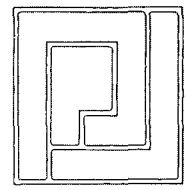
ESTABLISHING EVALUATION INDICATORS ON THE POPULATION KNOWLEDGE, ATTITUDES, PRACTICES AND SKILLS (KAPS) OF SECONDARY SCHOOL TEACHERS AND STUDENTS IN THE PHILIPPINES



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The study was conducted to establish indicators in evaluating the population education (POPED) program of the Ministry of Education, Culture and Sports in the secondary level by looking at the existing knowledge, attitude, practice and skills (KAPS) of high school students and teachers on POPED. From the one-shot survey of public and private schools of the 13 regions, some differences in the KAPS of teachers and students are discerned. For instance, the teachers show better knowledge of POPED concepts and have more favorable attitude towards POPED issues than their students. While both groups prefer late marriage and small family size, they are less amenable to delayed first pregnancy. Teachers are more for child spacing and express greater intention to practice family planning than the students. Among the factors found to be useful in predicting KAPS of high school teachers and students on POPED are: region of residence, age, sex, educational attainment, marital status, general grade average, type of school, place of residence, exposure to various sources of POPED information. These findings are used to suggest several recommendations for strengthening the implementation of the POPED program at the high school level.

INTRODUCTION

The population education (POPED) program in Philippine schools was launched in 1972 by the Ministry of Education, Culture and Sports (MECS), with financial assistance from the United Nations Fund for Population Activities. The program, the first in Asia, is aimed at extending and expanding POPED in the educational system and institutionalizing it in the 13 MECS regions as a means to achieve the population and development goals of the country.

The first phase of the program focused on the integration of POPED into the elementary schools curriculum and was implemented from 1972 to 1977. The second phase which started in 1982 was directed towards the secondary level curriculum development activities, training programs, researches/studies and program reviews and evaluation, and documentation and library service.

The present study was conducted in connection with the implementation of POPED at the secondary level. The survey, which covered high school students and teachers nationwide, was conducted to establish evaluation

indicators or baseline data which can be used as bases in evaluating the integration of POPED within the secondary school curriculum.

OBJECTIVES

The broad objective of this study was to establish indicators in evaluating the POPED programs of MECS in the secondary level.

The specific objectives were:

1. to determine the existing knowledge, attitude, practice and skills (KAPS) of high school students and teachers on population education; and

2. to determine if there are significant relationships between the respondents' demographic characteristics, exposure to population information sources, type of schools attended and exposure to POPED, on the one hand, and their knowledge, attitude, practice and skills concerning POPED, on the other hand.

CONCEPTUAL FRAMEWORK

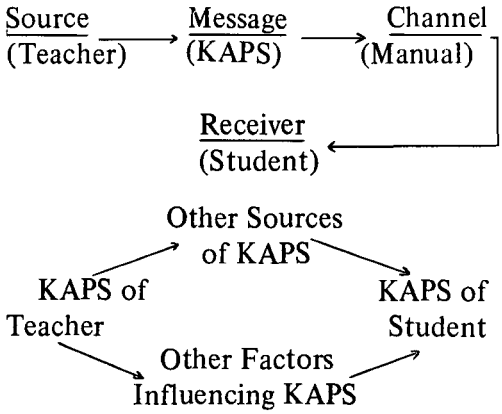
POPED in this study was conceived as an input and a process. As an input, it is composed of the following elements: manpower (teacher), resource materials (manual), teaching method (lecture) and information (content).

As a process, it was likened to communication, which is composed of a source, a message, a channel and a receiver. In POPED, the teacher is the main source and the student is the receiver. The message, which comes from the source, is composed of the teacher's knowledge, attitude, practice and skills. In the process, these components of the message are expected to be transferred to the receiver. The teaching methods used and the resource materials employed constituted the channels through which the message is shared between the teacher and the student.

In addition to the training and the resource materials, there seemed to be other internal and external factors which could influence the KAPS of the teachers and the students. The internal factors included some of their demographic characteristics while the external factors included exposure to mass media and location and type of school.

Against this framework, the study was designed to include two distinct features often neglected in conventional KAPS studies. First, the study included the teaching method of the teacher and other factors which might have influenced KAPS. Second, a broader view of POPED was adopted, to include value inculcation which touched on attitude towards parents, friends, work, schools, church, and other institutions and practices.

The basic hypothesis which could be derived from the conceptual framework may be stated like this: the KAPS and the teaching method of the teacher determine to a large extent the KAPS of the student. The type and the geographical location of the school, and the demographic characteristics of the students would also have some influence on their KAPS. Shown below is the framework used in evaluating the KAPS of secondary teachers and students in the Philippines:



METHODOLOGY

The data for the study were the results of a one-shot survey which utilized a multi-stage sampling technique in selecting the sample. All the 13 MECS regions were covered by the survey. From these regions, 26 divisions were selected from which 98 schools were randomly chosen. Both public and private schools were represented in the survey and they were selected through a stratified random sampling procedure.

From each school, one class section was randomly selected from each year level, making a total of four sections per school. From each section, eight students were randomly selected. Thus, there were 32 student respondents per school or a total of 3,136 students.

A total of 490 high school teachers, specifically those handling subjects where POPED was integrated, served as respondents. The respondents came from various types of schools from the different regions in the country. The teacher sample consisted of those teaching the following subjects: mathematics, home economics, social studies, health, and science.

Two types of questionnaires were developed, one for teachers and one for students. Each instrument contained questions on the respondents' demographic characteristics, exposure to POPED information sources, and their KAPS regarding POPED.

Simple percentages were used in the analysis of the data. Chi-square and ANOVA tests were run on the data to determine if there were significant differences in the responses of the two groups of respondents. Comparisons were also made on their demographic characteristics, exposure to population information sources, and type of school attended.

DEMOGRAPHIC AND SOCIO-ECONOMIC PROFILES OF RESPONDENTS

Students

Six out of 10 student respondents were females, indicating a slight advantage of females than males in high school enrolment (Table 1). The ages of the respondents ranged from 12 to 26 years, with a mean of 14.8 years (Table 2). As expected, almost all of them were unmarried (98 percent).

The greatest number of students (40 percent) came from barangay high schools, followed by those who came from private sectarian schools (27 percent) (Table 3). Least represented were the state colleges and municipal high schools (one percent each).

The distribution of the students by type of school was in keeping with

Table 1. Sex Distribution of Respondents

Sex	Students		Teachers	
	Number	Percent	Number	Percent
Female	1235	60.4	406	82.9
Male	1895	39.4	82	16.7
No response	6	0.2	2	0.4
Total	3136	100.0	490	100.0

Table 2. Age Distribution of Students

Age	Number	Percent
12	154	4.9
13	579	18.5
14	691	22.0
15	694	22.1
16	581	18.5
17	181	5.8
18 and above	187	6.0
No response	69	2.2
Total	5156	100.0
Mean Age		14.8 years

where they were found residing. Half were residents of rural barangays followed by city dwellers (32 percent) (Table 4).

