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AUTHOR Freeman, Rose B.; And Others
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ABSTRACT

The assistance of Department of Health, Education and Welfare and the Public Health Service, St. Anselm's College has undertaken a change in the structure of its nursing training curriculum. The instructor has been transformed from a dispenser of discrete parcels of knowledge to a manager of the learning environment, and the student has been converted from a passive recipient of lectures to an active seeker of knowledge to satisfy his own curiosity. In order to make the learning experience a rich one, extensive use has been made of individualized learning packages, small group activities, flexible classroom space, and a variety of audiovisual aids. (EMH)

DEVELOPMENT OF RESOURCES FOR INDEPENDENT AND SMALL GROUP LEARNING I N A CORE CURRICULUM

FINAL PROJECT REPORT
June, 1975

Project Director: Rose B. Freeman, R.N., B.S.N., M.S.

Assistant Directors: Lucille Croteau, R.N., B.S.N., M.S.
1972-1973
Lucille Lavoie, R.N., B.S.N.,M.S., M.A.
1973-1975

Department of Nursing
St. Anselm's College
Manchester, N.H.

INSTRUCTIONAL DEVELOPMENT IN NURSING CONTINUES AT ST. ANSELM'S

The Department of Nursing of St. Anselm's College has completed a three-year project funded by HEW, Public Health Service, to develop resources for independent and small group learning in a core curriculum. Now PHS has approved a two-year renewal of the project to take advantage of the gains already made and to continue to improve nurse education by providing assistance to instructors in developing and evaluating learning packages using concepts and principles from the curriculum theoretical framework as a base, and emphasizing the guided discovery method of teaching-learning.

The Department of Nursing has been in the process of developing and implementing an innovative curriculum design consistent with current trends in education. Beginning in 1966 with a project entitled "Development of a Core Curriculum Based on Identification of Common Principles and Concepts Underlying Professional Nursing (NPG-158-03), funded under the Nurse Training Act of 1964, the objective was to develop a curriculum which abolished the old divisions of nursing courses according to clinical disciplines. This eliminated needless duplications of theoretical and practical learning experiences and enabled students to be flexible in diverse nursing situations by applying concepts and principles common to all disciplines.

During that initial implementation the need was seen for additional instructional media resources and an environment more conducive to independent and small group learning in order to 1) provide the opportunity for students to be more actively participating and self-directing in the learning process, and 2) assist instructors in the changing role from content providers to facilitators of learning. A second proposal was written and funds granted (01-D-00045-03) for the period of June, 1972 to May 31, 1975.

During this time, curriculum development continued, utilizing the techniques of team teaching, seminar, and independent study. Environments were rehabilitated to provide additional seminar rooms and a flexible media complex with simulation laboratories. Through this experience, the need for learning packages became apparent. A few packages were developed and their use evaluated.

The objective of the latest renewal project is to develop the curriculum in learning packages with the assistance of an instructional designer, an audiovisual specialist and a media center manager. Concurrent faculty development in instructional technology is a major concern in order to continue project activities after grant termination. The project team consists of Director, Mrs. Rose Freeman, M.S.; Assistant Director, Miss Lucille Lavoie, M.S.; Instructional Designer, Howard H. Russell, EdD.; Audiovisual Specialist, Bernard Colo, B.A.; and Instructional Media Center Manager, Mrs. Carol West, A.A. Library Sciences.

DEVELOPMENT OF RESOURCES FOR INDEPENDENT AND SMALL GROUP LEARNING IN A CORE CURRICULUM

United States Public Health Service

Project Grant No. 01-D 000045-03

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Project Director: Rose B. Freeman, R.N., B.S.N., M.S.

Grantee Institution: St. Anselm's College, Manchester, N.H.

Total number of years for which project was approved:
Three years

Time covered by final report: June 1, 1972 to May 31, 1975

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ACKNOWLEDGEMENTS

The evidences of change reported, as a result of this project, could not have occurred without total faculty cooperation. Special mention is made of the contributions of the following: Rev. Brendan Donnelly, O.S.B., President of the College and formerly Dean, and Rev. Placidus Riley, O.S.B., Dean of the College and formerly President, for encouraging the Department of Nursing to undertake the project; Professor Ruth Bagley, Director of the Department of Nursing; Professor Lucille Croteau, Curriculum Coordinator and Assistant Director of the project during the first year; Professor Lucille Lavoie, Coordinator of the Senior Year Team during the first year of the project and Assistant Director of the project during the last two years; Professor Jeannette Bernier, Family Visit Coordinator; Professors Mary Bruton and Joanne Farley, Senior and Junior Year Team Coordinators, respectively; Professor E. Mae Davis, Administrative Assistant and Sophomore Year Coordinator; Mr. Robert Roy and Mr. Bernard Colo, Director and Assistant Director of the Audiovisual Department of St. Anselm's College, and to Dr. Howard Russell and Professor Lucille Lavoie for assistance in writing this report.

