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IDENTIFICATION OF SUBJECT AREAS APPROPRIATE FOR A CORE CURRICULUM IN A HEALTH SCIENCE TECHNOLOGY PROGRAM

by

Beverley Ann Miller, B.S.N.,

University of British Columbia, 1975

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ABSTRACT

In order to collaborate effectively in planning and delivering health care, graduates of health science technology programs must be aware of the knowledge base and roles of all members of the health care team. Because most health education programs exist in isolation, there is little opportunity for students to acquire knowledge regarding technologies other than their own. One method to decrease the isolation which exists among programs is a core curriculum.

The purpose of this study is to determine if a core of subject matter exists within health science programs that is suitable for a shared approach to education. This descriptive study was conducted at the British Columbia Institute of Technology, which offers ten diploma programs in health.

Based upon a review of relevant literature, a review of the curricula of the ten programs, and recommendations from the Health Division Committee on Integrating Diploma Curricula, a questionnaire consisting of 64 objectives was developed. The objectives reflected knowledge, skills, and values in the following five areas: Health Care System; Professional Role; Inter active Role; Legal and Ethical Responsibilities; and Management and Supervision. One hundred questionnaires were distributed to

faculty within the Health Division of BCIT. The research was conducted using the Delphi technique which is a decision-making process which uses anonymous response, feedback from respondents, and statistical group response.

Questionnaires were distributed in three phases to respondents. In each phase, respondents evaluated each objective on its present level of importance in the curricula, its desired level of importance, its ease of implementation, and its suitability for the curricula of other programs.

On the basis of predetermined criteria, 25 objectives were identified as acceptable for inclusion in a core curriculum. The majority of these objectives concerned the Interactive Role and Legal and Ethical Responsibilities. Thirty-seven additional objectives were rated as requiring further study.

Several recommendations were made. A base core curriculum was proposed for development, using 20 objectives concerning the Interactive Role and Legal and Ethical Responsibilities. Expansion of this base was recommended using selected objectives from sections regarding the Professional Role and Management and Supervision.

ACKNOWLEDGEMENTS

Through their patience and support a great many people have contributed to the completion of this study. I wish to acknowledge specifically the cooperation of the dean, department heads, and faculty of the Health Division at B.C.I.T. who participated in the survey. I also wish to thank Dr. Dianne Common and Dr. Tom O'Shea for their guidance and encouragement.

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A final force responsible for the growth of interdisciplinary education is the academic institution. Typically, academic institutions approach interdisciplinary education through projects which are externally funded or through institution wide administrative units. Connelly included the University of British Columbia as a basic model of institution wide administrative units for interdisciplinary activity. One notable exception to the typical approach of academic institutions has been the University of Kentucky. From its origins in 1972 as the "Kentucky January Program", the college has developed a National Centre for Interdisciplinary Education in Allied Health. This centre serves students in eighteen disciplines from twenty colleges and universities. Connelly stated, "the centre, the only one of its kind, has a mission of serving as a resource centre for other institutions in preparing strategies, materials, and experiences for students and faculty in interdisciplinary education" (1981, p. 86).

Several studies have been done which indicate the value assigned to the interdisciplinary education of health science technologists. In a survey of 54 physician's assistant and 60 nurse practitioner programs in the United States, McCally, Sorem, and Silverman (1977) reported that 80% of the programs recognized the importance of interdisciplinary activity and included it in

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CHAPTER I

BACKGROUND AND SIGNIFICANCE

Over the past three decades, the number of categories of health science technologists has increased tremendously. Today, over 125 categories of health science technologists exist. As the numbers have increased, the services performed by technologists have become increasingly varied and complex.

Graduates of health science technology programs are expected to be able to collaborate with other members of the health care team in co-ordinating, planning, delivering, and evaluating care. To do so they must not only be aware of each other's knowledge and language base but also be aware of the contribution of one another to the health care of the patient. Lack of an adequate understanding of the knowledge base, roles, and responsibilities of the many categories of health personnel contributes to inefficient and costly health care delivery.

Although health science technologists are expected to work collaboratively, the general absence of shared learning experiences within the preparatory educational programs does not facilitate preparation for this role. In the 1960s, Dr. John McCreary, co-ordinator of Health Sciences at the University of

British Columbia, recognized that separate training programs for health professionals promoted an independent rather than co-operative approach to the delivery of health care. He attempted to develop shared learning experiences for the education of doctors, dentists, dental hygienists, nurses, clinical psychologists, pharmacists, social workers, and rehabilitation and nutritional scientists. A major goal of the Health Sciences Centre at the University of British Columbia was the preparation "of health professionals who are able to provide more effective and economic health care because of shared undergraduate, graduate and continuing educational experiences" (McCreary, Note 1).

Core Curriculum

The use of a core curriculum is one approach to the shared education of health science technologists. Although there is great diversity in the occupations of health science technologists, a base of knowledge and skills is required by all technologists regardless of the field of specialization chosen. Core curriculum has been defined in a variety of ways. However two essential features are characteristic - one being related to content and the other to organization. Firstly, the core curriculum "constitutes the segment of the curriculum that teaches

the common concepts, skills, and attitudes needed by all individuals for effective functioning in society" (Zais, 1976, p. 421). Although the methods of unification vary greatly, the use of core curriculum is an attempt to promote integration through the unification of subject areas. Secondly, core curriculum is administered using a block-time class. That is, a block of time consisting of two or more normal time periods is devoted to teaching the core components. Most often the block-time class is handled by a single teacher.

For the purposes of this study, core curriculum is considered only in relation to the content component. Core curriculum is defined as "that central course or group of courses taken by all students in a school of allied health professions" (Hawkins, 1972, p. 167).

Research Questions

The purpose of this descriptive study was to determine if a core of subject matter, suitable for a shared approach to education, existed within health science technology programs. The study focused on the British Columbia Institute of Technology (BCIT), the major site within the province for the education of

health science technologists. BCIT presently offers ten diploma programs within the Health Division. These ten programs, which are described in Appendix A, include the following:

Biomedical Electronics
General Nursing
Health Information
Medical Laboratory
Medical Radiography
Nuclear Medicine
Occupational Health and Safety
Prosthetics and Orthotics
Psychiatric Nursing
Public Health Inspection

Like many health education programs across Canada and the United States, these programs exist in isolation from one another.

The research questions were as follows:-

1. Can specific areas of knowledge, and the associated learning objectives, which exist within the curricula of two or more health science programs be identified?

2. Can specific skills, and the associated learning objectives, which exist within the curricula of two or more health science programs be identified?

3. Can specific values, and the associated learning objectives, which exist within the curricula of two or more health science programs be identified?

The ideal outcome of the study was the identification of commonalities among all programs. However, the identification of commonalities among two or more programs was an acceptable alternative.

Procedure

The study was conducted using the Delphi technique developed by the Rand Corporation of Santa Monica in the 1960s (Dalkey, a, 1969). All department heads, faculty, and teaching technical staff within the Health Division were asked to participate in three circulations of a questionnaire consisting of an inventory of learning objectives. The participants were given statistical analyses of the results prior to responding to the second and third circulations of the questionnaire. The study reports on the importance of specific learning objectives within the curricula of the ten health science technology programs offered at BCIT. Those objectives identified as important to all ten programs form the potential basis for development of a core curriculum for the Health Division at BCIT.

Significance of the Study

Although the focus of this study was the education of health science technologists at BCIT, the study has relevance for the education of health science technologists elsewhere in Canada. Most health science technology programs are accredited by national associations. Moreover, following completion of programs in several technologies such as General Nursing, Medical Laboratory, Health Information, Nuclear Medicine, Public Health Inspection, and Medical Radiography, students write nationally set examinations. For these reasons, there are many similarities in the curricula of programs from one province to another. Program objectives which are identified as core content for the ten health science technology programs at BCIT may form the basis of a core curriculum for health science technology programs elsewhere.

Limitations of the Study

The study has several limitations. Since the study includes ten specific health science technology diploma programs, the results cannot necessarily be generalized to health science technology programs other than the ten specified. Moreover, the population surveyed includes the dean, all department heads,

faculty, and teaching technical staff involved with the curricula of these ten programs. The number of individuals surveyed on behalf of a specific technology varied from two in the Prosthetics and Orthotics program to 30 in the General Nursing program. To have surveyed on a proportional basis would have resulted in a very small sample.

The inventory of objectives was confined to those professional behaviors believed to be of mutual importance to the education of health science technologists. No attempt was made to include objectives from the science areas. Furthermore, the objectives were defined in fairly general terms because any attempt at greater specificity would have resulted in an unmanageable number of objectives. The majority of the objectives reflected the cognitive and psychomotor domains of learning. Lack of objectives in the affective domain may have limited the breadth of the results. Objectives which pertain to attitude, feelings and values are extremely important in health science technology programs. Because these objectives are difficult to teach and to evaluate, they are often expediently omitted from the curricula. The paucity of objectives in the affective area on the questionnaire reflects concern for the length of the questionnaire rather than lack of appreciation of the value of affective objectives.

Definition of Terms

For the purposes of this study the following definitions are stipulated:

A health science technologist is an individual who provides patient care and health promotion. The term is used synonymously with the American term "allied health personnel."

A diploma program is a program of either two or three years requiring two thousand hours of instruction.

The Delphi technique is a decision making process which has three major features -- anonymous response, iteration and controlled feedback, and statistical group response.

Description of the Study

The study is organized into five chapters. In the first chapter, the problem and its background and significance is described. In the second chapter, a review of the literature in relation to interdisciplinary education, the use of core curricula, and the history and use of the Delphi technique is

presented. The procedures and methodology used in the research are described in chapter three. In chapter four the results of the research are presented. Finally, in chapter five, the findings are discussed, and conclusions and recommendations based on the study are presented.

CHAPTER II

LITERATURE REVIEW

The twentieth century is unprecedented in the amount of new knowledge which has been created. This expansion of knowledge has had tremendous impact in particular on our understanding and practice of health care. At the turn of this century, the primary contributors to health care were few in number - essentially the general practitioner and the nurse. Today, the knowledge and skills necessary to meet the health needs of society demand a wide variety of workers. Although numerous health science technologies exist today, the pattern for the emergence of these technologies has been remarkably similar. Each technology has emerged in response to a distinct need created by new knowledge, increased mechanization, and the demand for more services. Preparation for these newly defined roles began with informal on-the-job training and has eventually been transferred and formalized within educational institutions. The transfer and formalization of training has usually been accompanied by the development of a professional registry and increasing standardization of education. Today over 125 health science technologies exist.

The degree of isolation of health science education programs

is a problem of serious concern to health science educators. Based on the general pattern characterizing the emergence of each new technology and the desire by each group to carve out and define its own role within the system, program isolation is not surprising. This study assumes that such isolation is neither economically, educationally, nor morally sound.

The realities of practice dictate that health science technologists must work as a team in providing patient care. Connelly (1978) believed that new professionals often experience a "practice shock" of frustration and unhappiness in dealing with actual situations involving other professionals working with the same patients. He believed

> in truth, today's "health care team" basically resembles a track team. Each profession runs its own race, puts its own shot, jumps its own hurdles and then, at the conclusion of the event, totals the score to see who has won. (p. 275)

One of the most effective means available to health science educators to reduce "practice shock" and increase the effectiveness of the health care team is the use of interdisciplinary educational activity. This chapter of the study is directed specifically to a review of the literature in relation to

interdisciplinary education and the use of core curricula as one method of achieving interdisciplinary education. The research was conducted using the Delphi technique as a process for identifying a core curriculum. For this reason, relevant literature concerning the Delphi technique is included.

Interdisciplinary Education

Since the 1970s the term "interdisciplinary" has been prominent in the health science literature of the United States. However, as indicated by Connelly (1981), this term is defined differently by those in higher education, general health science, and allied health. For the purposes of this study, interdisciplinary education is

> that process which develops as its ultimate outcome the collaborative and interdependent action among two or more persons of different disciplines revolving around accomplishment of tasks or achievement of goals which could best be achieved through such effort. (Connelly & Clark, 1979, p. 6)

When discussed in relation to educational programs, the term interdisciplinary also implies coordination of goal attainment efforts from a higher level.

The initiative for interdisciplinary education has not arisen from the educational centres but rather primarily in response to the needs arising in health care delivery. Connelly (1981) cited five major forces responsible for the growth of interdisciplinary education. As early as 1964 the professional organizations representing the American Medical Association and the American Nurses Association, promoted collaboration between physicians and nurses. A second major force promoting interdisciplinary education in the United States has been federal agencies. Since the mid-1960s special funds have been allocated for interdisciplinary activities in relation to medicine, nursing, and other allied health fields. In addition, students have shown much leadership in interdisciplinary projects. They have promoted interdisciplinary activities not only within educational institutions but also in community settings. A fourth major force promoting interdisciplinary education has been private organizations. For example, the Robert Wood Johnson, Kellogg, and Ittleson Foundations have been extremely generous in their financial support. A recent approach to promoting interdisciplinary education has emerged in the form of a group of faculty members from the University of Washington who hope to promote interdisciplinary education through influencing the private sector. This Seattle based organization is called New Health Perspectives.

A final force responsible for the growth of interdisciplinary education is the academic institution. Typically, academic institutions approach interdisciplinary education through projects which are externally funded or through institution wide administrative units. Connelly included the University of British Columbia as a basic model of institution wide administrative units for interdisciplinary activity. One notable exception to the typical approach of academic institutions has been the University of Kentucky. From its origins in 1972 as the "Kentucky January Program", the college has developed a National Centre for Interdisciplinary Education in Allied Health. This centre serves students in eighteen disciplines from twenty colleges and universities. Connelly stated, "the centre, the only one of its kind, has a mission of serving as a resource centre for other institutions in preparing strategies, materials, and experiences for students and faculty in interdisciplinary education" (1981, p. 86).

Several studies have been done which indicate the value assigned to the interdisciplinary education of health science technologists. In a survey of 54 physician's assistant and 60 nurse practitioner programs in the United States, McCally, Sorem, and Silverman (1977) reported that 80% of the programs recognized the importance of interdisciplinary activity and included it in

their curricula. Jacobsen (1977), using an expert panel of 15 vice presidents of health science centres, determined through the use of the Delphi technique that "the concept of interdisciplinary education in the health professions is valued as an important method to achieve the synergistic delivery of health care" (p. 10). The importance of interdisciplinary education was further supported in a study conducted by Gillespie (Note 2) of BCIT. Employers, graduates, and faculty indicated 79% agreement with implementing interprofessional health science education at BCIT.

Furthermore, the major objectives of interdisciplinary education have been defined. Jacobsen (1977) identified these objectives as follows:

1. Prepare the health professional student to deliver coordinated health care.
2. Develop a common philosophical frame for shared values and goals.
3. Develop a mutual respect for various members of the health care team.
4. Develop willingness to share responsibility for planning and delivery of patient care with multiple health professionals.
5. Orient the student to the various professional roles in order to facilitate cross-disciplinary communication and planning of health care.
6. Develop a common language among health professionals.
7. Demonstrate the delivery of team health care. (p. 10)

The literature also indicates general agreement regarding methods for achieving interdisciplinary education (Bassoff, 1977; Connelly, 1981; McCally et al., 1977). Such methods included mixing students of varying professional disciplines in the same course and classroom, establishing courses dealing with inter-professional issues, mixing students in the clinical setting, and bringing together students, faculty members, and administrators of differing schools and disciplines in the planning of joint activities.

Jacobsen's research (1977) supported the belief that all forms of interdisciplinary mixing of students and faculty result in the achievement of interdisciplinary goals but only if activities are planned specifically to meet these goals. The haphazard mixing of hetereogeneous students without a planned strategy can result in negative rather than positive interdisciplinary experiences. Furthermore, Jacobsen's work supported the use of the experiential clinical team as the most effective strategy for achieving the interdisciplinary goals. This approach received further support from the Centre for Interdisciplinary Education in Allied Health. In rating the potential effectiveness of teaching strategies for attaining learning results in interdisciplinary problem areas, the centre rated straight lecture delivery as low, seminar delivery as medium and patient care teams as very

high (Connelly, 1981). As Connelly stated, "This ... does not suggest that straight delivery (lecture, etc.) is inappropriate in interdisciplinary education but that learning outcomes are better as the students' participation level increase" (p. 89). The early experiences of Dr. John McCreary, Co-ordinator of Health Sciences at the University of British Columbia, clearly reflect a similar attitude. McCreary found that "the best results were obtained when students of various disciplines were brought together in a clinical situation faced with a patient who had a problem" (Note 1).

Although the literature indicates widespread support in principle for interdisciplinary education, evidence in practice is much less apparent. In a survey of academic programs in health science including dentistry, medicine, nursing and social work, Dukanis and Golin (1977) reported that 90% of the respondents indicated that it was important to have specific courses about the health care team. However, only 34% of the programs surveyed offered such courses. In discussing the need for co-ordination of educational programs, John Evans, Dean of Science at McMaster University, cited the following as interferences to interdisciplinary education:

1. Geographic isolation of the facilities for individual educational programs.
2. Professional rivalry and identity.
3. Fear of domination by medicine.
4. Dissimilarity of the knowledge base.
5. Different levels of maturity of students. (Note 3)

Jacobsen (1977) identified the following list of barriers -- several of which are similar to those cited by Evans:

1. Accreditation agencies who impose rigid standards.
2. Threat of domination by others and turf protection.
3. The lack of a positive image for the concept and misunderstanding of the philosophy.
4. The basic science overload that prohibits the student from paying equal attention to interdisciplinary courses and activities. (p. 11)

The experiences of Szasz (1974) suggested that many of the barriers cited were instrumental in causing the gradual deceleration of interprofessional education in health sciences at the University of British Columbia.

Connelly (1981) further defined the problems impeding the process of interdisciplinary education as being primarily of two kinds -- failure to identify clearly the competencies that interdisciplinary educational experiences create in students, and lack of appropriate evaluation measures to determine if the competencies have been met. Research in both of these areas is very limited. A noteworthy exception was the evaluation conducted by Edinberg, Dodson and Veach (1978) in relation to interdisciplinary health teams. In practice, individual academic programs essentially determine their own competencies and evaluation strategies. McCally et al. (1977) reported that only ten to 15% of the 114 programs surveyed were involved in any evaluation of the interdisciplinary objectives in the curricula.

The growth of interdisciplinary education appears to be confounded by obstacles. Moreover, it appears to be guided by no consensus of purpose or standard for success. Lacking roots in any specific discipline its existence is difficult to define. And yet, our health care delivery system demands health science technologists who see themselves as part of the team and clearly define their own purpose on that team. Connelly (1981) believed that resolution of the fragmented approach to interdisciplinary education in the health sciences will come about through:

1. Recognition of interdisciplinary education as a legitimate learning concept.

2. Allocation of resources and incentives to the development of the interdisciplinary concept.

3. Relaxation of external controls which will permit the flexibility necessary to incorporate an interdisciplinary approach.

4. Preparation of educators in the interdisciplinary process of teaching and learning.

5. Re-examination of clinical education to focus on the total delivery of care.

Core Curriculum

One approach to the interdisciplinary education of health science technologists is the use of a core curriculum. As indicated by Tanner and Tanner (1975), there are several major schemes for organizing knowledge. One major scheme is the subject curriculum approach which includes the purest form of organization using the individual disciplines. Alternatives to the subject curriculum are the core curriculum and the activity curriculum. Both the core curriculum and the activity curriculum eliminate the traditional subject boundaries in an effort to relate the curriculum to the life of the learner.

As shown in Figure 1, the separate disciplines are situated at the peak of the curriculum core. Various forms of the disciplinary curriculum exist which represent increasing degrees of synthesis between subject areas. An example is the broad-fields approach to curriculum organization which attempts to develop unity for an entire branch of knowledge. Natural science courses which integrate the physical and biological sciences within an interdisciplinary framework illustrate the broad fields approach. At the base of the cone are the core curriculum and activity curriculum. The traditional subject boundaries are eliminated and knowledge is organized in an interdisciplinary manner. The activity curriculum was developed early in the twentieth century and used primarily in the elementary grades. This form of curriculum organization, which focuses largely on areas of child interest, has also been called the experience curriculum.

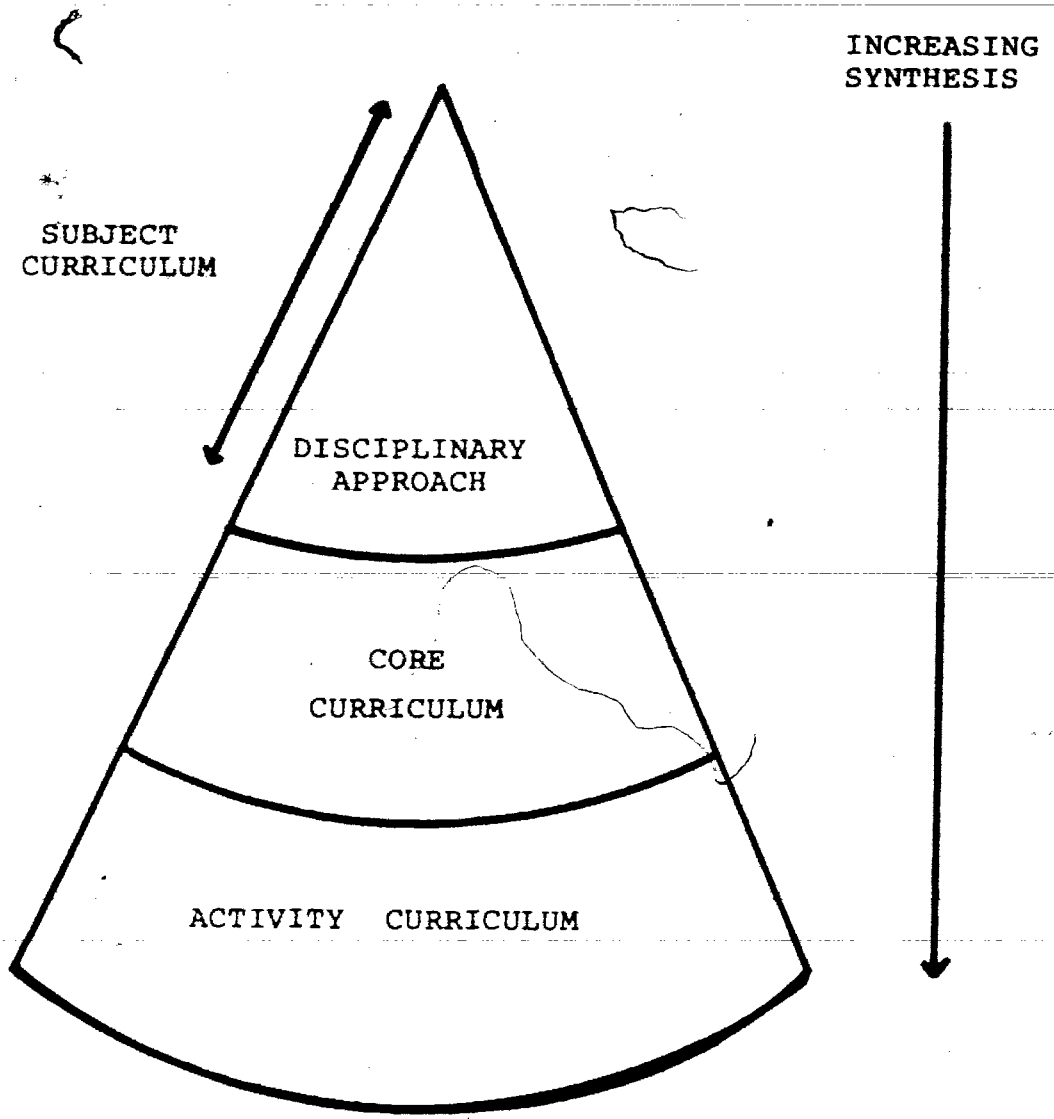


Figure 1. The curriculum construct. (Adapted from Tanner and Tanner, 1975, p. 488)

The core curriculum approach to the organization of knowledge was developed in the 1930's. As defined by Tanner and Tanner:

> the core curriculum is organized according to the problems and needs of students that demand personal and social understanding and action. Consequently, the divisions of subject matter that are characteristic of the subject curriculum are dissolved, since the problems are not confined to singular disciplines, or subjects, or subject fields that constitute the separate bodies of organized knowledge. (p. 489)

The core curriculum is intended to serve the needs of students by promoting active learning and increasing awareness of the relationships between life and learning. Although core curriculum can be organized in a variety of ways, the important characteristics are the integration of learning through the unification of subject matter, and the attempts to relate the curriculum to life problems and student interests.

Taba (1962) identified some of the dangers and limitations of the core curriculum. A prominent weakness is the tendency to exclude significant areas of knowledge because subject organization no longer serves as a guide. The implementation of core curriculum requires careful attention to the development of new

implementation strategies which ensure that gaps are not overlooked. The same careful planning is required when identifying learning experiences which promote integrated learning. In addition, in the process of combining subjects, one field must not dominate. When one field dominates

> its principles determine the scope and sequence, thus violating the unique qualities and contributions of the "cooperating" fields. New relationships between fields are thus developed at the price of overlooking the essential principles or thought forms inherent in a discipline. (Taba, 1962, p. 411)

A final obstacle to successful implementation of the core curriculum design is the lack of teachers who have the broad competencies required by the unified approach of this design. Most teachers, especially at the secondary and post secondary level of education, have fairly specialized training in content areas. For these reasons it is difficult to test the effectiveness of the core curriculum in fulfilling the purposes it was designed to serve.

Core Curriculum in Allied Health Education

Having reviewed core curriculum in relation to general education, it is useful to look at core curriculum from the perspective of health science education. Hawkins (1972) defined core curriculum as "that central course or group of courses taken by all students in a school of allied health professions" (p. 167). Underlying the use of the core curriculum is the belief that all students, regardless of their field of specialization, require a common base of knowledge and skills in order to function effectively as health science technologists.

The federal government of the United States funded a major study by the Association of Schools of Allied Health Professions to determine the state of the art on core curriculum in the educational programs for allied health personnel. The study (Association of Schools of Allied Health Professions, 1973) involved an extensive review of the literature on use of the core concept in allied health and interviews at nine schools of allied health. The criteria for selecting the schools to be interviewed included use of a core curriculum; representation from secondary and post-secondary programs, vocational and technical schools, junior and community colleges, and four-year colleges and universities; and representation from a variety of programs

serving differing student populations. Part of the purpose of the study conducted by the Association of Schools of Allied Health Professions was to determine the rationale for a core approach. Reasons given included increased efficiency and economy in program planning, greater career mobility, enhancement of the health team concept, and increased effectiveness of teaching and learning.

The planning and development of core material took place in a variety of ways depending upon the length and kind of programs offered, the diversity of student populations, the availability of space, faculty, and funds, as well as the stage of development of the administrative educational structure to house the programs. This study showed that, in many cases, the planning for core courses was concurrent with the development of a new administrative structure. In addition, the study conducted by the Association of Schools of Allied Health Professions revealed within institutions offering one and two year programs, the core course offerings frequently originated within the nursing program.

A further finding of the Association of Schools of Allied Health Professions related to the content of core curricula. The content which most freqently appeared to be offered in the core

included basic science content, medical terminology, nursing procedures, emergency procedures, community health, the role of the health worker, ethics, and disease processes. These content areas are fairly consistent with those identified in a similar study by Jacobsen (1977). Jacobsen's study reported "the common subject areas ... are ethics, medical terminology, medical records, health care delivery system, public health concepts, death and dying, aging and psychology of the handicapped" (p. 10).

Furthermore, the study conducted by the Association of the School of Allied Health Professions, indicated mixed evaluation of the core courses by faculty and students. Faculty believed that core courses permitted more effective use of faculty, but decreased the flexibility in scheduling and sequencing courses necessary for the integration of didactic and clinical material. The core courses permitted students to have involvement with faculty from a variety of health fields. This factor assisted some students in making career choices. On the other hand, some faculty believed that lack of immediate student identification with a particular field because of the core program was a frustration to many students.

A further finding of the Association of the School of Allied Health Professions' study indicated students viewed the core courses favourably. They perceived core courses as an effective means of achieving valued interprofessional contact. Students were particularly enthusiastic about core courses that involved trips to health care centres and courses that utilized role playing. However, students were critical of the general knowledge presented in core science courses. They believed the level of knowledge presented was not specific to their particular allied health field. Students also believed that core courses should be spread throughout the entire program and not placed primarily in the first semester or first year.

The study conducted by the Association of Schools of Allied Health Professions (1973) concluded that the state of the art in core curriculum was very difficult to define, uneven in nature, and difficult to compare from one school to another. However, some common objectives did emerge. As stated in the report, the primary objectives were:

1. Relevance of training for work;
2. Encouragement of communication among the allied health categories, ultimately leading to the delivery of health services by a health team;
3. Interdependence of behavioral and social sciences with the physical sciences; and
4. A problem solving approach to training. (p. 105)

Unfortunately, the literature does not reveal a recent similar study of core curriculum of the magnitude of the study undertaken by the Association of Schools of Allied Health Professions. There is, however, ample evidence of the continued use of core curricula (Klopfenstein, 1973; Infante, Speranza & Gillespie, 1976; Sesney, Nivard & Stringham, 1977).