As in most surveys eliciting income information, this survey was not very successful in getting income reports. Fifty-three percent of the students either did not know or did not want to reveal their family income. Of those who reported, 25 percent had annual family income of less than P8,000.00. Only six percent belonged to the P20,000.00 or more bracket (Table 5).

In terms of school performance, the students came from a wide range of scholastic standing. The sample's average grade during the school-year prior to the survey was 84.4 percent, with a range of 75 to 95 percent (Table 6).

Teachers

The teacher-respondents were overwhelmingly females (83 percent) indicating the predominance of that sex in the teaching profession (Table 1). Two-fifths of them were between the ages of 31 and 40, closely followed by those in the 21-30 age bracket (39 percent). Their mean age was 33 years (Table 7). More than half of the teachers (57 percent) were married (Table 8) having between 1-4 children (Table 9).

In addition to their college degree, nine percent of the teachers had either earned M.A. units or obtained their masteral degree (Table 10). Like the students, more than half (58 percent) of the teachers belonged to the teaching force of the public school system, mostly in the barangay high schools (40 percent). Among those teaching in private schools, more came from sectarian (28 percent) than from the non-sectarian (14 percent). (See Table 3.)

Table 3. Respondents' Type of School

Type of School	Students		Teachers	
	No.	Percent	No.	Percent
Public	1824	58.2	285	58.2
State College/University	32	1.0	5	1.0
Vocational/technical	192	6.1	30	6.1
City high school	160	5.1	25	5.1
Provincial high school	64	2.0	10	2.0
Municipal high school	32	1.0	5	1.0
Barangay high school	1248	39.9	195	39.9
National high school	96	3.1	15	3.1
Private	1312	41.8	205	41.8
Sectarian	864	27.5	135	27.5
Non-sectarian	448	14.3	70	14.3
Total	3136	100.0	490	100.0

Table 4. Place of Residence of Students

Residence	Number	Percent
Barrio	1574	50.3
Poblacion	556	17.7
City	996	31.7
No response	10	0.3
TOTAL	3136	100.0

Table 5. Yearly Income of Students' Family

Income	Number	Percent
Less than P8000	776	24.7
P 8,000 – P11,999	269	8.6
12,000 – 15,999	169	5.4
16,000 – 19,999	71	2.3
20,000 – and above	198	6.3
No estimate	1653	52.7
Total	3136	100.0

As can be gleaned from Table 11, teachers were well distributed in various lengths of service. One third (33 percent) were relatively new in the teaching job, being in it for less than five years. The second greatest

Table 6. Students' Grade During the Last School Year

Grade	Number	Percent
75 – 79	136	4.4
80 – 84	1224	39.0
85 – 89	1089	34.7
90 – 94	235	7.5
95 – 99	4	14.3
Total	3136	100.0

Table 7. Age Distribution of Teachers

Age	Number	Percent
20 and below	4	0.8
21 – 30	191	39.0
31 – 40	198	40.4
41 – 50	65	13.3
51 – 60	18	3.7
61 and above	4	0.8
No response	10	2.0
Total	490	100.0
Mean Age		33.4 years

Table 8. Marital Status of Teachers

Marital Status	Number	Percent
Single	199	40.6
Married	281	57.4
Separated	1	0.2
Widow/Widower	6	1.2
No response	3	0.6
Total	490	100.0

Table 9. Number of Living Children of Teachers

Number of Children	Number	Percent
None	16	5.6
1 – 2	123	42.7
3– 4	123	42.7
5 – 6	22	7.6
No response	4	1.4
Total	288	100.0

Table 10. Educational Attainment of Teachers

Education	Number	Percent
Two-year teaching course	3	0.6
Four-year teaching course	433	88.4
Has MA units/finished MA	45	9.2
No response	9	1.8
Total	490	100.0

Table 11. Length of Teaching Service of Teachers

Length of Service	Number	Percent
Less than 5 years	161	32.9
5 – 9 years	152	31.0
10 – 14 years	77	15.7
15 – 19 years	50	10.2
20 years or longer	35	7.0
No response	15	3.1
Total	490	100.0

number of respondents (31 percent) were those who have taught from five to nine years.

RESULTS AND DISCUSSION

Subject Where POPED is Integrated

Based on the teacher's responses, it appeared that 81 percent of them had actually integrated POPED in the high school curriculum. The greatest number of respondents (22 percent) said that they integrated POPED in social studies, followed by those who integrated it in home economics/ practical arts (17 percent). Nineteen percent, however, said that they had not integrated population education in the subjects they were teaching (Table 12).

POPED Training of Teachers

Attendance in POPED training programs

At interview date, only 93 (19 percent) of the 490 teachers had

Table 12. Subject/s Where POPED is Integrated by Teachers*

Subjects	Number	Percent
Pilipino	26	5.3
English	31	6.3
General Science	65	13.3
General Mathematics	62	12.6
Social Studies	110	22.4
Home Economics/Practical Arts/Practical Education	83	16.9
Physical Education/YDT	39	8.0
Biology	25	5.1
Chemistry/Physics	5	1.0
Population Education	20	4.1
Others	6	1.2
None	91	18.6
Number of Respondents	(490)	

*Multiple response

attended trainings on POPED sponsored by the MECS (Table 13). This means that roughly four-fifths (80 percent) of the teachers who were teaching POPED had not formally undergone training on teaching POPED.

Table 13. Number of Teachers who have Attended MECS-Sponsored Trainings on Population Education

Has Attended Training	Number	Percent
Yes	93	19.0
No	391	79.8
No response	6	1.2
Total	490	100.0

Of the 93 who had POPED training, 90 or 97 percent had taken part in only one such activity. The remaining three had undergone training twice. This core of MECS-trained teachers had had other related trainings. For instance, 75 percent simply said POPED seminars, perhaps sponsored by other agencies. Eight percent said that the trainings were about family planning while six percent said that they were about Christian sex education (Table 14).

Table 14. Other POPED Training Programs Attended by Teachers*

Type of Training Program	Number	Percent
Marriage Encounter	2	2.8
Population Educ. seminar	53	74.6
Family Planning seminar	6	8.5
Home Nursing course	1	1.4
Christian Sex Education	4	5.6
Family Relations seminar	1	1.4
No response	9	12.7
Number of respondents	(71)	

*Multiple response

On the MECS-training, the teachers gave several suggestions for improving POPED training programs. Among these were to extend length of training (24 percent), to invite knowledgeable resource persons (18 percent), to provide more resource materials (17 percent) and to include audio-visual aids in the discussions (14 percent). Some teachers also suggested that participation among teachers be encouraged, updated resource materials be provided, and more in-depth discussion of topics be conducted (Table 15).

Curriculum development and course content

The respondents were presented different suggestions on curriculum development and course content for POPED.[1] They were asked to check suggestions which they, as teachers, believed could improve the POPED curriculum and content of POPED courses.

