

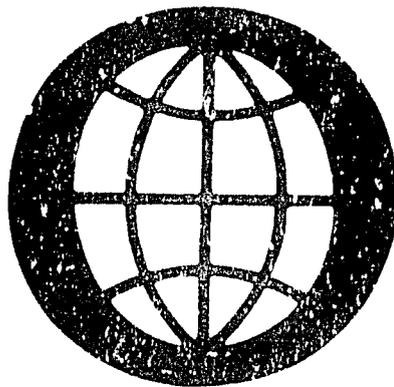
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JHPIEGO

The Johns Hopkins Program for International Education
in Gynecology and Obstetrics

TECHNICAL REPORT

Evaluation of Nigerian Reproductive Health
Curriculum and Training Projects
in Nurse-Midwife Education



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The Johns Hopkins Program for International Education in Gynecology and Obstetrics (JHPIEGO) is a private, nonprofit corporation affiliated with The Johns Hopkins University and funded primarily by the Agency for International Development. JHPIEGO's mandate is to increase the availability of improved reproductive health services in developing countries and to increase the number of health professionals in developing countries with knowledge and skills in modern reproductive health care, especially family planning services.

In its approach, JHPIEGO:

- Supports short-term educational programs for medical and nursing/midwifery school faculty, trainers, key service providers, and administrators.
- Facilitates the strengthening of reproductive health education in medical and nursing/midwifery schools and other teaching institutions.
- Maintains a network of reproductive health care professionals in developing countries who act as project directors and consultants for JHPIEGO-supported educational programs.
- Advocates the incorporation of reproductive health services into primary health care.
- Develops innovative educational programs for medical professionals.

- Provides trainees and their institutions with up-to-date educational materials and supports the development of local educational materials.
- Provides medical equipment for reproductive health services to the institutions of program participants.

JHPIEGO is essentially a catalyst for the improvement of reproductive health. Leading health care professionals in developing countries propose and manage the programs; JHPIEGO provides technical guidance and funding.

Since 1974, JHPIEGO has supported educational programs for more than 55,500 health care professionals and medical and nursing/midwifery students from 6,700 institutions in 122 countries. A total of 12,100 doctors, 7,800 nurses, midwives, or paramedical workers, 1,500 administrators, and 34,100 undergraduates have participated in these programs. For the majority of health professionals, clinical training has been in voluntary surgical contraception, anesthesia for outpatient gynecological procedures, IUD insertion, or treatment of sexually transmitted disease. The vast majority of program participants were trained at in-country and regional centers, with just over 2,600 attending courses in the United States.

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JHPIEGO Technical Report

EVALUATION OF NIGERIAN
REPRODUCTIVE HEALTH CURRICULUM
AND TRAINING PROJECTS
IN NURSE-MIDWIFE EDUCATION

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FOREWORD

In 1985, the Department of Nursing, University of Ibadan, Nigeria, with support from the Johns Hopkins Program for International Education in Gynecology and Obstetrics (JHPIEGO) began a program to institutionalize reproductive health training in the curricula of nursing and midwifery schools throughout Nigeria. This technical report documents JHPIEGO's phased approach to curriculum development and training in nursing education and summarizes the progress made in integrating family planning into the curricula of Nigerian nursing and midwifery schools.

JHPIEGO is very appreciative of the Nigerian project staff's efforts and, in particular, of Dr. W. M. Ogundeyin, Project Director and Acting Head of the Department of Nursing at the University of Ibadan. In addition, we wish to acknowledge the efforts of Mrs. A. A. Tubi, former Head of the Department of Nursing at the University of Ibadan, and Ms. Michele Moloney, C.N.M., JHPIEGO consultants who assisted in collecting the data; Ms. Connie Husman, C.R.N.P., Program Development Officer at JHPIEGO, who provided continuing technical assistance and support to project staff, and Mr. Wilbur Wallace, JHPIEGO's Associate Director for Africa. Finally, JHPIEGO is especially grateful to Dr. Flora Nell Roebuck, Professor of Educational Foundations, Texas Woman's University, who prepared this report.

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The Johns Hopkins Program
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EXECUTIVE SUMMARY

Evaluation of Nigerian Reproductive Health Curriculum and Training Projects in Nurse/Midwife Education

Evaluation activities were conducted to assess the influence of a project in Teaching Skills for Nurse Tutors (NCA-93) which had been supported by the Johns Hopkins Program for International Education in Gynecology and Obstetrics (JHPIEGO). Using a Training of Trainers (TOT) model to disseminate information and skills throughout the country, the NCA-93 project provided training to nursing and midwifery tutors in order to facilitate the implementation of an integrated reproductive health curriculum in the education of Nigerian nurses and midwives. In the original TOT workshop at the Department of Nursing, University of Ibadan, six U.I. Nursing Faculty and 12 participants from four states received training in selected content development and teaching skills; in addition, the U.I. faculty learned Master Trainer skills. In the first two years after the TOT workshop, the U.I. faculty trained 192 participants from 11 states; subsequently, they went on to replicate the training in all of the states in Nigeria.

In order to assess both the influence of the project and the effectiveness of the TOT model for disseminating information, evaluation data were sought through follow-up questionnaires and subsequent on-site observations and interviews. The return rate was 47% for the questionnaires while 28% of all participants were interviewed. In addition, a comparison group of non-participants were observed. The data obtained from these activities and detailed in the evaluation report support several conclusions and recommendations.

Conclusions

1. The Training of Trainers model is an effective approach to disseminating skills and information to widely dispersed members of a professional group.
2. The training has resulted in the participants' use of teaching skills which are suited to the implementation of an integrated reproductive health curriculum in the preparation of nurses and midwives.
3. Significant progress has been made in the implementation of family planning as part of an integrated curriculum in reproductive health; however, much remains to be done.

4. The facilities and materials needed for instructional support in the new curriculum area of family planning are severely lacking. These deficits include a paucity of textbooks, library books, journals, audio visual teaching aids, demonstration models and facilities, and materials, samples and demonstration kits specific to family planning.
5. Courses (for health care tutors) in family planning content and clinical skills should precede courses for teaching skills in order to enable effective delivery of the family planning curriculum to students.
6. According to early indicators of impact, the integrated reproductive health curriculum has influenced tutors, students, and communities in directions which are positive towards family planning. The magnitude, permanence, and significance of the change, however, can not yet be estimated; nor can change as a result of impact from the reproductive health curriculum be separated from change resulting from factors in the economy and the culture which have a similar vector.
7. Support from International funding agencies will remain critical in maintaining the positive influences on family planning instruction and attitudes which have been initiated in Nigeria.

Recommendations

1. Effects of the integrated reproductive health curriculum should be evaluated again in about 5 years, after graduates of programs implementing the curriculum have had some experience as service providers.
2. Planners of similar programs for health care educators should recognize the critical sequence evidenced in this report: the effective delivery of instruction in family planning services requires (a) that training in family planning clinical skills and concepts must precede training in teaching skills, and (b) that both kinds of training must be provided.
3. International funding agencies should give increased attention to providing professional schools with access to family planning curriculum materials and instructional aids, including textbooks, library books, teaching models, and films and videos.

4. Continuing professional education for health care tutors in all content areas is a priority which needs to be addressed on a continuous basis.
5. The Training of Trainers (TOT) model has been demonstrated as an effective method for disseminating skills and information; it should receive serious consideration during the planning of future program efforts.

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**REPORT OF FOLLOW-UP EVALUATION
OF
CURRICULUM AND TRAINING PROJECTS
RELATED TO
REPRODUCTIVE HEALTH IN NURSE/MIDWIFE EDUCATION IN NIGERIA**

The primary purpose of this evaluation was to assess the influence of Teaching Skills for Nurse Tutors (NCA-93), a project which provided training in order to facilitate the implementation of an integrated reproductive health curriculum in the education of nurses and midwives in Nigeria. A secondary purpose was to evaluate the effectiveness of the Training of Trainers (TOT) model which was used by the project to disseminate information and skills throughout the country. Pursuant to these purposes, evaluation data were sought through (1) six-month follow-up questionnaires and (2) subsequent on-site observations and interviews. This report presents the results of the evaluation activities, documents future priorities expressed by respondents, and delineates recommendations based on an evaluative summary of the data.