Of particular value to this study are the methods used to define the core curricula. Klopfenstein (1973) reported on the experience at Kellogg Community College where a core semester was implemented for students entering one of eight specific programs. These programs were dental assisting, dental hygiene, medical assisting, medical laboratory technology, associate degree nursing, practical nursing, physical therapy assisting, and radiologic technology. The core semester was the first semester of each of these programs. The objectives for the core courses were identified and developed by an interdisciplinary faculty committee. The committee was made up of faculty from each of the allied health programs as well as instructors in anatomy, physiology, English, and psychology. Through consultation and cooperative efforts, courses were developed that satisfied the needs of all the programs. The core courses were taught using a variety of methods including team teaching, lecture/discussion combinations, and clinics. Modules were available in many

courses for specific topics or units of instruction. An interdisciplinary committee was responsible for on-going evaluation and revision of the core courses.

Infante, Speranza, & Gillespie (1976) reported on the use of a core course by the Schools of Allied Health, nursing, pharmacy, and social work at the University of Connecticut. This course concentrated on the theory of interprofessional behaviors necessary for developing a team, and included an experiential component to stimulate a team problem solving situation. In order to develop this course, concerned faculty members from each school formed a voluntary interprofessional education committee. Through committee negotiation it was decided that the initial interdisciplinary course would include content from the curriculum of each school. The content focused on the health care delivery system and health team practice. Defining the content from the perspective of all professions, rather than the perspective of each profession, proved very difficult with the result that the course was not a requirement for students in pharmacy and social work. Infante cited threats to professional autonomy, feelings of superiority by some health professions, lack of administrative commitment, and the tremendous problems of scheduling as deterrents to presenting the interdisciplinary course as a core course. The course described by Infante was

team taught by faculty from the participating schools. Group discussions, panel presentations, and group projects were included in the teaching strategies. Despite the difficulties encountered, both faculty and students supported the effectiveness of the course in promoting interprofessional behaviors.

Sesney, Nivard, & Stringham (1977) reported on the development of a biomedical sciences core course at Weber State College in Utah. The core course integrated content from physics, chemistry, anatomy, physiology, and microbiology, and was offered to students in nursing, respiratory therapy, medical technology, radiological technology, and dental hygiene. Students could elect to take the traditional science courses if they wished. The core content was determined by a coordinator working in consultation with allied health faculty and selected science faculty. Since the school was committed to the philosophy of competency based education, the core content was presented as learning modules. Teaching strategies also included guest lectures and the use of student tutors. Preliminary evaluation studies reported by Sesney et al. indicated that students achieved superior test scores compared to those students taking the traditional science courses. A longitudinal evaluation is planned to assess the performance of "core" students in their disciplines. This evaluation will attempt to determine the significant effects of

the core curriculum on students' future performance.

A further study germane to discussion of core curriculum is the South Dakota Statewide Core Curriculum project (Brekke & Gildseth, 1974). In attempting to establish a statewide core curriculum, "a major problem ... was to inventory all the health career programs in the state, to break items down in terms of 'tasks, skills, knowledge and attitudes', and then to determine the commonalities around which a core curriculum could be built" (p. 10). Primary and secondary core curricula objectives were defined and ratified with respect to the degree of importance assigned by each of the health education programs. Those objectives believed to be important to all health programs constituted the final core curriculum. This extensive statewide study resulted in the implementation of a primary core curriculum at ten institutions.

The review of the literature identifies strong support for the interdisciplinary education of all health science technologists. Support orginates predominantly from the needs of the practice setting. Although the general goals of interdisciplinary education seem clear, the specific outcomes desired and the methodology for evaluating the outcomes of interdisciplinary education are generally undefined. The desire for autonomy and

identity by each evolving technology serve to confound the process of interdisciplinary education. Despite the obstacles, interdisciplinary education is being implemented in various ways, one of which is the use of a core curriculum. Studies indicate general support for a core curriculum and various ways of determining the core content. A primary task in determining the content appears to be the initial identification of the knowledge, skills and attitudes required by each health technology program and the subsequent development of objectives. The Delphi technique is identified as one method of decision making in relation to such objectives (Eure, 1976).

Delphi Technique

The final section of the literature review focuses on the use of the Delphi technique. The history of its development, its method of use, and its effectiveness as a decision making tool, are discussed.

The Delphi technique was developed by the Rand Corporation of Santa Monica in the 1960s. The Rand Corporation was interested in assessing the direction of long range trends, particularly in the areas of scientific breakthroughs, population

control, automation, space progress, war prevention, and weapon systems. Lacking a suitably tested methodology for long-range forecasting, researchers at the Rand Corporation developed a technique for systematically soliciting expert opinion which they called the Delphi technique. This technique derives its name from Greek mythology.

> According to Greek legend, Zeus, the supreme god, wanted to determine the exact centre of the earth. He released two eagles at opposite ends of the world. And, flying toward each other, they met over Delphi. Thus, Delphi was the midpoint, the exact centre of the Hellenic world. Later Apollo, the god of youth, manly beauty, music, song and prophecy chose this site above all others for his most truthful oracle, the Delphic Oracle. (Strauss & Zeigler, 1975, p. 184)

Instead of using the traditional approach of open group decision to achieve consensus, the Delphi technique eliminates committee activity entirely. This technique has the following three major features -- anonymous response, iteration and controlled feedback, and statistical group response.

Anonymous response, which may be effected through the use of questionnaires or on-line computer communication, is a way of

reducing the effect of dominant individuals. Controlled feedback is effected by providing the participants with a summary of the results of previous rounds. The semantic noise of individual and group interests is thus reduced. Statistical group response assures that the opinion of every member of the group is represented in the final response. Although these three features are basic to the Delphi technique, there may be variations.

Decision making involves the processing of three types of information (Dalkey, 1969a). The type of information which is most highly confirmed is knowledge. At the other end of the spectrum is material for which there is little evidence. This material is called speculation. The middle area of the scale represents opinion.

> In the area of knowledge, by definition the probability of an assertion being true is relatively high; for speculative material the probability is low; and for opinion it is middling. This point, is rather vital. There is an irrepressible urge on the part of analysts to move the area of action entirely into the knowledge area. Sometimes this is possible. In general it is not. When an opinion is expressed, it is an inescapable fact of life that whatever is said, there is a reasonable probability of its being false. (Dalkey, 1969a, p. 5)

In the spring of 1968, a series of experiments were initiated by the Rand Corporation to evaluate and improve the use of the Delphi technique, particularly in the statistical treatment of individual opinions (Dalkey, 1969a). The experimental Delphi studies were conducted in the following way:

1. A panel of experts on a particular subject was identified. (In this case college students were used.)
2. Each expert responded anonymously to items on a questionnaire.
3. Responses were collated and panel experts were given the results of all expert responses, comments, and any additional questions.
4. Based on this feedback, each expert was asked to respond again to the previously asked questions as well as any newly generated questions.
5. The process was repeated three to four times until reasonable consensus was achieved.

The major purposes of these experiments were to determine whether the use of iteration and controlled feedback improved the value of group estimates. The median and the upper and lower quartiles of the previous round answers were used as the basic feedback between rounds. Dalkey (1969b) summarized outcomes of the experiments as follows:

> 1. On the initial round, a wide spread of individual answers typically ensued.
>
> 2. With iteration and feedback, the distribution of individual responses progressively narrowed (convergence).
>
> 3. More often than not, the group response (defined as the median of the final individual responses) became more accurate. (p. 416)

Researchers also found that an estimate of the accuracy of a group response to a given question could be obtained by combining individual self-ratings of competence on that question in a group rating. These research findings supported the possibility of attaching accuracy scores to the outcomes of the Delphi process (p. 420).

An additional finding of Dalkey's research concerned the level of knowledge about the subject held by the individuals involved in the process.

> The experiments suggest that it is no great loss to include less knowledgeable individuals, since they are more likely to improve on iteration than the more informed (or at least the more accurate individuals).
>
> (Dalkey, 1969a, p. 76)

This finding was the basis for later experiments which supported the value of the Delphi technique as an educational tool for learning (Weaver, 1971, p. 271).

A modification of the Delphi technique was introduced by Turoff (1975). This approach differed from the original Delphi technique in that its primary purpose was not to generate consensus but to present all the opinions and supporting evidence which would allow the policy maker or committee to formulate policy. The process was essentially as described earlier with the following changes. Reasons for agreement and disagreement positions on questions were explored by the individual participants and respective assumptions, views and facts recorded for consideration by other participants. The opinions were re-evaluated in subsequent rounds until all sides of an issue were exposed. This process requires some means of evaluating the ideas expressed by the responding group. Rating scales were generally used in relation to importance, desirability and feasibility of options.

Although research indicates the need for further investigation into the scientific accuracy of Delphi, the technique has numerous advantages for the decision maker. Participants are anonymous and need not fear potential repercussions or embarrassment since no single individual commits himself or herself

publicly to a particular view until after all of the alternatives are explored. Moreover, participants have the benefit of the views and information of other respondents in exploring options. This can be accomplished without the major costs which may be involved in bringing a group together. Research studies (Dayton, 1981; Wedley, Jung & Merchant, 1979) support the value of this technique particularly in the area of decision analysis.

Use of the Delphi process is not, however, without some disadvantages. The process is a time-consuming one due to the necessity to collate responses and prepare material for future rounds. In addition, participants must be highly motivated to continue with successive rounds of the process. Participants must also possess a high level of written communication skills in order to express clearly their points of view. They may experience frustration since there is no opportunity to seek clarification of other members' comments and viewpoints. Although the Delphi process will identify the options pertinent for decision making, it will not resolve conflicts which arise over differing views. The majority rule prevails.

A much more fundamental concern is the question of the quality of the Delphi. Weaver (1971) argued that the Delphi methods, which were non-data based and relied on collective expert

judgement, were not a sufficient condition for arguing that a forecast was a scientific fact. No claims could be made for reliability or validity of the results. A further cautionary note was sounded in the following:

> Delphi does not obviate the need for good decisions; it only aids the process by communicating valuable information to the final decision-maker. In other words Delphi does not provide decision-making, just decision-analysis.
>
> (Wedley, Jung & Merchant, 1979, p. 35)

In this research, the Delphi technique is used to evaluate an inventory of learning objectives derived from a review of the curricula of health science technologies and the opinions of an expert panel. The results of the research are then made available to the same expert panel to increase its effectiveness in curricular decision making.

CHAPTER III

PROCEDURES AND METHODOLOGY

This chapter is presented in four sections. In the first section the population surveyed is discussed. The development of the questionnaire is addressed in the second section. The procedures for each phase of the survey are discussed in section three. Finally, the criteria for analysis of the data are presented in section four.

The purpose of the research was to determine if a core of subject matter existed within health science technology programs which was suitable for the development of a core curriculum. The research was conducted at the British Columbia Institute of Technology which offers ten diploma programs in health science. The research used the Delphi technique based on a questionnaire survey. Several similar studies have been reported in the literature (e.g. Eure, 1976; Jacobsen, 1977).

A critical step in this study was the formation of the Health Division Committee on Integrating Diploma Curricula whose task was to investigate ways in which a greater degree of shared

learning could exist. This committee of faculty from all ten health science technology programs served as an expert panel advising on the research.

Population Surveyed

The research was conducted using a questionnaire which was distributed three times to the dean, department heads, faculty members and teaching technical staff within the ten diploma health science technology programs at BCIT. The numbers of individuals associated with each program varied from two in the Prosthetic and Orthotics and Occupational Health and Safety Departments, to 30 in the General Nursing Department. This population included males and females from 25 to over 60 years of age. The number of years teaching experience within the technology varied from less than one to over 20. The total number surveyed was 100.

Questionnaire Design

An initial step in the research was the design of the questionnaire. Relevant literature was reviewed concerning

subject areas forming the basis for shared curricula in health science technology programs within Canada and the United States. The curricula of the ten diploma health science technology programs were studied to identify major content areas which presently existed within two or more programs. The Health Division Committee on Integrating Diploma Curricula met on three occasions for the purpose of identifying curricula content areas perceived as areas of mutual concern for interprofessional health science education. In order to limit the scope of the questionnaire, only those content areas reflecting the professional aspects of the program were included. Based on the literature review and committee response, five major areas were identified for questionnaire development:

1. Health Care System
2. Professonal Role
3. Interactive Role
4. Legal and Ethical Responsibilities
5. Management and Supervision

Using these five major areas, an initial inventory of objectives was developed and subsequently discussed with the committee. The objectives referred to the behaviors which students were expected to exhibit by the end of their specific program.

The objectives were defined using the taxonomy for education objectives (Bloom, 1956; Krathwohl, 1964) for the cognitive, psychomotor and, to a lesser extent, affective domains of learning. Initially the number of objectives was 98. Following consultation with the committee members and several additional Health Division members, the objectives were further refined and reduced in number to 64. The individuals consulted were knowledgeable in their specific fields regarding health care practice requirements and curriculum planning. In this way, content validity was achieved in the design of the questionnaire.

The objectives had to be specific enough to provide future curriculum direction and yet general enough to reflect all five major areas without creating a questionnaire of such length that the response rate might be reduced. Space was provided on the questionnaire for respondents to add additional objectives relevant to the five areas. As shown in Appendices D and E, one additional objective was added to the second phase questionnaire and one to the third phase questionnaire.

Several days following the distribution of each phase of the questionnaire, a reminder card was distributed to each respondent. The card thanked respondents for their participation in the survey and reminded them of return date deadlines.

Scaling Technique

Respondents were asked to evaluate each objective in four ways:

EVALUATION A: How important is this objective in the curriculum of your program?

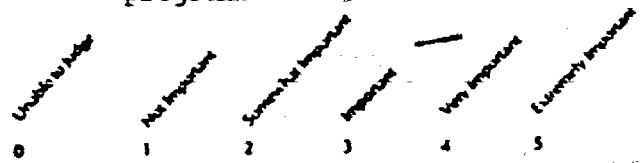
EVALUATION B: How important should this objective be in the curriculum of your program?

EVALUATION C: How easy would it be (was it) to make this objective part of the curriculum of your program?

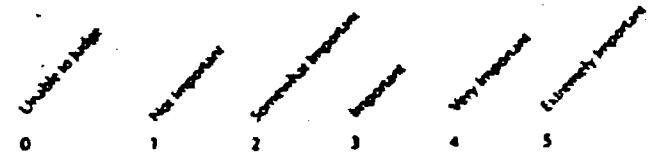
EVALUATION D: Do you think this objective is appropriate for the curriculum of a health technology program other than your own?

The response key and sample objective are shown in Figure 2.

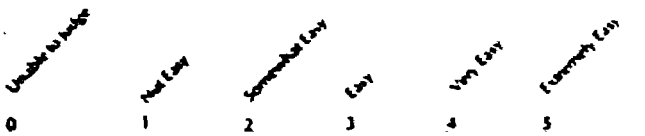
EVALUATION A How important is this objective in the curriculum of your program?



EVALUATION B How important should this objective be in the curriculum of your program?



EVALUATION C How easy would it be (was it) to make this objective part of the curriculum of your program?



EVALUATION D Identify any health technology program(s) for which you believe this objective might be appropriate. (Do not include your own program).

- ☐ None
- ☐ Biomedical Electronics
- ☐ Health Information
- ☐ Prosthetics and Orthotics
- ☐ All
- ☐ Medical Laboratory
- ☐ Medical Radiography
- ☐ Nuclear Medicine
- ☐ Public Health Inspector
- ☐ Occupational Health and Safety
- ☐ Psychiatric Nursing
- ☐ General Nursing

By the end of the program the student will be able to identify the major purposes of patient/agency records.

A	0	1	②	3	4	5
B	0	1	2	3	④	5
C	0	1	2	3	④	5

D

☐ None	☐ All	☐ PHI .....
☐ Biomed	☐ Med Lab	☐ OH and S .....
☑ HI	☐ Med Rad	☑ PH .....
☐ P and O	☐ Nuc Med	☑ GN .....

In this example the respondent indicates the objective:

A is somewhat important in the curriculum of his/her program.

B should be very important in the curriculum of his/her program.

C would be very easy to make part of the curriculum of his/her program.

D might be appropriate for the curriculum of the Health Information, Psychiatric Nursing and General Nursing programs.

Figure 2. Response key and sample objective

In Evaluation D respondents were asked to identify programs other than their own for which an objective might be suitable. Evaluation D was included for the specific purpose of increasing respondents' awareness of other health technology programs within the Health Division. Moreover, this evaluation required respondents to examine their perceptions concerning the roles of other technologists on the health care team.

In determining the scale to be used to answer the first three questions, several factors were considered. A scale of fewer than five positions would have presented a limited number of options for respondents wanting to change their evaluations over the three phases of the study. A scale of greater than five positions might have created possible confusion as respondents made their evaluations. The five point scale which was developed made use of descriptors in order to decrease the variation in interpretation. In order to increase the ease of answering the questionnaire, the descriptors used were similar in all three evaluations. Although a five point scale was used, the trend towards central tendency was minimized since the central figure descriptors were not neutral responses. A zero option was included in the response key for those respondents who felt they were unable to make a judgement.

Pilot Testing of Questionnaire

The draft questionnaire was pilot tested using the 11 members of the Health Division Committee on Integrating Diploma Curricula. The committee members were asked to answer the questionnaire and make comments in relation to the construction, clarity, and content of the objectives and the clarity of the directions. Nine responses were received. Several objectives which were similar in content were combined and others were reworded for clarification. Although the committee agreed on the importance of the proposed objectives concerning values, attitudes, and beliefs, it was agreed that such objectives were difficult to teach and to evaluate. For these reasons, and in order to decrease the length of the questionnaire, most objectives which pertained to affective behaviors were deleted. The final questionnaire was prepared following a review by this committee and several additional Health Division members.

Procedure for Phase One

Each questionnaire and respondent was assigned a code number for follow up on subsequent phases of the research. The questionnaires were distributed with a cover letter explaining

the purpose of the research and assuring respondents that individual responses would not be reported. This letter also explained the purpose of the Delphi technique (see Appendix C). The responses on the returned questionnaires were keypunched on to computer cards and analyzed using the computer program Statistical Package for the Social Sciences (Nie, Hadlai Hull, Jenkins, Steinbrenner, Bent, 1975). Means, standard deviations, and frequency distributions were determined for responses to each item for the entire responding group.

Procedure for Phase Two

The same questionnaire, with the addition of objectives generated from phase one, was circulated three weeks later to the same population. For ease in identifying each phase, the second phase questionnaire was printed on blue paper. The mean and range of responses within one standard deviation of the mean, were indicated for each objective for Evaluation B (how important should this objective be?) and Evaluation C (how easy would it be (was it) to implement?). Evaluation A asked respondents to assess the degree of importance of the objective in their curriculum. The group mean and range of responses were not indicated for Evaluation A since this evaluation reflected the present

content rather than the desired content of the curriculum. Frequency responses were included for Evaluation D. Each respondent's previous responses for all four evaluations were indicated in red. A sample objective from the phase two questionnaire follows in Figure 3.

OBJECTIVE 8

By the end of the program the student will be able to identify the major purposes of patient/agency records.

EVALUATION A

Comments

0 1 [2] (3) 4 5

EVALUATION B

0 1 2 3 (4) 5

EVALUATION C

0 1 2 3 [4] (5)

Could probably be added to content on legal issue.

D

☐ None .....5%..	☐ All .....12%..	☐ PHI .....34%..
☐ Biomed ...15%..	☐ Med Lab ..54%..	☐ OH and S .34%..
☑ HI ..✓....98%..	☐ Med Rad ..68%..	☑ PN ..✓....82%..
☐ P and O ..35%..	☐ Nuc Med ..70%..	☑ GN ..✓....84%..

In this example, the respondent's original ratings for **Evaluations A, B and C** are marked in red. The mean response is indicated by the central tick. The horizontal line and two extreme tick marks indicate the range of responses encompassed by ± one standard deviation.

This respondent changed the A rating to 3, **recircled** the B rating at 4 and changed the C rating to 5.

The C rating of 5 is outside the consensus range. The comment in the margin indicates this objective - "could probably be added to the content on legal issues".

After reviewing the objective and the percentage results for **Evaluation D**, this respondent again indicated the objective might be an appropriate part of the curriculum of the Health Information, Psychiatric Nursing and General Nursing programs.

Figure 3. Sample objective from phase two questionnaire

Respondents were again asked to evaluate each item based on their own previous response and the group response. If respondents chose to respond outside the marked range of responses for Evaluations B and C, they were asked to write a comment explaining their reasons for being outside the marked range. These comments were collated and included as an appendix to the third phase questionnaire (see Appendix F). As indicated in Appendix D, respondents also received a covering letter reiterating the purpose of the research and assuring them that individual responses would not be reported. The responses on the returned questionnaires were keypunched on to computer cards and analyzed for mean responses, standard deviations, and frequency distributions for the entire responding group.

Procedure for Phase Three

Three weeks following phase two, the third and final version of the questionnaire was circulated to the same population used in phases one and two, with one exception. Those individuals who had not responded to either phase one or phase two questionnaires were omitted from the distribution. The number surveyed in phase three was 88. The mean responses and range of responses within one standard deviation of the mean were marked for Evaluations B

and C of each objective. The group frequency responses from phase two for Evaluation D were also marked. The respondents' previous responses from phase two were indicated in red for Evaluations B, C, and D. Those respondents who did not respond to the phase two questionnaire were given their phase one responses. For ease in identifying phase three, the third phase questionnaire was printed on yellow paper. A sample objective follows in Figure 4.

OBJECTIVE #

By the end of the program the student will be able to identify the major purposes of patient/agency records.

EVALUATION A

0 1 2 (3) 4 5

EVALUATION B

0 1 2 3 (4) 5

EVALUATION C

Could probably be added to content on legal issue.

0 1 2 3 (4) (5)

D

☐ None .....5%..	☐ All .....62%..	☐ PHI .....4%..
☐ Biomed ...15%..	☐ Med Lab ..14%..	☐ OH and S .34%..
☑ HI .....70%..	☐ Med Rad ..18%..	☑ PN .....82%..
☐ P and O ..35%..	☐ Nuc Med ..12%..	☑ GN .....84%..

In this example, the respondent's ratings from the second questionnaire are marked in red. (If the respondent did not reply to the second questionnaire, the first phase response is given.)

For Evaluations B and C the mean response is indicated by the central tick. The horizontal line and two extreme tick marks indicate the range of responses encompassed by ± one standard deviation.

Based on the **comments** made by the respondents and revised means and standard deviations, this respondent **recircled** the **A** rating at 3, recircled the **B** rating at 4, and changed the **C** rating to 4.

After reviewing the objective and the percentage results for **Evaluation D**, this respondent again indicated the objective might be an appropriate part of the curriculum of the Health Information, Psychiatric Nursing and General Nursing programs.

Figure 4. Sample objective from phase three questionnaire.

Respondents were asked to make their final evaluations for each objective based on their own previous response, the group responses, and the appended list of comments from phase two indicating reasons for remaining outside of the marked range of responses. As indicated in Appendix E, all respondents also received a covering letter reiterating the purpose of the research and reassuring them that individual responses would not be reported. The responses from the returned questionnaires were keypunched onto computer cards and analyzed for mean responses, standard deviations, and frequency distributions for the entire group.

Non-Respondents

The response rate for the first phase of the research exceeded 80%. The response rates for each of the subsequent two phases exceeded 80% of the returned responses from the previous phase. Because the response rates were high, non-respondents were not interviewed to determine non-response bias.

Analysis of Data

The data were computer analyzed for mean responses, standard deviations, and frequency distributions for the entire group. With the direction of the Health Division Committee on Integrating Diploma Curricula, criteria were developed prior to review of the data, in order to interpret the data in relation to Evaluation B (the importance an objective should be assigned in the respondent's own program) and Evaluation C (the ease with which the objective could be implemented in the respondent's own program). The use of such criteria enabled objectives to be categorized as to their degree of acceptability for inclusion in a core curriculum and in relation to ease of implementation. The committee agreed that an objective was "acceptable" for inclusion in a core curriculum if it obtained a rating of three or greater on Evaluation B by 60% or more of the respondents. A rating of two or less by 60% of the respondents identified an objective as "unacceptable". Similarly, for Evaluation C, a rating of three or more by 60% of the respondents identified an objective as being at the "easy" or higher end of the implementation scale. A rating of two or less by 60% of the respondents identified an objective as being at the "somewhat easy" or lower end of the implementation scale.

Using the preceding criteria, a mathematical formula was applied to the ratings for each objective. The table of standardized normal distributions indicates a Z value of 0.25 for a 60% response rate (Erickson and Nosanchuk, 1977). The formula used in interpreting the results for Evaluations B and C follows:

Evaluation B

a) If Mean response - 0.25 Standard Deviation > 3, objective "acceptable".

b) If Mean response + 0.25 Standard Deviation < 2, objective "unacceptable".

c) If neither (a) or (b), objective "requires further study".

Evaluation C

a) If Mean response - 0.25 Standard Deviation > 3, objective "easy" or higher on implementation scale.

b) If Mean response + 0.25 Standard Deviation < 2, objective "somewhat easy" or lower on implementation scale.

c) If neither (a) or (b), objective "requires further study".

Objectives having a value between two and three on Evaluation B were neither clearly "acceptable" for inclusion in a core curriculum for all health science technology programs, nor clearly "unacceptable". Objectives in this category require further study. Evaluation C indicated the ease with which the objective could be implemented in the curriculum. Objectives having a value between two and three on Evaluation C were neither clearly easy nor clearly difficult to implement. These objectives also require further study.

Evaluation D

Evaluation D asked respondents to identify programs other than their own for which an objective might be appropriate. The results of Evaluation D were analyzed based upon the percentage responses made for the "all" programs option.

CHAPTER IV

RESULTS OF THE STUDY

This study is concerned with the curricula of health science technology programs. The purpose of this study is to determine if a core of subject matter can be identified which is suitable for a shared approach to the education of health science technologists. The results of the research are presented in five sections. In the first section the demographic data of the respondents is recorded. In the second section the questionnaire response rates for the entire Health Division and for each program are described. The ratings on the objectives for Evaluations A, B, C and D are presented in the third section. In the fourth section the comments made by respondents on the second phase of the questionnaire survey are discussed briefly. The complete summary of comments appears in Appendix F. In the final section the use of the Delphi technique as the methodology for a questionnaire survey is discussed.

Demographic Data

Questionnaires were distributed to the dean, department

heads, faculty and teaching technical staff within the diploma programs of the Health Division at BCIT. Respondents were asked to indicate their current position within the Health Division, their program affiliation and the number of years of employment within the specified program. The data are summarized in Tables 1, 2 and 3.

Table 1

Distribution of Questionnaires by Program and Position

Program	Position				
	Dean	Department Head	Faculty	Teaching Technical Staff	Total
Biomedical Electronics	0	1	2	1	4
Environmental Health	0	1	2	1	4
General Nursing	0	1	28	1	30
Health Information	0	1	2	0	3
Medical Laboratory	1	1	11	0	13
Medical Radiography	0	1	8	0	9
Nuclear Medicine	0	1	3	0	4
Occupational Health & Safety	0	1	1	0	2
Prosthetics & Orthotics	0	1	1	0	2
Psychiatric Nursing	0	1	27	1	29
Total	1	10	85	4	100

Note. The dean of the Health Division responded as if he were a member of the Medical Laboratory program. Department heads responded in relation to each program for which they were responsible.

Table 2

Phase 1 Questionnaire Returns by Years of Employment and Program

Program	Years of Employment			
	Less Than 1 Year	1 - 3 Years	4 - 7 Years	8 or More Years
Biomedical Electronics	-	2	-	1
Environmental Health	1	-	-	1
General Nursing	-	7	7	10
Health Information	-	-	-	2
Medical Laboratory	-	3	-	8
Medical Radiography	1	-	2	5
Nuclear Medicine	1	-	1	2
Occupational Health & Safety	-	2	-	-
Prosthetics & Orthotics	-	1	-	-
Psychiatric Nursing	1	8	11	5

Table 3

Phase 1 Questionnaire Returns by Years of Employment and Position

Position	Years of Employment			
	Less Than 1 Year	1 - 3 Years	4 - 7 Years	8 or More Years
Dean	-	1	-	-
Department Heads	2	2	2	3
Faculty	2	18	18	31
Teaching Technical Staff	-	2	1	-

One hundred questionnaires were distributed during the first and second phases of the survey. Those individuals who had not responded to either the first or second phase questionnaires were not given the third phase questionnaire. Eighty-eight questionnaires were distributed in the third phase. Table 4 indicates that the number of respondents surveyed ranged from a low of two in Occupational Health and Safety and Prosthetics and Orthotics to a high of 30 in General Nursing. The dean of the Health Division responded as if he were a member of the Medical Laboratory program. Department heads volunteered to respond in relation to all programs for which they were responsible which ranged from one program to three programs.

Table 4

Number of Questionnaires Distributed by Program

Program	Phase 1	Phase 2	Phase 3
Biomedical Electronics	4	4	3
General Nursing	30	30	26
Health Information	3	3	2
Medical Laboratory	13	13	12
Medical Radiography	9	9	7
Nuclear Medicine	4	4	4
Occupational Health & Safety	2	2	2
Prosthetics & Orthotics	2	2	2
Psychiatric Nursing	29	29	27
Public Health Inspection	4	4	3
Total	100	100	88

Questionnaire Response Rates

The total response rate for the questionnaire survey was 82% for phase one, 68% for phase two, and 75% for phase three. Of the 100 questionnaires initially distributed, the final response rate for phase three was 66%. The response rates for each phase of the survey by individual programs are indicated in Table 5. As indicated in the table, the results of ten questionnaires were omitted from computer analyses due to their late return.