Regarding curriculum development, almost half of the respondents (49 percent) endorsed the use of the single-course approach instead of the integrated approach in teaching POPED. The second greatest number (44 percent) were for the integration of teachers' guides in all the enrichment areas to eliminate proliferation of sub-units, while more than three out of 10 (31 percent) endorsed the examination of the conceptual framework of the mother subjects (Table 16).

For the improvement of the course content, 66 percent of the respondents suggested that more stress on and

understanding of values is needed in POPED. Majority (58 percent) also endorsed the suggestion that equal emphasis on family size and family life be given. More than one-third (34 percent), on the other hand, believed in giving more emphasis on ecology in the curriculum guide. Thirty percent believed that contraceptive methods be discussed at the high school level while less than one percent said that the use of contraceptives should not be discussed (Table 17).

Teaching methods and teaching materials

Method used and perceived effectiveness. Almost all (93 percent) of the respondents used the lecture-discussion in teaching POPED, and they also believed that the method was very effective. Role playing was a poor second (46 percent) though considered to be very effective. Lecture and field trip were among the other teaching methods mentioned (Table 18).

Materials used and perceived usefulness. Nearly eight out of 10 (78 percent) of the teachers interviewed used books as resource material in teaching POPED, out of whom 70 percent perceived it to be a very useful material. They were followed

Table 15. Teachers Suggestions to Improve Training *

Suggestions	Number	Percent
Extend length of training	22	23.7
There should be more discussions	1	1.1
More in-depth discussions	7	7.5
Participation of teachers should be encouraged	10	10.7
Number of teacher-participants should be increased	5	5.4
Include more topics	6	6.4
Discussion of topics should be comprehensive to both students and teachers	1	1.1
Include audio-visual aids	13	14.0
Include modules/more references	2	2.1
Presentation should be made more interesting	1	1.1
There should be more resource materials	16	17.4
Provide better/updated resource materials	9	9.7
Invite expert/knowledgeable resource persons	17	18.3
Invite more resource persons	2	2.1
Number of respondents	(93)	

*Multiple response

Table 16. Suggestions on Curriculum Development for POPED Endorsed by the Teachers*

Suggestions	Number	Percent
Use of the single-course approach instead of the integrated approach	196	49.1
Integration of teachers' guides in all the enrichment areas to eliminate proliferation of sub-units	174	43.6
Use of only one syllabus for each mother subject and its pertinent enrichment areas	113	22.6
Addition of a new unit in POPED to every mother subject	79	19.8
Examination of the conceptual framework of POPED in the light of the conceptual framework of the mother subjects	124	31.1
Localization of curriculum development	103	25.8
Participation of teachers in writing POPED curriculum	76	19.0
Number of respondents	(399)	

*Multiple response

by those who used pamphlets (70 percent) and posters (60 percent). These two teaching materials were also found very useful by the teachers. Other teaching materials used included flipcharts (35 percent), films (33 percent), and slides (29 percent) (Table 19).

Table 17. Suggestions on Course Content for POPED Endorsed by Teachers*

Suggestions	Number	Percent
More stress on and understanding of value orientation	265	66.4
Equal emphasis on family size and quality of family life	232	58.1
Equal stress on the positive and negative predictions about population growth	125	31.3
Greater emphasis on human sexuality	102	25.6
More emphasis on ecology in the curriculum guide	134	33.6
Discussion of the use of contraceptive methods at the high school level	117	29.3
Use of contraceptives should not be discussed at the high school	3	0.8
Number of respondents	(399)	

*Multiple response

Manner of handling malicious comments. One-fourth of the respondents said that whenever students gave malicious comments during discussions, particularly on the human anatomy, they tried to explain the topic further for better understanding. They also gave scientific explanations for the subject that gave rise to such comments. The second greatest proportion (23 percent) of the teachers explained the importance of discussing sex or family planning by telling the students that it was part of their education. Other teachers tried to explain that sex is natural and God-given (22 percent). Still others simply ignored the malicious comments (19 percent), indicating the inadequacy of training on how to deal with difficulties of teaching POPED to students (Table 20).

Languages used in teaching human anatomy. Three languages were cited as the medium of instruction for teaching human anatomy. They were used singly or in combination. The most popular was English (41 per-

Table 18. Methods Used by Teachers in Teaching POPED and Perceived Effectiveness of Each Method

Teaching Methods	PERCEIVED EFFECTIVENESS								TOTAL	
	Very Effective		Slightly Effective		Not Effective		Can't Say			
	No.	%	No.	%	No.	%	No.	%	No.	%
Lecture	14	8.5	114	69.1	33	20.0	4	2.4	165	41.3
Lecture-discussion	224	60.4	130	35.0	6	1.6	11	3.0	371	93.0
Field trip	80	54.4	57	38.8	4	2.7	6	4.1	147	36.8
Role playing	125	68.7	44	24.2	3	1.6	10	5.5	182	45.6
Others	8	66.6	2	16.7	0	1.0	2	16.7	12	3.0
Number of respondents									(399)	

Table 19. Materials Used by Teachers in Teaching POPED and Perceived Usefulness of Each Material

Materials	Perceived Usefulness								TOTAL	
	Very Useful		Slightly Useful		Not Useful		Can't Say			
	No.	%	No.	%	No.	%	No.	%	No.	%
Pamphlets	179	63.7	97	34.5	0	0.0	5	1.8	281	70.4
Posters	157	65.1	77	32.0	2	0.8	5	2.1	241	60.4
Books	218	70.1	85	27.3	3	1.0	5	1.6	311	77.9
Slides	85	73.2	25	21.6	3	2.6	3	2.6	116	29.1
Flipcharts	97	69.3	41	29.3	0	0.0	2	1.4	140	35.1
Films	113	86.3	13	9.9	2	1.5	3	2.3	131	32.8
Others	8	66.7	3	25.0	0	0.0	1	8.3	12	3.0
Number of respondents									(399)	

Table 20. Teacher's Manner of Handling Malicious Comments of Students*

Manner of Handling Comments	Number	Percent
Explain topic further for better understanding; give biological/ scientific explanation	98	24.6
Explain the importance of discussing FP/sex; explain that sex is part of their education	90	22.6
Explain that sex is natural and God-given; explain that it should not be taken maliciously	86	21.6
Ignore them	75	18.8
Others	8	2.0
Not encountered yet	10	2.5
No response	38	9.5
Number of respondents	(399)	

*Multiple response

cent). This was followed by a combination of either English and Pilipino, or English and a dialect (38 percent). Only one-tenth of the respondents used Pilipino and one percent used local dialect (Table 21).

Of the 164 teachers who taught in English, 36 percent used the language so that the POPED terms would sound less vulgar and less malicious. More than one-fifth (21 percent) said that English terms were familiar to students and hence, more easily understood. Twenty-eight percent of the respondents, however, did not give their reasons (Table 22).