DEFINITIONS

CORE CURRICULUM - As defined by Faunce and Bossing refers to a pattern of the experience curriculum into a closely integrated and interrelated whole, in which one division, the core program, is devoted to the development of the common competencies needed by all, and the other division emphasizes the development of special competencies based upon the recognition of individual differences in interests, aptitudes, and capabilities; the entire curriculum utilizing consistently the same basic principles of learning, teaching methods, and problem organization.[1]

LEARNING PACKAGES - A self-contained or set of teaching-learning activities in any form, predesigned as a learning blueprint to help the student achieve specified behavioral objectives. The package identifies what the student will be expected to do at the completion of the activity, ways in which the student can proceed to meet the requirements, and how evaluation will take place.[2]

PROCESS - A continual development involving many changes or a number of interdependent changes or operations by which an end is attained.

SIMULATION - Attempts to replicate the essential aspects of reality so that reality may be better understood and controlled.[3]

EDUCATIONAL TECHNOLOGY - is a process whereby learning resources are planned, produced, utilized, and evaluated. It is the specification of objectives, the careful analysis of student and subject matter, the subsequent production and delivery of instruction which, when taken together, indicate the application of technology.[4]

DEVELOPMENT OF RESOURCES FOR INDEPENDENT AND SMALL GROUP LEARNING IN A CORE CURRICULUM

A. Situation with which the project dealt.

The Department of Nursing at St. Anselm's College has been in the process of developing and implementing an innovative curriculum design consistent with current trends in education. The department has been moving toward a curriculum in which students actively participate in their own learning through independent study, and instructors serve as facilitators of learning.

In 1966, the groundwork for this project was laid when Mary Bruton, Assistant Professor, Medical-Surgical Nursing, elaborated a three-year project entitled: "Development of a Core Curriculum Based on Identification of Common Principles and Concepts Underlying Professional Nursing" (NPG - 158-03). This 1966 project was supported by HEW, Public Health Service, and was funded under the Nurse Training Act of 1964. The Project Team[5] spearheaded faculty planning for a program which abolished the old divisions of nursing courses according to clinical disciplines and promoted a curriculum which applied concepts and principles common to all disciplines. Students graduating from this program could be flexible in applying their education to diverse nursing situations. In addition to saving teaching-learning time, needless duplications of theoretical and practical learning experiences were eliminated. The faculty considered this approach especially important in a world where specific knowledge becomes obsolete in a relatively few years.

In the implementation of this curriculum team teaching, seminars, and independent study were emphasized. This approach began with the class entering in 1969, and curriculum development continued while students in the three upper classes were completing their program under the previous set of courses. The next section describes how the project emerged out of the curriculum development concerns that came out of the 1966 project.

B. Anticipated outcomes prior to the initiation of the project.

During the initial implementation of the curriculum in 1969, the need was seen for additional instructional media resources and an environment more conducive to independent and small group learning. Educational technology, using the systems approach to integrate people, processes, and devices, was seen as a practical way to meet the needs of an increasing student enrollment and to mediate new teaching-learning strategies.

The general plan was to 1) rehabilitate the flexible space that was already available in a relatively new nursing education building in order to extend seminar space and make all areas more workable; 2) plan and equip single and small group study carrels with audiovisual hardware and software as part of the total instructional system; 3) provide portable classroom equipment for all three floors of the building; and 4) support instructors by increasing their ability to apply educational technology.

Outcomes anticipated were to effect both students and faculty: 1) for students, active participation in and responsibility for their own learning, independent thinking, increased involvement in group process and social responsibility; and 2) for instructors, facilitation of the changing role from content provider to manager of learning experiences and more time for individual student guidance.

C. Changes in originally approved plan and reasons for them.

There were no major changes in the concept for development of resources. There were changes in approach to the 1) format of the syllabus; and 2) videotape (VTR) distribution system.

As the faculty gained experience with the development of the syllabus for the core curriculum, it became apparent that learning packages (LP) were advantageous to both students and faculty. Learning packages assist students by 1) clearly stating learning outcomes and evaluation procedures; 2) providing for alternate learning styles, media and pacing; and 3) encouraging self-directed learning. LP's assist faculty by improving communications about teaching process and objectives among team members and providing a more systematic tool for evaluation of student learning.

As we gained experience with the black/white (b/w) VTR production and playback system, exploring methods for maximum utilization and evaluating potential for the future, we determined not to proceed to a color camera system in the third year as previously planned. Color production presents more technical complexity and more costs for maintenance. In our situation, b/w productions are satisfactory in most instances.