Those respondents who completed the questionnaires generally completed all questions on the survey. Although missing data was not a problem in the study, most of the missing data occurred on Evaluation D.

Table 5

Response Rates for Each Phase of the Survey By Program

Program	% Response					
	Phase 1		Phase 2		Phase 3	
Biomedical Electronics	75	(4)[a]	50	(4)	33	(3)
General Nursing	83	(30)	66	(30)	65	(26)
Health Information	66	(3)	66	(3)	100	(2)
Medical Laboratory	87	(13)	62	(13)	58	(12)
Medical Radiography	78	(9)	67	(9)	57	(7)
Nuclear Medicine	100	(4)	100	(4)	100	(4)
Occupational Health & Safety	100	(2)	100	(2)	100	(2)
Prosthetics & Orthotics	50	(2)	100	(2)	100	(2)
Psychiatric Nursing	83	(29)	65	(29)	89	(27)
Public Health Inspection	50	(4)	75	(4)	66	(3)
Overall	82		68		75	

Note. Results Do Not Include the Following Late Returns:
Phase 1 - 2 Questionnaires
Phase 2 - 7 Questionnaires
Phase 3 - 1 Questionnaire

a Numbers in parentheses indicate the number of questionnaires distributed within each program on each phase of the survey.

Ratings on Objectives

Respondents were asked to evaluate each of the 64 objectives in three ways:

Evaluation A: How important is the objective in the curriculum of your program?

Evaluation B: How important should this objective be in the curriculum of your program?

Evaluation C: How easy would it be (was it) to make this objective part of the curriculum of your program?

Using Evaluation D, respondents were asked to indicate if the objectives were suitable for the curriculum of a health technology program other than the respondent's own program.

Evaluation A

For all objectives, the group response on all three phases of the survey indicated that the present level of importance of the objective in the curriculum (Evaluation A) was less than the level of importance the objective should be assigned (Evaluation B).

Evaluation B

The results of the survey in relation to Evaluation B (the importance the objective should have in the respondent's own program) are presented for the total responding group in Tables 6, 7, 8, 9, and 10. Objectives rated as "acceptable" for inclusion in a core curriculum, objectives rated as "unacceptable", and objectives requiring further study are identified in these tables. The results are presented for each of the five sections of the questionnaire.

Objectives rated acceptable and unacceptable from all sections of the questionnaire are identified in Tables 11 and 12. A total of 25 objectives are rated as acceptable for inclusion in a core curriculum. Two objectives are rated as unacceptable. The remaining 37 objectives are rated as requiring further study. Twenty of the 25 acceptable objectives occur in the sections on Interactive Role and Legal and Ethical Responsibilities. Twenty-one of the 37 objectives requiring further study occur in the sections on the Health Care System and Management and Supervision.

Two additional objectives were suggested by respondents and incorporated into the phase two questionnaire. Both of these objectives are rated as requiring further study.

Table 6

Evaluation B: Degree of Acceptability of Health Care System Objectives in Own Program

Objective Number	Objective Statement (13)[a]
	Objectives Rated "Acceptable" (1)
13	describes the roles, functions and interrelationships of selected health team members.
	Objectives Requiring Further Study (11)
1	describe the structure and function of the major parts of the health care system of British Columbia (e.g., roles of various levels of government, health regulation, levels of care.)
2	describe the financing of health care in British Columbia.
3	describe the basic concept of health insurance and compare it to the "fee for service" concept.
5	describe common professional responsibilities of selected health team members in relation to the development and implementation of health care policies.
6	describe the content and impact of selected legislation on health care policies in British Columbia (e.g., narcotic control, radiation protection, public health).
7	explore the effects of technological innovation on the health care system of B.C. (e.g., computers, automated equipment).
8	discuss selected variables which increase an individual's use of health care services (e.g., age, sex, education, social class, values).
9	discuss selected characteristics which enable an individual to access health services (e.g., existence of service, geography).
10	discuss selected characteristics which influence an individual's perception of need for health services (e.g., social and cultural influences).
11	describe the impact of consumerism on the health care system (e.g., right to information, involvement in policy formation).
12	describe strategies for producing better informed consumers of health care.
	Objectives Rated "Unacceptable" (1)
4	describe the roles of government and private interests in the development of health care policies in British Columbia.

a Numbers in parentheses indicate the number of objectives.

Table 7

Evaluation B: Degree of Acceptability of Professional Role Objectives in Own Program

Objective Number	Objective Statement (6)[a]
	Objectives Rated "Acceptable" (0)
	Objectives Requiring Further Study (6)
14	describe the major roles of selected health professional organizations at the provincial and national level.
15	describe ways in which selected professional organizations seek to maintain the competency of their members.
16	describe selected accreditation requirements and standards which must be met by specified health care agencies (e.g., safety practices, equipment quality, staff qualifications, infection control).
17	describe the purpose and nature of quality control systems used by health care agencies.
18	explore the limits of his/her responsibility and expertise in relation to other members of the health care team.
19	explore his/her role in relation to the health care team in maintaining selected accreditation requirements and professional standards.
	Objectives Rated "Unacceptable" (0)

a Numbers in parentheses indicate the number of objectives.

Table 8

Evaluation B: Degree of Acceptability of Interactive Role Objectives in Own Program

Objective Number	Objective Statement (16)[a]
	Objectives Rated "Acceptable" (10)
20	describe the components of a model of effective communication including listening and verbal and nonverbal communication.
21	demonstrate behaviours which enhance his/her ability to initiate, maintain and effectively terminate a relationship with patients, families and others.
22	demonstrate skills in directly expressing feelings in a respectful, constructive manner.
24	describe common stresses associated with the life stages of man.
26	describe the role of values, attitudes and beliefs in influencing behaviour.
27	recognize values, attitudes and beliefs in self and client which may interfere with effective communication.
30	describe healthy and unhealthy ways in which the basic emotions of fear, anxiety, anger, sadness and elation may be expressed.
33	develop, implement and evaluate teaching plans for patients, families, peers and/or the public.
34	using appropriate medical terminology, report and record behaviour/events accurately and concisely using descriptive rather than evaluative terms and fact rather than inference.
35	describe self management strategies and techniques that assist him/her to maintain the interactive skills which are essential to effective relationships with clients and others.
	Objectives Requiring Further Study (6)
23	describe the characteristics of selected majority and minority groups in relation to lifestyle and attitudes to health and illness.
25	describe current trends in Canadian family life which influence health care needs.
28	describe societal values, attitudes and beliefs in relation to the handicapped.
29	describe strategies for interacting more effectively with handicapped and minority clients.
31	act to promote the healthy expression of emotions by clients and families.
32	describe socio-cultural and developmental factors which must be considered in meeting client learning needs.
	Objectives Rated "Unacceptable" (0)

a Numbers in parentheses indicate the number of objectives.

Table 9

Evaluation B: Degree of Acceptability of Legal and Ethical Objectives in Own Program

Objective Number	Objective Statement (14)[a]
	Objectives Rated "Acceptable" (10)
36	discuss the following terms: client rights, consent to treatment, negligence, malpractice, assault, battery, invasion of privacy, duty of disclosure, defamation, civil liability, criminal liability.
37	using selected case studies involving negligence identify: the standard of care expected by negligence law, the responsibility of the worker and the responsibility of the health care agency.
38	explore ways in which client rights may be violated in selected fields of practice.
39	describe the nature and importance of adequate identification of patients, patient records, specimens and films.
40	describe his/her legal responsibilities to clients in relation to the duty of disclosure (informed consent) and client confidentiality.
41	describe his/her legal responsibilities in relation to documentation in patient and agency records.
42	describe his/her legal responsibilities in relation to the administration of medications or diagnostic agents to patients.
43	describe his/her legal responsibilities for an accident or error in treatment occurring to a patient for whom he/she has direct or indirect responsibility (e.g., medication error, equipment malfunction, lab test error).
44	identify specific measures taken within selected fields of practice to safeguard the environment for patients, staff and others.
45	discuss the folllowing terms: ethics, ethical dilemma, feelings, beliefs, attitudes, opinions, values.
	Objectives Requiring Further Study (4)
46	describe selected traditional and contemporary ethical theories.
47	explore ways in which feelings, beliefs, attitudes, opinions and values influence the development of personal ethical standards.
48	identify major ethical dilemmas existing in selected fields of practice.
49	using selected case studies, identify the ethical dilemma, the rights and responsibilities involved, and the acceptable course(s) of action.
	Objectives Rated "Unacceptable" (0)

a Numbers in parentheses indicate the number of objectives.

Table 10

Evaluation B: Degree of Acceptability of Management and Supervision Objectives in Own Program

Objective Number	Objective Statement (14)[a]
	Objectives Rated "Acceptable" (4)
50	describe the organizational structure of an assigned agency including functions and responsibilities, line and staff relationships and channels of communication.
51	describe his/her role, responsibilities and channels of communication in relation to other members of the health care team within the assigned agency.
53	demonstrate effective supervision of assigned patients and specified health team members.
57	demonstrate skill in utilizing the decision making process.
	Objectives Requiring Further Study (10)
52	compare various leadership styles and their degree of effectiveness in directing health care personnel in selected settings.
54	describe performance appraisal systems and methods.
55	discuss effective strategies and techniques for motivating self and others.
56	employ basic strategies in planning, implementing and evaluating change.
58	describe strategies for reducing conflict within organizations and groups.
59	describe key variables influencing an individual's behaviour in organizational settings (e.g., attitudes, values, personality, perception, motivation).
60	demonstrate the basic principles of budgeting and cost control.
62	describe major legislation affecting labor relations within the health care system in B.C.
63	demonstrate awareness of rights and responsibilities as defined in own union contract and union contract of selected health team members.
64	describe grievance, mediation and arbitration procedures related to health labor relations
	Objectives Rated "Unacceptable" (1)
61	demonstrate selected methods for maintaining an inventory of supplies and equipment.

a Numbers in parentheses indicate the number of objectives.

Table 11

Evaluation B: Objectives Rated as "Acceptable" From all Sections of the Questionnaire

Section	Objective Number	Objective Statement
Health Care System (1)[a]	13	describe the roles, functions and interrelationships of selected health team members.
Professional Role (0)		
Interactive Role (10)	20	describe the components of a model of effective communication including listening and verbal and non-verbal communication.
	21	demonstrate behaviours which enhance his/her ability to ihitiate, maintain and effectively terminate a relationship with patients, families and others.
	22	demonstrate skill in directly expressing feelings in a respectful, constructive manner.
	24	describe common stresses associated with the life stages of man.
	26	describe the role of values, attitudes and beliefs in influencing behaviour.
	27	recognize values, attitudes and beliefs in self and client which may interfere with effective communication.
	30	describe healthy and unhealthy ways in which the basic emotions of fear, anxiety, anger, sadness and elation may be expressed.
	33	develop, implement and evaluate teaching plans for patients, families, peers and/or the public.
	34	using appropriate medical terminology, report and record behaviour/events accurately and concisely using descriptive rather than evaluative terms and fact rather than inference.
	35	describe self management strategies and techniques that assist him/her to maintain the interactive skills which are essential to effective relationships with clients and others.
Legal and Ethical (10)	36	discuss the following terms: client rights, consent to treatment, negligence, malpractice, assault, battery, invasion of privacy, duty of disclosure, defamation, civil liability, criminal liability.
	37	using selected case studies involving negligence, identify: the standard of care expected by negligence law, the responsibility of the worker and the responsibility of the health care agency.

Table 11 (Continued)

Evaluation B: Objectives Rated as "Acceptable" From all Sections of the Questionnaire

Section	Objective Number	Objective Statement
Legal and Ethical	38	explore ways in which client rights may be violated in selected fields of practice.
	39	describe the nature and importance of adequate identification of patients, patient records, specimens and films.
	40	describe his/her legal responsibilities to clients in relation to the duty of disclosure (informed consent) and client confidentiality.
	41	describe his/her legal responsibilities in relation to documentation in patient and agency records.
	42	describe his/her legal responsibilities in relation to the administration of medications or diagnostic agents to patients.
	43	describe his/her legal responsibilities for an accident or error in treatment occurring to a patient for whom he/she has direct or indirect responsibility (e.g., medication error, equipment malfunction, lab test error).
	44	identify specific measures taken within selected fields of practice to safeguard the environment for patients, staff and others.
	45	discuss the following terms: ethics, ethical dilemma, feelings, beliefs, attitudes, opinions, values.
Management and Supervision (4)	50	describe the organizational structure of an assigned agency including functions and responsibilities, line and staff relationships and channels of communication.
	51	describe his/her role, responsibilities and channels of communication in relation to other members of the health care team within the assigned agency.
	53	demonstrate effective supervision of assigned patients and specified health team members.
	57	demonstrate skill in utilizing the decision making process.
Total	25	Objectives

a Numbers in parentheses indicate the number of objectives.

Table 12

Evaluation B: Objectives Rated as "Unacceptable" From all Sections of the Questionnaire

Section	Objective Number	Objective Statement
Health Care System (1)[a]	4	describe the roles of government and private interests in the development of health care policies in British Columbia.
Professional Role (0)		
Interactive Role (0)		
Legal and Ethical (0)		
Management and Supervision (1)	61	demonstrate selected methods for maintaining an inventory of supplies and equipment.
Total	2 Objectives	

a Numbers in parentheses indicate the number of objectives.

Evaluation C

Evaluation C referred to the ease of implementation of objectives into the curriculum of the respondent's own program. Respondents were asked to rate the ease of implementation in five ways - not easy, somewhat easy, easy, very easy, or extremely easy. The results of the survey in relation to Evaluation C are summarized in Table 13. As indicated, 55 of the original 64 objectives are rated as neither clearly "easy" nor clearly "not easy" to implement. The one objective rated as easy to implement is also rated as acceptable for a core curriculum. Of the ten objectives rated "somewhat easy" or lower on the scale, none is rated acceptable for inclusion in a core curriculum. The two additional objectives suggested by respondents on phase two are rated as somewhat easy or lower on the implementation scale.

Table 13

Evaluation C: Ease of Implementation of Objectives Into the Curriculum of Own Program

Objective Number	Section of Questionnaire	Objective Statement
		Rated as "Easy" or Higher on Scale
44	Legal and Ethical Responsibilities	identify specific measures taken within selected fields of practice to safeguard the environment for patients, staff and others.
		Rated as "Somewhat Easy" or Lower on Scale
3	Health Care System	describe the basic concept of health insurance and compare it to the "fee for service" concept.
4		describe the roles of government and private interests in the development of health care policies in British Columbia.
9		discuss selected characteristics which enable an individual to access health services (e.g., existence of services, geography).
46	Legal and Ethical Responsibilities	describe selected traditional and contemporary ethical theories.
47		explore ways in which feelings, beliefs, attitudes, opinions and values influence the development of personal ethical standards.
60	Management and Supervision	demonstrate the basic principles of budgeting and cost control.
61		demonstrate selected methods for maintaining an inventory of supplies and equipment.
64		describe grievance, mediation and arbitration procedures related to health labor relations.
(65)[a]		describe various schemes used to maintain liaison between professional associations and industry.
(66)		demonstrate basic skills in clinical instruction and evaluation.

Note. All other objectives were rated between "easy" and "somewhat easy" on the implementation scale.

a Numbers in parentheses indicate the two additional objectives suggested by respondents on phase two.

Evaluation D

On Evaluation D respondents were asked to identify programs other than their own for which an objective might be suitable. One of the possible responses was "all" programs. The results of Evaluation D are used in Tables 14, 15, 16, 17, and 18 to present data in relation to the 37 objectives rated as requiring further study. These tables identify those objectives considered suitable for all programs as indicated by 60-80% of respondents and 81-100% of respondents. Twelve objectives are rated by 81-100% of the respondents as being suitable for all programs. The majority of these objectives are in the sections on Professional Role and Management and Supervision. Nineteen objectives are rated by 60-80% of respondents as being suitable for all programs. The majority of these objectives are in the section on the Health Care System.

Table 14

Evaluation D: Percentage Agreement on "All" Response for Health Care System Objectives Requiring Further Study

% Agreement on "All" Response	Objective Number	Objective Statement
60-80	1	describe the structure and function of the major parts of the health care system of British Columbia (e.g., role of various levels of government, health regulation, levels of care).
	2	describe the financing of health care in British Columbia
	3	describe the basic concept of health insurance and compare it to the "fee for service" concept.
	5	describe common professional responsibilities of selected health team members in relation to the development and implementation of health care policies.
	6	describe the content and impact of selected legislation on health care policies in British Columbia (e.g., narcotic control, radiation protection, public health).
	8	discuss selected variables which increase an individual's use of health care services (e.g., age, sex, education, social class, values).
	9	discuss selected characteristics which enable an individual to access health services (e.g., existence of service, geography).
	10	discuss selected characteristics which influence an individual's perception of need for health services (e.g., social and cultural influences).
	11	describe the impact of consumerism on the health care system (e.g., right to information, involvement in policy formation).
	12	describe strategies for producing better informed consumers of health care.
81-100	7	explore the effects of technological innovation on the health care system of B.C. (e.g., computers, automated equipment).

Note. Objectives 6 and 9 were rated as "Somewhat Easy" or lower on the implementation scale. All other objectives were rated between "Easy" and "Somewhat Easy" on the implementation scale.

Table 15

Evaluation D: Percentage Agreement on "All" Response for Professional Role Objectives Requiring Further Study

% Agreement on "All" Response	Objective Number	Objective Statement
60-80	17	describe the purpose and nature of quality control systems used by health care agencies.
81-100	14	describe the major roles of selected health organizations at the provincial and national level.
	15	describe ways in which selected professional organizations seek to maintain the competency of their members.
	16	describe selected accreditation requirements and standards which must be met by specified health care agencies (e.g., safety practices, equipment quality, staff qualifications, infection control).
	18	explore the limits of his/her responsibility and expertise in relation to other members of the health care team.
	19	explore his/her role in relation to the health care team in maintaining selected accreditation requirements and professional standards.

Note. All objectives were rated between "Easy" and "Somewhat Easy" on the implementation scale.

Table 16

Evaluation D: Percentage Agreement on "All" Response for Interactive Role Objectives Requiring Further Study

% Agreement on "All" Response	Objective Number	Objective Statement
60-80	28	describe societal values, attitudes and beliefs in relation to the handicapped.
81-100		

Note. Objective 28 was rated between "Easy" and "Somewhat Easy" on the implementation scale.

Table 17

Evaluation D: Percentage Agreement on "All" Response for Legal and Ethical Objectives Requiring Further Study

% Agreement on "All" Response	Objective Number	Objective Statement
60-80	47	explore ways in which feelings, beliefs, attitudes, opinions and values influence the development of personal ethical standards.
	48	identify major ethical dilemmas existing in selected fields of practice.
	49	using selected case studies, identify the ethical dilemma, the rights and responsibilities involved, and the acceptable course(s) of action.
81-100		

Note. Objective 47 was rated as "Somewhat Easy" on the implementation scale. Objectives 48 and 49 were rated between "Easy" and "Somewhat Easy" on the implementation scale.

Table 18

Evaluation D: Percentage Agreement on "All" Response for Management and Supervision Objectives Requiring Further Study

% Agreement on "All" Response	Objective Number	Objective Statement
60-80	56	employ basic strategies in planning, implementing and evaluating change.
	59	describe key variables influencing an individual's behaviour in organizational settings (e.g., attitudes, values, personality, perception, motivation).
	60	demonstrate the basic principles of budgeting and cost control.
	62	describe major legislation affecting labor relations within the health care system in B.C.
81-100	52	compare various leadership styles and their degree of effectiveness in directing health care personnel in selected settings.
	54	describe performance appraisal systems and methods.
	55	discuss effective strategies and techniques for motivating self and others.
	58	describe strategies for reducing conflict within organizations and groups.
	63	demonstrate awareness of rights and responsibilities as defined in own union contract and union contract of selected health team members.
	64	describe grievance, mediation and arbitration procedures related to health labor relations.

Note. Objectives 60 and 64 were rated as "Somewhat Easy" and lower on the implementation scale. All other objectives were rated between "Easy" and "Somewhat Easy" on the implementation scale.

Comments from Phase Two

Phase two of the questionnaire survey requested those respondents who were outside the range of consensus to give reasons for choosing their positions. Many comments, which were representative of all health science technology programs, were received. These comments were summarized and circulated with the phase three questionnaire and appear in Appendix F. In most cases, the comments refer to reasons for positions taken on Evaluation B. When similar comments were made by more than one respondent, the comments were summarized and stated along with the programs represented by the respondents. The comments reflect opinions regarding both diploma and post diploma level education.

Use of the Delphi Technique

This research used the Delphi technique to identify those objectives which are appropriate for the curricula of two or more health science technology programs. This technique was chosen because of its characteristics of anonymous response, controlled feedback, and statistical group response. Research on the Delphi technique indicated that feedback resulted in the progressive convergence of opinion.

By using a two step procedure the degree of convergence was measured for Evaluation B. Firstly, the mean of means and the mean standard deviations were calculated for each section of the questionnaire. These data are presented in Table 19. As indicated in Table 19, the mean of mean responses for each section tended to stay the same over the three phases of the survey while the mean standard deviations became less.

Table 19

Evaluation B: Comparison of Mean of Mean Responses and Mean Standard Deviations for Phases 1, 2, and 3 For All Sections of Questionnaire

	Mean of Means		
	Phase 1	Phase 2	Phase 3
Health Care System	2.40 (1.09)[a]	2.42 (0.99)	2.41 (0.90)
Professional Role	2.83 (1.22)	2.89 (1.04)	2.82 (0.97)
Interactive Role	3.43 (1.48)	3.42 (1.35)	3.50 (1.29)
Legal & Ethical Responsibilities	3.48 (1.33)	3.54 (1.20)	3.58 (1.11)
Management and Supervision	2.78 (1.24)	2.84 (1.07)	2.83 (1.00)

a Numbers in parentheses indicate the mean standard deviations

Secondly, using the data presented in Table 19, the reduction percentages were calculated based on the mean standard deviations for Phases 1, 2, and 3. For example, in the section on the Health Care System:

$$\frac{\text{Mean Standard Deviation Phase 1} - \text{Mean Standard Deviation Phase 2}}{\text{Mean Standard Deviation Phase 1}} \times 100 = x\ \%$$

$$\frac{1.09 - 0.99}{1.09} \times 100 = 9.17\%$$

The final percentage reductions between each phase are presented in Table 20. In all cases, the greatest amount of convergence occurs between phases one and three. Within the five sections of the questionnaire, there is a fairly narrow range of reduction percentages. The least amount of convergence occurs in the section on Interactive Role. Although ten objectives in this section were rated as acceptable for inclusion in a core curriculum, the greatest diversity of opinion occurs in this section. Because there was little difference in the mean of means on all questions over the three phases, no attempt was made to analyze the percentage reductions in the mean of means.

Table 20

Evaluation B: Comparison of Reduction Percentages Based on Mean Standard Deviations for Phases 1, 2, and 3 for all Sections of Questionnaire

	% Reduction		
	Phases 1-2	Phases 2-3	Phases 1-3
Health Care System	9	9	17
Professional Role	15	7	20
Interactive Role	9	4	13
Legal & Ethical Responsibilities	10	8	17
Management and Supervision	14	7	19

A comparison of the mean of mean responses and mean standard deviations for the three phases of the survey according to the three ratings for objectives - acceptable, unacceptable, and requiring further study - is presented in Table 21. As indicated, the mean of means remains relatively stable while the mean standard deviations decrease.

Table 21

Evaluation B: Comparison of Mean of Mean Responses and Mean Standard Deviations for Phases 1, 2, and 3 for Three Categories of Objectives

	Mean of Means		
	Phase 1	Phase 2	Phase 3
Acceptable Objectives	3.65 (1.34)[a]	3.70 (1.20)	3.76 (1.12)
Unacceptable Objectives	1.77 (1.02)	1.80 (0.99)	1.72 (0.85)
Objectives Requiring Further Study	2.66 (1.27)	2.69 (1.12)	2.68 (1.05)

a Numbers in parentheses indicate the mean standard deviations

Using the same procedure as described previously, reduction percentages were calculated between each phase. These data are presented in Table 22 which indicates little difference in the degree of convergence for the three categories of objectives.

Table 22

Evaluation B: Comparison of Reduction Percentages Based on Mean Standard Deviations for Phases 1, 2, and 3 for Three Categories of Objectives

	% Reduction		
	Phases 1-2	Phases 2-3	Phases 1-3
Acceptable Objectives	10	7	16
Unacceptable Objectives	3	14	17
Objectives Requiring Further Study	12	6	17

CHAPTER V

DISCUSSION AND CONCLUSIONS

Discussion

This study was conducted to determine if a core of subject matter could be identified within the curricula of health science technology programs that would be suitable for a shared approach to the education of health science students. In this final chapter, the results of the study are discussed, conclusions are drawn, and recommendations made.

The research questions posed by this study were:

1. Can specific areas of knowledge, and the associated learning objectives, which exist within the curricula of two or more health science programs be identified?

2. Can specific skills, and the associated learning objectives, which exist within the curricula of two or more health science programs be identified?

3. Can specific values, and the associated learning objectives, which exist within the curricula of two or more health science programs be identified?

In order to answer these research questions, respondents were asked to evaluate an inventory of 64 objectives according to four criteria.

The results are discussed in relation to the four evaluations of each objective, as well as the Delphi technique as a research methodology. Interpretation of the results was done with full awareness that only group responses for the entire Health Division were analyzed. It was not the intent or design of the research to focus on individual technology programs because of the wide range in the numbers available to be surveyed from one technology to another (see Table 4).

Evaluation A: How important is this objective in the curriculum of your program?

In all cases, the group response indicates the present level of importance of the objective is less than the level the objective should have. This finding confirms that most of the

objectives included in the questionnaire were relevant to the Health Division overall. This result, as well as the comments made by respondents (Appendix P), suggests that, due to time constraints, the content included in health science programs is restricted to that content which is directly related to program goals.

Evaluation B: How important should this objective be in the curriculum of your program?

Using predetermined criteria, 25 objectives were rated as acceptable for inclusion in a core curriculum. The objectives identified as acceptable are listed according to sections of the questionnaire in Tables 6, 7, 8, 9, and 10 of the previous chapter. The distribution of these objectives is as follows:

Interactive Role (Table 8)	- 10 objectives
Legal and Ethical Responsibilities (Table 9)	- 10 objectives
Management and Supervision (Table 10)	- 4 objectives
Health Care System (Table 6)	- 1 objective

Twenty of the 25 acceptable objectives occur in the sections on Interactive Role and Legal and Ethical Responsibilities. These

20 objectives represent a base for the development of a core curriculum for all health science technology programs surveyed in this study. This base core curriculum is identified in Appendix G, Table A.

Responses to Evaluation B identified two objectives as unacceptable for inclusion in a core curriculum. As indicated in Tables 6 and 10, one objective occurs in the section on the Health Care System and the other in the section on Management and Supervision.

The remaining 37 objectives were rated, according to Evaluation B, as requiring further study. The distribution of these objectives follows:

Health Care System (Table 6)	- 11 objectives
Management and Supervision (Table 10)	- 10 objectives
Interactive Role (Table 8)	- 6 objectives
Professional Role (Table 7)	- 6 objectives
Legal and Ethical Responsibilities (Table 9)	- 4 objectives

The two additional objectives suggested by respondents during the survey, were also rated as requiring further study.

Evaluation C: How easy would it be (was it) to make this objective part of the curriculum of your program?

As indicated in Table 13, one objective was rated as easy or higher on the implementation scale. This objective was also one of the 25 objectives rated as acceptable for a core curriculum using Evaluation B. A further eight objectives were rated as somewhat easy or lower on the implementation scale. The two additional objectives suggested by respondents during the survey, were also rated as somewhat easy or lower on the implementation scale. The remaining 55 objectives were rated between easy and somewhat easy. Of the 25 objectives rated acceptable for inclusion in a core curriculum, 24 are part of this middle category - that is, between easy and somewhat easy on the scale. This finding supports the feasibility of implementing a core curriculum using those objectives rated as acceptable.

When interpreting the results of Evaluation C, the written comments made by respondents, as summarized in Appendix F, must be considered. Many respondents indicated difficulty making a decision regarding ease of implementation. Most often this indecision was described as due to the degree of generality of the objective statement. Lack of specificity of objectives may represent an additional limitation in the research design.

Evaluation D: Do you think this objective is appropriate for the curriculum of a health technology program other than your own?

Evaluation D was included primarily to raise the respondent's level of awareness for other programs within the Health Division and the roles of other members of the health care team. Informal written and verbal comments indicated a general reluctance by many respondents to make a decison regarding curriculum content for a program other than their own. Although missing data were not a problem in the research, most missing data occurred on responses to Evaluation D. This evaluation served a major function, however, in making respondents think about other health science programs. The verbal comments made by respondents suggested a previous lack of awareness of programs and health technology roles other than the respondent's own. This informal finding supports the work of Weaver (1971) who believed the Delphi technique was valuable as an educational tool.

