal curriculum plan and objectives would support this interpretation. The findings reported earlier regarding the belief in the importance of studying population material on this level would also support this conjecture.

Hence, the nature of population education units may be based entirely on the personal interests and concerns of the teachers who include this information in their own courses as this subject comes up in class or within much broader units relative to pollution, conservation, contemporary issues, and the like. Should this be the case, individuals and groups trying to influence the curriculums of schools

in directions more consistent with population education goals may find their efforts more rewarding by seeking to interest teachers as individuals rather than as teachers. This survey would suggest that such an approach would more directly influence teachers towards including this content within their courses than any other approach they may take. Thus, population workshops aimed at teachers as individuals rather than as teachers per se may be the most effective type of workshops to hold. The teachers, not the curriculum plan, are the ones who must be influenced.

Finally, one other factor which may be overlooked on the basis of the nature of the study of various population concepts and content must be considered. To study population primarily within social studies classes without providing students with the conceptual understanding of important scientific and technical terms risks having students use the vocabulary of population education without an understanding of what these terms mean. Students with only a casual knowledge of various population-related terms and issues acquired from an instructor's general understanding of these terms and issues may develop even more stereotyped impressions, have even less understanding of the material and problems, or consider decisions based upon more misinformation or less accurate interpretations of relevant data. Students may develop unwarranted fears or make assumptions based upon misunderstood information, e.g., the people piled on top of each other myth mentioned earlier. Units which leave students with this level of knowledge are not what is needed. Units whose intentions are noteworthy but upon implementation foster more uncertainty and confusion surrounding population phenomena must be avoided.

Studying population issues does not guarantee that the data and terms are being understood by students. Even more, such a study does not necessarily reveal how accurate the data are or how appropriate the data are to the issue being studied. Groups which desire to have population information studied in schools must be careful as to how these units are taught as well as what the results of teaching such units are on students' knowledge and understanding.

In addition, the growth of population education units within the secondary school curriculum of Florida appears to be widespread and rapid. Whether this concern is the result of the rapid changes within Florida's large transient population or a reflection of widespread concern for Florida's natural environment is uncertain. Certainly the movement of large numbers of senior citizens into the state, the existence of the large Cuban-Spanish-speaking population created by Castro's 1959 revolution, the development of Disney World and related tourist attractions, the "boom town" experience of the Cape Canaveral-Kennedy Space Center region, and the continuing development of sprawling urban centers like Miami,

Jacksonville, and Tampa-St. Petersburg have had major impact upon teachers in their consideration of population-related phenomena within their courses.

Teachers are notorious for not keeping up with the literature in their own content area field. Since this is the case, we cannot expect teachers to have become experts in population-related content. Nor can we assume that their personal interests in problems related to this area of environmental education have made them knowledgeable on this particular subject area. Two of the films most shown by the 136 teachers answering this questionnaire did not exist and hence were unavailable to be shown. Yet, eleven teachers reported they had shown these films to their students during population education units. If teachers are capable of showing non-existent movies, just think what might occur as they engage in the teaching of contraception, urban centers, aging, and other important population concepts and problems. Just because population information is included within a course does not mean it is being presented adequately or that students are understanding this information. Whether students understand how this information could and should be used to help them make decisions regarding their personal reproductive behavior is unknown.

This survey reported the quantitative nature of population education in Florida schools. The reader is cautioned not to equate quantity with quality. To make such an assumption is not warranted by these data.

TABLES

*These tables are written to provide the reader information as to the wording of the questionnaire items to which the persons completing the survey responded.

Item number on the questionnaire: 6

Item: In which of the following courses at your school are aspects of population education included:

Choices Provided the Respondents	Public School F	Public School %	Non-Catholic Private School F	Non-Catholic Private School %	Catholic Private School F	Catholic Private School %	Total All-Respondents F	Total All-Respondents %
A). Contemporary Issues	37	36.3	7	50.0	8	40.0	52	38.2
B). World History	33	32.4	4	28.6	8	40.0	45	33.1
C). Biology	29	28.4	6	42.9	7	35.0	42	30.9
D). Marriage and the Family	29	28.4	2	14.3	3	15.0	34	25.0
E). Problems of Democracy	26	25.5	3	21.4	3	15.0	32	23.5
F). General Science	26	25.5	0	0.0	5	25.0	31	22.8
G). Home Economics	28	27.5	1	7.1	1	5.0	30	22.1
H). Other	49	48.0	5	35.7	8	40.0	62	45.6
Totals(Not Appropriate)								