Background

The Johns Hopkins Program for International Education in Gynecology and Obstetrics (JHPIEGO) first became involved in the in-country training of nurses and midwives in Nigeria subsequent to an assessment trip in 1983. The purpose of that trip was to identify needs and/or strategies for integrating Family Planning into the curricula for nurses and midwives.

From that beginning, a three-stage strategy ultimately evolved. The first stage would consist of training a substantial number of practicing nurses and midwives in family planning knowledge and clinical skills in order to provide an expanded base of clinical services. Such a base would serve to stimulate professional involvement in curricular change as well as to provide practicum sites for pre-professional training in the event that an integrated curriculum were to be approved. The second stage would be the provision of support for curriculum development activities initiated by the nursing/midwifery professionals in Nigeria. And the third stage would be support for the implementation of an integrated curriculum, if one should be authorized for schools of nursing and midwifery. The exact nature of the second and third stages was to be specified on the basis of developments from the first stage, but training programs would form a large part of the support activities in each of the stages.

This three-stage strategy would capitalize on the activist nature of Nigerian nurses and midwives and on the strengths of their professional organization. In addition, this strategy would

complement, rather than confront, the leadership role of the Nigerian Nursing Council. This Council is the national body which registers all nurses and midwives, administers the examinations for registration, and is the official organ for approval of nursing and midwifery curricula. The organization holds quarterly meetings of all Chief Nursing Officers to consider problems and recommend action. In doing this, it seeks input from advisory committees of health care professionals, including outstanding tutors and faculty of the schools of nursing and midwifery in the country.

JHPIEGO's involvement in the three-stage strategy began with the initiation of an intensive course in family planning content and clinical skills (NCA-70), sited at the University of Ibadan College Hospital. This course has continued to furnish clinical competence in family planning to service providers and tutors. It assumed this broad role in order to meet the needs of Nurse/Midwife Tutors for additional competence in Family Planning.

By 1985, the second stage of the strategy was well underway with JHPIEGO supporting a curriculum development workshop in Ibadan and, subsequently, a second such workshop in Zaria. Then, a pilot study integrating family planning into the midwifery curriculum was conducted at the School of Midwifery at the University College Hospital in Ibadan. This pilot curriculum later became the substantive basis for the integrated reproductive health curriculum in midwifery which was approved by the Nigeria Nursing Council.

The participants in the 1985 curriculum development workshop in Ibadan strongly recommended that those tutors who might be implementing an integrated reproductive health curriculum should receive training in teaching methodology, including the process of content development. It was also specified that training for family planning competence should precede training in teaching methodology.

The third stage of JHPIEGO'S involvement in the process began when Mrs. A. A. Tubi, Acting Head of the Department of Nursing at the University of Ibadan, and her assistant, Dr. Dupe Ogundeyin, approached JHPIEGO for assistance in developing a continuing education course in teaching methodology for nurse/midwife tutors. The Department of Nursing at U.I. is the only graduate school of nursing in the country and, so, was an appropriate body for the development and implementation of such a course. The resulting project, Teaching Skills for Nurse Tutors (NCA-93), is the focus of the evaluation activities reported here.

Procedures

Intervention

The continuing education course which was developed in cooperation with the department of Nursing at the University of Ibadan was a two-phase Training of Trainers (TOT) model. During the first phase, a Johns Hopkins Consultant (Dr. Flora Nell Roebuck) conducted a two week training course for the faculty of the department of Nursing at UI and for twelve selected core participants from faculties of nursing and midwifery schools in each of four states. The purposes of this course were as follows:

1. to build competence in a common body of teaching and curriculum development skills for all the participants,
2. to encourage implementation of an integrated reproductive health curriculum through content development and lesson planning activities focused on family planning, and
3. to develop and practice Master Trainer skills for the UI faculty who would be replicating the training in subsequent state-level continuing education courses.

In addition, the participants in this TOT course served as a problem-solving group to identify and suggest solutions for potential state-level implementation problems and to develop evaluation instruments and procedures.

The second phase of the project was the replication of the training by the UI faculty. During the first year of the project, four state-level workshops were conducted by the U.I. faculty. The core participants trained in the TOT course acted as implementation facilitators in setting up the courses and as assistant trainers in conducting the courses. A total of 71 additional nursing educators were trained in these workshops. In the second year of the project, five additional courses were conducted, resulting in another 109 tutors receiving the training. As of this writing, the UI faculty have implemented training courses in all 20 states in Nigeria; consequently, the Department of Nursing at U.I. is seen as capable of conducting continuing education courses for the profession.

Development of Evaluation Procedures and Instruments

During the first-phase TOT workshop, plans were made for determining the effectiveness of the TOT procedure. With guidance from the JHPIEGO consultant, the participants specified both short-term assessment and long-term evaluation procedures.

For short-term assessments to be conducted during the implementation of the state-level courses, the TOT-course participants specified pre and post-training tests, performance demonstration of lesson-planning and teaching skills, and informal evaluation procedures similar to those which had been

implemented in the TOT workshop. Results of the short-term assessments were documented in the project director's annual reports (on file at JHPIEGO) and will not be dealt with here.

For long-term (follow-up) evaluation of the training, the participants developed two instruments. They began by specifying a list of indicators (1) which realistically could be expected to reflect the integration of family planning content into the curriculum and (2) which would be accessible to data collection. Then they developed a follow-up questionnaire to be administered six months after the state-level workshop. This questionnaire would collect data relevant (1) to the specified indicators, (2) to the participants' attitudes about the training in teaching skills which they had received, and (3) to the results of teaching family planning in the integrated curriculum. (See Appendix A.) Because of considerations due to (1) poor infra-structures for communication and (2) anticipated low return rates from a mailed survey, the participants determined that the follow-up questionnaires should be distributed and collected through a personal-contact network of participants which would be established at each state-level workshop.

Finally, the participants specified that the questionnaire results should be validated by follow-up site visits. They developed an interview schedule to standardize data collection during the site visits. (The schedule is displayed in Appendix B.) Observation of the utilization of teaching skills was also to be conducted during the on-site visits.

Data Collection

This report deals with the results of data collected as follow-up evaluation of the training conducted during the first two years of the project. Both data from six-month questionnaires and from on-site evaluations will be reported.

Six-Month Questionnaires: The six-month questionnaires were distributed and collected by the NCA-93 project staff, utilizing the participant network resulting from the training courses. Questionnaires were distributed to the total of 192 participants who had been trained during the first two years of the project. (N.B.: This total did not include the U.I. faculty.) The return rate was 47.4%, representing a total of 91 questionnaires returned. All returned questionnaires were usable, although some items on some of the returns were blank or non-responsive to the question.

On-site Interviews and Observations: On-site follow-up evaluations were conducted of 27.6% of the participants. Table 1 displays the distribution of observations among training cadres.

Table 1: Distribution of On-Site Observations
among Training Cadres

Training Cadre	Number Trained	Number Visited	Percent Visited
TOT Course, U.I. Faculty	6	0	0 %
TOT Course, Core participants	12	4	33 %
1st Year, State-Level Participants	71	23	32 %
2nd Year, State-Level Participants	109	26	24 %
Total Participants (not U.I. Faculty)	192	53*	27.6%

Note: 57 participants were visited but, due to logistical problems, no observation was possible for four participants who were only interviewed. Data from those 4 participants were excluded from this report.

During each on-site evaluation visit, the evaluator performed two activities: structured interviews and observation of classroom teaching. These two activities resulted in four kinds of data:

1. Participant's verbal responses in structured interview
2. Student's verbal responses in structured interview
3. Observer's narrative records of classroom observation
4. Observer's tally of Flander's interaction categories

Data from different sources (participant and student) and through different procedures with the same source (interview and observation of performance) were sought in order to be consonant with the principle of triangulation for validating evaluation results.

Comparison Data: Because base-line data on teaching skills was not available for the participants, comparison data was sought from Nurse Tutors who had not been trained in the NCA-93 courses. Classroom observations, including application of Flanders Interaction Analysis, were carried out for 14 Nurse Tutors who had not received the intervention training.