Evaluation D gave respondents the option of indicating specific programs believed to be suited for inclusion of the objective statement or the "all" program response. The all response was intended to mean all programs except the respondent's own program. Evaluations regarding the respondent's own program

were previously made using Evaluations A, B, and C. Confusion may have been created by the wording of Evaluation D and respondents may have included their own program in the group when responding. This confusion may represent a further limitation to the interpretation of the responses to Evaluation D.

The results of Evaluation D were used to give additional information regarding the 37 objectives rated as requiring further study. The 37 objectives were categorized according to the degree to which respondents agreed that all programs should include the objective. Objectives were divided into two categories - those objectives agreed to by 81-100% of the respondents and those objectives agreed to by 60-80% of the respondents. These data are presented according to the five sections of the questionnaire in Tables 14, 15, 16, 17, and 18. Table 15 indicates that five of the six objectives from the section on Professional Role were rated by 81-100% of respondents as appropriate for all programs. Table 18 indicates that six of the ten objectives from the Management and Supervision section were rated by 81-100% of the respondents as appropriate for all programs. Moreover, in the results of Evaluation B, four objectives from the Management and Supervision section are rated as acceptable for inclusion in a core curriculum. Based on these findings, the foregoing 20 objectives are suggested as possible additions to

the base core curriculum. These additions form a new base for the development of a core curriculum of 35 objectives as indicated in Appendix G, Tables A and B.

When using the results of Evaluation D to determine additions to the base core curriculum, it is important to remember that Evaluation D required respondents to make curriculum decisions from positions of less informed judgement. Evaluation D also asked respondents to make judgements for which they were not directly responsible. Furthermore, comments made by respondents who were outside the range of consensus on phase two of the survey (Appendix F) suggested that objectives in the Professional Role section may be more suitable for inclusion in individual technology curricula due to the variation in professional responsibilities. Comments also indicated Professional Role objectives may be more appropriate for post diploma education when the student has a better defined sense of professional role. For these reasons, the results of Evaluation D cannot be relied upon in isolation when making decisions regarding additional content to be added to the base core curriculum. A panel of curricula experts, representative of all health science technology programs studied, should be used to review the objectives suggested as additions to the base core curriculum.

The results of Evaluation D also identified 19 objectives rated by 60-80% of respondents as suitable for a core curriculum for all programs. Table 14 indicates that ten of these objectives occurred in the section on the Health Care System. These ten objectives may constitute a content area which is suitable either as a later addition to the core curriculum or as curriculum content for a subgroup of health science technology programs (see Appendix G, Table C). Once again, a panel of curricula experts representative of all programs would be useful in making such decisions. Such a panel should also review the remaining objectives rated by 60-80% of respondents as suitable for all programs (Tables 15, 16, 17, 18). Some of these objectives may be judged appropriate for addition to the base core curriculum for all programs or as curriculum content for subgroups of programs.

Delphi Technique

The final interpretation of the results focuses on the effectiveness of the Delphi technique as a research methodology. This technique was chosen for its value in facilitating decision making through anonymous response and group feedback from respondents' comments, and through statistical analyses. Written

and verbal comments made by respondents indicated they felt free to make their opinions known without fear of reprisals or embarrassment. In addition, respondents were able to learn from each other's comments and from the statistical group responses without any feeling of pressure to conform. As shown in Tables 19, 20, 21, and 22, convergence of opinion did tend to occur as respondents had the opportunity to review the feedback from the group. The time lapse of three to four weeks between phases of the survey enabled respondents to consider and discuss their responses to the questionnaire. Respondents thus became increasingly aware of health science technology programs other than their own.

As indicated in the literature review, however, the Delphi technique has disadvantages. A major disadvantage was the degree of time required from both the respondents and the researcher. Respondents were asked to participate three times in answering the same questionnaire. Moreover, they were asked to follow fairly complex directions, make comments on specific aspects of the phase two questionnaire, and read all the comments circulated with the phase three questionnaire. Based on an initial distribution of 100 questionnaires, a final response rate of 66% attests to the high degree of commitment of the respondents. A large amount of time was also required from the researcher. The original questionnaire had to be designed and a new master

questionnaire had to be developed after each phase. The new questionnaire had to include new directions to respondents as well as the statistical responses for each objective. Individual responses from the previous questionnaire also had to be marked on the new questionnaire for each objective. In addition, following the second phase of the survey, respondents' comments were collated and included as an appendix to the final questionnaire. All of these activities were time consuming.

A further disadvantage of this technique was the need for a high level of communication skills. Respondents were asked to give reasons for choosing a position outside of the range of consensus on phase two of the survey. Clear written communication was necessary in order for respondents to interpret accurately and to learn from other respondents' opinions. In addition, there was no provision for resolving conflicts. Dissident opinions were presented but not resolved.

Despite the disadvantages cited, the Delphi technique appears to be an effective way to evaluate curriculum objectives and to assist respondents to more toward consensus in relation to these objectives. This finding supports the research of Eure (1976) who used the Delphi technique to identify a core curriculum for schools of Social Work.

Conclusions

Several conclusions are drawn from the results of this study. First, the health science technology program educators surveyed were willing to participate actively in research related to curriculum. The Delphi technique required respondents to answer a questionnaire three times and to make comments explaining reasons for the evaluations made. Respondents were also required to review the statistical analysis of each phase of the survey and review comments from other respondents. Despite the time consuming nature of the survey, the overall response rate was 66%. Such a response rate indicates a high level of concern for curricular issues within the Health Division as well as a willingness to be involved in research related to such issues.

Second, the results of Evaluation A in relation to Evaluation B suggest that all objectives included in the inventory should be dealt with in greater detail. However, the consistent concern for lack of time suggested by the comments in Appendix F indicates increased curriculum content may not be a realistic objective. Many comments also indicate some objectives may be more appropriate at the post diploma level of education. There appears to be a conflict between the ideal sought and the reality which is possible. These differences must be reconciled

prior to any attempt at detailed core curriculum development.

Third, specific knowledge, skills, and values and the associated learning objectives which exist within the curricula of two or more health science technology programs, were identified. Based on the results of Evaluation B, 20 objectives were identified as the base for developing a core curriculum (Appendix G). Furthermore, the results of Evaluation C suggest that respondents viewed the implementation of these objectives as feasible.

An additional 37 objectives, rated as requiring further study, were also reviewed using the results of Evaluation D. The responses given by 81-100% of respondents suggested a further expansion of the base core curriculum using five objectives from the Professional Role section (Table 15) and six objectives from the Management and Supervision section (Table 18). The results of Evaluation D also supported adding an additional four objectives, rated as acceptable on Evaluation A, from within the Management and Supervision section (Table 10). With the review and approval of an expert panel, it is possible for the base core curriculum to be expanded from the original 20 objectives to a total of 35 objectives (Appendix G). Furthermore, the "all" program response given by 60-80% of respondents on Evaluation D,

suggested a further 19 objectives for possible inclusion at a later stage in core curriculum development or as content directed towards a subgroup of programs (Appendix G).

A final conclusion concerns the effectiveness of the Delphi technique as a procedure for facilitating decision making regarding curricular issues. This technique was time consuming for both the researcher and the respondents. A high degree of commitment was required in order to follow the process through to conclusion. Moreover, lack of verbal feedback, and generality in relation to the objective statements and respondents' comments, may have created frustration for respondents. Despite these disadvantages, the Delphi technique was a useful procedure for evaluating the appropriateness of objectives for a core curriculum. In addition, this technique was helpful in moving respondents toward consensus on curricular issues. The educational value of the Delphi technique was also demonstrated as respondents became increasingly aware of health science technology programs other than their own.

Recommendations

Five major recommendations are made based upon the results of this study.

Core Curriculum

A base core curriculum should be developed using the ten objectives from the section on the Interactive Role and the ten objectives from the section on Legal and Ethical Responsibilities. The curriculum should be broadly developed to define clearly the scope and level of all objectives relating to these two areas.

Evaluation D

An expert panel should review the results of Evaluation D in relation to those objectives requiring further study. Objectives rated by 81-100% of respondents as suitable for all programs should be considered for addition to the core curriculum. These objectives form part of the sections on Professional Role and Management and Supervision. In addition the four objectives from the Management and Supervision section which were rated as

acceptable on Evaluation B, should be considered for inclusion (Appendix G, Table B).

Objectives rated by 60-80% of respondents as suitable for all programs should be evaluated by a panel and considered for addition to the core curriculum at a later stage or as curriculum content for a subgroup of programs. This review should include the ten objectives from the section of the Health Care System (Appendix G).

Delphi Technique

The Delphi technique proved to be a useful tool to assist in making curriculum decisions. This technique could be used effectively in further developing core curriculum. Curriculum expertise necessary for decision making could be obtained by using a panel of curriculum experts from the health science technology programs. In this way the amount of time and effort required to conduct further studies would be reduced.

Implementing Core Curriculum

Several major factors must be considered when developing and implementing a core curriculum. These factors are discussed briefly in general terms as well as with specific reference to BCIT, the site of this study. First, successful development and implementation requires full endorsation by both the administration of the school of health science and the accrediting/certifying bodies associated with health science programs. Such endorsation provides not only the psychological support necessary for changes to occur but also, in the case of administrative endorsation, manifests itself in resources and facilities to support a core curriculum. Moreover, as indicated by Connelly (1981) there is a need for the relaxation of external controls on educational programs to permit the flexibility necessary for interdisciplinary education.

In addition, there must be full recognition of the complexity of changes being proposed. Core courses pose many problems, the most difficult being the threats to faculty roles and autonomy within departments (Fullan & Pomfret, 1977). Successful core curriculum development and implementation requires joint educational activities across all departments which service health science students. For these reasons, a school of health

science seeking to effect greater integration of educational activities for its students must first focus on greater integration and shared educational activity at the faculty level.

Furthermore, co-operative planning must occur across all departments involved in health science education. No one program can dominate the field. Such co-operative planning requires much trust and commitment from both faculty and department heads. Faculty will be required to learn new skills and consider new perspectives as they direct their teaching to students from many technologies. Such a system demands broad competencies from teachers.

Moreover, core curriculum requires the re-education of students so that they are able to learn from one another. Students must realize that their education is being enriched, not diluted, by sharing with each other. However, such enrichment does not occur without planning and the careful definition of goals, learning objectives, and experiences. (Jacobsen, 1977).

As found by McCreary (Note 1), the best results of a core curriculum are achieved when students are brought together in a clinical situation faced with a patient with a problem. It may not be possible initially to extend the teaching of core concepts

to the clinical areas. This, however, should be the ultimate goal. Timetabling constraints will pose a very real threat to the scheduling of common classroom as well as clinical hours. A tremendous degree of energy and commitment will be necessary to overcome this very basic, but real, problem.

Finally, successful implementation of a core course or core curriculum requires time for faculty and students to become used to the new expectations and time for educational goals and approaches to become clarified and communicated. Clarification of goals and revision of implementation plans can best occur when active communication systems are in place. Although such systems will vary in form from one health science school to another, the essential characteristics of such systems are their practicality and accuracy in monitoring on-going implementation plans.

Successful development and implementation of a core curriculum at BCIT, the site of this study, requires that the results of this study be shared with the Health Division Committee on Integrating Diploma Curricula. Efforts directed towards development and implementation of a core curriculum should be co-ordinated by this committee which reports directly to the dean of the Health Division.

In addition to the general recommendations made, careful consideration must be given to those individual programs at BCIT which were identified as not desiring core content in the area of Interactive Role and Legal and Ethical Responsibilities. Although the group response across the Health Division indicated the suitability of many objectives in these two sections for a core curriculum, individual program responses were not analyzed. However, as indicated in Appendix P, some respondents in programs such as Medical Laboratory and Biomedical Electronics, did not view some of these objectives as relevant to their programs. Moreover, some respondents expressed the view that certain objectives could have relevance only if taught within a specific program - not to all health science students. For these reasons, it is essential that all programs be represented on the expert panel involved in the further development of the base core curriculum. If a common base of content is not identifiable for all programs, it is reasonable that some programs not be included in the core curriculum. However, it is also important that reasons for exempting a program from participation in the core curriculum be valid ones -- not those of personal preference or desire to maintain the status quo.

Further Research

The final focus of this chapter pertains to recommendations for further research. Further studies using the same objectives but focusing on a different mix of health science technology programs would be useful. Such research would help determine if a similar core of content is basic to all health science programs regardless of specialty area. Replication of this study using only the 25 objectives rated as acceptable for core curriculum would also be valuable. This research focused on five specific content areas, however, research is also indicated in the many other areas where the teaching of common content occurs. Such areas include English, the sciences, and basic psychomotor skills. Another area for further research includes the affective area of learning. Although affective objectives are clearly important in the curriculum of health science technology programs, such objectives are frequently overlooked entirely or inadequately identified (Cole & Lacefield, 1978). This study included very few affective objectives for evaluation by respondents. Further research in this area is needed.

Finally, research into the area of implementation and evaluation of core curricula is warranted. Through such research, the effectiveness of various strategies for implementation and evaluation can be identified and the value of core curriculum more clearly defined.

APPENDIX A

DESCRIPTIONS OF THE HEALTH SCIENCE TECHNOLOGY PROGRAMS INCLUDED IN THE SURVEY

Appendix A

Descriptions of the Health Science Technology Programs Included in the Survey

Biomedical Electronics - This program prepares technologists to maintain, repair and design equipment used in hospitals, clinics, research laboratories and industry.

General Nursing - General nurses work with other members of the health care team to assist people in meeting their health needs. Graduates of this program are prepared to provide health information on health concerns and disease prevention as well as providing restorative care and emotional support.

Health Information - Graduates of this program are prepared for management and administrative positions in the health record departments of hospitals and health agencies.

Medical Laboratory - This program prepares technologists to perform the many and varied laboratory procedures which are used by physicians as important aids to the diagnosis and treatment of the patient.

Medical Radiography - The medical radiographer works under the direction of a radiologist in performing diagnostic techniques through the use of x-rays. The radiographer may be employed in hospital x-ray departments or in private x-ray clinics.

Nuclear Medicine - Graduates of this program are prepared to use radioactive materials in the diagnosis and management of diseases. Nuclear medicine is a relatively new diagnostic specialty.

Occupational Health and Safety - Occupational health and safety graduates are able to provide the knowledge and leadership necessary to develop programs in industry that will assist in conserving life, health, and property. They are able to identify health and safety hazards in the work environment and advise corrective action.

Prosthetics and Orthotics - Graduates of this program help people who have become disabled or who were born with physical defects by fitting them with artificial limbs or supports. The prosthetist designs, constructs, and fits artificial limbs, while the orthotist designs, constructs, and fits orthopaedic braces and supports.

Psychiatric Nurses - The psychiatric nurse works with people of all ages who have mental health problems or who are mentally retarded. These patients may also have common medical problems.

Public Health Inspection - This program prepares graduates who provide leadership and technical expertise in the development of long-range planning to protect and improve community health.

APPENDIX B

LETTER OF PERMISSION TO CONDUCT
SURVEY WITHIN HEALTH DIVISION
AT BCIT

BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY
3700 WILLINGDON AVENUE, BURNABY, BRITISH COLUMBIA, CANADA V5G 3H2 AREA CODE 604 434 5734

1983 02 01

Dr. Bryan Hiebert
Chairperson
University Research Ethics Review
Committee
Simon Fraser University
Burnaby, B.C. V5A 1S6

Dear Dr. Hiebert

Re: Research Study by Beverley Miller

Ms. Beverley Miller, on leave from the B.C.I.T. Department of Psychiatric Nursing, has discussed with me her research study on the integration of Diploma curricula. I have authorized her study, including the distribution of questionnaires, in the Health Division here at B.C.I.T. and look forward to seeing the results.

Sincerely yours

Brian Gillespie
Dean
Health Division

BG/kb

c.c. Dr. Dianne Common
Faculty of Education

APPENDIX C

COVER LETTER AND QUESTIONNAIRE
FOR PHASE ONE

BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY
3700 WILLINGDON AVENUE, BURNABY, BRITISH COLUMBIA, CANADA V5G 3H2 AREA CODE 604 434-5734

March 7, 1983

Dear Colleague:

As a member of the Health Division, you are involved in educating students to assume a role in one of the ten health technologies. As you know, the diploma technology programs tend to be isolated from each other with few, if any, shared learning experiences. The Health Division Committee on Integrating Diploma Curricula is presently examining the feasibility of increasing the degree of integration occuring between programs.

As outlined by the Dean of the Health Division at the September 1982 meeting of the Health Division, integration may occur in a variety of ways, such as sharing physical space, using faculty from one health program to teach in another, and sharing specialized audiovisual resources. Integration may also occur through the teaching of common program content to the students of two or more health technology programs.

As part of its terms of reference, the Health Division Committee on Integrating Diploma Curricula wishes to identify commonalities among diploma curricula. As a graduate student in the Faculty of Education at Simon Fraser University, I have adopted this task for my thesis research and have thus become the "arms and legs" of the committee. I request your participation, on behalf of the integration committee, in a three phase survey in order to identify content areas where integration might be feasible.

The enclosed questionnaire is the first phase of the survey. The survey will use the Delphi technique whereby you will be given the results of each round of the questionnaire before being asked to complete the questionnaire again. The purpose of the three phases is to allow you to make your final evaluation based upon the results of the previous rounds and the comments generated by all respondents.

After completion of the enclosed questionnaire please return it in the original envelope to the office of the Dean of the Health Division by Wednesday, March 23, 1983. The second questionnaire will be mailed to you within two weeks of this date.

In no instance will responses be reported on an individual basis. Each questionnaire has been assigned a code number for computer analysis and for providing you with your previous responses for phases two and three of the survey. Completion of the questionnaire will take less than one hour.

If you are unclear about any aspect of this project, please call me any evening at 929-3514. Your participation is essential in providing direction for the development of curriculum integration within the Health Division.

Sincerely

Beverley Miller
Department of Psychiatric Nursing

BM/har
Attach.

BCIT

DIPLOMA PROGRAM
HEALTH SCIENCE TECHNOLOGY
SURVEY
PHASE ONE

This survey is directed to department heads, faculty, and teaching technical staff within the diploma programs of the Health Division at the British Columbia Institute of Technology. The purpose of the survey is to identify curricula objectives which are common to two or more health science technology programs.

Your co-operation in participating in this three phase survey is extremely important. The results of this survey will help provide direction for future curricula development within the Health Division at BCIT.

DIPLOMA PROGRAM
HEALTH SCIENCE TECHNOLOGY SURVEY

Please answer the following questions about yourself by placing a check mark (✓) in the box beside the item which best describes you.

1. What is your current position within the Health Division?

01 ☐ Department Head
02 ☐ Faculty
03 ☐ Teaching Technical Staff
04 ☐ Other. Please specify _____

2. With which health program are you affiliated? If you are affiliated with more than one program please select the *one program* for which you will respond *in all three phases* of the survey. (Check one response only.)

01 ☐ Biomedical Electronics (Biomed)
02 ☐ Health Information (HI)
03 ☐ Prosthetics and Orthotics (P and O)
04 ☐ Medical Laboratory (Med Lab)
05 ☐ Medical Radiography (Med Rad)
06 ☐ Nuclear Medicine (Nuc Med)
07 ☐ Public Health Inspector (PHI)
08 ☐ Occupational Health and Safety (OH and S)
09 ☐ Psychiatric Nursing (PN)
10 ☐ General Nursing (GN)

3. How many years have you been employed within the health technology program indicated in Question 2?

01 ☐ Less than 1
02 ☐ 1 - 3
03 ☐ 4 - 7
04 ☐ 8 or more

The following pages contain an inventory of objectives which may be present in some or all of the curricula of the diploma health technology programs at BCIT. These objectives have been identified through consultation with members of the Health Division Committee on Integrating Diploma Curricula and through a review of the existing curricula of diploma programs.

Each objective refers to learning outcomes which students are expected to meet by the end of the program. You are asked to evaluate each objective in four distinct ways:

EVALUATION A — How important *is* this objective in the curriculum of *your* program? (Please circle your choice.)

EVALUATION B — How important *should* this objective be in the curriculum of *your* program? (Please circle your choice.).

Please answer this question without regard for the constraints imposed by time, facilities, or other resources.

EVALUATION C — How easy *would it be* (was it) to make this objective part of the curriculum of *your* program? (Please circle your choice.)

Please answer this question with regard for the constraints imposed by time, facilities or other resources.

EVALUATION D — Do you think this objective is appropriate for the curriculum of a health technology program *other than your own?* Please indicate which program or programs by placing a check mark in the appropriate box.

Please evaluate each item to the best of your knowledge.

Please feel free to suggest additional objectives, topics, or learning activities relating to each of the sections of the questionnaire. Space has been left at the end of the questionnaire for this purpose. These additional items will be added to the second and third rounds of the questionnaire.

RESPONSE KEY

EVALUATION A — How important *is* this objective in the curriculum of *your* program?

Unable to judge	Not important	Somewhat important	Important	Very important	Extremely important
0	1	2	3	4	5

EVALUATION B — How important *should* this objective be in the curriculum of *your* program?

Unable to judge	Not important	Somewhat important	Important	Very important	Extremely important
0	1	2	3	4	5

EVALUATION C — How easy *would it be (was it)* to make this objective part of the curriculum of *your* program?

Unable to judge	Not Easy	Somewhat Easy	Easy	Very Easy	Extremely Easy
0	1	2	3	4	5

EVALUATION D — Identify any health technology program(s) for which you believe this objective *might be appropriate*. (*Do not* include your own program.)

- ☐ None
- ☐ Biomedical Electronics
- ☐ Health Information
- ☐ Prosthetics and Orthotics
- ☐ All
- ☐ Medical Laboratory
- ☐ Medical Radiography
- ☐ Nuclear Medicine
- ☐ Public Health Inspector
- ☐ Occupational Health and Safety
- ☐ Psychiatric Nursing
- ☐ General Nursing

EXAMPLE

By the end of the program the student will be able to identify the major purposes of patient/agency records.

A	0	1	(2)	3	4	5
B	0	1	2	3	(4)	5
C	0	1	2	3	(4)	5

D

☐ None	☐ All	☐ PHI
☐ Biomed	☐ Med Lab	☐ OH and S
☑ HI	☐ Med Rad	☑ PH
☐ P and O	☐ Nuc Med	☑ GN

In this example the respondent indicates the objective:

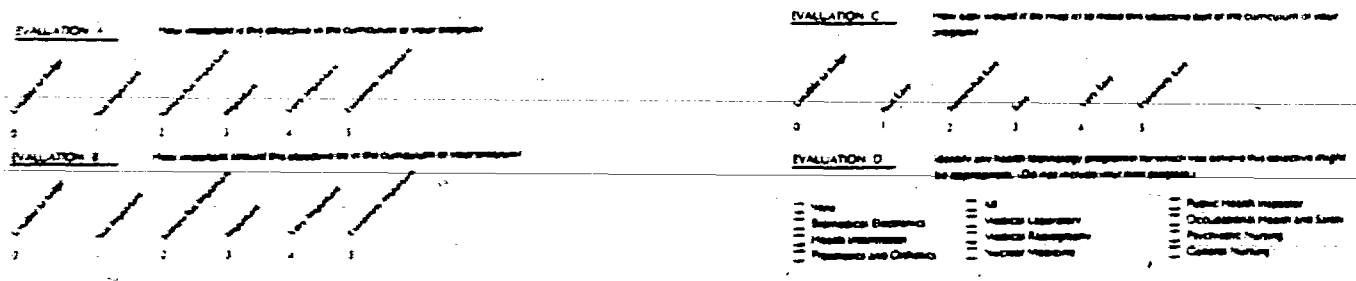
A is *somewhat important* in the curriculum of his/her program.

B should be *very important* in the curriculum of his/her program.

C would be *very easy* to make part of the curriculum of his/her program.

D *might be appropriate* for the curriculum of the Health Information, Psychiatric Nursing and General Nursing programs.

A Response Key has been printed on the last page and may be detached for your convenience in answering the questionnaire.



INVENTORY OF OBJECTIVES

I HEALTH CARE SYSTEM

By the end of the program the student will be able to:

1. describe the structure and function of the major parts of the health care system of British Columbia (e.g., roles of various levels of government, health regulation, levels of care.)

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ Biomed ☐ HI ☐ P and O ☐ All ☐ Med Lab ☐ Med Rad ☐ Nuc Med ☐ PHI ☐ OH and S ☐ PH ☐ GN

2. describe the financing of health care in British Columbia.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ Biomed ☐ HI ☐ P and O ☐ All ☐ Med Lab ☐ Med Rad ☐ Nuc Med ☐ PHI ☐ OH and S ☐ PH ☐ GN

3. describe the basic concept of health insurance and compare it to the "fee for service" concept.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ Biomed ☐ HI ☐ P and O ☐ All ☐ Med Lab ☐ Med Rad ☐ Nuc Med ☐ PHI ☐ OH and S ☐ PH ☐ GN

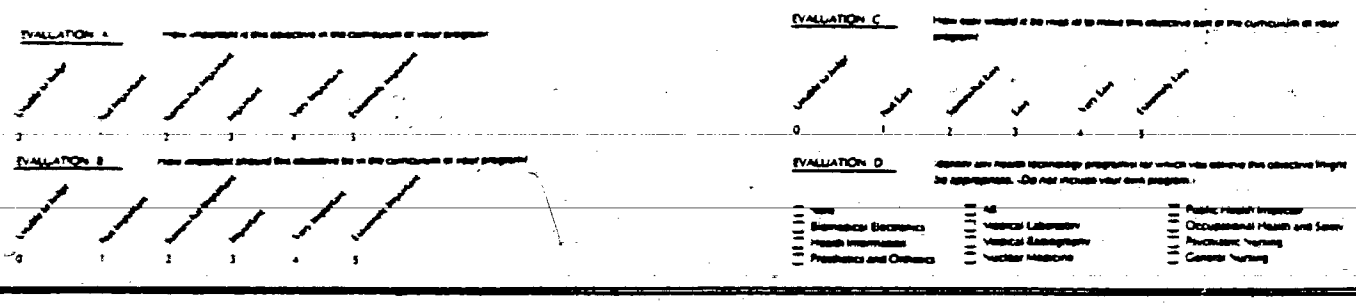
4. describe the roles of government and private interests in the development of health care policies in British Columbia.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ Biomed ☐ HI ☐ P and O ☐ All ☐ Med Lab ☐ Med Rad ☐ Nuc Med ☐ PHI ☐ OH and S ☐ PH ☐ GN



5. describe common professional responsibilities of selected health team members in relation to the development and implementation of health care policies.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ All ☐ PHI
☐ Biomed ☐ Med Lab ☐ OH and S
☐ HI ☐ Med Rad ☐ PH
☐ P and O ☐ Nuc Med ☐ GN

6. describe the content and impact of selected legislation on health care policies in British Columbia (e.g., narcotic control, radiation protection, public health).

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ All ☐ PHI
☐ Biomed ☐ Med Lab ☐ OH and S
☐ HI ☐ Med Rad ☐ PH
☐ P and O ☐ Nuc Med ☐ GN

7. explore the effects of technological innovation on the health care system of B.C. (e.g., computers, automated equipment).

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ All ☐ PHI
☐ Biomed ☐ Med Lab ☐ OH and S
☐ HI ☐ Med Rad ☐ PH
☐ P and O ☐ Nuc Med ☐ GN

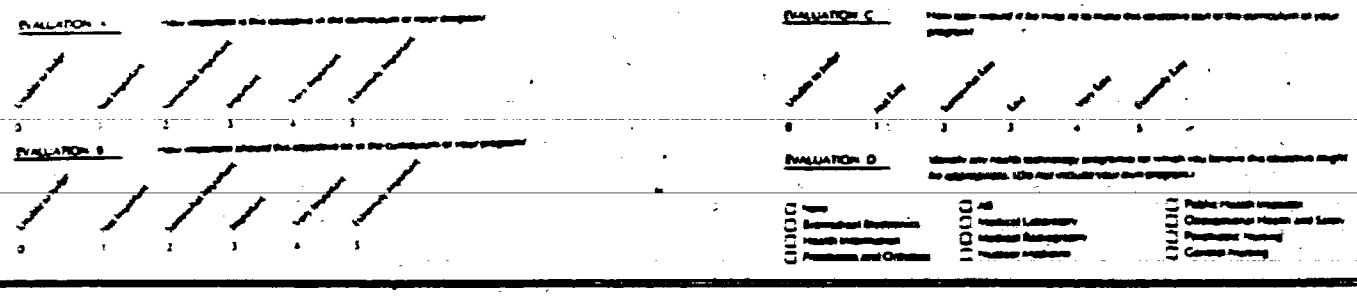
8. discuss selected variables which increase an individual's use of health care services (e.g., age, sex, education, social class, values).

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ All ☐ PHI
☐ Biomed ☐ Med Lab ☐ OH and S
☐ HI ☐ Med Rad ☐ PH
☐ P and O ☐ Nuc Med ☐ GN



9. discuss selected characteristics which enable an individual to access health services (e.g., existence of service, geography).