On the other hand, more than half (55 percent) of the 38 teachers who taught in Pilipino said they used the vernacular to be better understood by students. Thirteen percent, on the other hand, said that their using Pilipino was not a matter of choice, but rather because it was supposed

Table 21. Language Used by Teachers in Teaching Human Anatomy

Language	Number	Percent
English only	164	41.1
Pilipino only	38	9.5
Local dialect only	4	1.0
English and Pilipino/English & dialect/all three of them	153	38.4
No response	40	10.0
TOTAL	399	100.0

Table 22. Teachers' Reasons for Using English*

Reasons	Number	Percent
Terms do not sound vulgar/ malicious	59	36.0
Terms are familiar to students/ easily understood by students	35	21.3
It is the medium of instruction	9	5.5
Can express myself better in English/not conversant in Pilipino	9	5.5
Some terms don't have equivalent in Pilipino or the dialect	7	4.3
References are in English	4	2.4
No response	46	28.0
Number of respondents	(164)	

*Multiple response

Table 23. Teachers' Reasons for Using Pilipino*

Reasons	Number	Percent
For better understanding/easily understood	21	55.3
It is the medium of instruction	5	13.2
It is the national language	2	5.3
Words don't sound vulgar	2	5.3
No response	10	26.3
Number of respondents	(38)	

*Multiple response

to be the medium of instruction in the subjects they were handling. There were a few (five percent) who said that parts of the human anatomy sounded less vulgar in Pilipino (Table 23).

The majority (51 percent) of the 155 teachers who used a combination of languages in teaching POPED, particularly the human anatomy, were also concerned with the students' better understanding of the subject matter. Others (five percent) said that the terms sounded less vulgar if they used more than one language, and they helped give more emphasis to important terms and ideas (four percent) (Table 24).

Knowledge of Teachers and Students

The knowledge tests given to the teachers and students were virtually the same to allow comparison between the two groups of respondents. The knowledge questions were divided into six major classifications: 1) demography; 2) family size; 3) age at marriage; 4) responsible parenthood: 5) use-effectiveness of methods; and 6) population and development. Under each topic, five specific questions were asked. Therefore, the respondents were asked a total of 30 knowledge questions.

As expected, the teachers performed better than their students in all the six groups of questions on knowledge. The greatest difference in knowledge between the two groups of respondents was on responsible parenthood. The teachers obtained a mean score of 4.0 out of 5.0 while the students got a mean score of 2.7 out of 5.0. The difference in mean scores between the two groups was 1.3. This might be due to the fact that, among other reasons, some of the teachers were trained on POPED,

Table 24. Teachers' Reasons for Using a Combination of Languages*

Reasons	Number	Percent
For better understanding	78	51.0
Terms don't sound vulgar	7	4.6
For emphasis	6	3.9
Others	4	2.6
No response	63	41.2
Number of respondents	(153)	

*Multiple response

many had more experience on parenting than the students, or were more exposed to materials on responsible parenthood than the students.

The smallest difference in knowledge between the teachers and the students was observed in demography. The difference in their mean scores was only 0.4. Incidentally, the two groups of respondents obtained also the lowest mean score on this topic. The findings suggest that perhaps due to the continuous change in demographic data, the teachers and the students have difficulty catching up with the most recent information.

The specific item under each classification and the percentage of teachers and students who got the right answer to each item is shown in Table 25.

Attitude of Teachers and Students

The teachers and the students were asked to react to attitude statements on four topics with six specific statements under each or a total of 24 attitudinal statements. The main classifications of the attitude statements were: 1) family size, 2) age at marriage; 3) responsible parenthood; and 4) population and development. The respondents were asked to check whether they *agree, slightly agree, don't know, slightly disagree* or *disagree* with each statement.

When the statement was favorable to POPED, *agree* was given an equivalent of five points; *slightly agree,* four points; *don't know,* three points; *slightly disagree,* two points; and *disagree,* one point. However, when the statement was unfavorable to POPED, the scoring system was reversed: *disagree,* five points; *slightly disagree,* four points; *don't know,* three points; *slightly agree,* two points; and *agree,* one point. Under this system, with a total of five items per class (e.g., family), the lowest possible score is five (one point x five statements). For all the items, the lowest total score that a respondent could possibly get is 20 (one point x 20 statements); the highest is 100 (five points x 20 statements).

In all the dimensions of attitude, the teachers showed a slightly more favorable attitude towards POPED issues than their students. Of the four dimensions of attitude, the respondents were most favorable to responsible parenthood. The teachers obtained a mean score of 22.6 and the students earned a mean score of 20.3, out of the highest possible mean score of 25.0. The lowest mean score obtained by the two groups was on age at marriage with both groups of respondents scoring 17.7. This means that both the teachers and the students were least convinced about issues on age at marriage (Table 26).

Practices and Decision Making Skills of Teachers and Students

The teachers and the students were asked about five questions which would reveal their practices (actual and/or potential) and decision making skills relating to POPED. These questions related to: 1) preferred age at marriage; 2) desired number of children; 3) when to have

Table 25. Percentage of Teachers and Students Who Got Correct Answers in the Knowledge Items

VARIABLE	TEACHERS	STUDENTS
A. Demography		
1. 1983 Philippine population	52%	39%
2. 1983 Philippine population growth rate	26%	21%
3. 1981 Philippine mortality rate	8%	11%
4. Filipino life expectancy	43%	26%
5. Most densely populated region in the Philippines	70%	72%
6. Mean score	2.1	1.7
B. Family Size		
1. Average family size	37%	37%
2. Recommended number of children	49%	53%
3. Bigger families, by education	94%	72%
4. Smaller families, by residence	73%	50%
5. Workers who have bigger families	89%	59%
6. Mean score	3.4	2.8
C. Age at Marriage		
1. Recommended age at marriage for males	87%	70%
2. Recommended age at marriage for females	47%	41%
3. Earlier marriage, by education	93%	72%
4. Residents who get married late	75%	46%
5. Workers who marry earlier	84%	56%
6. Mean score	3.9	2.8
D. Responsible Parenthood		
1. Recommended spacing	87%	72%
2. Relationship between performance of parental responsibilities and family size	96%	87%
3. Caring for children as a father's duty	29%	26%
4. Effect of family size on food	97%	88%
5. Effect of family size on clothing	93%	(not asked)
6. Mean score	4.0	2.7
E. Use-Effectiveness of Methods		
1 Male method	81%	67%
2. Method requiring operation	96%	72%
3. Most effective male method	77%	52%
4. Most effective female method	76%	51%
5. Least effective method	55%	37%
6. Mean score	3.9	2.8
F. Population and development		
1. Cause of rapid population growth	62%	46%
2. Effect of population growth on natural resources	89%	66%
3. Population size in less developed countries	84%	74%
4. Population size in more developed countries	88%	76%
5. Death rates in less developed countries	71%	58%
6. Mean score	3.9	3.2
G. Total Knowledge Score	21.2	15.8