Findings from Evaluation Activities

The evaluation activities described above were intended to provide data which could be utilized to answer the following questions:

1. Was the TOT model effective in transmitting to participants trained in state-level workshops the content (concepts and skills of teaching) which had been specified and modeled in the

initial TOT course in Ibadan during the first year of NCA-93?

2. Did the training result in better utilization by the trainees of teaching skills which would effectively facilitate the implementation of Family Planning as part of an integrated reproductive health curriculum for preparing nurses and midwives?
3. What progress has been made in the implementation of an integrated reproductive health curriculum into the education of nurses and midwives in Nigeria?
4. What has been the impact of the progress made?
5. What are the needs expressed by the participants for effective instruction in family planning?

Findings relevant to each of these questions will be discussed separately below. Data from at least two sources or procedures will be utilized in addressing each question.

Effectiveness of TOT Model

Determination of the effectiveness of the Training of Trainers (TOT) model for transmitting information to the participants in the state-level courses rests primarily upon the data obtained from narrative records of the classroom observations which were conducted during on-site evaluations. The skills utilized by the participants during their observations were compared (1) to the content taught in the initial TOT course and (2) to the skills utilized by the comparison group of nurse tutors who had not received the training. Additional data relevant to this question came from the 6-Month Follow-up Questionnaire.

Obtaining Narrative Records: The record form used by the evaluators to note the performance of the nurse tutors they observed is displayed in Appendix C. The form provides space for annotating five broad classes of behavior. Occurrences of specific examples of behavior within each of those classes could be expected to be observed in any classroom. Furthermore, the five classes comprehensively subsumed most of the skills content which had been presented in the TOT course. The form also provided space for additional comments.

This simple narrative form was used in preference to a checklist of behaviors in order to off-set the probability of error due to researcher-expectancy. That is, if the evaluators had been supplied with a list of skills taught in the workshop and had been told to look for them, the result might have been drastically skewed towards positive findings.

On the other hand, it is recognized that the narrative recording procedure will tend to under-represent the actual occurrence of specific behaviors. That is, the evaluator's narrative notes will not be a comprehensive record of all targeted behaviors occurring in the field of observation; rather, the notes will record only those behaviors to which the observer attended. Thus, while an annotated behavior can be trusted to have occurred, the lack of such an annotation is not an accurate indicator of the absence of the behavior. Although this is a weakness of the procedure, it was decided that the risk of under-representation was preferable to the risk of error from researcher-expectations.

The classroom observations were made by three evaluators who were experienced teachers; in addition, two of them had participated in the original TOT course or in its equivalent at the JHPIEGO training center in Baltimore. The third evaluator was the JHPIEGO consultant who had designed and taught the TOT course.

All three evaluators began by observing the same participants and comparing notes in order to be sure that they were observing the same types of behaviors and noting them in the same areas of the form. Once general agreement was established, the evaluators worked individually. It should perhaps be noted that the JHPIEGO consultant was involved in observations in only the first two of the eleven states evaluated; subsequently the on-site evaluations were carried out by the two persons with whom standardization to the consultant had been established.

Data Resulting from Narrative Records: The narrative records were subjected to content analysis. A checklist of the content from the TOT course was used to tally the information noted in the observers' annotations. In addition, items in the narratives which were not reflected by checklist items were aggregated. Tallies were kept separately for Trained Tutors (those who had taken the NCA-93 course in Teaching Skills for Nurse Tutors) and for Untrained Tutors (those who had not received the NCA-93 course.) Table 2 displays the results of this process.

Underlined items in Table 2 represent major skills which were taught in the TOT course. Grouped beneath the underlined items are specific aspects of performance of that skill. Items which originated in the evaluators' notes rather than from analysis of the content of the TOT course are indicated by asterisks (*).

In Table 2, there are fifteen underlined items, representing major skills which were taught in the TOT course. By section number in the table, those skills include:

- Section 1: four skills in lesson planning
- Section 2: three skills in learning-style involvement,
- Section 3: four skills in interaction with learners,
- Section 4: two skills in content development, and
- Section 5: two skills in manner of presentation.

Table 2: Teaching Behaviors Exhibited by Nurse-Tutors
During On-Site Evaluations

Teaching Skill or Behavior	Tutors Exhibiting Behavior			
	Trained		Untrained	
	N	%	N	%
1. ORGANIZATION & STRUCTURE OF LESSON				
<u>Lessons prepared as 4-part plans.</u>	32	63%	0	0%
<u>Advance Organizer/Overview provided.</u>	37	73	3	23
...content related to previous learnings	27	53	2	15
...expectancies for learners stated	13	25		
...objective(s) of lesson stated clearly	16	31	2	15
<u>Principle or Rationale stated.</u>	13	25	4	31
...major theme or principle stated	4	8		
...relevance of content to learner indicated	10	20		
<u>At conclusion, lesson was summarized.</u>	29	57	3	23
...content was reviewed by teacher	21	41	2	16
...content was reviewed thru student response	8	16	1	8
2. TELL, SHOW, DO, A.V.				
<u>"Do"-steps were performed by students.</u>	32	63	1	8
<u>Audio-Visual media were utilized.</u>	50	98	12	92
...chalkboard	50	98	11	85
...flip charts	29	57	3	23
...teacher-made charts, drawings, diagrams	26	51		
...real objects (realia)	18	35		
...commercial models	16	31	4	31
...in demonstrations by teacher	16	31		
...teacher-made models (clay, cardboard)	4	8		
...miscellaneous other	5	10	2	15
...films, slides, or overhead transparencies	0	0		
<u>Use of media added to lesson's effectiveness.</u>	41	80	5	38
...graphics were legible, clear	32	63	2	15
...entire group could see/hear adequately	23	45		
...media use was appropriate & effective	5	10		
...*time wasted drawing/writing on board*	4	8	2	15
...*outline put on board as lesson proceeded*	3	6	2	15

----- (continued on next page) -----

Table 2: Teaching Behaviors Exhibited by Nurse-Tutors
During On-Site Evaluations (Cont'd)

Teaching Skill or Behavior	Tutors Exhibiting Behavior			
	Trained		Untrained	
	N	%	N	%
3. INTERACTION WITH LEARNERS				
<u>Student contributions/responses elicited.</u>	48	94%	8	62%
...only as oral responses to questions	16	31	7	54
...*primarily as oral responses "in chorus"*	12	24	7	54
...as kinesthetic/psychomotor activity or return demonstrations by students	23	45	3	23
...as "think" steps	10	20		
...as dramatic or role play	4	8	1	8
...in small group processes	2	4		
<u>Teacher responded to student contributions.</u>	43	84	5	38
...with praise	31	61	2	15
...with extension/use of ideas or by relating to previous student response	18	35		
...with acceptance of feelings or ideas	10	20		
...with corrective feedback for errors	10	20	2	15
...with considerate handling of errors	4	8	1	8
<u>Teacher made eye contact with most learners.</u>	34	67	3	23
<u>Teacher had good rapport with students.</u>	36	71	6	47
Classroom atmosphere relaxed/non-threatening	26	51	4	31
*Classroom atmosphere formal, not relaxed	7	14	2	15
The students were attentive and interested	13	25	4	31
Teacher often checked for understanding	6	12		
4. CONTENT AND SEQUENCING OF LEARNING				
<u>Content sequenced effectively/logically.</u>	43	84	10	77
Internal summaries were used at end of parts	27	53	3	23
Teacher checked knowledge of prerequisites	5	10	4	31
<u>Teacher had excellent knowledge of subject.</u>	37	73	7	54
Content was well-organized and thorough	32	63	4	31
Content was appropriate to level of student	15	31		
In general, content was adequate & correct	11	22		
Teacher made one or more errors of fact	6	12	2	15

----- (continued on next page) -----

Table 2: Teaching Behaviors Exhibited by Nurse-Tutors
During On-Site Evaluations (Cont'd)

Teaching Skill or Behavior	Tutors Exhibiting Behavior			
	Trained		Untrained	
	N	%	N	%
5. MANNER OF PRESENTATION				
<u>Teacher enriched presentation/lesson.</u>	42	82%	9	69%
...by showing high level of confidence	31	61	1	8
...by use of humor (not at student's expense)	25	49	5	38
...by expressing enthusiasm for content	17	33	1	8
...by providing suitable examples, anecdotes, illustrations, or personal experiences	10	20	3	23
...by demonstrating high energy or vitality	6	12	2	15
...by moving around to help students focus	5	10	1	8
<u>Teacher's voice quality was effective.</u>	44	86	10	77
...audible to everyone	41	80	1	8
...clear	32	63	5	38
...varied in tone and/or pace	23	45	1	8
...*conversational in tone*	13	25	3	23
...used with good diction	7	14	1	8
...business-like	4	14	2	15
6. OTHER COMMENTS				
Teacher exhibited initiative and creativity	11	22		
Dictated notes followed by explanation	6	12	1	8
Total Number of Participants	51		13	

*Item was drawn from narrative notes of evaluators rather than from analysis of content of initial TOT course in Ibadan.