Item number on the questionnaire: 6 continued

"Other" Courses Identified as Containing Population Education Content	Public School F	Non-Catholic Private School F	Catholic Private School F	Total All-Respondents F
a) Geography	10	1	2	13
b) Civics	10	1	1	12
c) General Middle School Social Studies	8	2	1	11
d) 11th Grade American History	8	2	1	11
e) Sociology	9	0	0	9
f) Ecology/Environmental Science	5	1	1	7
g) Health	5	0	0	5
h) Psychology	4	0	0	4
i) American Institutions	3	0	0	3
j) Economic Studies	3	0	0	3
k) Religion	0	0	3	3
l) Florida History	2	0	0	2
m) Language Arts	2	0	0	2
n) Changing Cities	1	0	0	1
o) Conservation	1	0	0	1
p) Earth Science	0	0	1	1
q) Man and His World	0	0	1	1
Totals	71	7	11	89*

*A number of respondents designated more than one 'other' response for this item.

Item number on the questionnaire: 7

Item: In which department in your school would you expect population education to be taught?

Choices Provided the Respondent	Public School F	Public School %	Non-Catholic Private School F	Non-Catholic Private School %	Catholic Private School F	Catholic Private School %	Total All-Respondents F	Total All-Respondents %
A). Social Studies	97	95.1	11	78.6	20	100.0	128	94.1
B). Science	54	52.9	7	50.0	7	35.0	68	50.0
C). Home Economics	44	43.1	1	7.1	3	15.0	48	35.3
D). Health Education	30	29.4	1	7.1	2	10.0	33	24.3
E). Physical Education	8	7.8	1	7.1	1	5.0	10	7.4
F). Other (specify)	22	21.6	3	21.4	8	40.0	33	24.3
a) Language Arts	3	2.9	0	0.0	1	5.0	4	2.9
b) Pre-Vocational Education	3	2.9	0	0.0	0	0.0	3	2.2
c) Career Education	2	2.0	0	0.0	0	0.0	2	1.5
d) Religion	0	0.0	0	0.0	2	10.0	2	1.5
e) Failed to specify	14	13.7	3	21.4	5	25.0	22	16.2
Totals (Not Appropriate)								

Item number on the questionnaire: 13

Item: Below are listed a number of topics and concepts which are usually included in the study of population. Please indicate those topics and concepts which are discussed in your classroom.

Choices Provided the Respondents	Public School F	Public School %	Non-Catholic Private School F	Non-Catholic Private School %	Catholic Private School F	Catholic Private School %	Total All-Respondents F	Total All-Respondents %
A). Effects of crowding	70	70.0	9	64.3	12	60.0	91	67.9
B). Population and environment	66	66.0	5	35.7	14	70.0	85	63.4
C). Birth rate	63	63.0	10	71.4	11	55.0	84	62.8
D). Growth rate	63	63.0	9	64.3	8	40.0	80	59.7
E). Immigration	58	58.0	8	57.1	13	65.0	79	59.0
F). Population explosion	63	63.0	7	50.0	9	45.0	79	59.0
G). Florida's population	63	63.0	6	42.9	9	45.0	78	58.2
H). Population and economics	60	60.0	5	35.7	11	55.0	76	56.7
I). Census	56	56.0	6	42.9	12	60.0	74	55.2
J). Population distribution	58	58.0	7	50.0	6	30.0	71	53.0
K). Population projections	56	56.0	6	42.9	8	40.0	70	52.2
L). Zero population growth	49	49.0	8	57.1	5	25.0	62	46.3
M). Birth Control	38	38.0	7	50.0	6	30.0	51	38.1
N). Age structure	41	41.0	4	28.6	5	25.0	50	37.3
O). Demographic transition	32	32.0	7	50.0	3	15.0	42	31.3
P). Sex-role stereotyping	24	24.0	6	42.9	5	25.0	35	26.1
Q). Geometric growth	24	24.0	3	21.4	3	15.0	30	22.4
R). None of these	1	1.0	0	0.0	0	0.0	1	.7
S). Other (Specify)	6	6.0	0	0.0	1	5.0	6	4.5
No Responses	2	----	0	----	0	----	2	----
Totals (Not Appropriate) Mean =	8.84		8.07		7.00		8.49	

Item number on the questionniare: 14

Item: Below are listed a number of objectives for teaching units on population education. Check those objectives which most accurately reflect the objectives you use for your unit(s):