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ All ☐ PHI
☐ Biomed ☐ Med Lab ☐ OH and S
☐ HI ☐ Med Rad ☐ PH
☐ P and O ☐ Nuc Med ☐ GN

10. discuss selected characteristics which influence an individual's perception of need for health services (e.g., social and cultural influences).

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ All ☐ PHI
☐ Biomed ☐ Med Lab ☐ OH and S
☐ HI ☐ Med Rad ☐ PH
☐ P and O ☐ Nuc Med ☐ GN

11. describe the impact of consumerism on the health care system (e.g., right to information, involvement in policy formation).

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ All ☐ PHI
☐ Biomed ☐ Med Lab ☐ OH and S
☐ HI ☐ Med Rad ☐ PH
☐ P and O ☐ Nuc Med ☐ GN

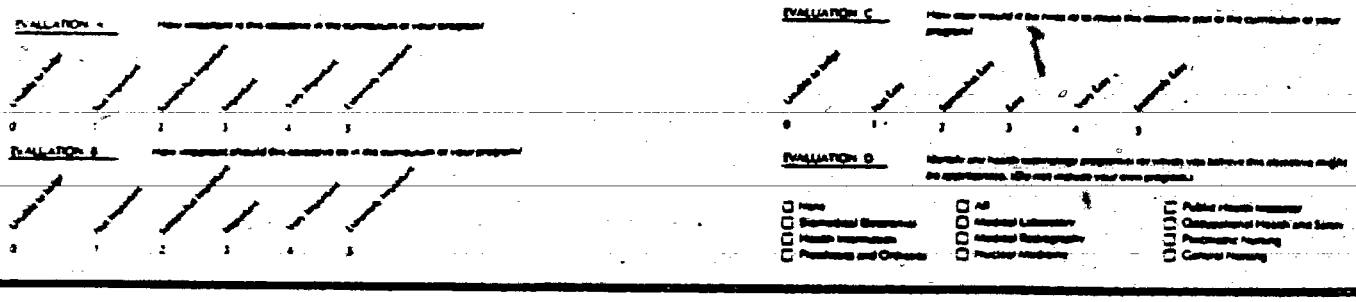
12. describe strategies for producing better informed consumers of health care.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ All ☐ PHI
☐ Biomed ☐ Med Lab ☐ OH and S
☐ HI ☐ Med Rad ☐ PH
☐ P and O ☐ Nuc Med ☐ GN



13. describe the roles, functions and interrelationships of selected health team members.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ All ☐ PHI
☐ Biomed ☐ Med Lab ☐ OH and S
☐ HI ☐ Med Rad ☐ PH
☐ P and O ☐ Nuc Med ☐ CN

II PROFESSIONAL ROLE

By the end of the program the student will be able to:

14. describe the major roles of selected health professional organizations at the provincial and national level.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ All ☐ PHI
☐ Biomed ☐ Med Lab ☐ OH and S
☐ HI ☐ Med Rad ☐ PH
☐ P and O ☐ Nuc Med ☐ CN

15. describe ways in which selected professional organizations seek to maintain the competency of their members.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ All ☐ PHI
☐ Biomed ☐ Med Lab ☐ OH and S
☐ HI ☐ Med Rad ☐ PH
☐ P and O ☐ Nuc Med ☐ CN

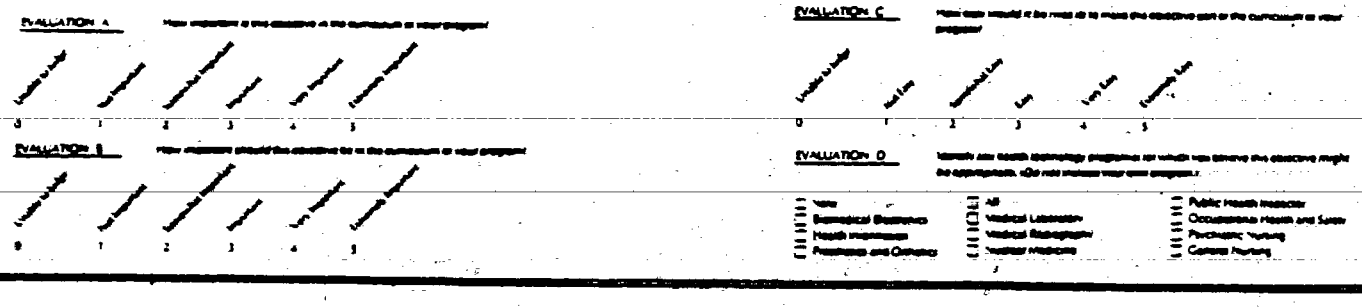
16. describe selected accreditation requirements and standards which must be met by specified health care agencies (e.g., safety practices, equipment quality, staff qualifications, infection control).

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ All ☐ PHI
☐ Biomed ☐ Med Lab ☐ OH and S
☐ HI ☐ Med Rad ☐ PH
☐ P and O ☐ Nuc Med ☐ CN



17. describe the purpose and nature of quality control systems used by health care agencies.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ All ☐ PHI
☐ Biomed ☐ Med Lab ☐ OH and S
☐ HI ☐ Med Rad ☐ PH
☐ P and O ☐ Nuc Med ☐ CN

18. explore the limits of his/her responsibility and expertise in relation to other members of the health care team.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ All ☐ PHI
☐ Biomed ☐ Med Lab ☐ OH and S
☐ HI ☐ Med Rad ☐ PH
☐ P and O ☐ Nuc Med ☐ CN

19. explore his/her role in relation to the health care team in maintaining selected accreditation requirements and professional standards.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ All ☐ PHI
☐ Biomed ☐ Med Lab ☐ OH and S
☐ HI ☐ Med Rad ☐ PH
☐ P and O ☐ Nuc Med ☐ CN

III INTERACTIVE ROLE

By the end of the program the student will be able to:

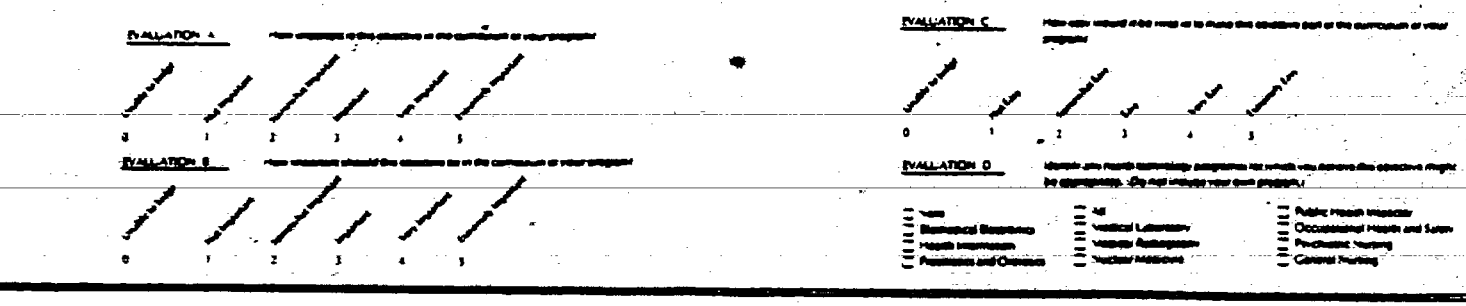
20. describe the components of a model of effective communication including listening and verbal and non-verbal communication.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ All ☐ PHI
☐ Biomed ☐ Med Lab ☐ OH and S
☐ HI ☐ Med Rad ☐ PH
☐ P and O ☐ Nuc Med ☐ CN



21. demonstrate behaviours which enhance his/her ability to initiate, maintain and effectively terminate a relationship with patients, families and others.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ All ☐ PHI
☐ Biomed ☐ Med Lab ☐ OH and S
☐ HI ☐ Med Rad ☐ PH
☐ P and O ☐ Nuc Med ☐ CN

22. demonstrate skill in directly expressing feelings in a respectful, constructive manner.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ All ☐ PHI
☐ Biomed ☐ Med Lab ☐ OH and S
☐ HI ☐ Med Rad ☐ PH
☐ P and O ☐ Nuc Med ☐ CN

23. describe the characteristics of selected majority and minority groups in relation to life style and attitudes to health and illness.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ All ☐ PHI
☐ Biomed ☐ Med Lab ☐ OH and S
☐ HI ☐ Med Rad ☐ PH
☐ P and O ☐ Nuc Med ☐ CN

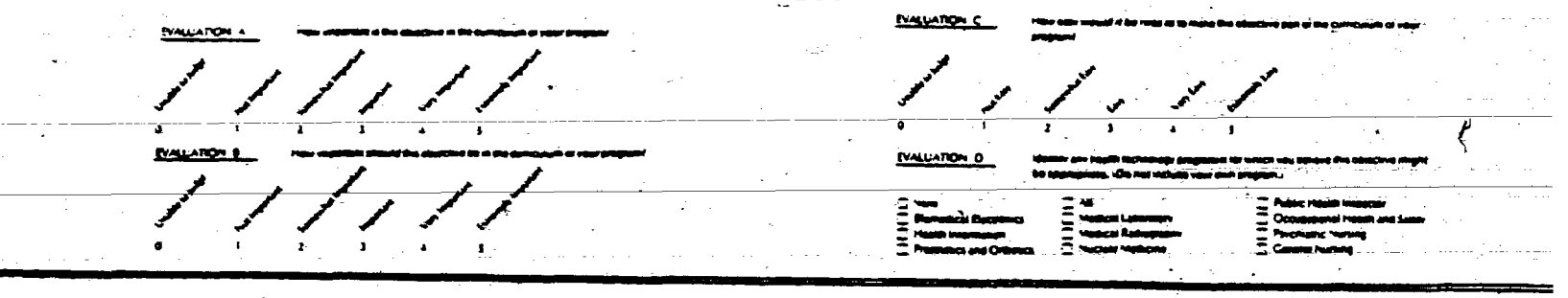
24. describe common stresses associated with the life stages of man.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ All ☐ PHI
☐ Biomed ☐ Med Lab ☐ OH and S
☐ HI ☐ Med Rad ☐ PH
☐ P and O ☐ Nuc Med ☐ CN



25. describe current trends in Canadian family life which influence health care needs.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ All ☐ PHI
☐ Biomed ☐ Med Lab ☐ OH and S
☐ HI ☐ Med Rad ☐ PH
☐ P and O ☐ Nuc Med ☐ GN

26. describe the role of values, attitudes and beliefs in influencing behaviour.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ All ☐ PHI
☐ Biomed ☐ Med Lab ☐ OH and S
☐ HI ☐ Med Rad ☐ PH
☐ P and O ☐ Nuc Med ☐ GN

27. recognize values, attitudes and beliefs in self and client which may interfere with effective communication.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ All ☐ PHI
☐ Biomed ☐ Med Lab ☐ OH and S
☐ HI ☐ Med Rad ☐ PH
☐ P and O ☐ Nuc Med ☐ GN

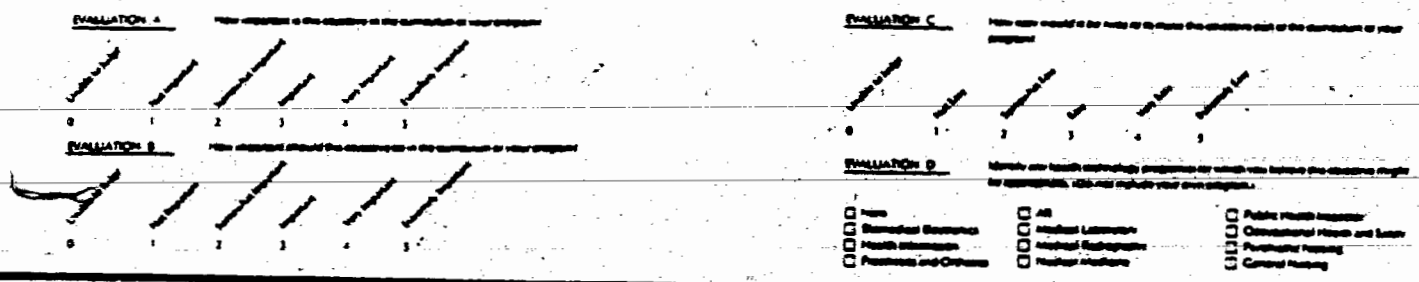
28. describe societal values, attitudes and beliefs in relation to the handicapped.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ All ☐ PHI
☐ Biomed ☐ Med Lab ☐ OH and S
☐ HI ☐ Med Rad ☐ PH
☐ P and O ☐ Nuc Med ☐ GN



29. describe strategies for interacting more effectively with handicapped and minority clients.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ All ☐ PHI
☐ Biomed ☐ Med Lab ☐ OH and S
☐ HI ☐ Med Rad ☐ PH
☐ P and O ☐ Nuc Med ☐ GN

30. describe healthy and unhealthy ways in which the basic emotions of fear, anxiety, anger, sadness and elation may be expressed.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ All ☐ PHI
☐ Biomed ☐ Med Lab ☐ OH and S
☐ HI ☐ Med Rad ☐ PH
☐ P and O ☐ Nuc Med ☐ GN

31. act to promote the healthy expression of emotions by clients and families.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ All ☐ PHI
☐ Biomed ☐ Med Lab ☐ OH and S
☐ HI ☐ Med Rad ☐ PH
☐ P and O ☐ Nuc Med ☐ GN

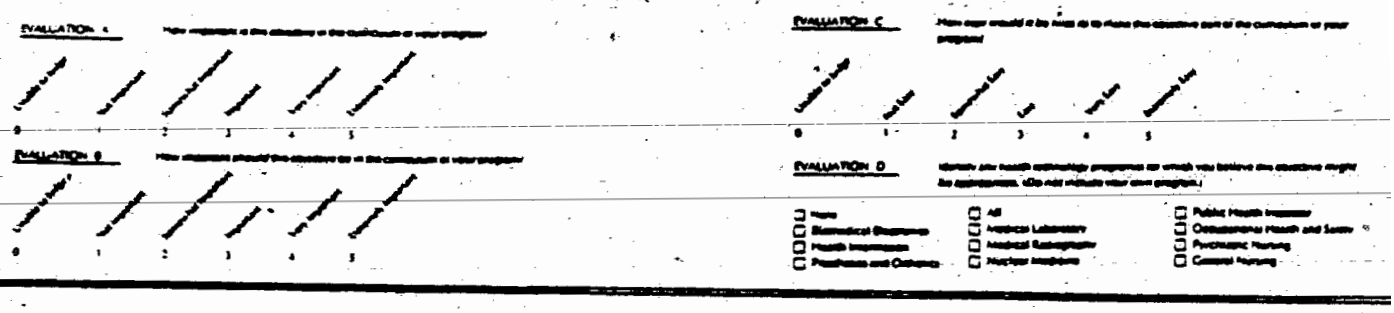
32. describe socio-cultural and developmental factors which must be considered in meeting client learning needs.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ All ☐ PHI
☐ Biomed ☐ Med Lab ☐ OH and S
☐ HI ☐ Med Rad ☐ PH
☐ P and O ☐ Nuc Med ☐ GN



33. develop, implement and evaluate teaching plans for patients, families, peers and/or the public.

A	0	1	2	3	4	5
B	0	1	2	3	4	5
C	0	1	2	3	4	5

D
- ☐ None
- ☐ Biomed
- ☐ HI
- ☐ P and O
- ☐ All
- ☐ Med Lab
- ☐ Med Rad
- ☐ Nuc Med
- ☐ PHI
- ☐ OH and S
- ☐ PH
- ☐ GN

34. using appropriate medical terminology, report and record behaviour/events accurately and concisely using descriptive rather than evaluative terms and fact rather than inference.

A	0	1	2	3	4	5
B	0	1	2	3	4	5
C	0	1	2	3	4	5

D
- ☐ None
- ☐ Biomed
- ☐ HI
- ☐ P and O
- ☐ All
- ☐ Med Lab
- ☐ Med Rad
- ☐ Nuc Med
- ☐ PHI
- ☐ OH and S
- ☐ PH
- ☐ GN

35. describe self management strategies and techniques that assist him/her to maintain the interactive skills which are essential to effective relationships with clients and others.

A	0	1	2	3	4	5
B	0	1	2	3	4	5
C	0	1	2	3	4	5

D
- ☐ None
- ☐ Biomed
- ☐ HI
- ☐ P and O
- ☐ All
- ☐ Med Lab
- ☐ Med Rad
- ☐ Nuc Med
- ☐ PHI
- ☐ OH and S
- ☐ PH
- ☐ GN

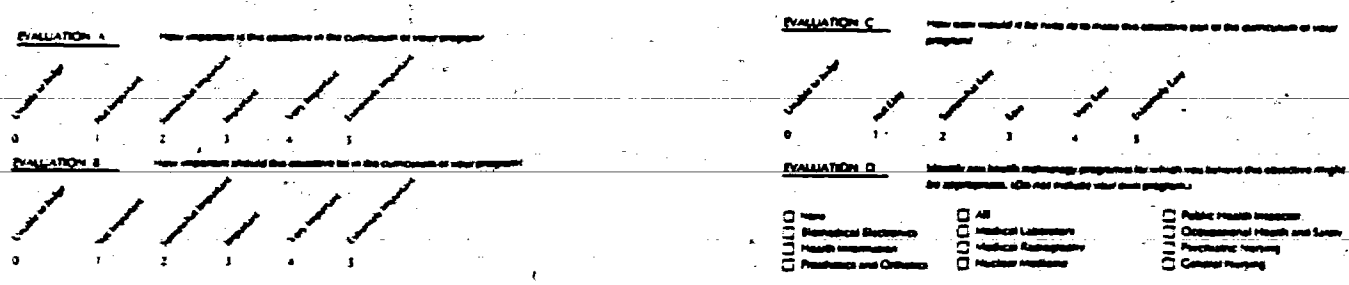
IV LEGAL AND ETHICAL RESPONSIBILITIES

By the end of the program the student will be able to:

36. discuss the following terms: client rights, consent to treatment, negligence, malpractice, assault, battery, invasion of privacy, duty of disclosure, defamation, civil liability, criminal liability.

A	0	1	2	3	4	5
B	0	1	2	3	4	5
C	0	1	2	3	4	5

D
- ☐ None
- ☐ Biomed
- ☐ HI
- ☐ P and O
- ☐ All
- ☐ Med Lab
- ☐ Med Rad
- ☐ Nuc Med
- ☐ PHI
- ☐ OH and S
- ☐ PH
- ☐ GN



37. using selected case studies involving negligence, identify: the standard of care expected by negligence law, the responsibility of the worker and the responsibility of the health care agency.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ Biomed ☐ HI ☐ P and O ☐ All ☐ Med Lab ☐ Med Rad ☐ Nuc Med ☐ PHI ☐ OH and S ☐ PH ☐ GN

38. explore ways in which client rights may be violated in selected fields of practice.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ Biomed ☐ HI ☐ P and O ☐ All ☐ Med Lab ☐ Med Rad ☐ Nuc Med ☐ PHI ☐ OH and S ☐ PH ☐ GN

39. describe the nature and importance of adequate identification of patients, patient records, specimens and films.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ Biomed ☐ HI ☐ P and O ☐ All ☐ Med Lab ☐ Med Rad ☐ Nuc Med ☐ PHI ☐ OH and S ☐ PH ☐ GN

1

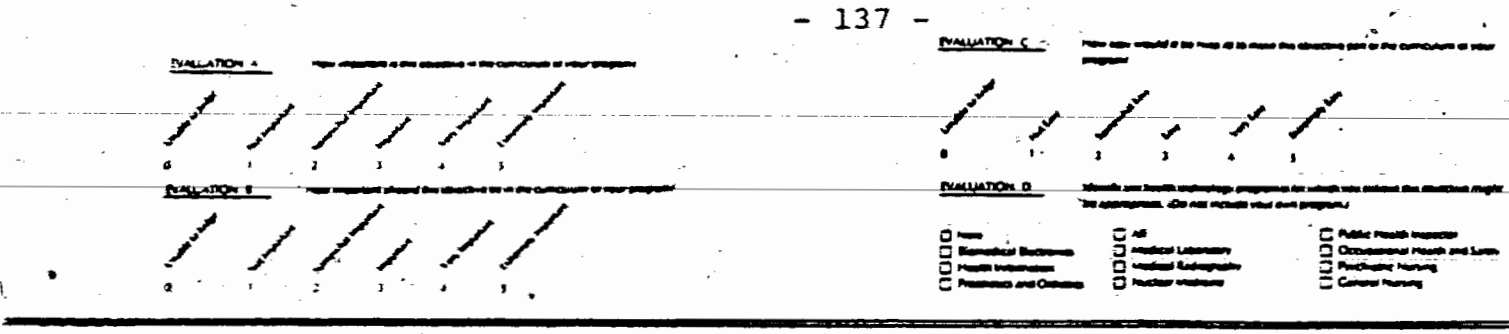
40. describe his/her legal responsibilities to clients in relation to the duty of disclosure (informed consent) and client confidentiality.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ Biomed ☐ HI ☐ P and O ☐ All ☐ Med Lab ☐ Med Rad ☐ Nuc Med ☐ PHI ☐ OH and S ☐ PH ☐ GN



41. describe his/her legal responsibilities in relation to documentation in patient and agency records.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ All ☐ PHI
☐ Biomed ☐ Med Lab ☐ OH and S
☐ HI ☐ Med Rad ☐ PH
☐ P and O ☐ Nuc Med ☐ GN

42. describe his/her legal responsibilities in relation to the administratation of medications or diagnostic agents to patients.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ All ☐ PHI
☐ Biomed ☐ Med Lab ☐ OH and S
☐ HI ☐ Med Rad ☐ PH
☐ P and O ☐ Nuc Med ☐ GN

43. describe his/her legal responsibilities for an accident or error in treatment occurring to a patient for whom he/she has direct or indirect responsibility (e.g., medication error, equipment malfunction, lab test error).

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ All ☐ PHI
☐ Biomed ☐ Med Lab ☐ OH and S
☐ HI ☐ Med Rad ☐ PH
☐ P and O ☐ Nuc Med ☐ GN

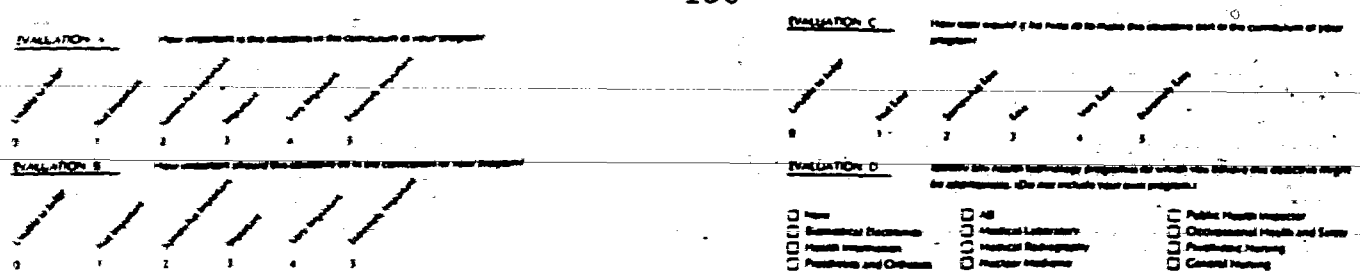
44. identify specific measures taken within selected fields of practice to safeguard the environment for patients, staff and others.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ All ☐ PHI
☐ Biomed ☐ Med Lab ☐ OH and S
☐ HI ☐ Med Rad ☐ PH
☐ P and O ☐ Nuc Med ☐ GN



45. discuss the following terms: ethics, ethical dilemma, feelings, beliefs, attitudes, opinions, values.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ Biomed ☐ HI ☐ P and O ☐ All ☐ Med Lab ☐ Med Rad ☐ Nuc Med ☐ PHI ☐ OH and S ☐ PH ☐ GN

46. describe selected traditional and contemporary ethical theories.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ Biomed ☐ HI ☐ P and O ☐ All ☐ Med Lab ☐ Med Rad ☐ Nuc Med ☐ PHI ☐ OH and S ☐ PH ☐ GN

47. explore ways in which feelings, beliefs, attitudes, opinions and values influence the development of personal ethical standards.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ Biomed ☐ HI ☐ P and O ☐ All ☐ Med Lab ☐ Med Rad ☐ Nuc Med ☐ PHI ☐ OH and S ☐ PH ☐ GN

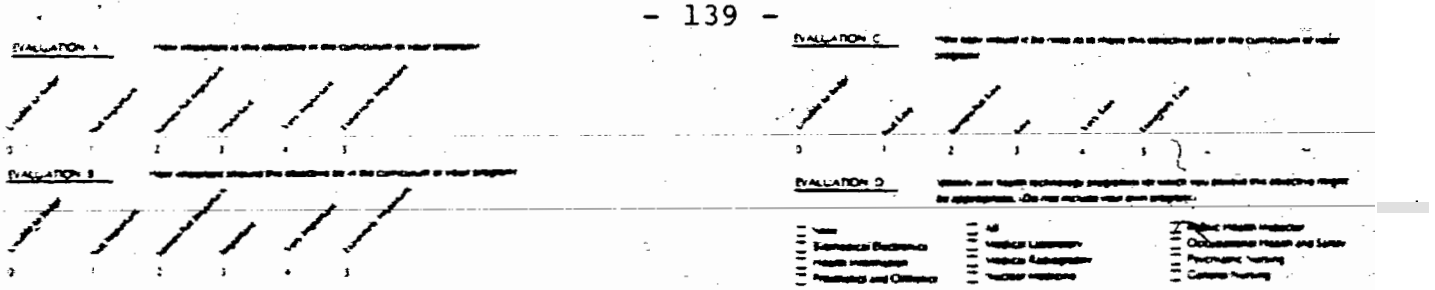
48. identify major ethical dilemmas existing in selected fields of practice.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ Biomed ☐ HI ☐ P and O ☐ All ☐ Med Lab ☐ Med Rad ☐ Nuc Med ☐ PHI ☐ OH and S ☐ PH ☐ GN



49. using selected case studies, identify the ethical dilemma, the rights and responsibilities involved, and the acceptable course(s) of action.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ Biomed ☐ HI ☐ P and O ☐ All ☐ Med Lab ☐ Med Rad ☐ Nuc Med ☐ PHI ☐ OH and S ☐ PH ☐ CN

V MANAGEMENT AND SUPERVISION

By the end of the program the student will be able to:

50. describe the organizational structure of an assigned agency including functions and responsibilities, line and staff relationships and channels of communication.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ Biomed ☐ HI ☐ P and O ☐ All ☐ Med Lab ☐ Med Rad ☐ Nuc Med ☐ PHI ☐ OH and S ☐ PH ☐ CN

51. describe his/her role, responsibilities and channels of communication in relation to other members of the health care team within the assigned agency.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ Biomed ☐ HI ☐ P and O ☐ All ☐ Med Lab ☐ Med Rad ☐ Nuc Med ☐ PHI ☐ OH and S ☐ PH ☐ CN

52. compare various leadership styles and their degree of effectiveness in directing health care personnel in selected settings.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ Biomed ☐ HI ☐ P and O ☐ All ☐ Med Lab ☐ Med Rad ☐ Nuc Med ☐ PHI ☐ OH and S ☐ PH ☐ CN

EVALUATION A

EVALUATION B

EVALUATION C

EVALUATION D

33. demonstrate effective supervision of assigned patients and specified health team members.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ Biomed ☐ HI ☐ P and O ☐ All ☐ Med Lab ☐ Med Rad ☐ Nuc Med ☐ PHI ☐ OH and S ☐ PH ☐ CN

34. describe performance appraisal systems and methods.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ Biomed ☐ HI ☐ P and O ☐ All ☐ Med Lab ☐ Med Rad ☐ Nuc Med ☐ PHI ☐ OH and S ☐ PH ☐ CN

35. discuss effective strategies and techniques for motivating self and others.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ Biomed ☐ HI ☐ P and O ☐ All ☐ Med Lab ☐ Med Rad ☐ Nuc Med ☐ PHI ☐ OH and S ☐ PH ☐ CN

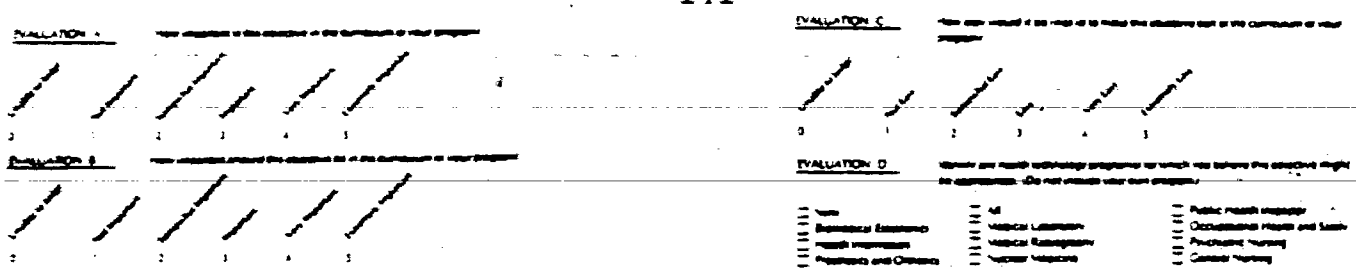
36. employ basic strategies in planning, implementing and evaluating change.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ Biomed ☐ HI ☐ P and O ☐ All ☐ Med Lab ☐ Med Rad ☐ Nuc Med ☐ PHI ☐ OH and S ☐ PH ☐ CN



57. demonstrate skill in utilizing the decision making process.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ Biomed ☐ HI ☐ P and O ☐ All ☐ Med Lab ☐ Med Rad ☐ Nuc Med ☐ PHI ☐ OH and S ☐ PH ☐ CN

58. describe strategies for reducing conflict within organizations and groups.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ Biomed ☐ HI ☐ P and O ☐ All ☐ Med Lab ☐ Med Rad ☐ Nuc Med ☐ PHI ☐ OH and S ☐ PH ☐ CN

59. describe key variables influencing an individual's behaviour in organizational settings (e.g., attitudes, values, personality, perception, motivation).