The advantages of an intramural closed-circuit TV system (CCTV) had become apparent to us as a result of our experiments with small groups of students in several rooms simultaneously viewing a televised demonstration followed by discussion and activity. The CCTV system has a built in potential for the future as quality educational CCTV becomes more readily available. TV monitors or receivers in this system have been purchased in two modes, b/w for our own productions and color for use with "off the air" programs or purchased software.

D. Outcomes of the project and how determined.

1. Trend toward learning packages.

The core curriculum is presented in a format which requires more active participation by the student in his own learning. The course syllabi are becoming more directed toward achievement of behavioral outcomes. In 1972, the first LP based on behavioral objectives was prepared for orientation to independent study and the Instructional Media Center (IMC). This LP was revised and additional LP's were developed and utilized the following year. In 1975, the whole sophomore course, The Nurse Becoming (TNB), was presented in the LP format. This proved valuable to students and instructors in that students knew what was expected of them from the beginning of the course, and communication among team members was facilitated. Impetus for writing a renewal proposal was initiated in order to finance expert assistance to the faculty for development of the curriculum in the LP learning-teaching strategy. This activity would take advantage of gains already made in experience and in curriculum design.

2. Learning environments are different.

The use of available space and facilities has changed. The IMC complex located on the first floor has expanded from a single large room holding ten hospital bed units, an eight-cubicle dressing room and a storage room to include the total classroom area of that floor. It now consists of the original space plus two other large rooms about 30' by 24', a work room, and the auditorium which seats 90 to 100 students. The room released by the elimination of large group nutrition labs has provided additional space for simulation labs. Airconditioning and acoustical tiles have been added to the two rooms which house the greatest number of carrels and software.

With the addition of folding partitions in two large classrooms, two more seminar rooms were made available resulting in a total of nine rooms equipped with seminar furniture. The furniture was purchased from funds other than project money. Classrooms on all three floors are now equipped with chalkboard, bulletin board, screens with additional portable multiscreen ability, and overhead projector on a cart. Additional portable equipment on each floor includes slide/sound/sync projectors, opaque projectors, and video production and replay equipment.

Found space, such as a dressing room unused since fundamentals classes in the old curriculum and a custodian's storage room in the IMC area, have been converted with shelf-lined walls for storage and work areas equipped for production of materials or preview of programs by faculty. A seminar room, Rm. 205, has been made easily convertible from seminar space to a VTR production area by placing heavy equipment on portable carts and rolling to one wall when not in use.

An ingenious intramural closed-circuit television system (CCTV) was installed on the first floor only by the personnel of the Audiovisual Department of the College. Nothing more than a few hundred feet of wiring and a directional center switch in the corridor was necessary with the regular VTR equipment. As a result, instructors have been able to divide large classes into small groups of students to observe and practice with demonstrations originating in one room and simultaneous audiovisibility in three additional rooms.

Simulated clinical laboratories are provided for practice of perceptual-motor skills prior to providing direct care to assigned patients. Examples of the kind of simulation labs responsive to this strategy have been Lamaze exercises, cardiopulmonary techniques, tracheotomy care, and postural drainage. Situations for demonstration or problem-solving can be prepared and videotaped for independent use or group scheduling. The VTR system provides a means for self-evaluation by immediate playback. The videotape can be erased and rerecorded when the program is no longer relevant. This system has made possible more effective use of time and has decreased needless repetition.

A wall-hung intramural CCTV system has been purchased for the rooms in the IMC complex and the classroom/seminar rooms on the second and third floors. The TV monitor/playback systems offer many opportunities, since they can be used singly or as a broadcast system for conferences, discussion programs, taped programs, or

"off the air" programs. By having CCTV on all three floors, both Junior and Senior Year Classes will be able to benefit from the simultaneous ability to divide these large classes into small groups.

Public address (P.A.) systems with provisions for recording are availabe in the larger rooms. As a result, input classes are taped and then made available in IMC to students and instructors for reinforcement and review. Registered nurses in the program preparing for challenging examinations in Nursing I and Nursing II may use the lecture tapes, as well as other software in IMC, as needed. In these ways, the range of instruction beyond the classroom of origin is augmented by the availability of tapes following presentation and demonstration.

Selections of software and other learning materials in IMC have increased considerably. For example, we have doubled the sound/slide/filmstrip library and tripled the film library. Problems from heavy wear and tear on filmstrip programs have been avoided by converting all filmstrips to slide/sound format in the Caramate or Kodak Carousel/Wollensak player mode. This was done with permission from producers or distributors. For easy reference, programs are catalogued under title and subject matter.