The first analysis of the data in Table 2 involved a comparison between the trained and the untrained tutors of the frequency of occurrence of the 15 major skills; i.e., the skills which are underlined in the table. That data is summarized in Table 3. For 10 of the 15 skills, the trained teachers achieved significantly ($p < .05$) higher frequency of occurrence. Five skills did not yield significant comparisons. In four of these five skills, the differences are in the expected direction with the trained group attaining the higher frequency of occurrence even though the differences were not large enough to be significant. Similarly, the difference between the two groups was neither large nor significant for the only skill in which the untrained group had the highest frequency of occurrence, i.e., the skill of stating to students the principle or rationale of the lesson.

Table 3: Comparison Between Trained and Untrained Tutor Groups of Percent of Occurrence of Major Skills

Major Skills Exhibited from Content Taught in TOT Course	Exhibited by		Chi Square
	% of Trained	% of Untrained	
Lessons prepared as 4-part plan	63%	8%	378.1*
Advance Organizer/Overview provided	73	23	108.6*
Principle or Rationale stated	25	31	1.2
At conclusion, lesson was summarized	57	23	50.3*
"Do"-steps were performed by students	63	8	378.1*
Audio-visual media were utilized	98	92	0.4
Use of media added to lesson effectiveness	80	38	46.4*
Student contributions/responses elicited	94	62	16.5*
Teacher responded to student contributions	84	38	55.7*
Teacher made eye contact with learners	67	23	84.2*
Teacher had good rapport with students	71	47	12.3*
Content sequenced effectively/logically	84	77	0.6
Teacher had excellent knowledge of subject	73	54	6.7*
Teacher enriched presentation/lesson	82	69	2.4
Teacher's voice quality was effective	86	77	1.1

*Significant at $p=.01$; Critical Chi-Square = 3.84; $df = 1$.

The second analysis examined the percent of occurrence of the major skills within the trained group. For thirteen of the fifteen skill areas, the percent of occurrence is equal to or greater than 63%. That is, the skill was exhibited during the classroom teaching of 63% or more of the trained teachers. For almost half (N = 7) of the skills, the percent of occurrence is 80% or better.

Using an expected proportion of 50 percent (chance level of 50/50) for each category, Chi-Square was calculated for each of the fifteen categories. The resulting Chi-Squares were significant for all but three categories: lesson was prepared as 4-part plan, lesson was summarized, and "Do"-steps were performed by students. That is, most (80%) of the skills taught in the TOT course are being used at levels significantly higher than a theoretical probability equal to that of a chance occurrence.

From these two examinations of the data resulting from classroom observations, it seems evident that the trained tutors are utilizing the skills which were presented in the initial TOT course in Ibadan. Furthermore, these skills do not commonly occur at high frequency levels among tutors who have not received the training. The conclusion from these two findings is that the skills from the TOT course were in fact transmitted to the state level.

This conclusion is further validated by a comparison of the percent of occurrences of the skills from the TOT content with the frequency of those skills which were generated from the evaluators' notes. The eleven non-TOT items (indicated by asterisks in Table 2) ranged from 8% to 31% in percent of occurrence among the trained group. This can be compared to the range of 25% to 98% occurrence for the TOT skills. Furthermore, the untrained group had a higher proportion than did the trained group for five of the eleven items while the reverse was true for the remaining six items. That is, the trained participants are using TOT-content at higher levels than they are using non-TOT content; on the other hand, they are using non-TOT content at about the same levels as are the tutors who did not receive the training.

Supporting Data from Questionnaire Items: Further support for the conclusion that the TOT content was adequately transmitted to the state level comes from the trained participants' responses to two items on the 6-month follow-up questionnaire. The two items request a listing of the skills from the JHPIEGO workshop found most useful by the participants. Table 4 presents that data.

The skills in Table 4 were compared to the observed TOT skills displayed in Table 2. Two vague items, "Better Skills in General" and "Miscellaneous" were excluded from consideration. Six of the remaining ten items in Table 4 are represented among the

Table 4: Participants' Responses from 6-month Questionnaire Relevant to Transmittal of TOT Content

Source	Question Posed	Response Categories	Responses	
			N	%
Q17	Do you find useful the teaching skills to which you were exposed during the workshop organized by JHPIEGO?	Yes	90	99%
		No	1	1
Q18	If yes, which areas do you find most useful?	Better Skills in General	35	39
		4-Part Lesson planning	18	31
		Utilization of AV Media	27	30
		Responding to Students	19	21%
		Content in Family Planning	8	9%
		Content Development	8	9%
		Problem-Solving Skills	4	4%
		Need Assessment	4	4
		Self-evaluation	4	4
		Role play & counseling	4	4
	Small Group processes	2	2	
	Miscellaneous (supplied by only 1 participant each)	5	6	

TOT-content skills listed in Table 2. Three of the other four items represent content taught in the TOT course but which had not been observed during the on-site visits and is therefore not listed in Table 2. The final Table 4 item, Content in Family Planning, was not taught per se in the TOT course; rather that content was reviewed, up-dated, and used as the subject of practice exercises in content development, curriculum revision, and lesson planning. In sum, all skills listed in Table 4 as being found "most useful" by the participants trained at the state-levels were skills from the content of the TOT course, except for one vague designation of "Better Skills in General" and a miscellaneous item aggregating those skills nominated by only 1 participant each.

Summary of Effectiveness of TOT Model: The evidence from the two procedures, observation and 6-month follow-up questionnaire, show the same vector. The preponderance of skills exhibited or named by the participants came from the content of the TOT course. Furthermore, evidence from the observation of tutors who had not received the training in Teaching Skills for Nurse Tutors indicated that the trained teachers are using these skills at much higher frequencies than are the tutors in the comparison group. It seems possible to conclude, then, that the TOT model was effective

in transmitting to participants trained in the state-level workshops the content (concepts and skills of teaching) which had been specified and modeled in the initial TOT course in Ibadan during the first year of NCA-93.

Facilitation of Family Planning Instruction

Once having established that the content of the TOT course had in fact been transmitted to the state level participants, it became appropriate to examine the effects of the training. The first question posed was whether the training resulted in utilization by the trainees of teaching skills which would better facilitate the implementation of Family Planning as part of an integrated reproductive health curriculum for preparing nurses and midwives.

This question about the effects of training on the teaching skills used by the participants was addressed first in terms of classroom behaviors assessed by Flanders' Interaction Analysis. Then the question was approached through participants' responses to questions about changes occurring in the teaching of Family Planning since their attendance at the NCA-93 course.

Data from Flander's Interaction Analysis: The delivery of Family Planning services involves the nurse or midwife in considerable decision-making and counseling skills. Therefore, when intended for the purpose of integrating Family Planning as part of a Reproductive Health curricula for the training of nurses and midwives, instruction should provide for modeling of responding and elicitation skills and opportunities for students to be actively involved in learning. Of particular importance is classroom instruction which frequently incorporates "Do" steps as a bridge between classroom theory and clinical practice. Family planning instruction should also encourage student initiation. In these ways, students can be helped to see themselves as counselors and decision-makers and can more readily develop appropriate skills for these aspects of service delivery.

In order to assess whether the nurse tutors trained in the NCA-93 courses were utilizing these kinds of skills, it was decided to assess the kinds of interaction occurring in their classrooms. Since no baseline data from before the training was available, the assessment was also conducted with a comparison sample of tutors who had not received the training.