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ Biomed ☐ HI ☐ P and O ☐ All ☐ Med Lab ☐ Med Rad ☐ Nuc Med ☐ PHI ☐ OH and S ☐ PH ☐ CN

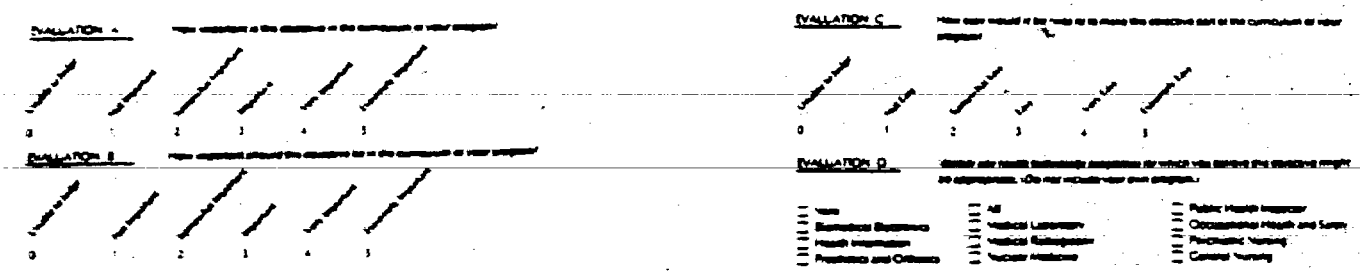
60. demonstrate the basic principles of budgeting and cost control.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ Biomed ☐ HI ☐ P and O ☐ All ☐ Med Lab ☐ Med Rad ☐ Nuc Med ☐ PHI ☐ OH and S ☐ PH ☐ CN



61. demonstrate selected methods for maintaining an inventory of supplies and equipment.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ All ☐ PHI
☐ Biomed ☐ Med Lab ☐ OH and S
☐ HI ☐ Med Rad ☐ PH
☐ P and O ☐ Nuc Med ☐ CN

62. describe major legislation affecting labor relations within the health care system in B.C.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ All ☐ PHI
☐ Biomed ☐ Med Lab ☐ OH and S
☐ HI ☐ Med Rad ☐ PH
☐ P and O ☐ Nuc Med ☐ CN

63. demonstrate awareness of rights and responsibilities as defined in own union contract and union contract of selected health team members.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ All ☐ PHI
☐ Biomed ☐ Med Lab ☐ OH and S
☐ HI ☐ Med Rad ☐ PH
☐ P and O ☐ Nuc Med ☐ CN

64. describe grievance, mediation and arbitration procedures related to health labor relations

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D ☐ None ☐ All ☐ PHI
☐ Biomed ☐ Med Lab ☐ OH and S
☐ HI ☐ Med Rad ☐ PH
☐ P and O ☐ Nuc Med ☐ CN

Additional objectives, topics or learning activities relating to the Health Care System, the Professional Role, the Interactive Role, Legal and Ethical Responsibilities and Management and Supervision.

Thank you for your co-operation in completing **Phase One** of the survey.

RESPONSE KEY

EVALUATION A — How important *is* this objective in the curriculum of *your* program?

Unable to judge	Not important	Somewhat important	Important	Very important	Extremely important
0	1	2	3	4	5

EVALUATION B — How important *should* this objective be in the curriculum of *your* program?

Unable to judge	Not important	Somewhat important	Important	Very important	Extremely important
0	1	2	3	4	5

EVALUATION C — How easy *would it be (was it)* to make this objective part of the curriculum of *your* program?

Unable to judge	Not Easy	Somewhat Easy	Easy	Very Easy	Extremely Easy
0	1	2	3	4	5

EVALUATION D — Identify any health technology program(s) for which you believe this objective *might be appropriate*. (*Do not* include your own program.)

- ☐ None
- ☐ Biomedical Electronics
- ☐ Health Information
- ☐ Prosthetics and Orthotics
- ☐ All
- ☐ Medical Laboratory
- ☐ Medical Radiography
- ☐ Nuclear Medicine
- ☐ Public Health Inspector
- ☐ Occupational Health and Safety
- ☐ Psychiatric Nursing
- ☐ General Nursing

Please detach for your convenience in answering the questionnaire.

APPENDIX D

COVER LETTER AND QUESTIONNAIRE
FOR PHASE TWO

BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY
3700 WILLINGDON AVENUE, BURNABY, BRITISH COLUMBIA, CANADA V5G 3H2 AREA CODE 604 434-5734

April 6, 1983

Dear Colleague:

Thank you for your participation in the first phase of the survey. I am pleased to say that 82% of you responded. I appreciate your participation greatly and hope you will stay with me for the next two phases.

As indicated previously, the Health Division Committee on Integrating Diploma Curricula has endorsed this study as a means of identifying common content areas within diploma programs in the Health Division. The results of the survey, which will identify content areas where integration might be feasible, will be available to you and the Division integrating committee.

Enclosed is the second questionnaire of the three phase survey. It consists of the original inventory of objectives, your responses from phase one, the statistical analysis of phase one, and additional objectives suggested by respondents on phase one.

Please complete the second questionnaire, place it in the original envelope and return it to the office of the Dean of the Health Division by Wednesday, April 20th. The third and final questionnaire will be distributed to you within two weeks.

In no instances will responses be reported on an individual basis. Each questionnaire has been assigned a code number for computer analysis and for providing you with your responses to phase two of the survey.

If you are unclear about any aspect of this project, please call me any evening at 929-3514. Your participation is essential in providing direction for the development of curriculum integration within the Health Division.

Sincerely

Beverley Miller
Member of Health Division Committee
on Integrating Diploma Curricula
B.C.I.T.
Attach.

BCIT

DIPLOMA PROGRAM
HEALTH SCIENCE TECHNOLOGY
SURVEY
PHASE TWO

This survey is directed to department heads, faculty, and teaching technical staff within the diploma programs of the Health Division at the British Columbia Institute of Technology. The purpose of the survey is to identify curricula objectives which are common to two or more health science technology programs.

Your co-operation in participating in this **three phase survey** is extremely important. The results of this survey will help provide direction for future curricula development within the Health Division at BCIT.

☐☐☐

DIPLOMA PROGRAM
HEALTH SCIENCE TECHNOLOGY SURVEY

Please answer the following questions about yourself by placing a check mark (✓) in the box beside the item which best describes you.

1. What is your current position within the Health Division?

01 ☐ Department Head
02 ☐ Faculty
03 ☐ Teaching Technical Staff
04 ☐ Other. Please specify _____

2. With which health program are you affiliated? If you are affiliated with more than one program please select the *one program* for which you will respond *in all three phases* of the survey. (Check one response only.)

01 ☐ Biomedical Electronics (Biomed)
02 ☐ Health Information (HI)
03 ☐ Prosthetics and Orthotics (P and O)
04 ☐ Medical Laboratory (Med Lab)
05 ☐ Medical Radiography (Med Rad)
06 ☐ Nuclear Medicine (Nuc Med)
07 ☐ Public Health Inspector (PHI)
08 ☐ Occupational Health and Safety (OH and S)
09 ☐ Psychiatric Nursing (PN)
10 ☐ General Nursing (GN)

3. How many years have you been employed within the health technology program indicated in Question 2?

01 ☐ Less than 1
02 ☐ 1 - 3
03 ☐ 4 - 7
04 ☐ 8 or more

The following questionnaire which has been returned to you is the same as the questionnaire used in **phase one** of the survey with the following additions:

a) **your previous responses** for each objective have been indicated in **red**;

b) the **mean response** and the **range of responses** represented by ± one standard deviation have been indicated for **Evaluations B and C;**

c) **the percentage responses** have been indicated for **Evaluation D**;

d) additional **objectives**, **topics**, and **learning activities** suggested by you on the first questionnaire have been added for your evaluation.

Each objective refers to learning outcomes which students are expected to meet by the end of the program. You are again asked to evaluate each objective in four distinct ways.

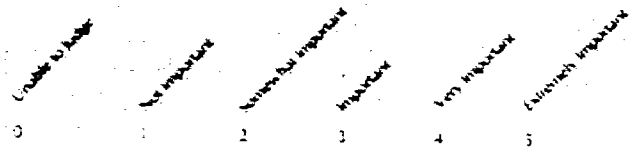
EVALUATION A	How important is the objective in the curriculum of *your* program? (Please circle your choice.)
EVALUATION B	How important *should* this objective be in the curriculum of *your* program? Please circle your choice.) *Please answer this question without regard* for the constraints imposed by time, facilities, or other resources.
EVALUATION C	How easy *would it be (was it)* to make this objective part of the curriculum of *your* program? (Please circle your choice.) *Please answer this question with regard* for the constraints imposed by time, facilities or other resources.
EVALUATION D	Do you think this objective is appropriate for the curriculum of a health technology program *other than your own?* Please indicate which program or programs by placing a check mark in the appropriate box.

Please evaluate each item to the best of your knowledge.

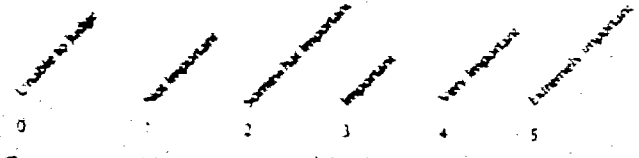
Please feel free to suggest additional objectives, topics, or learning activities relating to each of the sections of the questionnaire. Space has been left at the end of the questionnaire for this purpose. These additional items will be added to the third round of the questionnaire.

RESPONSE KEY

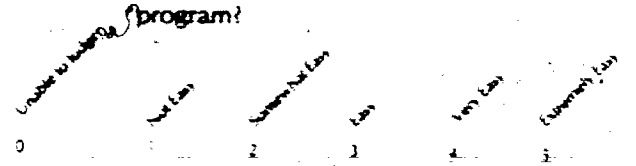
EVALUATION A — How important *is* this objective in the curriculum of *your* program?



EVALUATION B — How important *should* this objective be in the curriculum of *your* program?



EVALUATION C — How easy *would it be (was it)* to make this objective part of the curriculum of *your* program?



EVALUATION D — Identify any health technology program(s) for which you believe this objective *might be appropriate*. *Do not* include your own program.

- ☐ None
- ☐ Biomedical Electronics
- ☐ Health Information
- ☐ Prosthetics and Orthotics
- ☐ All
- ☐ Medical Laboratory
- ☐ Medical Radiography
- ☐ Nuclear Medicine
- ☐ Public Health Inspector
- ☐ Occupational Health and Safety
- ☐ Psychiatric Nursing
- ☐ General Nursing

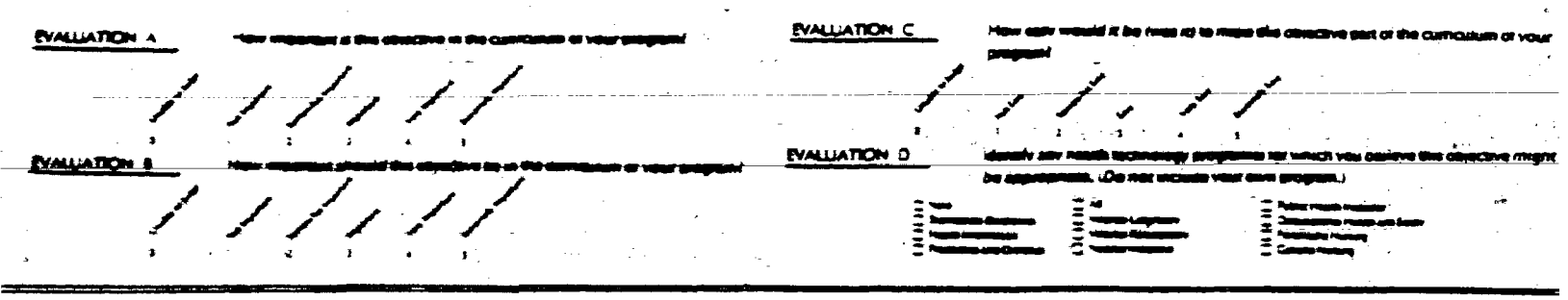
Please complete this second questionnaire while reviewing each of your previous responses (indicated in red) and the **consensus indicators** (mean response, range of responses, percentage responses).

For **Evaluations A, B and C** mark your preferred rating by **circling** a number on each scale. If your rating for any objective is **outside** the horizontal line which represents ± one standard deviation from the mean response, please **briefly** explain your reason for choosing that position by writing in the area designated for **comments**.

For **Evaluation D**, identify the selected program(s) by placing a **check mark** in the appropriate box(es).

Please feel free to maintain your **original position** on any items you wish by **re-marking** your original choice. The consensus indicators represent the responses for the **entire Health Division** – not your own technology.

A Response Key has been printed on the last page and may be detached for your convenience in answering the questionnaire.



EXAMPLE

OBJECTIVE #

By the end of the program the student will be able to identify the major purposes of patient agency records.

Comments

EVALUATION A

0 1 [2] (3) 4 5

EVALUATION B

0 1 2 3 [4] 5

EVALUATION C

0 1 2 3 [4] (5)

Could probably be added to content on legal issue.

D

☐ None	5%	☐ All	12%	☐ PHI	34%
☐ Biomed	15%	☐ Med Lab	51%	☐ OH and S	34%
☑ HI	98%	☐ Med Rad	68%	☑ PN	92%
☐ P and O	35%	☐ Nuc Med	70%	☑ GN	84%

In this example, the respondent's original ratings for **Evaluations A, B and C** are marked in red. The mean response is indicated by the central tick. The horizontal line and two extreme tick marks indicate the range of responses encompassed by ± one standard deviation.

This respondent changed the A rating to 3, **recircled** the B rating at 4 and changed the C rating to 5.

The C rating of 5 is outside the consensus range. The comment in the margin indicates this objective – "could probably be added to the content on legal issues".

After reviewing the objective and the percentage results for **Evaluation D**, this respondent again indicated the objective might be an appropriate part of the curriculum of the Health Information, Psychiatric Nursing and General Nursing programs.

EVALUATION A — How important is this objective in the curriculum of your program?

EVALUATION B — How important should this objective be in the curriculum of your program?

EVALUATION C — How easy would it be (was it) to make this objective part of the curriculum of your program?

EVALUATION D — Identify any health technology programs for which you believe this objective might be appropriate. (Do not include your own program.)

INVENTORY OF OBJECTIVES

I HEALTH CARE SYSTEM

By the end of the program the student will be able to:

1. describe the structure and function of the major parts of the health care system of British Columbia (e.g., roles of various levels of government, health regulation, levels of care.)

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

Comments

D

None	7%	All	50%	PHI	29%
Biomed	3%	Med Lab	8%	OH and S	21%
HI	30%	Med Rad	8%	N	21%
P and O	9%	Nuc Med	10%	GN	17%

2. describe the financing of health care in British Columbia.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

Comments

D

None	22%	All	60%	PHI	4%
Biomed	2%	Med Lab	2%	OH and S	5%
HI	11%	Med Rad	2%	N	7%
P and O	4%	Nuc Med	5%	GN	5%

3. describe the basic concept of health insurance and compare it to the "fee for service" concept.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

Comments

D

None	24%	All	44%	PHI	5%
Biomed	6%	Med Lab	6%	OH and S	5%
HI	17%	Med Rad	7%	N	10%
P and O	9%	Nuc Med	6%	GN	6%

4. describe the roles of government and private interests in the development of health care policies in British Columbia.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

Comments

D

None	27%	All	45%	PHI	10%
Biomed	2%	Med Lab	1%	OH and S	7%
HI	17%	Med Rad	1%	N	10%
P and O	2%	Nuc Med	2%	GN	10%

EVALUATION A — How important is this objective in the curriculum of your program?

EVALUATION B — How important should this objective be in the curriculum of your program?

EVALUATION C — How easy would it be necessary to make this objective part of the curriculum of your program?

EVALUATION D — Identify any health technology programs for which you believe this objective might be appropriate. (Do not include your own program.)

5. describe common professional responsibilities of selected health team members in relation to the development and implementation of health care policies.

Comments

	None	Biomed	HI	P and O	All	Med Lab	Med Rad	Nuc Med	PHI	OH and S	P	CN
A	13%	5%	6%	4%	59%	6%	6%	9%	4%	6%	11%	12%

6. describe the content and impact of selected legislation on health care policies in British Columbia (e.g., narcotic control, radiation protection, public health).

Comments

	None	Biomed	HI	P and O	All	Med Lab	Med Rad	Nuc Med	PHI	OH and S	P	CN
A	4%	5%	7%	4%	6%	7%	18%	18%	23%	17%	16%	16%

7. explore the effects of technological innovation on the health care system of B.C. (e.g., computers, automated equipment).

Comments

	None	Biomed	HI	P and O	All	Med Lab	Med Rad	Nuc Med	PHI	OH and S	P	CN
A	4%	16%	11%	6%	70%	15%	15%	16%	5%	5%	10%	13%

8. discuss selected variables which increase an individual's use of health care services (e.g., age, sex, education, social class, values).

Comments

	None	Biomed	HI	P and O	All	Med Lab	Med Rad	Nuc Med	PHI	OH and S	P	CN
A	9%	4%	18%	15%	46%	9%	7%	9%	17%	22%	30%	28%

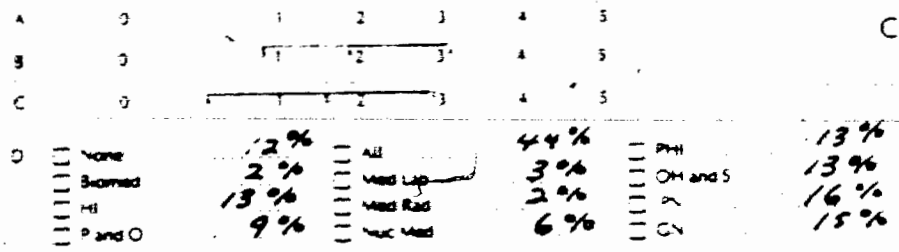
EVALUATION A — How important is this objective in the curriculum of your program?

EVALUATION B — How important should this objective be in the curriculum of your program?

EVALUATION C — How easy would it be now to make this objective part of the curriculum of your program?

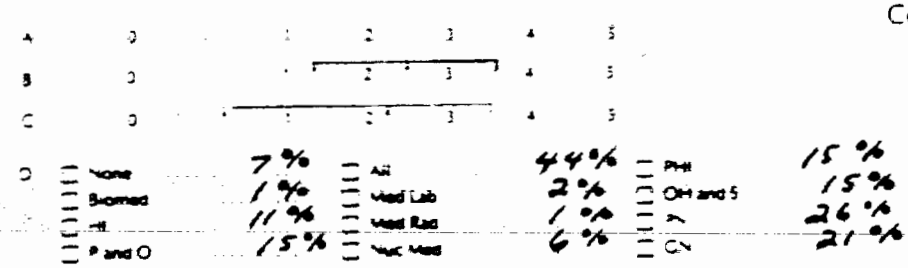
EVALUATION D — Identify any health technology programs for which you believe this objective might be appropriate. (Do not include your own program.)

9. discuss selected characteristics which enable an individual to access health services (e.g., existence of service, geographic).



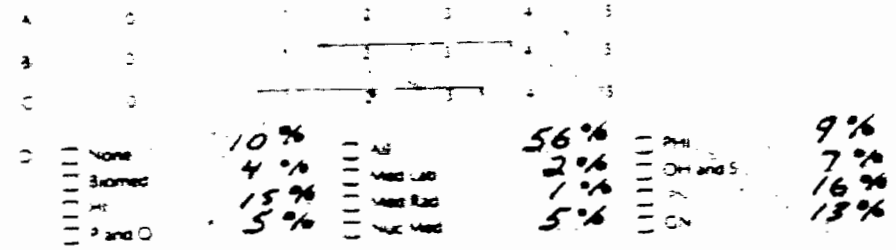
Comments

10. discuss selected characteristics which influence an individual's perception of need for health services (e.g., social and cultural influences).



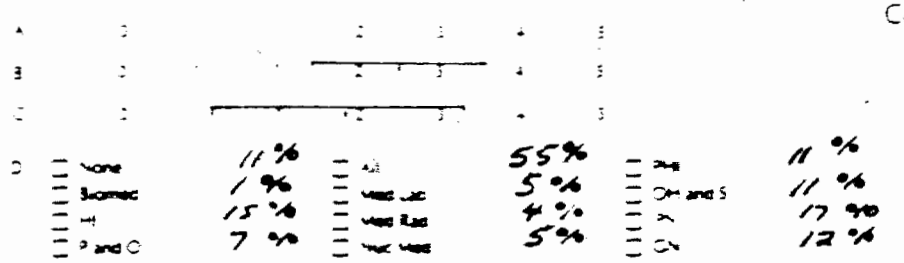
Comments

11. describe the impact of consumerism on the health care system (e.g., right to information, involvement in policy formation).



Comments

12. describe strategies for producing better informed consumers of health care.



Comments

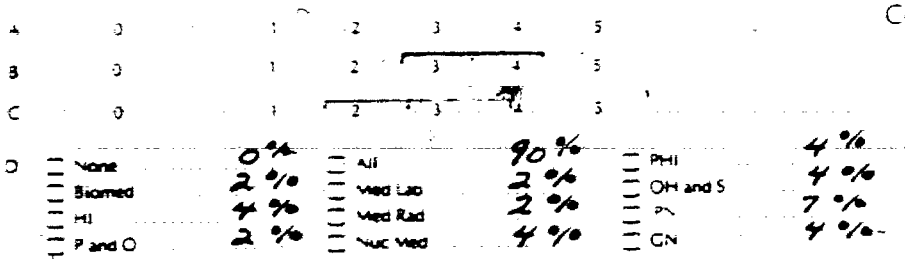
EVALUATION A

EVALUATION B

EVALUATION C

EVALUATION D

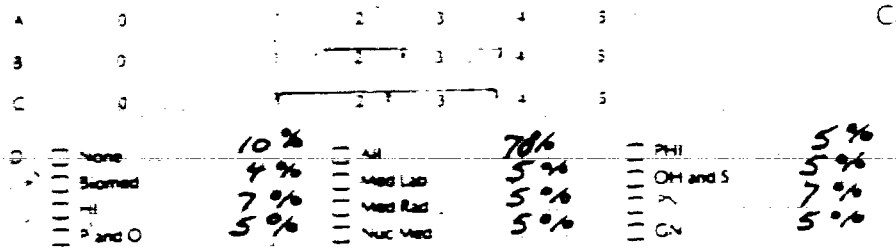
13. describe the roles, functions and interrelationships of selected health team members.



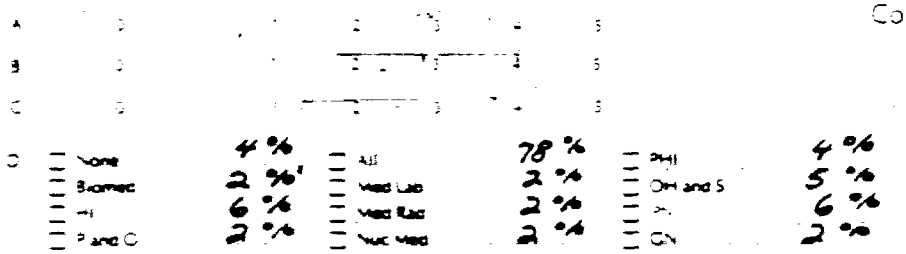
II PROFESSIONAL ROLE

By the end of the program the student will be able to:

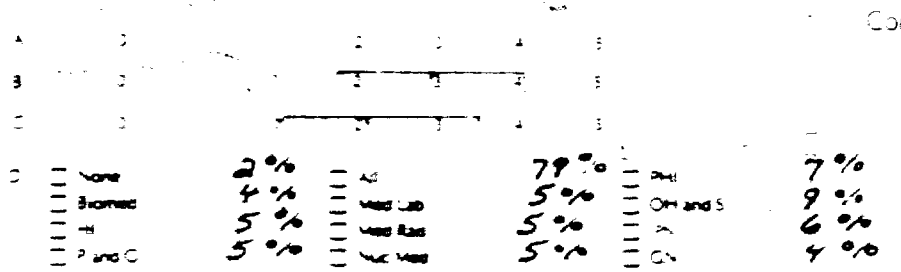
14. describe the major roles of selected health professional organizations at the provincial and national level.



15. describe ways in which selected professional organizations seek to maintain the competency of their members.



16. describe selected accreditation requirements and standards which must be met by specified health care agencies e.g. safety practices equipment quality staff qualifications infection control



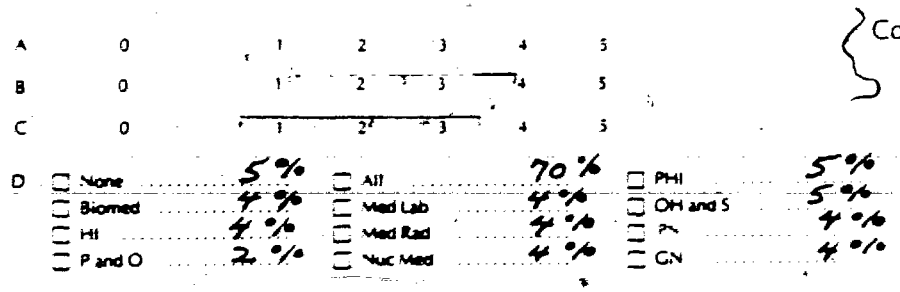
EVALUATION A

EVALUATION C

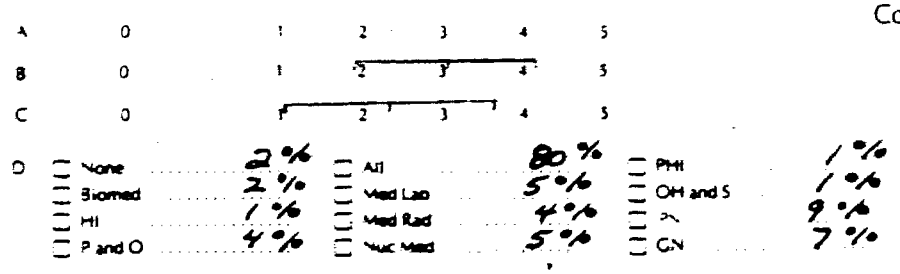
EVALUATION B

EVALUATION D

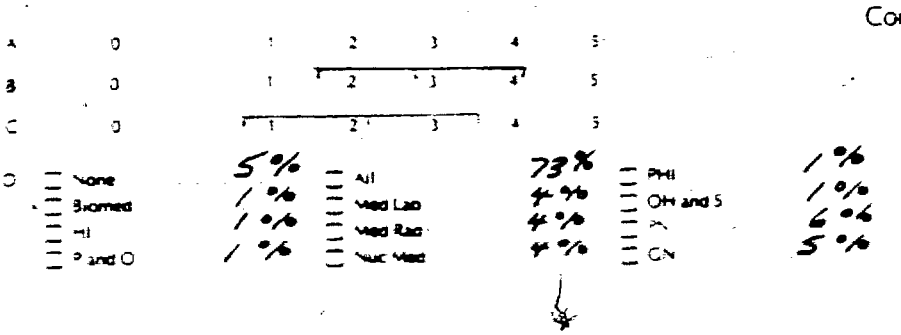
17. describe the purpose and nature of quality control systems used by health care agencies.



18. explore the limits of his/her responsibility and expertise in relation to other members of the health care team.



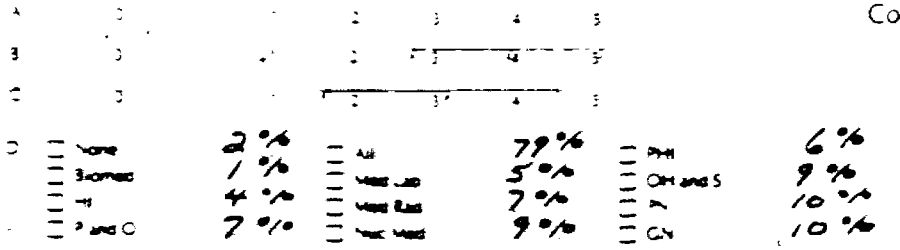
19. explore his/her role in relation to the health care team in maintaining selected accreditation requirements and professional standards.



III INTERACTIVE ROLE

By the end of the program the student will be able to:

20. describe the components of a model of effective communication including listening and verbal and non-verbal communication.



EVALUATION A

EVALUATION B

EVALUATION C

EVALUATION D

21. demonstrate behaviours which enhance his/her ability to initiate, maintain and effectively terminate a relationship with patients, families and others.