In proximity to the sizeable inventory of software, fifteen wet carrels with slide/sound capability are spaced in small clusters. Additional slide projectors, filmloop projectors, Caramates, and a number of audiotape recorders and cassette players are available for use in the many locations of the IMC complex where an electric outlet is provided. In addition three Sony VTR

portapak and TV cameras with playback and monitors are availabe on each floor.

Materials, such as models, health care equipment, and audiovisual programs, are readily available for learning reinforcement, enhancement or supplementation of classroom input, and review on demand. A list of the major hardware, instructional equipment, and quantities of software purchased with grant funds in order to facilitate attainment of project objectives, may be found in Appendix C.

With the exception of holidays and college recesses, the IMC has been available to students and instructors from 8:00 A.M. to 9:00 P.M. four days per week, from 8:00 A.M. to 4:30 P.M. on Fridays and several hours on Saturday and Sunday.

3. Faculty role.

The faculty are becoming managers of learning. Since many basic course segments, either purchased or faculty-made, are provided in IMC, and additional resources are now available for demonstrations and illustration, less class time is spent with non-changing and repetitive content and demonstrations. Faculty members have more time available for planning and guiding student activity and for individual and small group conferences. This has been made possible by the expanded IMC, use of CCTV, additional seminar rooms and beginning use of the LP format.

Simulation labs are planned for faculty evaluation of student perceptual motor activities and practice. All instructors share responsibility for planning and supervising these labs.

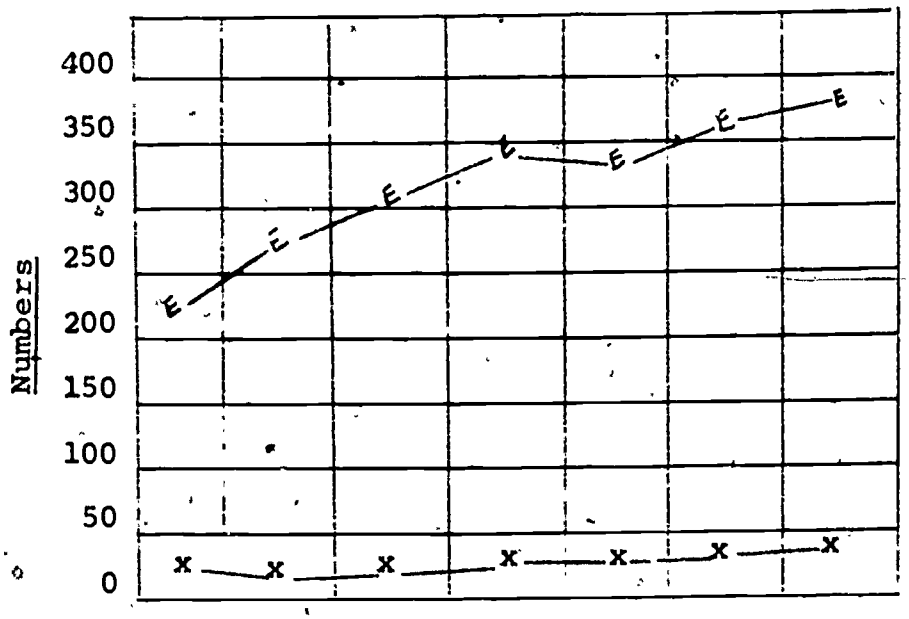
There has been an increase in faculty involvement in the production of learning materials for class use and development of materials for student us in IMC.

The number of faculty members in the Department of Nursing has not increased proportionately to the increase in numbers of students. Table 1 shows the comparison of total faculty/total student numbers (Freshmen through Seniors) under the old and new curriculum. As can be seen in Table 2, the total faculty/total student ratios have increased from 1:7.5 in 1969 to 1:11 in 1975

Table 3 shows the clinical faculty/student numbers in the clinical area from 1969 to 1975. Table 4 shows that the clinical faculty/student ratio in the clinical area was 1:5.5 in 1969 whereas, in the years following the implementation of the new curriculum, the faculty/student ratio in clinical areas rose to a more practical, economical, and highly acceptable level which fluctuates from 1:6.5 to 1:7.7 in 1975.

TABLE 1

Comparisons of Total Faculty/Total Student Numbers (Freshmen through Seniors) Under the Old and New Curriculum*, 1969-1975.



