

EVALUATION OF THE USE OF INDEPENDENT STUDY MODULES

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The only man who is educated is the man who has learned how to learn . . . how to adapt and change . . . that no knowledge is secure, that only the process of seeking knowledge gives a basis for security. (Rogers, 1969)

Independent study modules have been used in each year of the new undergraduate curriculum as one means of meeting the instructional demands arising from increased numbers of students with a variety of learning needs and styles. (Lange, 1973, Postlethwait, Novak and Murray, 1969; and de Tornyay, 1971). Since evaluation of student response to this learning approach is an integral component of educational planning, the third year of the B.S.N. programme has implemented two methods of assessing effectiveness of self-directed learning in relation to expected behavioural changes.

The third-level nursing course has been directed toward the study of maturational problems of individuals and families. Based on the U.B.C. School of Nursing Behavioural System Model, it reflected the spiralling nature of the ladder curriculum.

The student body of the third year was composed of two groups. One group (approximately two-thirds of the class) entered from the preceding two years of the programme. Another group (approximately one-third of the class) entered having received a diploma in nursing (R.N.) from other educational institutions. These groups of students were combined in all phases of instructional activity, that is, lectures, seminars, and clinical experiences.

The individuals who made up these groups embodied a multiplicity of variables. Chronological ages ranged from twenty to fifty years. Many students had previous university courses or degrees and others had extensive nursing experiences as head nurses, intensive care nurses, and general duty nurses. However, two-thirds of the students had minimal nursing practice outside the prescribed clinical experiences.

In an attempt to accommodate the variety of life experiences, previous learnings, professional work experiences, and personal/professional goals, independent self-directed study modules were used in the third year.

THE MODULES

Nine modules were designed to enable students to study core course concepts independently of instructors. Units of study were self-contained and inclusive of :

1. objectives
2. suggested learning activities
3. reading guides
4. pre- and post-tests with answer key
5. xeroxed copies of selected readings
6. five-to-ten minute video-cassettes which demonstrated application of selected concepts in a family setting

The titles of the modules were :

1. Family Structure
2. Family Interaction
3. Self-Concept
4. Role Performance
5. Interplay of Self-Concept and Role Performance
6. Maturational Crisis Situations
7. Potential for Use of Therapeutic Groups
8. Teaching in Therapeutic Groups
9. Therapeutic Use of Self

The sequence of the modules was correlated with lecture topics throughout the fall term.

METHOD OF STUDY

The nine modules were available for student use eight to twelve hours daily six days a week. Access was on an "honour" basis, that is, students were free to choose if and when they studied them, and the suggested learning activities within each module provided for a selection of options best suited to the individuals' learning needs. An attendant was present at all times to solve minor technical and administrative problems.

EVALUATION

Two module evaluation forms were administered to the student body. One, designed to elicit descriptive information, was distributed at the end of the first term prior to the examination period. The other, designed to gain data in relation to time of study, exam scores, and term paper scores, was distributed for completion during review of the Christmas exam. The total student population in the third year was 117; the response to both evaluation forms was 85. Some students did not respond to some questionnaire items; others chose not to respond at all.

The first evaluative tool sought to obtain information on each of the nine modules in relation to:

1. use of the module
2. module design
3. learning need satisfaction

The number of students who completed any given module ranged from 79-84. A large proportion of respondents, therefore, completed each component of study.

Students who completed all the suggested learning activities for each module ranged from a low of 41 percent in one module to a high of 53 percent in another module. Thus, a large proportion of students did not complete all learning activities. One reason could have been that some activities were not perceived as useful. This may be due to previous learning or inappropriate content.

For each module, different percentages of students reported satisfaction with different elements of design. In the first three modules only 63 percent of the students saw a relationship between the objectives and the content. A maximum of 81 percent of students were able to identify this relationship in another later module. These low percentages, particularly in the first three modules, suggest that the objectives may not have been clearly stated. Also, content included in the modules may not have related closely to the learning objectives. Additional materials may need to be added and review of the objectives may need to be undertaken.

Considering the quantity of material included in the modules, students reported low levels of satisfaction. In three modules, only 50 percent of the students felt that there was sufficient content. A maximum of 78 percent of students expressed satisfaction with the quantity in another module. These low percentages further indicate the need for revision of content.

However, repetition of content was not a major source of dissatisfaction. A minimum of 20 percent and a maximum of 30 percent of the students identified it as a problem in different modules. Therefore, when additional materials are added to improve content, care will have to be exercised to avoid repetition.

The organization and clarity of instructions in all modules were satisfactory to the large majority of students.

Generally, students indicated that the last four modules in the sequence were the most useful and enjoyable. Possible reasons for these findings were:

1. level of sophistication of the user (student)

2. level of sophistication of construction of the modules (Module 1 was developed first, Module 9 last)
3. lecture content at the beginning may have overlapped too much or may not have correlated well with the content of the modules
4. clinical experiences towards the end of the term may have provided an arena for immediate application of theory.

The second evaluative tool sought data on how students studied each of the nine modules, their term paper marks, and their correct responses to examination items specific to each module. These data also permitted study of relationships between raw scores on the term paper and the proportion of correct responses on the examination.

Students could have selected to study the modules :

1. during the assigned week
2. prior to Christmas exam
3. prior to writing the term paper
4. not at all
5. during the assigned week *and* prior to the Christmas exam
6. during the assigned week, prior to writing the term paper, *and* prior to the Christmas exam

There was no difference between the study approach students used and their term paper marks. Variables which may have been operating in this instance were: inter-rater reliability in term paper grading may have been low; term paper design may have been such that lecture material was sufficient to meet term paper criteria.

Both the time when modules were studied and the correct responses to exam questions specific to each module were examined and no difference was found with the exception of one module. In this instance it was found that studying the module during the assigned week was more effective. Because this difference occurred only with the first module, discretion must be used in attempting generalizations. Other variables which may have been operating in the situation require isolation and study. More sensitive tools should be effective in isolating pertinent factors and in determining their degree of significance.

The relationship between term paper scores and the proportion of correct responses on the examination was insignificant. Again, inter-rater reliability on term paper grading could have been questionable. Content tested by the two measurement techniques was not analogous. Student skills required in both evaluation methods were not of the same order. Reliability of both measuring instruments is subject to investigation.

SUMMARY

Nine independent study modules were used in the third year of the U.B.C. nursing programme. Nursing students with a variety of backgrounds used this method to study core concepts in relation to working with families. Descriptive information on the modules was collected prior to the examination period. A large proportion of students completed the modules and generally expressed satisfaction with them. A need for additional content was identified. Objective data were collected during review of the Christmas exam. No difference was found in relation to the time when the modules were studied, term paper marks and examination scores.

Additional revision and study are indicated. Refined and more sensitive evaluative tools are being planned for further investigation of module use. Module revision is scheduled to occur during the summer months, using the services of a part-time educational consultant.

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