As part of the on-site evaluations, the observers applied Flander's Interaction Analysis to the teaching they witnessed. Four three-minute segments from each class were coded for Flanders' categories. The four segments were taken from different points in the class session. One segment came from each of these points: (1) near the beginning of the class, (2) about 15 minutes into the class, (3) about 15 more minutes into the class, and (4)

during the closing phase of the class. A code was recorded for each 3-second interval during each of the three-minute segments.

The codes were numbers which represented the kind of teacher or student talk which most prominently occurred during each 3-second interval. The frequency of these codes were then aggregated across segments and converted into the percentage of class time spent in each category of talk. Indexes were computed by summing across categories. The percentages of class time for each category and index are the data reported in Table 5 for both the trained and untrained tutor groups.

Table 5: Comparison Between Trained and Untrained Tutors of the Percent of Classtime Spent in Categories of Flanders' Interaction Analysis

Flander's Category or Index	Mean Percent of Time		T-Test Results	
	Untrained	Trained	t-value	prob.
<u>Categories</u>				
1-Teacher Accepts Feelings	0.0%	0.1%	1.88	.033
2-Teacher Praises	0.9	3.4	4.76	.001
3-Teacher Accepts Ideas	1.2	3.0	5.09	.001
4-Teacher Questions	6.9	10.8	2.78	.005
5-Teacher Lectures	64.6	53.0	1.88	.039
6-Teacher Directs/Commands	0.5	2.4	3.93	.001
7-Teacher Criticizes	0.03	0.09	1.44	NS*
8-Student Responds	10.3	15.9	1.60	NS
9-Student Initiates	0.9	3.1	2.94	.003
10-Silence or Chaos	11.4	7.3	1.7	NS
<u>Indexes</u>				
Facilitative Talk	2.1	6.5	5.48	.001
Teacher Elicitation	7.5	13.2	3.71	.001
Total Direct Talk	65.2	55.5	1.59	NS
Total Student Talk	11.3	18.9	2.19	.022
Number of Subjects	53	14		

NOTE: Indexes computed by summing across categories as follows:

Facilitative Talk = 1 + 2 + 3

Total Direct Talk = 5 + 6 + 7

Teacher Elicitation = 4 + 6

Total Student Talk = 8 + 9

*NS = not significant at alpha \leq .05.

As indicated in Table 5, the trained tutors were significantly different (at $p = .05$) from the comparison group in seven of the ten categories and in three of the four indexes. Furthermore, the differences are in the desired directions. That is, the tutors who received the training more frequently modeled good foundations for counseling skills; i.e., they exhibited more facilitative talk and had significantly higher mean scores in giving praise and in acceptance of feelings and of ideas. The trained tutors also used greater amounts of elicitation to encourage students to reach higher levels of participation and involvement in learning. These tutors elicited student participation through two kinds of talk: (1) they gave more directions for performance of "do" steps and (2) they asked more questions. As would be expected, their students responded by achieving a higher total of student talk and also by more frequently initiating contributions to the on-going classroom interaction.

The three categories and one index on which the trained tutors were not significantly different from the comparison group included the student response category. While student response between the two groups was not different in amount; it should be noted that it was different in kind. More student response in the comparison group consisted of "chorale" responses, in which the entire group of students answered questions together or filled in blanks when the teacher paused in the presentation. As indicated earlier in Table 2, this kind of activity occurred in 54% of the classrooms of the comparison group but in only 24% of trained tutors' classrooms.

Because of the discrepancy in the sizes of groups, with the trained group being four times larger than the comparison sample, it was felt that the results in Table 5 should be validated through evaluating groups more nearly equal in size. Therefore, a 30% random sample of the trained group was drawn. The t-tests as shown in Table 5 were repeated, comparing the Flander's data from the small random sample of the trained group to the data of the comparison group. All tests which had reached significance (as indicated in Table 5) again yielded significance when conducted with the smaller sample of the trained group. Thus, it was concluded that the trained tutors are using more effective teaching skills for family planning instruction.

Changes in Teaching Family Planning: Two of the items on the 6-month follow-up questionnaire address the issue of changes in family planning instruction which occurred subsequent to the course in Teaching Skills for Nurse Tutors. One of the two questions asks what changes the participant has made in the teaching of family planning since attending the course. The other questions asks whether there have been any other changes relevant to the teaching of family planning since the course. The responses were aggregated across the two questions. Table 6 displays the participants' responses.

Table 6: Participants' Responses to Questionnaire Items
about Changes in Family Planning Instruction
Since the Course on Teaching Skills for Nurse Tutors

Response Categories	% of Cases
Increased number of lectures/hours in FP classes	34%
FP integrated into curriculum	32
Increased student participation/involvement	29
Increased clinical/practicum assignments for students	22
Increased use of AV Teaching Aids	21
Preparation of 4-part lesson plans	15
Modernization of teaching methods	15
Increase in teaching skills	13
Increase in student satisfaction/motivation	12
Better community acceptance of family planning	11
Better use of questioning	8
Used more demonstrations	8
Increased student achievement	7
Family planning lectures delivered to more students	7
More instructor interest in family planning	5
Only trained tutors/participants can teach family planning	5
A family planning clinic in school/hospital was initiated	3
Clearly stated learning objectives	3
Acceptance of program by more female students	2
Use of Drama/Role Play	2
Space to Teach	2
Family planning workshops conducted	2
Miscellaneous Responses (Each nominated by only 1 person)	16
No change occurred	5
No Response	5

Several of the high frequency items in Table 6 support the data from Flanders interaction analysis reported earlier. Particular items worthy of note include the fact that almost one-third (29%) of the participants reported greater student involvement and 22 percent stated that the use of clinical or practicum assignments had increased. AV aids were more often used by 21% of respondents.

Many of the other items, while not specifically reflective of the interaction data from Flanders' Analysis, lend a great deal of credence to the probability of an increased implementation of

family planning as part of an integrated reproductive health curriculum. These items include (1) the statement by 32 percent of the participants that family planning had been integrated into the curriculum, (2) an increase in the number of family planning lectures or hours which was mentioned by more than a third (34%) of the participants, and (3) statements by three participants that they had initiated a family planning clinical unit since taking the NCA-93 course.

Summary of Facilitation of Family Planning Instruction: Data from Flanders' Interaction Analysis and responses to two items on the 6-month questionnaire serve to cross-validate each other. Both data sets support the conclusion that the training has resulted in the trainees' utilization of teaching skills which better facilitate the implementation of family planning as part of an integrated reproductive health curriculum for preparing nurses and midwives.

Progress in Implementing Family Planning Curriculum

When asked on the 6-month questionnaire to list changes that had occurred in family planning instruction after their participation in the course on teaching skills, 32 percent of the tutors volunteered that they had integrated family planning into their curriculum. Several other of the changes identified as occurring since the course also serve as indicators of progress in implementing family planning curriculum. These additional indicators include the following items from the data in Table 6:

- Increased number of lectures/hours in family planning classes
- Increased clinical/practicum assignments for students
- Family planning lectures delivered to more students
- More instructor interest in family planning
- Initiation of a family planning clinical unit
- Acceptance of program by more female students
- Family planning workshops conducted

Interview Data: Data from the interview conducted during the on-site evaluations, along with other data from the 6-month questionnaire, provide additional information about the status of family planning in the reproductive health curriculum. Table 7 displays the relevant data resulting from the interviews.

The first item in Table 7 provided the basis for a before-and-after comparison of the significance of change in the proportion of tutors utilizing an integrated curriculum. The "before" was before the inception of JHPIEGO's NCA-93 course and the "after" was subsequent to the course's initiation. Since the state-level replications of the course began in 1986, the before group is defined as "Before 1986". According to Table 7, then, the percent of tutors involved in an integrated curriculum prior to the inception of the course was 8% while the percent involved since

Table 7: Participants' Responses to Interview Items
about Progress on Integrated Curriculum

Question Posed	Response Categories	Tutors	
		N	%
When did you start the integrated Program?	Before 1986	4	8
	In 1986	16	30
	In 1987	24*	45
	In 1988	2	4
	Have not yet started	9	17
What instructional facilities do you have?	Library	51	96
	Practical Room	29	55
	Audio-Visual Aids	34	64
Do you have enough books in Family Planning?	Yes	5	9
	No	42**	79
	1 or 2 journals only	6	11
Do you have enough equipment and material?	Yes	2	4
	A few; can make do	2	4
	No	43	81
	None of certain critical items such as models	6	11
N of respondents		53.	