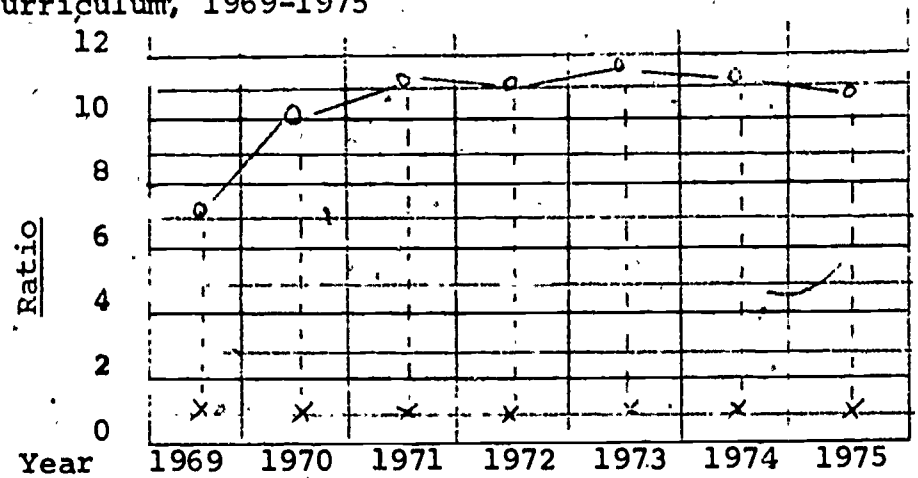
E = Student enrollment:
211 265 308 348 329 363 371

X = Number of faculty:
29 26 27 30 30 32 35

* 1969-1972 Students in both old and new curriculum
1972-1973 First class to graduate under new curriculum

TABLE 2

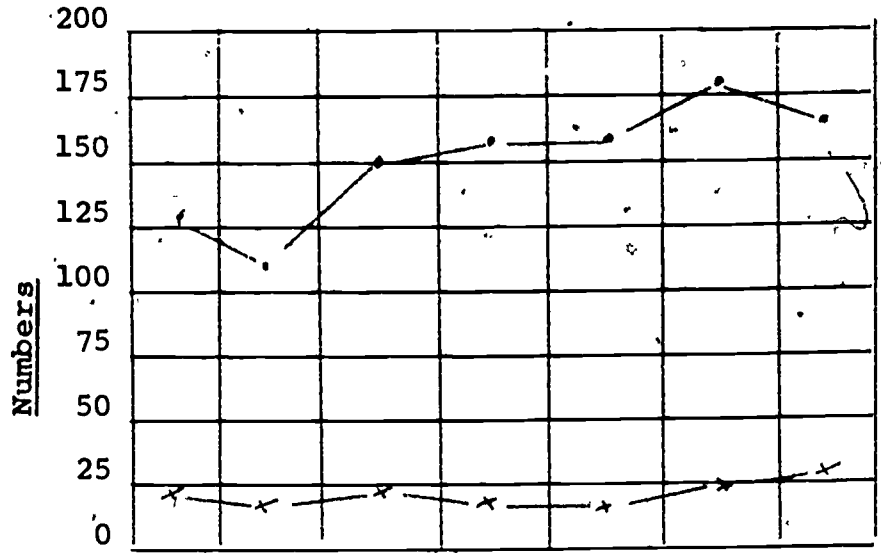
Comparisons of Total Faculty/Total Student Ratios (Freshmen through Seniors) under the Old and New Curriculum, 1969-1975



x = Faculty
0 = Student Ratio
1:7.5 1:10 1:11.4 1:11 1:11.7 1:11.1 10.7

TABLE 3

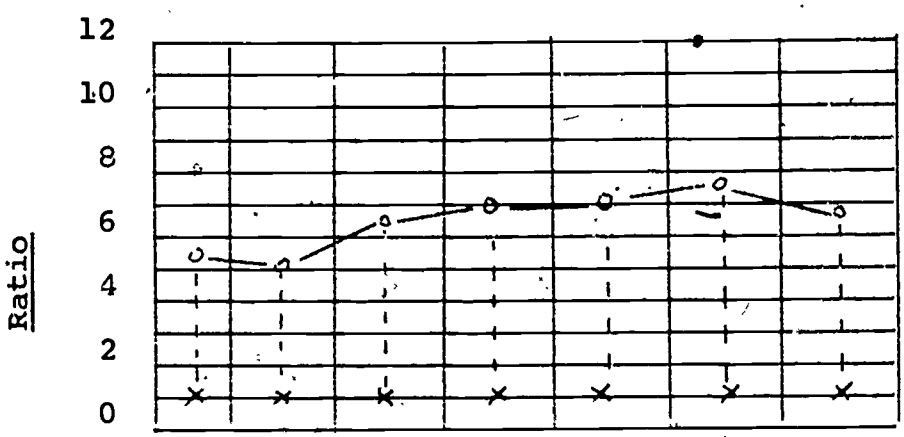
Comparison of Clinical Faculty/Student Numbers (Juniors and Seniors) in the Clinical Area, 1969 - 1975