Choices Provided the Respondents	Public School F	Public School %	Non-Catholic Private School F	Non-Catholic Private School %	Catholic Private School F	Catholic Private School %	Total All-Respondents F	Total All-Respondents %
A) Studying population as one aspect of the whole environmental crisis situation	74	73.3	6	46.2	11	55.0	91	67.9
B) Identifying and examining characteristics of past, present, and future population growth	66	65.3	5	38.5	10	50.0	81	60.4
C) Identifying and exploring the possible consequences of continued population growth	64	63.4	6	46.2	8	40.0	78	58.2
D) Drawing inferences and formulating hypothesis about human population growth	58	57.4	6	46.2	10	50.0	74	55.2
E) Studying the effects of crowded conditions on individual personality and group behavior	56	55.4	4	30.8	8	40.0	68	50.7
F) Reading and interpreting population data presented in different forms such as statistics, graphs, etc.	54	53.5	4	30.8	6	30.0	64	47.7
G) Identifying and examining the students' roles in the population problems	44	43.6	4	30.8	4	20.0	52	38.8
H) Studying the effects of population growth on internal and international politics, economics,etc.	43	42.6	5	38.5	4	20.0	52	38.8
I) Defining basic demographic terms	39	38.6	5	38.5	3	15.0	47	35.1
J) Examining various actions through which individuals can influence population changes	38	37.6	3	23.1	3	15.0	44	32.8
K) None of the above objectives are used in my classroom	5	5.0	0	0.0	0	0.0	5	3.7
L) Other (specify)	5	5.0	2	15.4	1	5.0	8	6.0
No Responses	1	----	1	----	0	----	2	----
Totals (Not Appropriate)								

Item number on the questionnaire: 15

Item: Please indicate which of the following films you have used in the course you presently teach:

Choices Provided the Respondents	Public School	Non-Catholic School	Catholic School	Total All-Respondents
A) Tragedy of the Commons	6	0	0	6
B) "Spaceship Earth" is in Trouble*	5	0	1	6*
C) People, People, and More People*	6	0	0	6*
D) Population and the American Future	4	1	0	5
E) Let's Talk - - - About Population	4	0	0	4
F) "And You Shall Multiply . . . "*	4	0	0	4*
G) World Population	3	0	0	3
H) Sorry, No Vacancy	3	0	0	3
I) The Population Bomb is Ticking Away*	2	0	0	2*
J) Population Education*	2	0	0	2*
K) Come to Florida Before It's Gone	0	0	0	0
Number of No Responses	76	13	19	108

The responses above are ordered according to the frequencies of responses each received.

*These films were fictitious rather than real films. S. Dennis Baker, University of Florida Advanced Graduate Student and an activist in the population education movement on that campus in Gainesville, Florida, selected the names of six films that did exist and five that did not exist in order to determine the 'validity' of these teachers' responses to this item. The names of the films selected were taken from lists of films provided by various population education groups. The invented names were contrived to sound real. What this data says in regards to the 'validity' of the results regarding other items is left to the reader.

Item number on the questionnaire: 16

Item: What types of instructional resources related to population education would you like to see made available for your use?

Choices Provided the Respondents	Public School F	Public School %	Non-Catholic Private School F	Non-Catholic Private School %	Catholic Private School F	Catholic Private School %	Total All-Respondents F	Total All-Respondents %
A). Filmstrips	70	70.0	5	35.7	9	47.4	84	63.2
B). Student workbooks	68	68.0	6	42.9	10	52.6	84	63.2
C). Cassette tapes	61	61.0	8	57.1	10	52.6	79	79.4
D). Super-8 filmloops	56	56.0	1	7.1	4	21.1	61	45.9
E). Visiting lecturers	45	45.0	6	42.9	5	26.3	56	42.1
F). Films/16 mm movies	38	38.0	7	50.0	5	26.3	50	37.6
G). Simulation games	38	38.0	2	14.3	9	47.4	49	36.8
H). Case studies	34	34.0	6	42.9	6	31.6	46	34.6
I). Small paperbacks	33	33.0	4	28.6	8	42.1	45	33.8
J). Materials for slow learners	37	37.0	3	21.4	5	26.3	45	33.8
K). Value sheets	37	37.0	4	28.6	2	10.5	43	32.3
L). Posters	29	29.0	4	28.6	3	15.8	36	27.1
M). A newsletter for teachers	28	28.0	3	21.4	3	15.8	34	25.6
N). Overhead transparencies	29	29.0	1	7.1	3	15.8	33	24.8
O). Textbooks	24	24.0	4	28.6	4	21.1	32	24.1
P). 35mm slides	21	21.0	4	28.6	6	31.6	31	23.3
Q). Bibliographies	14	14.0	2	14.3	0	0.0	16	12.0
R). Other (specify)	14	14.0	4	28.6	2	10.5	20	15.0
No Responses	2	----	0	----	1	----	3	----
Totals(Not Appropriate). Mean =	6.62		5.00		4.84		6.23	

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