* Six participants specified that their start-up was only a personal and informal program, following attendance at a JHPIEGO course.

** Many participants answering "No" also stated that most of the books available were copies of Family Planning Methods and Practice: Africa which had been supplied during the JHPIEGO workshop.

the course began is 79%. The significance of the two proportions was examined through the z-test of the difference between two proportions. Results were a calculated $z = 7.39$, which was significant at $p < .01$. That is, since the inception of the teaching skills course in 1986, a significantly greater proportion of tutors have become involved in teaching family planning as part of an integrated reproductive health curriculum than were doing so prior to 1986.

It should be noted, however, that six of the tutors specified in their responses to this item that their involvement in the integrated curriculum was only an informal program which they had started after their attendance at the JHPIEGO course. That is, their schools had not yet officially implemented an integrated curriculum. Similarly, those tutors (17%) who stated that they had not yet started the integrated curriculum explained that they were still waiting for official approval from the Nigerian Nursing Council (NNC) for an integrated reproductive health curriculum for Nurses. (As of the conclusion of the on-site evaluations in the summer of 1988, the NNC was considering an integrated nursing curriculum which had been submitted to them by the director of a JHPIEGO project. The curriculum submitted for the Council's approval was an outcome of the project's curriculum development workshop.)

The other items in Table 7 dealt with supports for teaching family planning. Although 64 percent of the tutors said that they have access to audio-visual aids, 92 percent indicated that they did not have enough equipment and materials. Almost all the tutors' schools have libraries but fewer than 10% of the tutors stated that the libraries have enough books on family planning. Most of the participants (79%) explained that they did not have enough books and, furthermore, that most of the books available were copies of Family Planning Methods and Practice: Africa, which had been given to them during the JHPIEGO workshop.

Questionnaire Data: One of the 6-month questionnaire items provided additional information as to the need for books. (See Table 8.) Almost half (47%) of the respondents stated there were five or fewer family planning books in their school's library.

A similar picture is presented of access to a practical room which can be used for demonstrations of clinical skills. In the interviews, about half (55%) of the respondents indicated that they had practical rooms (see table 7) but only 33 percent of tutors returning the questionnaires indicated that they had facilities for practical demonstration for family planning (see table 8). A probe to investigate the discrepancy found that in many of the schools the practical room was for "general" health care and did not have models, samples, or equipment specific to the instructional needs of the family planning curriculum.

A final indicator of the degree to which family planning has been integrated into the curriculum is accessed through responses to the last two items presented in Table 8. Almost all (98%) of the participants stated that at least one or two family planning questions were included in the final exams.

Table 8: Participants' Responses to 6-Month Questionnaire Items about Progress on Integrated Curriculum

<u>Question Posed</u>	Response Categories	Tutors	
		N	%
Do you have family planning books in your library?	Yes	71	78
	No	19	21
	No response	1	1
If yes, about how many books?	1 to 5 books	24	47
	6 to 10 books	15	30
	11 to 15 books	2	4
	16 to 20 books	8	16
	More than 20 books	2	4
	No response	20	
Does your school give a family planning course?	Yes	80	91
	No	8	9
	No response	3	
Do you have facilities for practical demonstration for family planning in your school?	Yes	30	33
	No	60	67
	No response	1	
Do you normally include family planning questions in your exams?	Yes	89	98
	No	2	2
	No response	1	
If yes, how many family planning questions do you usually include?	1 question	50	62
	2 questions	24	30
	3 or more "	7	8
	No response	10	

NOTE: % = percent of tutors responding to item.

Summary of Implementation Progress: The data clearly indicated significant progress in the implementation of family planning as part of an integrated curriculum in reproductive health. Just as clear, however, is the finding that facilities and materials needed for instructional support are lacking in this new curriculum area.

Impact of Integrated Curriculum

The influence of a change in the curriculum of a training program tends to exert itself over a considerable stretch of time. A follow-up evaluation after only one or two years is a very short period in which to assess the impact of such a change. For example, no students in programs implementing the new curriculum have had time to graduate and become service deliverers. In the evaluation data collected, however, there were some early indicators of the potential impact of the integrated curriculum. The data came from the nursing tutors' responses to interview and questionnaire items and from interviews conducted with students.

Tutors' Estimates of Effects of Curriculum: On the six-month questionnaires, most of the tutors (72%) indicated that family planning had been discussed freely among students and staff since the integration of the FP course into the program. (See Table 9.) The validity of this datum, however, is dubious since there seems to have been a problem with interpretation of the question. That is, 97% of the respondents answered the question as if they had an integrated program in place but, in fact, only about 80% of them were actually involved in the implementation of the integrated curriculum at the time of administration of the questionnaire. It may be that they were providing an estimate of general interest in the area of family planning rather than assessing verbal reaction to the integrated course

In response to a questionnaire item related to student outcome performance on the final examinations, 81% of the tutors stated that one or two family planning questions were contained in their final exams. As indicated by the tutors, the scores achieved by the students on these exams ranged from a Low Score mean of 54% to a High Score mean of 76%. This datum is in agreement with the tutors' informal evaluation (during the interviews) of student performance. At that time, about 86 percent of the tutors interviewed stated that their students were doing well in the exams at either (or both) the state or school levels. Moreover, about 20% of the tutors stated that their students always chose to answer the family planning questions. (See Table 9).

Volunteer choice of examination questions is a good indicator of motivation and is a validation of the tutors' estimation of student reactions. Over 91 percent of the tutors stated that the students enjoyed the family planning course and 11 percent stated that students have become acceptors since the course was initiated.

The final indicator of potential impact, displayed in Table 9, was the response of the tutors to the question as to whether there had been any reaction from the community. Many of the responses were about community reactions to family planning per se; however,

Table 9: Faculty Responses to Interview and Questionnaire Items
Assessing Impact of Integrated Curriculum

Question Posed	Response Categories	Responses	
		N	%
*How freely has family planning been discussed among students and staff since integration of course into program?	Very freely	65	72%
	Some discussion	21	23
	Little discussion	3	3
	No course given	1	1
	No response	1	
What are the reactions of the students?	They enjoy it; feel motivated	48	91
	Many have become acceptors	6	11
	Some are not interested	3	6
	Male students are acceptors	2	4
	Some want to specialize in FP	1	2
How have the students performed in school and state exams?	Performed well at school level, but difficult to assess state level	30	56
	Performed well	16	30
	Students always choose FP questions	10	19
	Did fairly well	7	13
	Did better now than 2 years ago	2	4
Has there been any reaction from the community?	Increase in acceptance rate due to national austerity	42	79
	Generally positive reaction to teaching of course	12	23
	Secret acceptance by women	9	17
	Positive reaction to course but low acceptance rate due to cultural and religious reasons	4	8
	Mixed reactions to course	3	6
	Initial resistance	2	4
	Good media support for FP	2	4
	Increase in acceptance rate even among men	2	4
	Community commended school for teaching FP	1	2

NOTE: % = percent of respondents. Percents may sum to more than 100 due to multiple responses by some individuals.

* The item indicated by an asterisk came from data on the 6-month questionnaire; respondent N = 91. The other items came from on-site interviews; respondent N = 53.

other responses dealt specifically with community reactions to the teaching of family planning in the nursing/midwifery schools. Thus, 23 percent of the tutors indicated a generally positive reaction to the course while an additional 8 percent of tutors stated that reaction to the course was positive but acceptance rates were low due to cultural and religious reasons. Mixed reactions to the course were reported by 6 % of the tutors while 2 of the tutors stated they were receiving good media support for family planning. One tutor even commented that the community had commended the school for teaching family planning.

Data from Student Interviews: During the on-site evaluations, an effort was made randomly to select and interview one student for each tutor interviewed. In total, 51 students were asked about their experiences in relationship to the family planning course. Data resulting from those conversations is displayed in Table 10.