Year	1969	1970	1971	1972	1973	1974	1975
•___• Students in Clinical Areas	128	113	150	159	159	177	164
x___x Clinical Faculty	23	22	23	22	22	24.5	26

TABLE 4

Comparisons of Clinical Faculty/Student Ratio (Juniors and Seniors) in the Clinical Area, 1969 - 1975



Year	1969	1970	1971	1972	1973	1974	1975
X__x Faculty	23	22	23	22	22	24.5	26
o__o Students in Clinical Area	128	113	150	159	152	177	164
Ratio	1:5.5	1:5	1:6.5	1:7	1:7	1:7.7	1:6.5

4. Student role.

The student role has changed. Students are oriented to independent study and the use of the IMC prior to entering the nursing major. As a result, they participate more actively and accept more responsibility for their own learning; therefore, fewer assistants are needed to manage IMC. Students are also changing their expectations of instructors from providers of information to that of guiding learning activities. Students are encouraged to manage their time and incorporate their own unique methods of learning. They have the use of IMC for research and for completing assignments. Through increased use of the seminar method and small group activity, students learn from each other. The use of videotape permits students to learn through self-evaluation or immediate feedback by peers and instructors present during the activity.

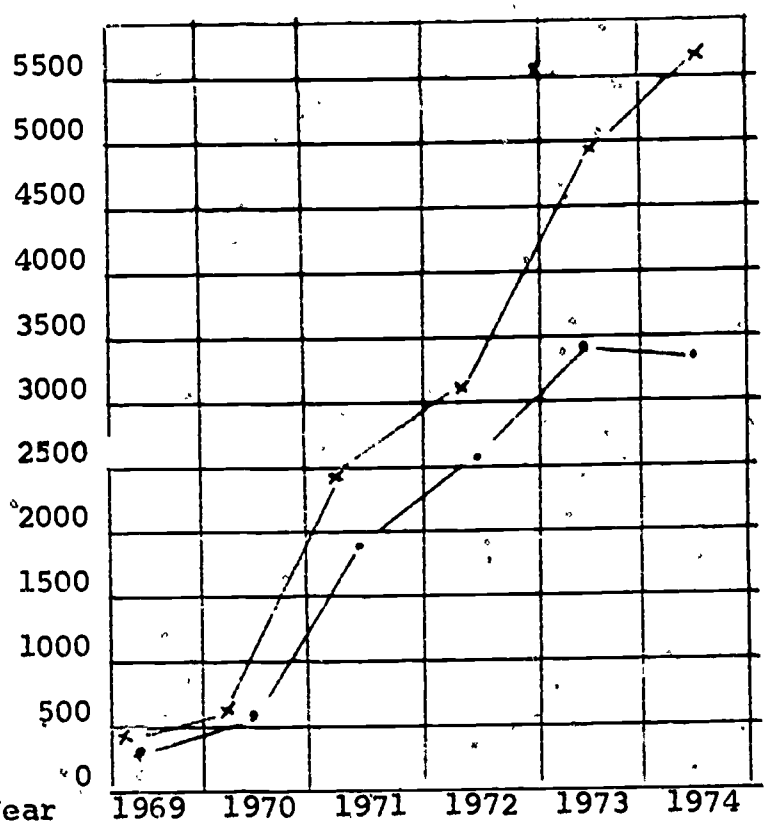
Since 1969, student enrollment has doubled from 184 students to 363 students in 1974-75. During this time, the use of IMC has increased elevenfold, and each student is spending more time putting the facilities to use. Table 5 shows data on utilization of IMC for independent study for the past six years. The presented data does not include scheduled group activities and simulation labs which have increased proportionately to independent study. When looking at Table 5, another variable to consider is that individual utilization is probably twice as much as recorded. Spot checking usually revealed that about half of the students "forgot" to make out a sign-in slip.

TABLE 5

INSTRUCTIONAL MEDIA CENTER UTILIZATION

INDEPENDENT STUDY ONLY

September, 1969 to August, 1975



	1969	1970	1971	1972	1973	1974
Code ._. No. of Sts.	309	530	1836	2507	3397	3321
Code x__x Total St. Hrs.	490	642	2489	3047	4975	5618

5. Other outcomes.

We have no concrete evidence to determine the influence which we have exerted on other departments at St. Anselm's College; however, IMC has been used to demonstrate the use of media in teaching-learning situations to students in the teacher-training courses.

Our IMC facilities have been visited by faculty from schools of nursing in several states, including the six New England States, but in this case as well, we cannot document our influence. Information has been shared relative to IMC management and technical assistance, integration of instructional media into the curriculum plan, production of learning materials, and preparing the students and faculty for their changing roles.