Comments

A	0	1	2	3	4	5		
B	0	1	2	3	4	5		
C	0	1	2	3	4	5		
D	None	1%	All	52%	PHI	10%		
	Biomed	4%	Med Lab	7%	OH and S	12%		
	HI	9%	Med Rad	12%	N	32%		
	P and O	24%	Nuc Med	16%	GN	35%		

22. demonstrate skill in directly expressing feelings in a respectful, constructive manner.

Comments

A	0	1	2	3	4	5		
B	0	1	2	3	4	5		
C	0	1	2	3	4	5		
D	None	1%	All	73%	PHI	6%		
	Biomed	1%	Med Lab	5%	OH and S	4%		
	HI	4%	Med Rad	7%	N	16%		
	P and O	7%	Nuc Med	10%	GN	17%		

23. describe the characteristics of selected majority and minority groups in relation to life style and attitudes to health and illness.

Comments

A	0	1	2	3	4	5		
B	0	1	2	3	4	5		
C	0	1	2	3	4	5		
D	None	4%	All	49%	PHI	15%		
	Biomed	4%	Med Lab	11%	OH and S	16%		
	HI	11%	Med Rad	12%	N	30%		
	P and O	21%	Nuc Med	15%	GN	32%		

24. describe common stresses associated with the life stages of man.

Comments

A	0	1	2	3	4	5		
B	0	1	2	3	4	5		
C	0	1	2	3	4	5		
D	None	1%	All	48%	PHI	6%		
	Biomed	2%	Med Lab	5%	OH and S	11%		
	HI	5%	Med Rad	6%	N	35%		
	P and O	11%	Nuc Med	7%	GN	29%		

EVALUATION A

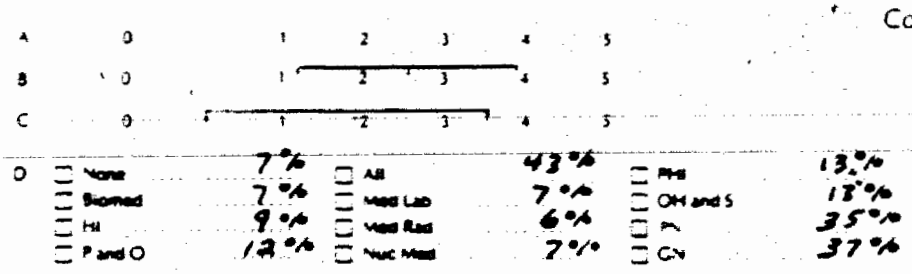
EVALUATION C

EVALUATION B

EVALUATION D

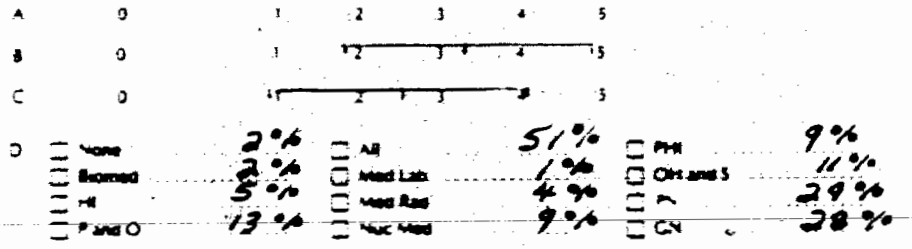
25. describe current trends in Canadian family life which influence health care needs.

Comments



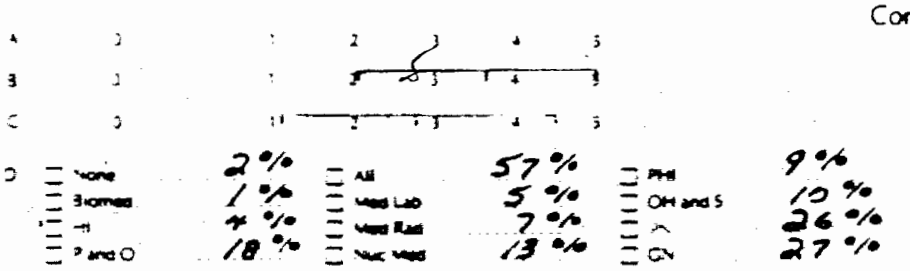
26. describe the role of values, attitudes and beliefs in influencing behaviour.

Comments



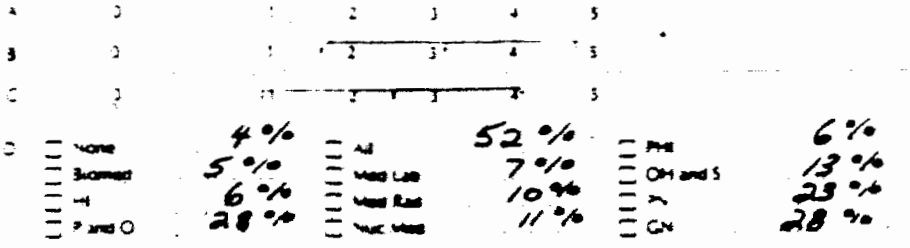
27. recognize values, attitudes and beliefs in self and client which may interfere with effective communication.

Comments



28. describe societal values, attitudes and beliefs in relation to the handicapped.

Comments



EVALUATION A — How relevant is this objective to the curriculum of your program?

EVALUATION C — How easy would it be most of to make this objective part of the curriculum of your program?

EVALUATION B — How relevant should this objective be to the curriculum of your program?

EVALUATION D — Identify any health technology programs for which you believe this objective might be appropriate. (Do not include your own program.)

29. describe strategies for interacting more effectively with handicapped and minority clients.

Comments

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

None	1%	All	48%	PHI	6%
Biomed	4%	Med Lab	9%	OH and S	13%
HI	6%	Med Rad	10%	X	35%
P and O	32%	Nuc Med	13%	CN	35%

30. describe healthy and unhealthy ways in which the basic emotions of fear, anxiety, anger, sadness and elation may be expressed.

Comments

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

None	3%	All	50%	PHI	6%
Biomed	4%	Med Lab	7%	OH and S	6%
HI	4%	Med Rad	9%	X	29%
P and O	15%	Nuc Med	11%	CN	30%

31. act to promote the healthy expression of emotions by clients and families.

Comments

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

None	1%	All	34%	PHI	5%
Biomed	5%	Med Lab	7%	OH and S	7%
HI	7%	Med Rad	12%	X	45%
P and O	23%	Nuc Med	16%	CN	40%

32. describe socio-cultural and developmental factors which must be considered in meeting client learning needs.

Comments

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

None	4%	All	33%	PHI	9%
Biomed	2%	Med Lab	4%	OH and S	12%
HI	5%	Med Rad	9%	X	43%
P and O	28%	Nuc Med	12%	CN	44%

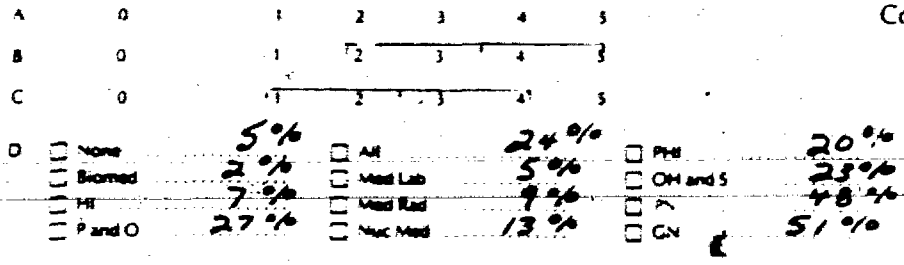
EVALUATION A

EVALUATION C

EVALUATION B

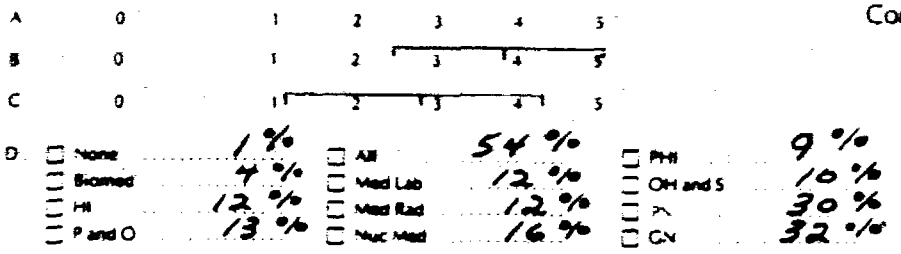
EVALUATION D

33. develop, implement and evaluate teaching plans for patients, families, peers and/or the public.



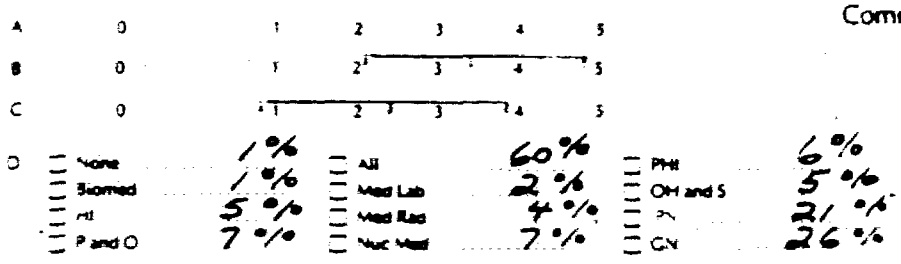
Comments

34. using appropriate medical terminology, report and record behaviour/events accurately and concisely using descriptive rather than evaluative terms and fact rather than inference.



Comments

35. describe self management strategies and techniques that assist him/her to maintain the interactive skills which are essential to effective relationships with clients and others.

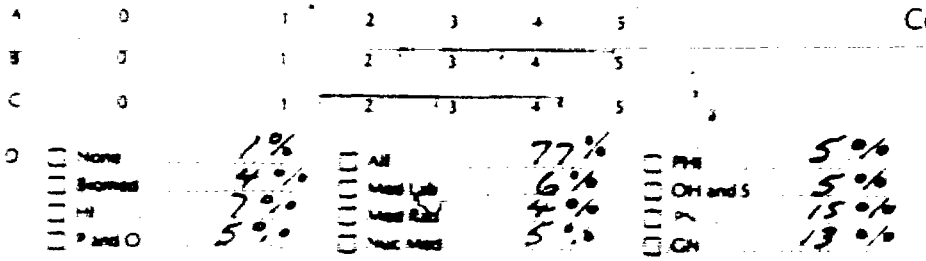


Comments

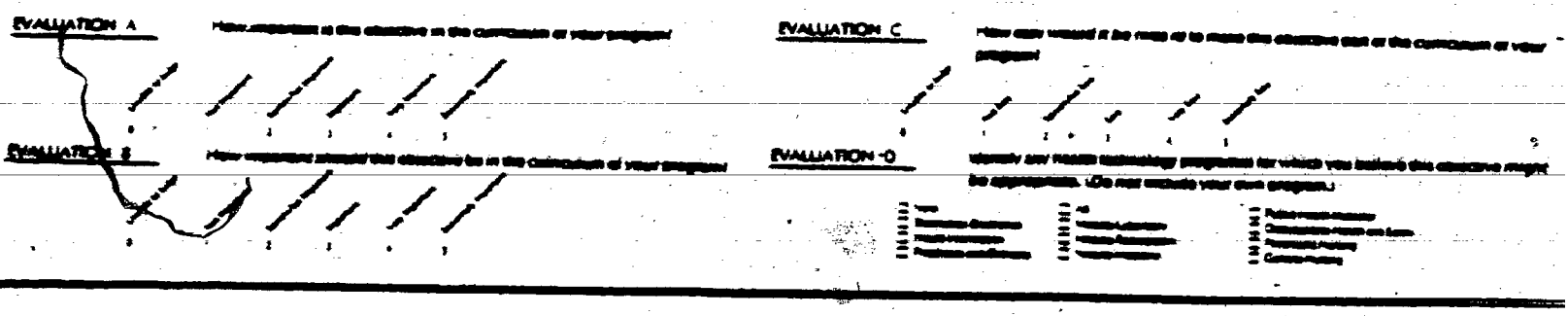
IV LEGAL AND ETHICAL RESPONSIBILITIES

By the end of the program the student will be able to:

36. discuss the following terms: client rights, consent to treatment, negligence, malpractice, assault, battery, invasion of privacy, duty of disclosure, defamation, civil liability, criminal liability.



Comments



37. using selected case studies involving negligence, identify: the standard of care expected by negligence law, the responsibility of the worker and the responsibility of the health care agency.

Comments

A	0	1	2	3	4	5					
B	0	1	2	3	4	5					
C	0	1	2	3	4	5					
D	None	5%	All	73%	PHI	6%					
	Biomed	4%	Med Lab	6%	OH and S	5%					
	HI	5%	Med Rad	6%	Y	12%					
	P and O	6%	Nuc Med	6%	CN	12%					

38. explore ways in which client rights may be violated in selected fields of practice.

Comments

A	0	1	2	3	4	5					
B	0	1	2	3	4	5					
C	0	1	2	3	4	5					
D	None	2%	All	74%	PHI	2%					
	Biomed	4%	Med Lab	6%	OH and S	4%					
	HI	5%	Med Rad	5%	Y	15%					
	P and O	6%	Nuc Med	6%	CN	13%					

39. describe the nature and importance of adequate identification of patients, patient records, specimens and films.

Comments

A	0	1	2	3	4	5					
B	0	1	2	3	4	5					
C	0	1	2	3	4	5					
D	None	7%	All	78%	PHI	4%					
	Biomed	6%	Med Lab	18%	OH and S	1%					
	HI	9%	Med Rad	15%	Y	16%					
	P and O	7%	Nuc Med	14%	CN	15%					

40. describe his/her legal responsibilities to clients in relation to the duty of disclosure (informed consent) and client confidentiality.

Comments

A	0	1	2	3	4	5					
B	0	1	2	3	4	5					
C	0	1	2	3	4	5					
D	None	7%	All	84%	PHI	7%					
	Biomed	5%	Med Lab	10%	OH and S	4%					
	HI	6%	Med Rad	9%	Y	12%					
	P and O	7%	Nuc Med	9%	CN	9%					

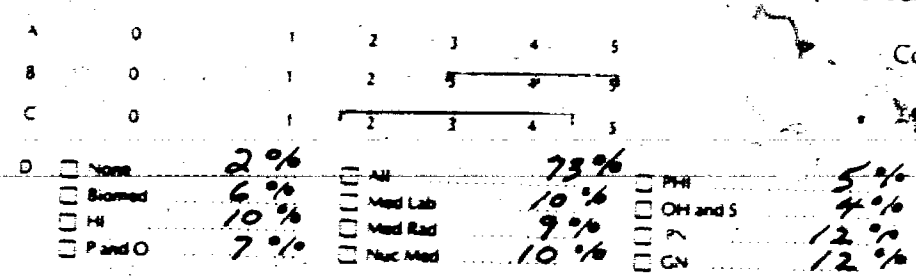
EVALUATION A

EVALUATION B

EVALUATION C

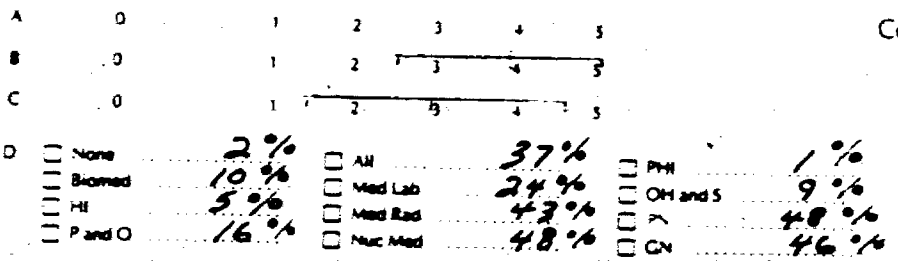
EVALUATION D

41. describe his/her legal responsibilities in relation to documentation in patient and agency records.



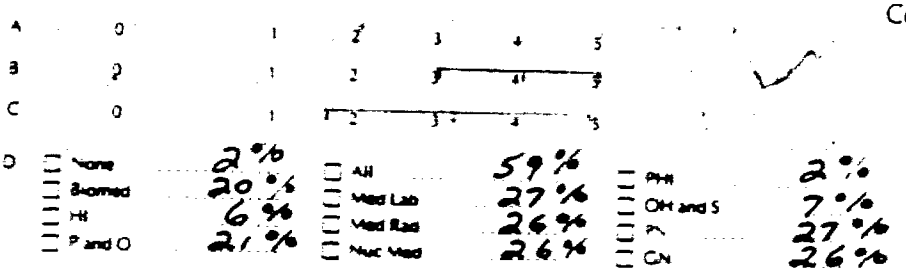
Comments

42. describe his/her legal responsibilities in relation to the administratation of medications or diagnostic agents to patients.



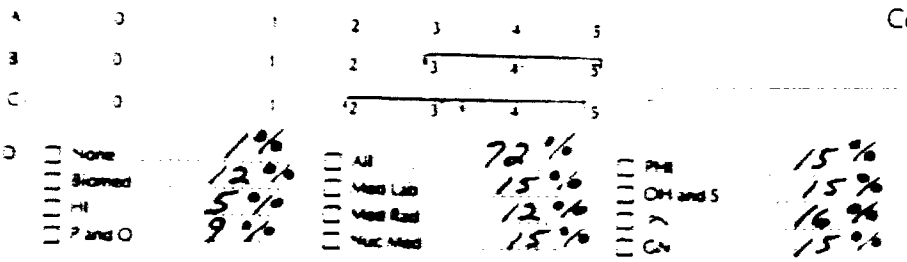
Comments

43. describe his/her legal responsibilities for an accident or error in treatment occurring to a patient for whom he/she has direct or indirect responsibility (e.g., medication error, equipment malfunction, lab test error).



Comments

44. identify specific measures taken within selected fields of practice to safeguard the environment for patients, staff and others.



Comments

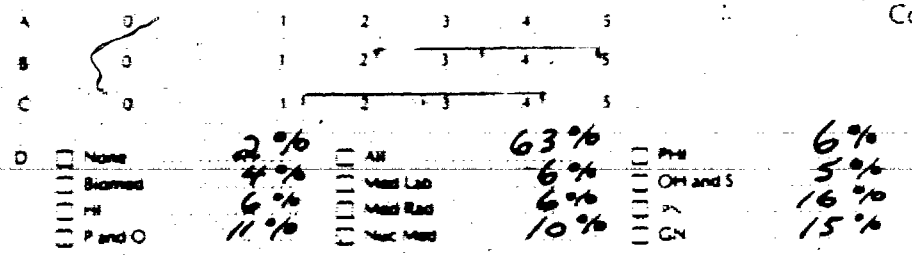
EVALUATION A

EVALUATION B

EVALUATION C

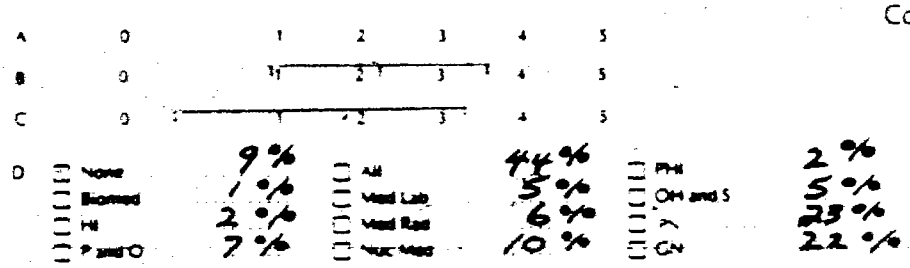
EVALUATION D

45. discuss the following terms: ethics, ethical dilemma, feelings, beliefs, attitudes, opinions, values.



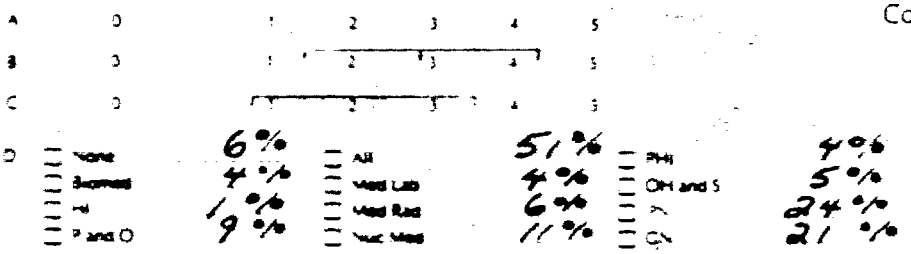
Comments

46. describe selected traditional and contemporary ethical theories.



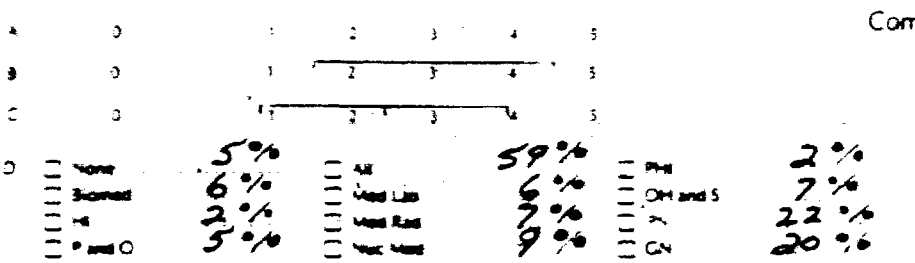
Comments

47. explore ways in which feelings, beliefs, attitudes, opinions and values influence the development of personal ethical standards.



Comments

48. identify major ethical dilemmas existing in selected fields of practice.



Comments

EVALUATION A — How important is this objective in the curriculum of your program?

EVALUATION B — How important should this objective be in the curriculum of your program?

EVALUATION C — How easy would it be (was it) to make this objective part of the curriculum of your program?

EVALUATION D — Identify any health technology programs for which you believe this objective might be appropriate. (Do not include your own program.)

49. using selected case studies, identify the ethical dilemma, the rights and responsibilities involved, and the acceptable course(s) of action.

Comments

D	None	6%	All	52%	Phil	4%
	Biomed	5%	Med Lab	5%	OH and S	6%
	HI	1%	Med Rad	6%	?	20%
	R and O	4%	Nuc Med	10%	CN	24%

V MANAGEMENT AND SUPERVISION

By the end of the program the student will be able to:

50. describe the organizational structure of an assigned agency including functions and responsibilities, line and staff relationships and channels of communication.

Comments

D	None	7%	All	77%	Phil	2%
	Biomed	4%	Med Lab	5%	OH and S	2%
	HI	4%	Med Rad	4%	?	4%
	R and O	1%	Nuc Med	4%	CN	4%

51. describe his/her role, responsibilities and channels of communication in relation to other members of the health care team within the assigned agency.

Comments

D	None	4%	All	80%	Phil	2%
	Biomed	5%	Med Lab	4%	OH and S	2%
	HI	2%	Med Rad	4%	?	4%
	R and O	2%	Nuc Med	4%	CN	4%

52. compare various leadership styles and their degree of effectiveness in directing health care personnel in selected settings.

Comments

D	None	9%	All	62%	Phil	2%
	Biomed	2%	Med Lab	5%	OH and S	2%
	HI	2%	Med Rad	5%	?	13%
	R and O	1%	Nuc Med	4%	CN	12%

EVALUATION A

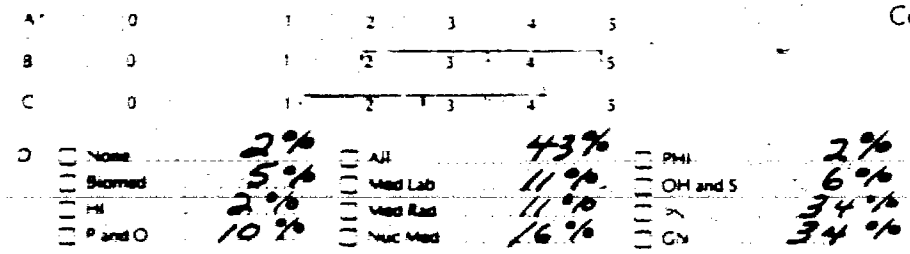
EVALUATION B

EVALUATION C

EVALUATION D

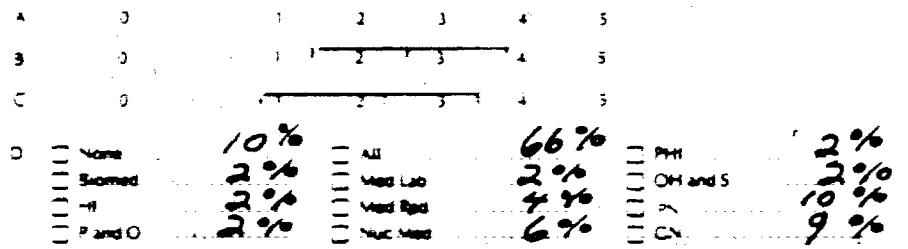
53. demonstrate effective supervision of assigned patients and specified health team members.

Comments



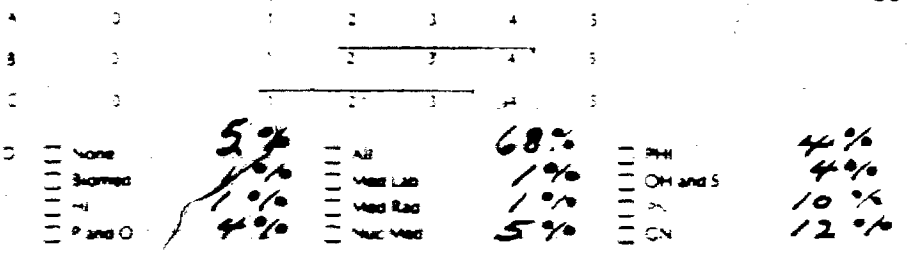
54. describe performance appraisal systems and methods.

Comments



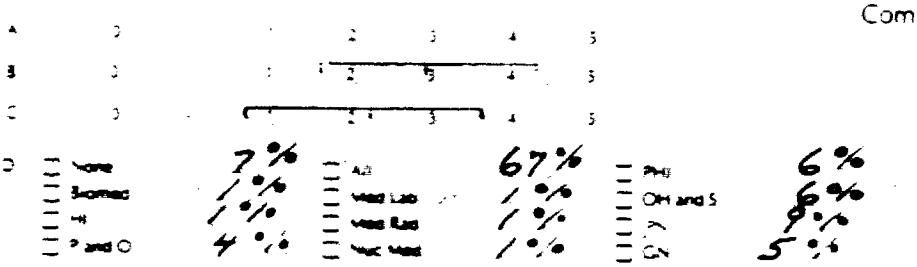
55. discuss effective strategies and techniques for motivating self and others.

Comments



56. employ basic strategies in planning, implementing and evaluating change.

Comments



EVALUATION A — How important is this objective in the curriculum of your program?

EVALUATION C — How easy would it be (was it) to make this objective part of the curriculum of your program?

EVALUATION B — How important should this objective be in the curriculum of your program?

EVALUATION D — Identify any health technology programs for which you believe this objective might be appropriate. (Do not include your own program.)

57. demonstrate skill in utilizing the decision making process.

Comments

A	0	1	2	3	4	5	
B	0	1	2	3	4	5	
C	0	1	2	3	4	5	
D	None	2 %	All	83 %	PHI	2 %	
	Biomed	1 %	Med Lab	3 %	OH and S	2 %	
	HI	1 %	Med Rad	2 %	N	5 %	
	P and O	2 %	Nuc Med	2 %	CN	2 %	

58. describe strategies for reducing conflict within organizations and groups.

Comments

A	0	1	2	3	4	5	
B	0	1	2	3	4	5	
C	0	1	2	3	4	5	
D	None	4 %	All	70 %	PHI	4 %	
	Biomed	1 %	Med Lab	2 %	OH and S	5 %	
	HI	2 %	Med Rad	2 %	N	11 %	
	P and O	1 %	Nuc Med	2 %	CN	10 %	

59. describe key variables influencing an individual's behaviour in organizational settings (e.g., attitudes, values, personality, perception, motivation).

Comments

A	0	1	2	3	4	5	
B	0	1	2	3	4	5	
C	0	1	2	3	4	5	
D	None	4 %	All	68 %	PHI	2 %	
	Biomed	1 %	Med Lab	1 %	OH and S	2 %	
	HI	1 %	Med Rad	1 %	N	10 %	
	P and O	1 %	Nuc Med	1 %	CN	6 %	

60. demonstrate the basic principles of budgeting and cost control.