Table 26. Teachers' and Students' Attitude Towards POPED Issues

VARIABLE	TEACHERS	STUDENTS
A. Family Size		
1. A big family is a happy family	64% (Agree)	62% (Agree)
2. A small family has better chances for a good life	96% (Agree)	87% (Agree)
3. It is easier to raise smaller families	95% (Agree)	73% (Agree)
4. It is advisable to have smaller families these days	99% (Agree)	87% (Agree)
5. Three is the best number of children in a family	96% (Agree)	90% (Agree)
6. Mean score	21.9	20.6
B. Age at Marriage		
1. It is better to marry early	83% (Disagree)	76% (Disagree)
2. Long courtship is already outmoded	62% (Disagree)	53% (Disagree)
3. Marrying late is not advisable for women	65% (Disagree)	52% (Disagree)
4. Marrying early means having more children	71% (Agree)	68% (Agree)
5. People who marry late are better prepared for family life	91% (Agree)	85% (Agree)
6. Mean score	17.7	17.7
C. Responsible Parenthood		
1. It is good to delay the first child by one or two years	79% (Agree)	81% (Agree)
2. Yearly pregnancy can affect the health of the mother	93% (Agree)	79% (Agree)
3. Abortion should be legalized to control population	90% (Disagree)	61% (Disagree)
4. It is good to stay with parents after marriage	92% (Disagree)	60% (Disagree)
5. Going to church every Sunday makes a good Christian family	92% (Agree)	90% (Agree)
6. Mean score	22	20.3
D. Population and Development		
1. Food will still be sufficient in the future	55% (Disagree)	43% (Disagree)
2. The housing problem will become worse.	94% (Agree)	79% (Agree)
3. Education will become less and less available	80% (Disagree)	72% (Disagree)
4. Water supply will not be affected	80% (Disagree)	57% (Disagree)
5. Transportation will not be a problem	50% (Disagree)	49% (Disagree)
6. Mean score	19.6	17.4

Table 27. Teachers' and Students' Practices and Decision Making Skills Relating to POPED

	Variable	Teachers	Students
1.	Mean preferred age at marriage	25.9 years	25.3 years
2.	Desired number of children	3.0	2.98
3.	Preferred time to have the first child	1 year after	1 year after
4.	Desired spacing of children	3.3 years	2.7 years
5.	Use of FP methods	84% Yes	76% Yes

the first child; 4) desired spacing of children; and 5) use of family planning methods.

Table 27 shows that the mean preferred age at marriage of the teachers and the students was 25 years old. The mean desired number of children (three) was the same for teachers and students. This is lower than the estimated 1980 total fertility rate of 4.5.

On the preferred time to have the first child, the teachers and the students both favored it to be one year after marriage. This means that the idea of delaying the first pregnancy has still to meet wide acceptance in the Philippines.

On the desired child spacing, the teachers wanted wider spacing of children (3.3 years) than the students (2.7 years). Perhaps, since the students have not yet experienced the difficulty of raising children, they wanted closer spacing of children in their younger age. But this might change as they grow older.

On the use of family planning methods, 84 percent of the teachers used or wanted to use a method while 76 percent of the students feel that they would use also family planning methods when they get married.

The data show that the practices and decision making skills of the teachers and the students were close to each other, implying the effectiveness of the POPED program in influencing the potential practices and decision making skills of the youth who had been exposed to the program in their elementary years.

Indicators of Teachers' and Students' KAPS

A number of factors were examined to find out whether these can be used as indicators in predicting the KAPS of teachers and students at the secondary level. The factors included: 1) region; 2) age of respondents; 3) sex of respondents; 4) educational attainment; 5) year level of students; 6) general average grades of students; 7) type of school; 8) place of residence; 9) family income; 10) exposure to POPED in the elementary; and 11) exposure to various sources of information on POPED such as teacher, newspaper, radio, and TV.

Region. This factor could be an indicator of the teachers' and students' KAPS. For instance, there was a wide variation in knowledge between regions in both the teachers and the students. Among the teachers,

Regions II, IV, and X obtained the highest mean knowledge score. Regions III, IV, IX AND XII showed the lowest mean knowledge score.

Region is also a good indicator of attitude among students but not among teachers. Highly favorable attitude towards POPED was noted in Regions I, IV, V, VI, X and the National Capital Region (NCR). The difference in attitude among students by region was significant at .001. Perhaps teachers, regardless of their regions, have almost equal access to various sources of information.

Likewise, region is also a good indicator of the projected practices and skills in decision making of the students. Among the teachers, the same held true only in the case of preferred time to have the first child and the use of family planning methods (Table 28-A). Region XII respondents preferred to have the first child earlier as compared with the other regions. Respondents from Regions XI and XII showed also 100 percent usage of family planning methods.

Age. Age is a good indicator of the attitude and preferred age at marriage of teachers but not of the students. The younger the teacher, the more favorable the attitude towards POPED. On the other hand, the older the teacher, the greater the preference for late marriage (Table 28-B).

Among students, age was very highly related to knowledge, preferred spacing of children and projected use of family planning methods. The older the student, the higher his knowledge, the wider his preferred spacing of children and the more likely is he to practice family planning.

Sex. For teachers, sex is only a good predictor of knowledge. Female teachers were significantly more knowledgeable than male teachers on POPED concepts. But among the students, sex is a good indicator of KAPS. In general, female students had higher knowledge and more favorable attitude towards POPED. Significantly, more females than males preferred late marriage, delayed first child and three children or less. But more males than females preferred more than one year spacing, and planned to use family planning methods (Table 28-C).

Education and Year Level. The teachers were asked about their educational attainment while the students were asked about their year level. Table 28-D shows that educational attainment is not a good indicator of teachers' KAPS except on the preferred spacing of children. It was found that the lower the educational attainment of teachers, the greater their inclination for wider spacing between children. Perhaps they realize that it would be more difficult for them to support delivery than their more highly educated and more likely higher earning counterparts.

Among students, year level was a good indicator of knowledge and practices, but not of attitude. As might be expected, the higher the year level, the higher the knowledge, implying the impact of prolonged exposure to POPED.