We have not been able to determine cost per student because of the lack of a valid method. The literature does not give much assistance.[6] In 1970, the President's Commission on Instructional Technology reported that techniques of analysis at educational institutions was very crude. "The costs of instructional technology cannot be taken in isolation. They must be compared with the costs of other forms of instruction, as well as the real costs to society of an unproductive educational system."[7] As noted by Richard Hooper in the Commission's report, the human process of education would always defy measurement. He adds that the benefits of education which can be given a dollar value, such as higher earning power, should not be overemphasized at the expense of the benefits which resist economic anaylsis.[8]

At the June, 1975, convention of the National League for Nursing, researchers reported that an acceptable valid method for

determining the cost of education per student of nursing has not been determined, nor can it be with present methods. An entire research program is being developed to try to solve this problem of computing costs in the various nursing education situations.

E. Factors that influenced these actions

1. Faculty.

The readiness of the majority of the existing faculty to undertake further changes during implementation of an ongoing unfamiliar curriculum and the willingness and pioneering spirit of newly appointed faculty have been positive factors in the outcomes of the project. Prospective faculty are made clearly cognizant of the evolution of the nursing education program. On appointment, new faculty members are absorbed into a teaching team and oriented, guided, and supported by coordinators and team members. The Faculty Development Committee has worked with the project team by assisting with planning time and in-service educational programs.

2. Administration

Impetus from Department of Nursing administration personnel with continuing encouragement, counseling, and support were the catalysts which motivated faculty and project team members to pursue the objectives of the project and to plan continuation, as the curriculum trend to learning packages became stabilized. Project outcomes were strengthened by counseling received from the college administration and their cooperation in rehabilitating, expanding and providing additional space for the IMC. Funds were also provided beyond those made available by the project grant.

3. Funding

Financial support from HEW, Public Health Service, for three years was a sine qua non for project implementation. Personnel were supported to permit giving full time to planning, purchasing, managing and developing a media center for activities integrated into the curriculum design.

Funds were also made available for attending professional conventions and workshops which kept project personnel updated in the field of educational technology and trends in nursing education. It was made possible for our staff to visit other professional schools which promoted educational trends relevant to our curriculum.

4. Consultants

Specialists in media and curriculum development were consulted and contributed greatly to the process and progress of the project. We were greatly helped by Dr. Gaylen Kelley, Director of Media Services, School of Education at Boston University; Dr. Thomas Cyrs, Jr., Director of Instructional Systems Development, Office of Education Resources at Northeastern University; and Dr. Marlene Kramer, Professor, School of Nursing, University of California at San Francisco. Faculty workshops and conferences had considerable influence upon the curriculum implementation process and the evolving trend toward learning packages.

5. Audiovisual Department, St. Anselm's College

The staff of the college AV Department rendered substantial assistance in early planning and continuing development of the media center, along with selecting, purchasing, evaluating and maintaining equipment and educational materials. Functioning of IMC

depends upon assistance in maintaining hardware and producing selected programs. AV personnel have also been involved in orientation of faculty and students to the policy and procedures of the media center.

6. Instructional Media Center

Pre-existing facilities made us realize the potential for media in strengthening our curriculum.

7. Students

Students have influenced our progress by utilizing, critiquing, and evaluating materials and management methods during the development of IMC. Because of student request and the responsible student assistance provided by the college work-study program, hours for supervised use of IMC have been extended.

F. Description of effects of the project on the nursing education program.

Project funding has provided the Department of Nursing with a capability for 1) curriculum evolution; 2) enhancement of environmnent which, under anticipated budgeting practices, would have required decades to accomplish; and 3) change of student-teacher role.

1. Curriculum

Because of expanded resources made available with grant funding, the teaching-learning strategies utilizing team teaching, seminar, and independent study have progressed more rapidly. As a result of the interaction of people, processes, and materials made possible by the grant, with a focusing on current trends in education, the teaching approach has evolved now to include learning packages.

2. Environments

The rehabilitated space, found space, media available to use as quickly and simply as possible, and increased academic resources motivate students to self-improvement, organization of own learning time, and utilization of individual abilities. As was seen in Table 5, page 13, there has been a rapid and marked increase in the utilization of IMC resources.

3. Student-teacher role

Learners have adapted to a different method of study and have changed their expectations of instructors. The students have more freedom in using unique methods of study and selecting time for their most receptive learning. There is more opportunity for social responsibility through mutual decision-making in the group process. In addition, there is more capability for individualizing the program for registered nurses to match their strengths and strengthen their weaknesses.

Expanded capabilities have led to the faculty development of a more creative approach to the teaching-learning process. Repetitive and routine instruction has been reduced. Faculty serve an expanded student population, yet more time is available for small group and individual student guidance. The development of LP's by the faculty has promoted the change of role from provider of information to facilitator of learning.