About 60% of the 51 students interviewed had taken the course in family planning. Of those who had taken the course, 63 percent stated they had gained a lot from it and felt it would improve the health of mother and child while 37 percent stated they had enjoyed it very much. The same proportion of respondents (37%) stated that family planning was important to the economy of the country. Although one student (3%) felt that traditional family planning methods are safer, 33 percent (N=10) of those interviewed had become an acceptor of a modern method of contraception.

When those who had taken the course were asked about the adequacy of the practice provided for mastery of clinical skills in family planning, more than half (57%) of the students felt that they had received enough practice. Many of these amplified their responses to indicate that they had enjoyed very much the practice of clinical family planning skills. About 17 percent of the students felt they had not had enough practice and were confident only of their ability to counsel or teach about family planning methods; they did not feel capable of delivering clinical services. Another 17 percent indicated they had just started the practical aspect of their course while three students complained that male students were not allowed enough practice and blamed this failure on cultural attitudes about privacy and sexuality.

Table 10: Student Responses to Interview Items
Assessing Impact of Integrated Curriculum

Question Posed	Response Categories	Responses	
		N	%
Have you taken the FP course?	Yes	30	59%
	No	21	41
*If yes, what do you think of it?			
	Like it; have gained a lot from it; feel will improve health of mother & child	19	63
	Enjoy it very much	11	37
	It is important, especially because of economic difficulties of country	11	37
	Have become an acceptor	10	33
	Will help me in counseling women	4	13
	Traditional methods are safer	1	3
*Did you get enough practice in clinical skills to be confident of serving clients in FP?			
	Yes; enjoy this very much	17	57
	No; can only counsel/teach	5	17
	Just started practicals	5	17
	Male students not allowed enough practice	3	10
**If "No" (have not taken FP course), what have you heard about it?			
	It is good to reduce number of children; makes couple happy	11	52
	Will check population growth and benefit society	6	29
	Not interested as heard FP has dangerous side effects	4	19
	Will prevent delinquency	3	14
	It is good for health of mother	3	14
	It will be practical for me later	1	5
	Will prevent criminal abortion	1	5

NOTE: % = percent of students responding to item. Percents do not always sum to 100 as some students supplied multiple responses.

The first item was answered by all students interviewed; N = 51.

* For items marked with a single asterisk, respondent N = 30.

** For items marked with a double asterisk, respondent N = 21.

Those students who had not taken the family planning course shared with the interviewer their attitudes toward family planning based on the information they had heard about the course. Most of these students had heard positive things about the course. One student thought that FP would be practical for her at a later time and benefits of family planning were cited by a majority of the students: 52% citing reduced family size and marital happiness, 29% citing benefits to society from reduced population growth, and 14% citing health benefits for the mother. On the other hand, 4 students (19%) were not interested in the course as they had heard that family planning has dangerous side effects and three students (14%) thought that family planning would prevent delinquency.

Summary of Impact Indicators: In general, these early indicators are positive in nature and fairly consistent in directionality. That is, it seems safe to conclude that implementation of the integrated curriculum is influencing tutors, students, and communities in directions which are positive towards family planning. How significantly, or to what degree of permanence, are questions which must be reserved until there has been a longer time for the effects of that influence to accumulate.

It must also be pointed out that those economic and cultural factors which made imperative the need for an integrated curriculum to train nurses and midwives for the delivery of family planning services have continued to exert influence on attitudes and actions relative to family planning. Thus these factors may have been additional stimulants to the positive indicators reported above. That is, the consistently positive nature of the indicators may not be due solely to the effect of the integrated curriculum but perhaps are a result of both vectors: the new curriculum and the relevant factors in the economy and the culture.

Participants' Needs Related to Teaching Family Planning

As the on-site follow-up evaluation for each of the state-level courses was completed, a report was submitted by the project director. Each state-level report contained a section listing recommendations. Those reports have been reviewed, and the recommendations related to instruction in family planning have been aggregated. Table 11 summarizes the aggregated recommendations from the State-level reports and indicates the number of reports making each recommendation.

As the data from the on-site interviews and the returns from the 6-month follow-up questionnaire were tabulated, it became evident that the recommendations made by the state-level reports were reflective of the participants' experiences and expressed needs. For example, the recommendation that training in the clinical content of family planning should precede participation in the course on teaching skills is substantiated by data from the

Table 11: Summary of Recommendations From State-level Reports of Priorities Related to Family Planning Instruction

Recommendations Made in State-level Reports	N of Reports
All participants should receive training in Family Planning, including clinical skills practice, prior to participating in the training course on Teaching Skills for Nurse Tutors.	10
It was recommended that funding agencies should seriously consider supplying teaching materials and supplies in FP as the tutors have great need for more books, equipment, teaching materials, demonstration models, films, samples of contraceptive devices and kits, slides, and other AV aids. Inadequacies in these areas adversely affect the quality of teaching.	9
Recommendations for the content of the course on teaching skills for nurse tutors included (a) continued emphasis on "Do-Steps", (b) facilitative response to students, or (c) instruction in Flanders' Interaction Analysis.	9
The schools have many urgent and unmet needs related to instruction in the practical aspects and clinical skills of family planning. Particularly needed are demonstration facilities and/or related equipment and materials.	8
The course in Teaching Skills for Nurse Tutors should be continued in order to meet the need for more tutors who are able to teach family planning.	6
The course in Teaching Skills for Nurse Tutors should be continued BUT should be opened to tutors teaching in areas other than family planning.	3

NOTE: The number of state reports from which recommendations were aggregated for this table was 11.

on-site observations of teaching. During the observations, a few tutors made an error of fact while teaching family planning content (see Table 2). In every instance, when the instructor was interviewed, it was discovered that she/he had not completed the training course for family planning clinical skills.

Further validation for the need of family planning clinical skills prior to the teaching skills course can be found in Table 12. When asked what other areas should have been included in the JHPIEGO

teaching skills course, many of the participants stated that the tutors should have been provided with practical experience in family planning. In elaborating on their responses to this question, the participants supplied many specific examples of practical experiences which should be included in the course. These examples

Table 12: Responses to Interview and Questionnaire Items
Assessing Needs Related to Effective Instruction
In Family Planning

Question Posed	Response Categories	Responses	
		N	%

What other areas should have been included in workshop (NCA-93 course)?			
	Practical experience in FP	68	75%
	Logistical suggestions	13	14
	Proposed new content	22	24
	No change needed	5	5
	No response	18	20
	Total N of Respondents	91	

In what areas would you like improvement related to teaching FP?			
	Need textbooks, visual aids, equipment, CD samples	40	75
	Need FP clinical course for self and/or other tutors	23	43
	Need more practicals for students	6	11
	Need transport to practical sites and/or for Outreach	3	6
	Need Family Planning Journals	2	4
	Miscellaneous (1 mention each)	2	4
	Total N of Respondents	53	

In what area(s) would you like improvement in your own teaching skill?			
	Continuing professional education for up-to-date information on family planning and STD	23	43
	Need more skill in use and development AV aids	5	9
	Need some family planning books other than "Africa"	3	6
	Need approval to operate clinic for practicals site	2	4
	No area of improvement	3	6
	Miscellaneous (1 mention each)	5	9
	Total N of Respondents	53	

NOTE: % = percent of respondents. Percents may sum to more than 100 since some respondents supplied more than one answer.

included such things as practice in FP skills (proposed by 24% of the respondents), more practical demonstrations (22 % of respondents), field trips to FP clinics (11%), practice with real patients or models (6%), and other miscellaneous experiences such as fieldwork in the community, outreach projects, community teaching, and film strips on model family planning clinics. Clearly these expressed needs support the recommendation that the tutors who will be teaching family planning should receive training in the clinical and service delivery aspects of family planning prior to the teaching skills course.

The tutors were offered an opportunity during the on-site interviews to express their needs in areas of improvement related to teaching family planning. Items two and three in Table 12 display the instructors' responses. The need for a clinical course in family planning for self and/or other tutors was expressed again in the verbal interaction with the interviewers, this time by almost half the tutors (43%). A similar dynamic dictated expression of the need for continuing professional education for up-to-date information on family planning and on sexually transmitted disease; this need was volunteered by another 43% of the respondents.