Table 28. Factors Influencing the Teachers' and Students' KAPS on POPED

VARIABLE	TEACHERS	STUDENTS
A. Region and KAPS		
1. Region and knowledge	P .001	P .001
2. Region and attitude	NS	P .001
3. Region and preferred age at marriage	NS	P .001
4. Region and desired number of children	NS	P .001
5. Region and preferred time to have first child	P .005	P .001
6. Region and preferred spacing of children	NS	P .001
7. Region and use of FP methods	P .001	P .001
B. Age and KAPS		
1. Age and knowledge	NS	P .001
2. Age and attitude	P .001	NS
3. Age and preferred age at marriage	P .05	NS
4. Age and desired number of children	NS	NS
5. Age and preferred time to have first child	NS	NS
6. Age and preferred spacing of children	NS	P .01
7. Age and use of FP methods	NS	P 01
C. Sex and KAPS		
1. Sex and knowledge	P .05	P .001
2. Sex and attitude	NS	P .001
3. Sex and preferred age at marriage	NS	P .01
4. Sex and desired number of children	NS	P .001
5. Sex and preferred time to have first child	NS	P .001
6. Sex and preferred spacing of children	NS	P .001
7. Sex and use of FP methods		P .05
D. Educational Attainment and KAPS		
1. Education and knowledge	NS	(Variables
2. Education and attitude	NS	not included
3. Education and preferred age at marriage	NS	for students)
4. Education and ideal number of children	NS	
5. Education and preferred time to have first child	NS	
6. Education and preferred spacing of children	P .05	
7. Education and use of FP methods	NS	
E. Year Level and KAPS		
1. Year level and knowledge	(Variables do	P .001
2. Year level and attitude	not apply to	NS
3. Year level and preferred age at marriage	teachers)	NS
4. Year level and desired number of children		P .001
5. Year level and preferred time to have first child		NS
6. Year level and desired spacing of children		P .001
7. Year level and use of FP methods		NS

F. Marital Status and KAPS

1.	Status and knowledge	P .05	Variables
2.	Status and attitude	NS	not included
3.	Status and preferred age at marriage	NS	for students)
4.	Status and desired number of children	P .001	
5.	Status and preferred time to have first child	NS	
6.	Status and preferred spacing of children	P .01	
7.	Status and use of FP methods	P .001	

G. General Average Grade and KAPS

1.	Grade and knowledge	(Variables do	P .001
2.	Grade and attitude	not apply to	P .001
3.	Grade and preferred age at marriage	teachers)	P .01
4.	Grade and desired number of children		P .005
5.	Grade and preferred time to have first child		P .001
6.	Grade and preferred spacing of children		P .001
7.	Grade and use of FP methods		P .01

H. Type of School and KAPS

1.	School and knowledge	P .05	P .001
2.	School and attitude	NS	P .001
3.	School and preferred age at marriage	NS	NS
4.	School and desired number of children	NS	NS
5.	School and preferred time to have first child	NS	P .001
6.	School and preferred spacing of children	NS	P .001
7.	School and use of FP methods	NS	P .001

I. Place of Residence and KAPS

1.	Residence and knowledge	(Variables	P .001
2.	Residence and attitude	not included for	P .001
3.	Residence and preferred age at marriage	teachers)	P .001
4.	Residence and desired number of children		P .001
5.	Residence and preferred time to have first child		P .001
6.	Residence and preferred spacing of children		P .001
7.	Residence and use of FP methods		P .001

J. Yearly Family Income and KAPS

1.	Income and knowledge	(Variables	P .001
2.	Income and attitude	not included	P .001
3.	Income and preferred age at marriage	for teachers)	P .001
4.	Income and desired number of children		P .005
5.	Income and preferred time to have first child		P .001
6.	Income and desired spacing of children		P .001
7.	Income and use of FP methods		P .01

K. Attendance in POPED Trainings and KAPS

1.	Attendance and knowledge	P .05	(Variables do not apply to students)
2.	Attendance and attitude	NS	
3.	Attendance and preferred age at marriage	NS	
4.	Attendance and desired number of children	NS	
5.	Attendance and preferred time to have first child	NS	
6.	Attendance and desired spacing of children	NS	
7.	Attendance and use of FP methods	NS	

L. Exposure to POPED in Elementary and KAPS

1.	Exposure and knowledge	(Variables do not apply to teachers)	NS
2.	Exposure and attitude		P .001
3.	Exposure and preferred age at marriage		NS
4.	Exposure and desired number of children		NS
5.	Exposure and preferred time to have first child		NS
6.	Exposure and preferred spacing of children		NS
7.	Exposure and use of FP methods		NS

M. Exposure to Teachers as POPED Source and KAPS

1.	Exposure and knowledge	(Variables do not apply to teachers)	P .001
2.	Exposure and attitude		P .001
3.	Exposure and preferred age at marriage		NS
4	Exposure and desired number of children		NS
5.	Exposure and preferred time to have first child		P .001
6.	Exposure and preferred spacing of children		P .001
7.	Exposure and use of FP methods		NS

N. Exposure to Newspapers as POPED Source and KAPS

1.	Exposure and knowledge	P .01	P .001
2.	Exposure and attitude	P .05	P .001
3.	Exposure and preferred age at marriage	NS	NS
4.	Exposure and desired number of children	NS	P .05
5.	Exposure and preferred time to have first child	NS	P .001
6.	Exposure and preferred spacing of children	NS	P .001
7.	Exposure and use of FP methods	NS	NS

O. Exposure to Radio as POPED Source and KAPS

1.	Exposure and knowledge	P .05	P .001
2.	Exposure and attitude	NS	P .001
3.	Exposure and preferred age at marriage	NS	NS
4.	Exposure and desired number of children	NS	NS
5.	Exposure and preferred time to have first child	NS	P .001
6.	Exposure and preferred spacing of children	NS	P .01
7.	Exposure and use of FP methods	NS	NS

P. Exposure to TV as POPED Source and KAPS

1.	Exposure and knowledge	P .01	P .001
2.	Exposure and attitude	P .01	P .001
3.	Exposure and preferred age at marriage	NS	NS
4.	Exposure and desired number of children	NS	NS
5.	Exposure and preferred time to have first children	NS	P .001
6.	Exposure and preferred spacing of children	NS	P .01
7.	Exposure and use of FP methods	NS	NS

On certain practices, it was found that with regards to the desired number of children, students in the lower year levels preferred less children. This finding appears to be opposite the expectation. Since those in the higher year levels have greater exposure to POPED, they should have had greater preference for a small family, which the POPED advocates (Table 28-E).

Marital Status. Among teachers, marital status is a good indicator of knowledge. The married teachers obtained higher knowledge scores than the single teachers (Table 28-F). Perhaps married teachers gain additional knowledge through actual practice.

However, marital status is not a good indicator of the teachers' attitude towards population issues. Likewise, it is not a good indicator of certain practices, such as preferred age at marriage and preferred time to have the first child.

Among teachers, marital status is a good indicator of the ideal number of children, spacing of children and use of family planning methods. Single teachers have relatively smaller ideal number of children than the married teachers. Earlier studies tend to show that some mothers have the tendency to consider the actual number of children as the ideal because to consider a smaller number as ideal might antagonize God who might then take the life of the other children. But single teachers prefer closer spacing between children than married teachers. As might be expected, more married teachers plan to use family planning methods than single teachers.

General Average Grade. This factor applies only to the student respondents. The general average grade is a very good indicator of the students' KAPS. In all cases, the higher the average grades of the students, the higher their KAPS. The higher the grade, the more likely that the student would prefer to marry later, produce lesser number of children than their counterpart and prefer wider spacing between children. But the higher performing students prefer to have the first child earlier and are less likely to practice family planning (Table 28-G).