G. Brief summary of what this project has meant to the nursing program involved.

This project has provided the Department of Nursing at St. Anselm's College with the resources to proceed with greater speed and effectiveness in the implementation of the core curriculum. The result has been a changed environment and a different model for the approach to teaching-learning activities.

Space has been expanded and made more flexible in two major areas: 1) two additional seminar rooms have been provided, and 2) the Instructional Media Center has grown to include one floor of an entire classroom wing. These areas have provided a more adequate environment for simulation laboratories small group interaction, and independent study.

The utilization of hardware, software, and other selected materials for enhancing the learning process has increased, providing the opportunity for students to be more self-directing and self-pacing in their learning. These materials have also freed the instructors from repetitive demonstrations and presentation of didactic course segments which remain the same.

With the changing faculty role from content provider to facilitator of learning, a more creative approach to teaching-learning has evolved to the general acceptance of and experimentation with learning packages. This trend has led to further plans for providing expert assistance in designing learning packages.

H. Plans for continuing activities of the project

To take advantage of the gains already made in the development of resources for independent and small group learning in a core curriculum, a proposal for a two-year renewal of the project was written and submitted to HEW, PHS. Approval of the renewal project has been granted and funds for the first year allocated.

The purpose of this renewal proposal is to strengthen and to continue development of the curriculum by providing, for a two-year period, supportive services to faculty in terms of an Instructional Designer, a Media Specialist and an Instructional Media Center Manager, in order to develop learning packages and build immediately on recent experiences and gains already made.

The objectives and proposed methodology are to 1) develop and revise learning packages by providing relevant faculty development in order to continue project activities after grant termination; 2) provide, for a two-year period, full-time supportive assistance for faculty in order to meet the foregoing objectives. The supportive personnel - an instructional designer, a media specialist, and an IMC manager - have been appointed and have practically completed the orientation and planning stage for the continuation of the curriculum progress through development of learning packages.

I. Enrollment in the nursing program

A. At the start of the project period, June, 1972 - 301

B. At the end of the project period, June, 1975 - 363

FOOTNOTES

Page

1. Roland Faunce and Nelson Bossing, Developing the Core Curriculum. New Jersey: Prenctice Hall, Inc., 1951, pp. 48-74 — iv

2. Working definition used by Consultant, Dr. Thomas Cyrs, Jr., Northeastern University, Boston, Mass. — iv

3. Sitts, Maxine, Reporter, "ERIC", Audiovisual Instruction, December 1972, 50 — iv

4. AECT Guidelines, 1974. Association for Educational Communications and Technology, Washington, D.C. — iv

5. Assistant Professors in the Department of Nursing, St. Anselm's College: Mary Bruton, Mary Cunningham Ann McDermott, and Mae Simpson — 1

6. Edward P. Coffarella, Jr. "How Little Do We Know About the Cost-Effectiveness of Instructional", Technology", Educational Technology, January, 1975, pp. 56-58 — 14

7. To Improve Learning, A Report to the President and the Congress of the U.S. by the Commission of Instructional Technology, March, 1970, pp. 85-91 — 14

8. Ibid: p. 91 — 14

APPENDIX C

List of Equipment Purchased to Facilitate Attainment of the Project Objectives

Models and Simulation Equipment

Resuscitation and Orthopedic

Storage Units

Shelving, filing cabinets, stacking chairs
Folding tables, Chalkboards

Software, commercially produced

182 Filmstrips, converted to
182 Slide/sound/sync programs
15 Slide programs
23 16 mm Films
30 Filmloops
107 Audiotapes

Selection of transparencies, records, programmed instruction, videocassette, learning kits, posters, games, charts

Hardware

15 Carrels, wet (4 equipped)

Portable Hardware for IMC carrels and classrooms
Cassette tape recorders and/or players

23 Wollensaks
55 Sharp, Panasonic, Norelco
73 Headsets
23 Kodak Carousel slide projectors
11 Singer Caramate units
2 Opaque Projectors
5 Overhead Projectors
3 16 mm film projectors, 6 close-up lenses
1 Filmstrip projector, 2 filmloop projectors
5 Pieces multi-image equipment
25 Portable projector carts
12 Projection screens
P.A. System

Videotape Production/playback equipment (Classroom, studio, and IMC)

1 Ministudio setup
2 cameras, PA system, accessories

Portable Hardware, continued

3 TV cameras (Sony)
9 VTR 3600 and 3650
1 Umatic video cassette player 3/4"
19 TV sets 11 color 25", installed
2 color 9"
6 B/W 19"
3 Sony Portapack
1 Repromaster
1 Filmstrip Kit and 2 camera setups

Office Equipment

2 IBM Typewriters
1 IBM Bulletin Typewriter
1 3M Secretary Copier