A large proportion of interviewees (75%) stated needs for textbooks, visual aids, teaching and demonstration equipment, and samples of contraceptive devices. Such needs were expressed not only in response to this question but also in various responses to other opportunities for the participants to communicate their ideas. For example, in response to the question as to desired areas of improvement in the participant's own teaching skill, nine percent indicated they wanted to learn more about the use and development of audio-visual aids and six percent wanted to have access to family planning books other than "Africa". (See also several items in Tables 7 and 8.) Furthermore, this need is evident in Table 2: in 53 classrooms, no use of film, slide, or transparency was observed.

Evaluative Summary and Recommendations

Evaluative Summary

The purposes of the evaluation activities reported here were twofold: (1) to assess the influence of the project on Teaching Skills for Nurse Tutors (NCA-93) as a facilitator of the implementation of an integrated reproductive health curriculum in the education of nurses and midwives in Nigeria and (2) to determine the effectiveness of the Training of Trainers model for the dissemination of specified skills and information. Both purposes were accomplished. The data collected and reported in earlier sections of this report support the following conclusions:

1. The Training of Trainers model was an effective mechanism for

transmitting the designated training content (skills and information) from the initial course at a central point to participants trained in the widely dispersed state-level workshops.

2. The training supported by the NCA-93 project has resulted in the participants' utilization of teaching skills which are better suited to the implementation of family planning content as part of an integrated reproductive health curriculum for preparing nurses and midwives.
3. There has been significant progress in the implementation of family planning as part of an integrated curriculum in reproductive health; however, much remains to be done.
4. The facilities and materials needed for instructional support in the new curriculum area of family planning are severely lacking. These deficits include the following items:
 - a. textbooks, library books and journals in family planning
 - b. audio visual teaching aids, including demonstration models
 - c. facilities (practical room) for demonstrations of skills
 - d. materials, samples, and demonstration kits or equipment specific to the instructional needs of the family planning curriculum
5. Courses in family planning content and clinical skills should precede courses for teaching skills to enable the effective delivery of the family planning curriculum to students.
6. Early indicators of the impact of the integrated reproductive health curriculum evince influences on tutors, students and communities in directions which are positive towards family planning. The magnitude, permanence, and significance of the change, however, can not yet be estimated; nor can the degree to which such change is a result of impact from the reproductive health curriculum be separated from change resulting from the influence of factors in the economy and the culture which have a similar vector. Examples of such factors include austerity as a push towards smaller families or fear of AIDS as a limiting factor on sexual activity, etc.
7. Support from International funding agencies will remain critical in maintaining the positive influences on family planning instruction and attitudes which have been initiated in Nigeria.

Recommendations

The recommendations related to the above conclusions are almost self-evident. Based on the data in this report and the conclusions drawn from that data, several recommendations can be made. They

include the following items:

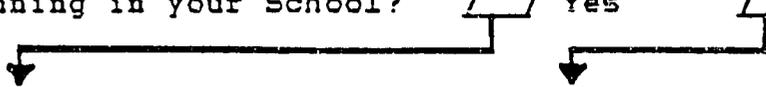
1. The effects of the integrated reproductive health curriculum should be evaluated again in about 5 years after graduates of programs implementing the curriculum have had some experience as service providers.
2. Planners of similar assistance programs in the future should recognize the critical sequence evidenced in this report: the effective delivery of instruction in family planning services requires (a) that the intended teachers of the family planning curriculum be provided with training both in family planning clinical skills and concepts and in effective teaching skills and (b) that the training in family planning clinical skills and concepts must precede the training in teaching skills.
3. International funding agencies should consider ways in which the tutors delivering family planning skills and content to nurses and midwives can obtain the teaching materials and practical facilities necessary to effectively present that content.
4. Continuing professional education (in-service training) for health care tutors in all content areas is a priority which needs to be addressed on a continuous basis.
5. The Training of Trainers (TOT) model is concluded to be an effective method for disseminating skills and information to widely dispersed members of a professional group and should receive serious consideration in planning future program efforts.

This report has provided an assessment of JHPIEGO efforts in Nigeria to institutionalize reproductive health training in the curricula of nursing and midwifery schools. The report documents that, influenced by JHPIEGO training and curriculum development projects, family planning has increasingly been integrated into the curriculum of nursing and midwifery schools and that a cadre of nurses are in place who have been trained both in family planning content and clinical skills and in those instructional skills which enable them to more effectively teach family planning.

Furthermore, the data yielded several specific findings, summarized above, which will serve as a guide to JHPIEGO in the planning of similar reproductive health training programs in the future. It is hoped that these findings also may prove useful or heuristic to other national and international organizations engaged in projects related to training in reproductive health.

APPENDIX A

SIX-MONTH FOLLOW-UP QUESTIONNAIRE
(administered through personal net-work)

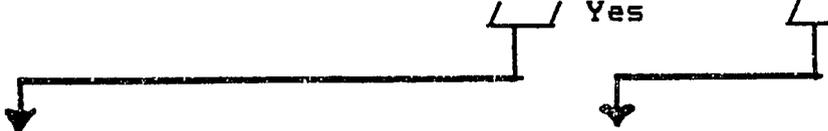
1. Name and Address of your School/Institution:
2. Type(s) of Training Programme: General Nursing
 Midwifery Psychiatry Public Health
3. No. of Staff No. of Students
4. Qualifications: RN RT
 RM PHN
5. Other Qualifications: (Specify) _____
6. Do you have Family Planning books in your library? Yes
 No
7. If yes, about how many books? How many different types
(textbook, general, method-specific, etc.) are there?
8. Does your school give a Family Planning course? Yes No
9. How many hour-lectures do you give per set? hours/
10. Do you have facilities for practical demonstration for Family
Planning in your School? Yes No

11. If yes, please list:

12. If no, what facilities do you
use for practical demonstration
in Family Planning?

13. Do you normally include Family Planning question(s)
in your examinations? Yes No
14. If yes, how many Family Planning questions do
you usually include in the examinations?
15. What is the range of scores of the students? to
16. From your observation, how freely Very freely
has Family Planning been discussed Some discussion
among students and staff since Little discussion
integration of course into program? No Course given

17. Do you find the teaching skills to which you were exposed during the workshop organized by JHPIEGO useful?

Yes No



18. If yes, which areas do you find most useful?

19. If no, state reasons:

20. What other areas do you think should have been included in the workshop?

21. In the six months since you attended the workshop, have you made any changes in your teaching of family planning?

Yes No

22. If yes, what changes have you made? _____

23. In the six months since you attended the workshop, have there been any other changes relevant to the teaching of Family Planning in your School/Institution? Yes No

24. If yes, what changes have occurred? _____

APPENDIX B

INTERVIEW SCHEDULE

(to be administered during follow-up on-site visits)

Name of School: _____

Location: _____

No. of Teachers: _____ No. of Students: _____

Specialities: _____

For Faculty Interview

Previous Family Planning Course: _____

Facilities: (library, practical room, AV aids, etc.)

1. When did you start the integrated program? _____
2. How are your lectures arranged? /external /internal
3. Do you have enough books in Family Planning?
4. Do you have enough equipment and material?
5. What difficulties have you encountered in teaching Family Planning?
6. How many lecture hours for theory and practical in Family Planning have been made available?
7. What are the reactions of the students?

8. How have the students performed in school and state exams?

9. How many Family Planning clinics are around your area?

10. Has there been any reaction from the community?

11. In what area(s) would you like improvement related to teaching Family Planning?

12. In what area(s) would you like improvement in your own teaching skills?

OTHER COMMENTS:

For Student Interview

1. Have you taken the Family Planning Course? /Yes /No

2. If yes, what did you think of it?

3. Did you get enough practice in clinical skills to be confident of serving clients in family planning?

4. If no, what have you heard about it?

35

APPENDIX C

OBSERVATION RECORD

1. Organization

___ Overview ___ Principle ___ Activities ___ Summary

2. Tell -- Show -- Do -- AV

3. Interaction with Students

4. Content & Sequencing

5. Manner of Presentation (confidence, voice, etc.,)

6. Other Comments