Type of School. The type of school is not a good indicator of teachers' KAPS but it is good indicator of students' KAPS. For instance, the public school teachers had a significantly higher mean knowledge score than the private school teachers. But no significant difference was found between the two groups on attitude, practice and skills. It appears that it is not the school *per se* that makes the difference, but the location of the school. Private schools are mostly found in more urbanized areas while public schools are found in more rural areas. Since urbanized areas have more sources of information about POPED, students in private schools must have greater access to these sources. But among teachers, mobility and the location of the school did not seem to matter (Table 28-H).

Place of Residence. This factor refers to urban or rural area as the

place where the school is located. This was only asked of the students. Table 28-I reveals that place of residence is a good indicator of students' KAPS. Urban-based students have significantly higher knowledge and more favorable attitude towards POPED concepts than rural-based students. But rural-based respondents intended to marry later than their counterparts, wanted to delay their first child, preferred wider spacing between children and planned to use family planning methods. Perhaps the rural-based students have realized the importance of marrying late, delayed first child and wider spacing more than their urban counterparts.

Family Income. The annual family income is also a good indicator of the KAPS of the students. Rather surprisingly, the higher the annual family income of the student, the higher the knowledge, the more favorable the attitude but the lower the practice and skills. For instance, students who came from lower income familes preferred later marriage, smaller number of children, late first child, wider child spacing and planned to use family planning methods (Table 28-J). Perhaps the relatively well-to-do students felt that they could afford to marry early, have the first child early and have more children.

Attendance in POPED Training. It is revealing to note that attendance in POPED training is only a good indicator of knowledge, but not of attitude, practice and skills. The teachers who had attended POPED trainings had significantly higher knowledge ($P<.05$) than those who had not attended, but attendance did not make any difference on the other variables (Table 28-K).

Exposure to POPED in the Elementary Grades. Among the students, exposure to POPED in their elementary years is a good indicator of attitude but not of practice and skills. Students who had been exposed to POPED in their elementary years had more favorable attitude towards POPED ($P<.001$), but they did not differ in practice and skills with students who had not been exposed to POPED (Table 28-L).

Exposure to Teachers as Source of Information on POPED. This factor is a good indicator of knowledge, attitude and a few practices of students related to POPED. Those exposed to teachers had significantly higher knowledge ($P<.001$) and more favorable attitude ($P<.001$) than those who were not exposed. Surprisingly, those not exposed to teachers preferred to have the first child later; however, those exposed to teachers of POPED preferred wider spacing between children (Table 28-M).

Exposure to Newspapers as Source of Information on POPED. Exposure to newspapers is a good indicator of the teachers' knowledge about and attitude towards POPED. Those who were exposed to newspapers had significantly higher knowledge and more favorable attitude towards POPED than those not exposed.

Among students, exposure to newspapers was also a good indicator, not only of knowledge and attitude, but

also of certain practices. Students who were exposed to newspapers had higher knowledge and more favorable attitude than the other students. Students with exposure to newspapers also wanted smaller number of children, preferred wider spacing of children but expected to have the first child earlier (Table 28-N).

Exposure to Radio as Source of Information on POPED. Radio is only a good indicator of knowledge among teachers. Those who were exposed to radio had higher knowledge than those who were not exposed.

However, among the students, radio exposure is a good indicator of both knowledge and attitude and some practices. Students exposed to radio had higher knowledge and more favorable attitude than the students who were not exposed. They also preferred wider spacing between children although they wanted the first child earlier. This may be due to POPED messages directly or indirectly conveyed by the radio programs to the listeners (Table 28-O).

Exposure to TV as Source of Information on POPED. Exposure to TV is also a good indicator not only of knowledge, but also of attitude of teachers towards POPED. Those who were exposed had higher knowledge and more favorable attitude than those not exposed to TV. POPED messages aired over TV must have influenced the teachers.

To the students, exposure to TV was also a good indicator of knowledge, attitude and some practices. Those who were exposed to TV had higher knowledge and more favorable attitude than those who were not exposed; they also preferred wider spacing of children. But those not exposed preferred to have the first child later than those who were exposed to TV. TV messages on POPED might have also influenced the KAP of students (Table 28-P).

RECOMMENDATIONS

This study was conducted to determine the existing KAPS on POPED of high school teachers and students in the country, as well as the factors influencing their KAPS. Based on the findings of the study, policy recommendations and guidelines for the integration of POPED into the secondary school curriculum are formulated.

On the whole, the findings of the study imply that the POPED program at the elementary level has had moderate impact on the KAPS of the high school teachers and students. To further increase the KAPS of youth to a higher level, this study endorses the integration of POPED into the secondary school curriculum. The recommendations discussed in the next few pages identify some ways and means by which the integration can be strengthened at the high school level.

Recommendations for Students

Based on the findings of the descriptive analysis of the students' data, the following implications and recommendations are presented:

1. The data suggest that on the whole, the high school students have

a moderate level of knowledge about population concepts. The concepts were divided into demography, family size, age at marriage, responsible parenthood, and use-effectiveness of family planning methods. When these four core population concepts were analyzed individually, the students obtained the lowest score (1.7 out of 5.0) in demography and moderate (3.2 out of 5.0) in the other core concepts. *It is recommended that on subject matter, greater emphasis be given to demographic aspects in preparing the high school curriculum on POPED.* Attention should also be given to the method used in teaching demography, since this might also have influenced the low level of knowledge of the students on this subject.

2. The data also suggest that the high school students, on the whole, already show a favorable attitude towards the population program. However, a close look at their scores in the core attitude items show that their attitudes towards issues on age at marriage and population and development are only slightly favorable relative to the other core attitudes. *It is recommended that greater emphasis be given on issues about age at marriage and population and development in the high school curriculum on POPED. The other core attitudes should also be given attention to further strengthen them to influence the practices of the youth in their adulthood.*

3. On decision making, the data suggest that the high school students have already internalized the desired age at marriage, number of children, planning of the first child and proper spacing. The scores they obtained on these issues show that their decisions are even slightly better than what the program is expecting. *It is recommended that reinforcement of the decision making skills of the high school students also be given emphasis in the curriculum to ensure that these will be carried on in their adulthood.*

4. The data also suggest that the students appear to have learned most about population concepts from their general science and social studies subjects. *It is recommended that population concepts intended for high school students be integrated in related high school science and social studies subjects.*

5. Lecture-discussion was the most mentioned and the most recommended teaching method for POPED. *It is recommended that POPED teachers be trained on the use of lecture-discussion. They should afterwards use the method in teaching POPED.*

6. Books were reportedly the most commonly used educational materials in POPED, followed by pamphlets. However, pamphlets, posters and films were the most recommended educational or informational materials by the respondents. *It is recommended that pamphlets, posters and films be given priority over other materials in teaching population education at the high school level.*

7. The study also suggests that the teachers are the most common sources of information about popu-

lation information followed by parents and relatives, newspapers and TV. *It is recommended that parents, relatives, newspapers and TV be considered as reinforcing factors to teachers in POPED.*

8. The mass media, particularly newspapers, TV and radio, still lead the list of sources of news. Among the newspapers, the national dailies are still considered the most credible, followed by religious radio stations and foreign publications. *It is recommended that these mass media be tapped as support channels or reference materials in POPED,*

9. A number of Filipino values seem to be still strong among high school students. These include the belief that child care is not a fathers' duty, that a big family is a happy family, that the best place to work after finishing college is abroad. *It is recommended that these values be discussed explicitly and countered in POPED.*

10. There is also a growing number of students who seems to be slowly getting attracted to some of the controversial practices confronting the Philippines today. These include the following: that long courtship is already outmoded; that divorce and abortion should be legalized in the Philippines; that pre-marital pregnancy is nothing to be ashamed of; that wealth is now more important than honesty. A growing number has also engaged in intimate practices such as kissing, embracing and even sexual intercourse. *It is, therefore, recommended that value inculcation to correct these beliefs among high school youth be made a part of POPED at the high school level.*

Recommendations for Teachers

Based on the findings of the descriptive analysis of the teachers' data, the following implications and recommendations are presented:

1. The data revealed that the teachers integrated POPED mainly in social studies, home economics and general science. These, incidentally are the subjects where the students have learned most about POPED concepts. Since POPED integration appears to be already strong in these subjects, *it is recommended that POPED integration be strengthened in other core subjects such as mathematics and physical education.*

2. Only a few of the teachers teaching POPED have attended the training programs on POPED conducted by MECS. Likewise, very few of the teachers cited seminars and trainings as sources of information on POPED. But despite the lack of training, the teachers' level of knowledge on and attitude towards POPED concepts and issues are high or favorable. This may indicate that teachers rely on other print and broadcast media. *It is recommended that resource materials and mass media be utilized as supplementary sources of POPED information for teachers. Also, priority should be given to the development of resource materials for POPED teaching and the training program may be focused on the use of resource materials.*

3. Books were the most commonly used references by both

teachers and students for POPED. However, books require longer preparation and may in the long run be impractical since most population information (e.g., demographic data) change over time. *It is recommended that teaching modules and low-cost materials such as pamphlets, leaflets and data charts be produced as these are more economical than books.*

4. The teachers who participated in POPED training programs gave some suggestions concerning the different aspects of the training. For the training of high school teachers on POPED, the following suggestions should be taken into consideration: 1) the duration of the training program should be lengthened; 2) participation of teachers should be encouraged and number of teacher-participants should be increased: 3) more topics related to POPED should be discussed, and the discussions should be more in-depth, and 5) there should be more and updated resource materials and knowledgeable resource persons should be invited. *It is recommended that these suggestions of the teachers be given consideration in planning the training programs on POPED in the high school level.*

5. Some of the teachers suggested the use of the single-course approach instead of the integrated approach in teaching POPED. However, study findings suggest that the integrated approach is already relatively effective in imparting POPED concepts and values to the students. *It is therefore, recommended that the integrated approach be retained since it is not only effective, it is also more economical than the single-course approach. The integrated approach does not need additional teacher while the single-course approach may need additional teachers and extra time for teaching POPED*

6. The teachers endorsed certain suggestions on course content of POPED, such as: a) giving more stress on and understanding of value orientation; b) giving equal emphasis on family size and quality of family life; c) putting more emphasis on ecology; d) putting equal stress on the positive and negative predictions about population growth, e) discussing the use of contraceptive methods at the high school level; and f) giving greater emphasis on human sexuality. *It is recommended that these suggestions be taken into consideration in designing the POPED curriculum for secondary schools.*

7. In all the six areas of POPED, it is in demography where the teachers got their lowest score. The same is true in the case of the students. Based on these findings, *it is recommended that information on demography (e.g., birth rate, death rate, growth rate) be given greater emphasis when conducting POPED training programs and developing teaching aids.* A more appealing approach in teaching may also be useful in improving the knowledge on demography of both teachers and students.

8. Like the students, the teachers showed a favorable attitude towards the population program as a whole. And in their decision making and practices, the data suggest that most

of them are already following the suggested age at marriage, number of children, planning of the first child and proper spacing. *It is recommended that reinforcement of these attitudes, skills and practices be given emphasis in training programs and materials on POPED intended for teachers.*

9. However, since the teachers still prefer the less effective family planning methods such as rhythm and condom, *it is recommended that the more effective ones be emphasized during training so that the teachers will consequently endorse these to their students in preparation for the latter's married life.*

10. The data showed that in general, teachers still favored the traditional values and practices over such Western practices as live-in, premarital pregnancy, divorce and abortion. However, these practices seemed to be gaining acceptance among the students. And the teachers seemed to share the students' opinion that long courtship is already outmoded, that most of the youth do not know how to pray and very few are ready to die for their country, that English should be favored over Pilipino, and that most of today's youth prefer them for jobs abroad. *It is recommended that value clarification be stressed in the POPED curriculum for high school so that both teachers and students will be enlightened on the issue mentioned.*

Factors Influencing KAPS of Students and Teachers

Based on the results of the analysis of the factors influencing the KAPS of teachers and students, the following recommendations are presented:

1. The data showed that the teachers from some regions had a higher level of knowledge of POPED concepts than teachers from the other regions. Likewise, the female teachers, married teachers, teachers from public schools, teachers who had attended previous trainings on POPED, and teachers with exposure to the mass media had higher levels of knowledge than the other teachers. Based on these results, *it is recommended that further training on basic population information be given to teachers in regions where knowledge scores were lower, to male teachers, unmarried teachers, teachers from private shools, teachers who have not participated in previous trainings on POPED, and teachers who have limited access to the mass media as source of POPED information.*

2. The analysis also revealed that attitude towards POPED issues and practice of concepts relating to delayed marriage, small family size, delayed first child, longer birth spacing and use of family planning methods were more favorable among teachers with two-year or four-year course, single teachers, teachers with less children and teachers with exposure to the mass media as source of POPED information. *It is recommended that training programs on issues and practices concerning POPED be conducted for those teachers who showed less favorable attitudes.*

3. On the whole, the results

showed that KAPS on POPED were higher among married teachers who are in their late 20s or in their 30s. Thus, *it is recommended that teachers in their 20s or in their 30s be tapped for teaching POPED at the high school level or to participate in POPED training programs designed for teachers who should be teaching POPED in the high school.*

4. Conversely, better KAPS on POPED were observed among the female students, those with higher class standing, students from higher year levels, students from urban areas, those who had exposure to POPED in their elementary grades, and those with access to the mass media as sources of POPED information. *It is recommended that these students be tapped to help in disseminating POPED concepts to their classmates and perhaps to out-of-school youth.*

5. The mass media have been found to have a significant influence on the teachers' and students' knowledge and attitude on POPED. *It is recommended that the mass media be utilized as support channels in POPED.*

NOTE

[1] In the single course approach, POPED is taught as a separate course while in the integrated approach, POPED concepts are taught as part of a "mother" subject e.g., home economics, social studies, science and mathematics.