Comments

A	0	1	2	3	4	5	
B	0	1	2	3	4	5	
C	0	1	2	3	4	5	
D	None	18 %	All	55 %	PHI	6 %	
	Biomed	5 %	Med Lab	4 %	OH and S	6 %	
	HI	2 %	Med Rad	4 %	N	2 %	
	P and O	6 %	Nuc Med	5 %	CN	1 %	

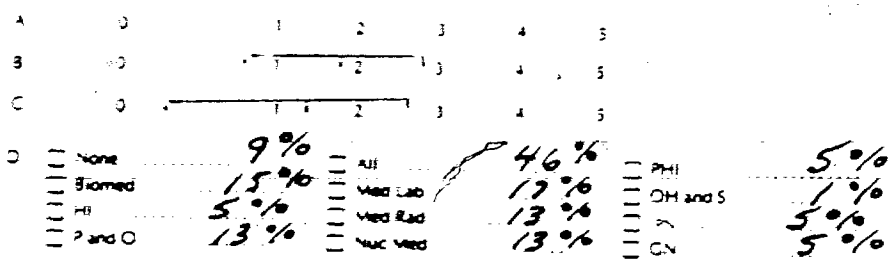
EVALUATION A

EVALUATION B

EVALUATION C

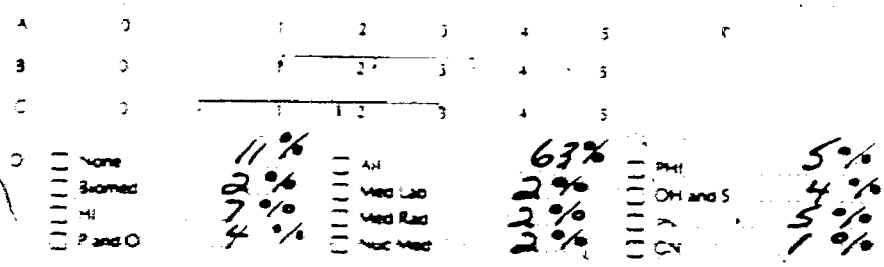
EVALUATION D

61. demonstrate selected methods for maintaining an inventory of supplies and equipment.



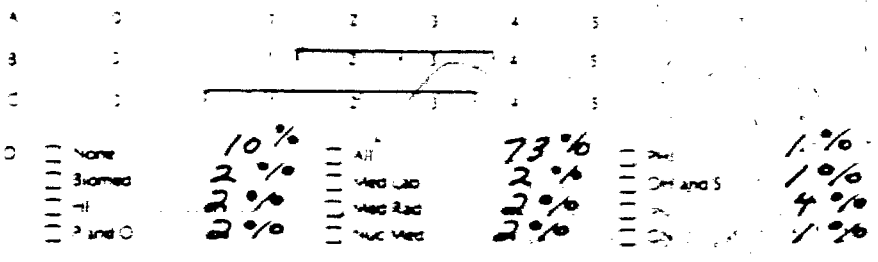
Comments

62. describe major legislation affecting labor relations within the health care system in B.C.



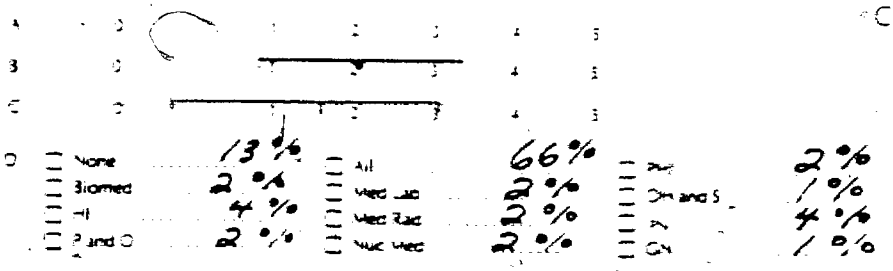
Comments

63. demonstrate awareness of rights and responsibilities as defined in own union contract and union contract of selected health team members.

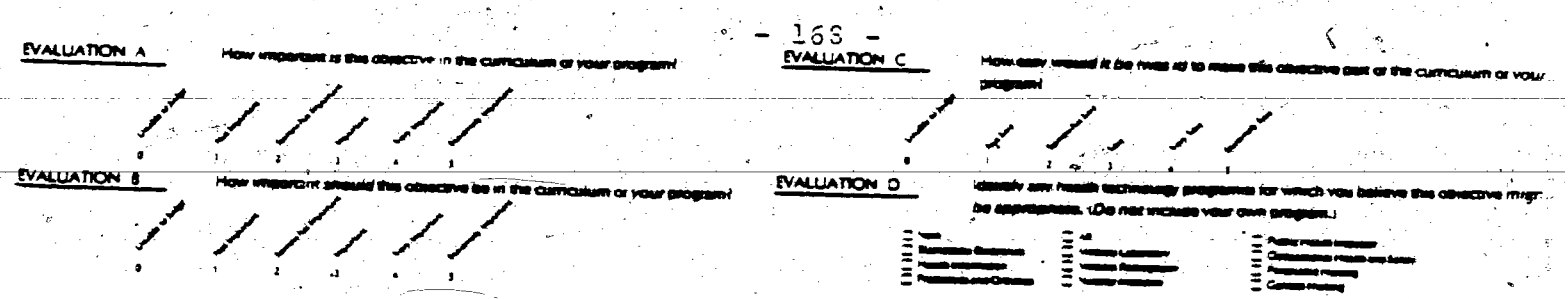


Comments

64. describe grievance, mediation and arbitration procedures related to health labor relations.



Comments



65. Describe various schemes used to maintain liaison between professional associations and industry.

Additional objectives, topics or learning activities relating to the Health Care System, the Professional Role, the Interactive Role, Legal and Ethical Responsibilities and Management and Supervision.

Thank you for your co-operation in completing **Phase Two** of the survey.

RESPONSE KEY

EVALUATION A — How important *is* this objective in the curriculum of *your* program?

Unable to judge	Not important	Somewhat important	Important	Very important	Extremely important
0	1	2	3	4	5

EVALUATION B — How important *should* this objective be in the curriculum of *your* program?

Unable to judge	Not important	Somewhat important	Important	Very important	Extremely important
0	1	2	3	4	5

EVALUATION C — How easy *would it be (was it)* to make this objective part of the curriculum of *your* program?

Unable to judge	Not Easy	Somewhat Easy	Easy	Very Easy	Extremely Easy
0	1	2	3	4	5

EVALUATION D — Identify any health technology program(s) for which you believe this objective *might be appropriate*. (*Do not* include your own program.)

- ☐ None
- ☐ Biomedical Electronics
- ☐ Health Information
- ☐ Prosthetics and Orthotics
- ☐ All
- ☐ Medical Laboratory
- ☒ Medical Radiography
- ☐ Nuclear Medicine
- ☐ Public Health Inspector
- ☐ Occupational Health and Safety
- ☐ Psychiatric Nursing
- ☐ General Nursing

Please detach for your convenience in answering the questionnaire.

APPENDIX E

COVER LETTER AND QUESTIONNAIRE
FOR PHASE THREE

BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY
3700 WILLINGDON AVENUE, BURNABY, BRITISH COLUMBIA, CANADA V5G 3H2 AREA CODE 604 434-5734

1983 05 03

Dear Colleague:

Thank you for your participation in the second phase of the survey. I am pleased to say that the response rate was 68%. I greatly appreciate your participation and time, and hope you will stay with me for one last round. This final phase is the most crucial of the entire survey. It is also the most time consuming since it involves reviewing the comments made by respondents on the second phase.

As indicated previously, the Health Division Committee on Integrating Diploma Curricula has endorsed this study as a means of identifying common content areas within diploma programs in the Health Division. The results of the survey, which will identify content areas where integration might be feasible, will be available to you and the Division integrating committee.

Enclosed is the final questionnaire of the three phase survey. It consists of the original inventory of objectives, your responses from phase two, the statistical analysis of phase two, additional objectives suggested by respondents, and comments from respondents on phase two.

Please complete the third questionnaire, place it in the original envelope and return it to the Office of the Dean of the Health Division by Friday, May 13, 1983. In no instances will responses be reported on an individual basis.

If you are unclear about any aspect of this project, please call me any evening at 929-3514. Your participation is essential in providing direction for the development of curriculum integration within the Health Division.

My sincere thank you,

Beverley Miller
Member of Health Division Committee
on Integrating Diploma Curricula
B.C.I.T.

BCIT

DIPLOMA PROGRAM
HEALTH SCIENCE TECHNOLOGY
SURVEY
PHASE THREE

This survey is directed to department heads, faculty, and teaching technical staff within the diploma programs of the Health Division at the British Columbia Institute of Technology. The purpose of the survey is to identify curricula objectives which are common to two or more health science technology programs.

Your co-operation in participating in this **three phase survey** is extremely important. The results of this survey will help provide direction for future curricula development within the Health Division at BCIT.

☐☐☐

DIPLOMA PROGRAM
HEALTH SCIENCE TECHNOLOGY SURVEY

Please answer the following questions about yourself by placing a check mark (✓) in the box beside the item which best describes you.

1. What is your current position within the Health Division?

   01 ☐ Department Head
   02 ☐ Faculty
   03 ☐ Teaching Technical Staff
   04 ☐ Other. Please specify _____

2. With which health program are you affiliated? If you are affiliated with more than one program please select the *one program* for which you will respond *in all three phases* of the survey. (Check one response only.)

   01 ☐ Biomedical Electronics (Biomed)
   02 ☐ Health Information (HI)
   03 ☐ Prosthetics and Orthotics (P and O)
   04 ☐ Medical Laboratory (Med Lab)
   05 ☐ Medical Radiography (Med Rad)
   06 ☐ Nuclear Medicine (Nuc Med)
   07 ☐ Public Health Inspector (PHI)
   08 ☐ Occupational Health and Safety (OH and S)
   09 ☐ Psychiatric Nursing (PN)
   10 ☐ General Nursing (GN)

3. How many years have you been employed within the health technology program indicated in Question 2?

   01 ☐ Less than 1
   02 ☐ 1 - 3
   03 ☐ 4 - 7
   04 ☐ 8 or more

The questionnaire which has been returned to you is the same as the questionnaire used in the previous two phases of the survey. Based on analysis of the second questionnaire, the following information is included:

a) **your previous responses** for each objective have been indicated in **red**;

b) the **mean response** and the **range of responses** represented by $\pm$ one standard deviation have been indicated for **Evaluations B and C**;

c) **the percentage responses** have been indicated for **Evaluation D**;

d) additional **objectives** suggested by you on the second questionnaire have been added for your evaluation.

e) reasons given by respondents for remaining outside of the range of consensus have been included in an appendix.

Each objective refers to learning outcomes which students are expected to meet by the end of the program. You are again asked to evaluate each objective in four distinct ways.

EVALUATION A	How important *is* the objective in the curriculum of *your* program? (Please circle your choice.)
EVALUATION B	How important *should* this objective be in the curriculum of *your* program? (Please circle your choice.) ***Please answer this question without regard*** for the constraints imposed by time, facilities, or other resources.
EVALUATION C	How easy *would it be (was it)* to make this objective part of the curriculum of *your* program? (Please circle your choice.) ***Please answer this question with regard*** for the constraints imposed by time, facilities or other resources.
EVALUATION D	Do you think this objective is appropriate for the curriculum of a health technology program *other than your own?* Please indicate which program or programs by placing a check mark in the appropriate box.

Please evaluate each item to the best of your knowledge.

Before making your final evaluations, please refer to the appendix which lists reasons given by respondents on phase two for remaining outside of the range of consensus. These comments **may** influence your final evaluations.

RESPONSE KEY

EVALUATION A — How important *is* this objective in the curriculum of *your* program?

Unable to Judge	Not Important	Somewhat Important	Important	Very Important	Extremely Important
0	1	2	3	4	5

EVALUATION B — How important *should* this objective be in the curriculum of *your* program?

Unable to Judge	Not Important	Somewhat Important	Important	Very Important	Extremely Important
0	1	2	3	4	5

EVALUATION C — How easy *would it be (was it)* to make this objective part of the curriculum of *your* program?

Unable to Judge	Not Easy	Somewhat Easy	Easy	Very Easy	Extremely Easy
0	1	2	3	4	5

EVALUATION D — Identify any health technology program(s) for which you believe this objective *might be appropriate*. (*Do not* include your own program.)

- ☐ None
- ☐ Biomedical Electronics
- ☐ Health Information
- ☐ Prosthetics and Orthotics
- ☐ All
- ☐ Medical Laboratory
- ☐ Medical Radiography
- ☐ Nuclear Medicine
- ☐ Public Health Inspector
- ☐ Occupational Health and Safety
- ☐ Psychiatric Nursing
- ☐ General Nursing

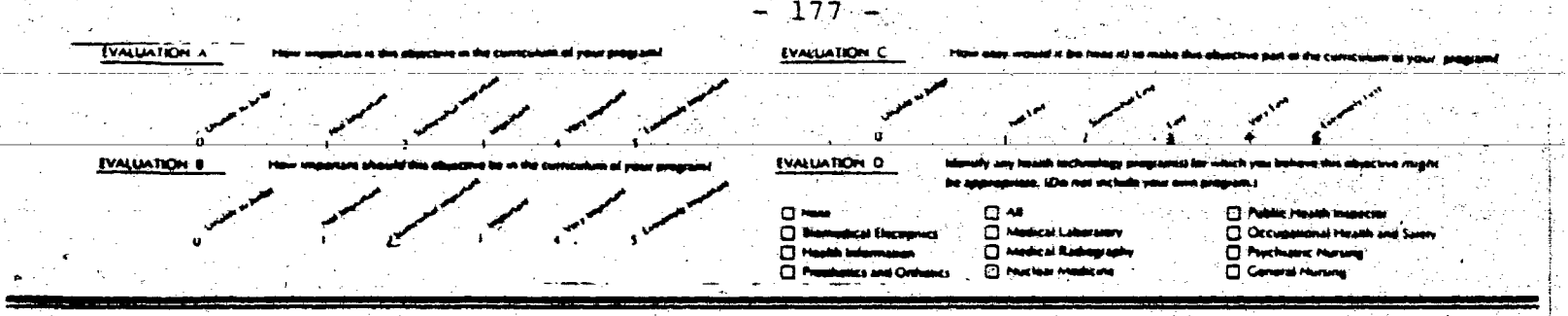
Please complete this third questionnaire while reviewing each of your **previous responses** (indicated in red), the **consensus indicators** (mean response, range of responses, percentage responses), and the appended list of comments.

For **Evaluations A, B, and C** mark your preferred rating by **circling** a number on each scale. On this final survey you **are not asked** to give a reason for maintaining a position outside of the range of consensus.

For **Evaluation D**, identify the selected program(s) by placing a **check mark** in the appropriate box(es).

Please feel free to maintain your **original position** on any items you wish by **re-marking** your original choice. The consensus indicators represent the responses for the **entire Health Division – not your own technology.**

A Response Key has been printed on the last page and may be detached for your convenience in answering the questionnaire.



EXAMPLE

OBJECTIVE #

By the end of the program the student will be able to identify the major purposes of patient/agency records.

EVALUATION A

0 1 2 (3) 4 5

EVALUATION B

0 1 2 3 (4) 5

EVALUATION C

0 1 2 3 (4) (5)

Could probably be added to content on legal issue.

D						
☐	None	5%	☐ All	12%	☐ PHI	34%
☐	Biomed	15%	☐ Med Lab	54%	☐ OH and S	34%
☑	HI	98%	☐ Med Rad	68%	☑ PN	92%
☐	P and O	35%	☐ Nuc Med	70%	☑ GN	84%

In this example, the respondent's ratings from the second questionnaire are marked in red. (If the respondent did not reply to the second questionnaire, the first phase response is given.)

For Evaluations B and C the mean response is indicated by the central tick. The horizontal line and two extreme tick marks indicate the range of responses encompassed by ± one standard deviation.

Based on the **comments** made by respondents and the revised means and standard deviations, this respondent **recircled** the **A** rating at 3, **recircled** the **B** rating at 4, and changed the **C** rating to 4.

After reviewing the objective and the percentage results for **Evaluation D**, this respondent again indicated the objective might be an appropriate part of the curriculum of the Health Information, Psychiatric Nursing and General Nursing programs.

EVALUATION A — How important is this objective in the curriculum of your program?

EVALUATION B — How important should this objective be in the curriculum of your program?

EVALUATION C — How easy would it be (was it) to make this objective part of the curriculum of your program?

EVALUATION D — Identify any health technology programmes for which you believe this objective might be appropriate. (Do not include your own program.)

- ☐ None
- ☐ Biomedical Electronics
- ☐ Health Information
- ☐ Prosthetics and Orthotics
- ☐ All
- ☐ Medical Laboratory
- ☐ Medical Radiography
- ☐ Nuclear Medicine
- ☐ Public Health Inspector
- ☐ Occupational Health and Safety
- ☐ Psychiatric Nursing
- ☐ General Nursing

INVENTORY OF OBJECTIVES

I HEALTH CARE SYSTEM

By the end of the program the student will be able to:

1. describe the structure and function of the major parts of the health care system of British Columbia (e.g., roles of various levels of government, health regulation, levels of care.)

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

☐ None	6%	☐ All	65%	☐ PHI	20%
☐ Biomed	0%	☐ Med Lab	4%	☐ OH and S	15%
☐ HI	20%	☐ Med Rad	3%	☐ P	11%
☐ P and O	5%	☐ Nuc Med	3%	☐ GN	11%

2. describe the financing of health care in British Columbia.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

☐ None	12%	☐ All	77%	☐ PHI	3%
☐ Biomed	2%	☐ Med Lab	3%	☐ OH and S	3%
☐ HI	6%	☐ Med Rad	3%	☐ P	3%
☐ P and O	3%	☐ Nuc Med	3%	☐ GN	3%

3. describe the basic concept of health insurance and compare it to the "fee for service" concept.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

☐ None	15%	☐ All	63%	☐ PHI	3%
☐ Biomed	2%	☐ Med Lab	5%	☐ OH and S	0%
☐ HI	14%	☐ Med Rad	6%	☐ P	8%
☐ P and O	5%	☐ Nuc Med	6%	☐ GN	6%

4. describe the roles of government and private interests in the development of health care policies in British Columbia.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

☐ None	17%	☐ All	58%	☐ PHI	11%
☐ Biomed	0%	☐ Med Lab	0%	☐ OH and S	6%
☐ HI	14%	☐ Med Rad	0%	☐ P	9%
☐ P and O	3%	☐ Nuc Med	0%	☐ GN	9%

EVALUATION A — How important is this objective in the curriculum of your program?

EVALUATION C — How easy would it be (was it) to make this objective part of the curriculum of your program?

EVALUATION B — How important should this objective be in the curriculum of your program?

EVALUATION D — Identify any health technology programmes for which you believe this objective might be appropriate. (Do not include your own program.)

- ☐ None
- ☐ Biomedical Electronics
- ☐ Health Information
- ☐ Prosthetics and Orthotics
- ☐ All
- ☐ Medical Laboratory
- ☐ Medical Radiography
- ☐ Nuclear Medicine
- ☐ Public Health Inspector
- ☐ Occupational Health and Safety
- ☐ Psychiatric Nursing
- ☐ General Nursing

5. describe common professional responsibilities of selected health team members in relation to the development and implementation of health care policies.

A 0 1 2 3 4 5
B 0 1 2 3 4 5
C 0 1 2 3 4 5

D
- ☐ None 15 %
- ☐ Biomed 2 %
- ☐ HI 6 %
- ☐ P and O 3 %
- ☐ All 69 %
- ☐ Med Lab 3 %
- ☐ Med Rad 3 %
- ☐ Nuc Med 5 %
- ☐ PHI 8 %
- ☐ OH and S 8 %
- ☐ PN 8 %
- ☐ GN 9 %

6. describe the content and impact of selected legislation on health care policies in British Columbia (e.g., narcotic control, radiation protection, public health).

A 0 1 2 3 4 5
B 0 1 2 3 4 5
C 0 1 2 3 4 5

D
- ☐ None 9 %
- ☐ Biomed 4 %
- ☐ HI 9 %
- ☐ P and O 5 %
- ☐ All 52 %
- ☐ Med Lab 6 %
- ☐ Med Rad 26 %
- ☐ Nuc Med 26 %
- ☐ PHI 40 %
- ☐ OH and S 25 %
- ☐ PN 22 %
- ☐ GN 22 %

7. explore the effects of technological innovation on the health care system of B.C. (e.g., computers, automated equipment).

A 0 1 2 3 4 5
B 0 1 2 3 4 5
C 0 1 2 3 4 5

D
- ☐ None 2 %
- ☐ Biomed 6 %
- ☐ HI 3 %
- ☐ P and O 2 %
- ☐ All 83 %
- ☐ Med Lab 5 %
- ☐ Med Rad 6 %
- ☐ Nuc Med 6 %
- ☐ PHI 2 %
- ☐ OH and S 0 %
- ☐ PN 5 %
- ☐ GN 6 %

8. discuss selected variables which increase an individual's use of health care services (e.g., age, sex, education, social class, values).

A 0 1 2 3 4 5
B 0 1 2 3 4 5
C 0 1 2 3 4 5

D
- ☐ None 5 %
- ☐ Biomed 0 %
- ☐ HI 14 %
- ☐ P and O 6 %
- ☐ All 60 %
- ☐ Med Lab 3 %
- ☐ Med Rad 3 %
- ☐ Nuc Med 5 %
- ☐ PHI 12 %
- ☐ OH and S 14 %
- ☐ PN 22 %
- ☐ GN 18 %

EVALUATION A — How important is this objective in the curriculum of your program?

EVALUATION B — How important should this objective be in the curriculum of your program?

EVALUATION C — How easy would it be (was it) to make this objective part of the curriculum of your program?

EVALUATION D — Identify any health technology programs for which you believe this objective might be appropriate. (Do not include your own program.)

- ☐ None
- ☐ Biomedical Electronics
- ☐ Health Information
- ☐ Prosthetics and Orthotics
- ☐ All
- ☐ Medical Laboratory
- ☐ Medical Radiography
- ☐ Nuclear Medicine
- ☐ Public Health Inspector
- ☐ Occupational Health and Safety
- ☐ Psychiatric Nursing
- ☐ General Nursing

9. discuss selected characteristics which enable an individual to access health services (e.g., existence of service, geography).

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

☐ None	8 %	☐ All	60 %	☐ PHI	8 %
☐ Biomed	0 %	☐ Med Lab	3 %	☐ OH and S	9 %
☐ HI	8 %	☐ Med Rad	5 %	☐ PN	9 %
☐ P and O	6 %	☐ Nuc Med	3 %	☐ GN	14 %

10. discuss selected characteristics which influence an individual's perception of need for health services (e.g., social and cultural influences).

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

☐ None	5 %	☐ All	55 %	☐ PHI	12 %
☐ Biomed	0 %	☐ Med Lab	2 %	☐ OH and S	12 %
☐ HI	8 %	☐ Med Rad	2 %	☐ PN	18 %
☐ P and O	9 %	☐ Nuc Med	2 %	☐ GN	18 %

11. describe the impact of consumerism on the health care system (e.g., right to information, involvement in policy formation).

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

☐ None	3 %	☐ All	75 %	☐ PHI	5 %
☐ Biomed	0 %	☐ Med Lab	2 %	☐ OH and S	3 %
☐ HI	11 %	☐ Med Rad	2 %	☐ PN	11 %
☐ P and O	3 %	☐ Nuc Med	2 %	☐ GN	11 %

12. describe strategies for producing better informed consumers of health care.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

☐ None	6 %	☐ All	72 %	☐ PHI	5 %
☐ Biomed	0 %	☐ Med Lab	2 %	☐ OH and S	5 %
☐ HI	9 %	☐ Med Rad	2 %	☐ PN	11 %
☐ P and O	2 %	☐ Nuc Med	2 %	☐ GN	6 %

EVALUATION A — How important is this objective in the curriculum of your program?

EVALUATION B — How important should this objective be in the curriculum of your program?

EVALUATION C — How many would it be ... to make this objective part of the curriculum of your program?

EVALUATION D — Identify any health technology programmes for which you believe this objective might be appropriate. (Do not include your own program.)

- ☐ None
- ☐ Biomedical Electronics
- ☐ Health Information
- ☐ Prosthetics and Orthotics
- ☐ All
- ☐ Medical Laboratory
- ☐ Medical Radiographic
- ☐ Nuclear Medicine
- ☐ Public Health Inspector
- ☐ Occupational Health and Safety
- ☐ Psychiatric Nursing
- ☐ General Nursing

13. describe the roles, functions and interrelationships of selected health team members.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

☐ None	2%	☐ All	94%	☐ PHI	0%
☐ Biomed	0%	☐ Med Lab	0%	☐ OH and S	0%
☐ HI	0%	☐ Med Rad	0%	☐ PN	0%
☐ P and O	0%	☐ Nuc Med	0%	☐ GN	0%

II PROFESSIONAL ROLE

By the end of the program the student will be able to:

14. describe the major roles of selected health professional organizations at the provincial and national level.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

☐ None	3%	☐ All	85%	☐ PHI	2%
☐ Biomed	0%	☐ Med Lab	2%	☐ OH and S	2%
☐ HI	3%	☐ Med Rad	2%	☐ PN	3%
☐ P and O	2%	☐ Nuc Med	2%	☐ GN	5%

15. describe ways in which selected professional organizations seek to maintain the competency of their members.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

☐ None	2%	☐ All	92%	☐ PHI	0%
☐ Biomed	0%	☐ Med Lab	0%	☒ OH and S	2%
☐ HI	2%	☐ Med Rad	0%	☐ PN	2%
☐ P and O	0%	☐ Nuc Med	0%	☐ GN	2%

16. describe selected accreditation requirements and standards which must be met by specified health care agencies (e.g., safety practices, equipment quality, staff qualifications, infection control).

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

☐ None	3%	☐ All	91%	☐ PHI	3%
☐ Biomed	2%	☐ Med Lab	2%	☐ OH and S	2%
☐ HI	0%	☐ Med Rad	2%	☐ PN	3%
☐ P and O	2%	☐ Nuc Med	3%	☐ GN	2%

EVALUATION A — How important is this objective to the curriculum of your program?

EVALUATION C — How easy would it be for you to make this objective part of the curriculum at your program?

EVALUATION B — How important should this objective be to the curriculum of your program?

EVALUATION D — Identify any health technology programmes for which you believe this objective might be appropriate. (Do not include your own program.)

- ☐ None
- ☐ Biomedical Electronics
- ☐ Health Information
- ☐ Prosthetics and Orthotics
- ☐ All
- ☐ Medical Laboratory
- ☐ Medical Radiography
- ☐ Nuclear Medicine
- ☐ Public Health Inspection
- ☐ Occupational Health and Safety
- ☐ Psychiatric Nursing
- ☐ General Nursing

17. describe the purpose and nature of quality control systems used by health care agencies.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

☐ None	6 %	☐ All	86 %	☐ PHI	2 %
☐ Biomed	2 %	☐ Med Lab	2 %	☐ OH and S	2 %
☐ HI	0 %	☐ Med Rad	2 %	☐ PN	0 %
☐ P and O	2 %	☐ Nuc Med	2 %	☐ GN	0 %

18. explore the limits of his/her responsibility and expertise in relation to other members of the health care team.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

☐ None	2 %	☐ All	94 %	☐ PHI	2 %
☐ Biomed	0 %	☐ Med Lab	2 %	☐ OH and S	2 %
☐ HI	0 %	☐ Med Rad	2 %	☐ PN	2 %
☐ P and O	0 %	☐ Nuc Med	2 %	☐ GN	0 %

19. explore his/her role in relation to the health care team in maintaining selected accreditation requirements and professional standards.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

☐ None	3 %	☐ All	94 %	☐ PHI	0 %
☐ Biomed	0 %	☐ Med Lab	0 %	☐ OH and S	0 %
☐ HI	0 %	☐ Med Rad	0 %	☐ PN	0 %
☐ P and O	0 %	☐ Nuc Med	0 %	☐ GN	0 %

III INTERACTIVE ROLE

By the end of the program the student will be able to:

20. describe the components of a model of effective communication including listening and verbal and non-verbal communication.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

☐ None	2 %	☐ All	88 %	☐ PHI	3 %
☐ Biomed	0 %	☐ Med Lab	3 %	☐ OH and S	3 %
☐ HI	2 %	☐ Med Rad	3 %	☐ PN	3 %
☐ P and O	3 %	☐ Nuc Med	2 %	☐ GN	5 %

EVALUATION A — How important is this objective in the curriculum of your program?

EVALUATION B — How important should this objective be in the curriculum of your program?

EVALUATION C — How many would it be necessary to make this objective part of the curriculum of your program?

EVALUATION D — Identify any health technology programs for which you believe this objective might be appropriate. (Do not include your own program.)

- ☐ None
- ☐ Biomedical Electronics
- ☐ Health Information
- ☐ Prosthetics and Orthotics
- ☐ All
- ☐ Medical Laboratory
- ☐ Medical Radiography
- ☐ Nuclear Medicine
- ☐ Public Health Inspector
- ☐ Occupational Health and Safety
- ☐ Psychiatric Nursing
- ☐ General Nursing

21. demonstrate behaviours which enhance his/her ability to initiate, maintain and effectively terminate a relationship with patients, families and others.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

☐ None	0 %	☐ All	52 %	☐ PHI	11 %
☐ Biomed	0 %	☐ Med Lab	5 %	☐ OH and S	15 %
☐ HI	2 %	☐ Med Rad	6 %	☐ PN	34 %
☐ P and O	26 %	☐ Nuc Med	11 %	☐ GN	34 %

22. demonstrate skill in directly expressing feelings in a respectful, constructive manner.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

☐ None	0 %	☐ All	80 %	☐ PHI	3 %
☐ Biomed	0 %	☐ Med Lab	2 %	☐ OH and S	3 %
☐ HI	2 %	☐ Med Rad	2 %	☐ PN	11 %
☐ P and O	5 %	☐ Nuc Med	3 %	☐ GN	12 %

23. describe the characteristics of selected majority and minority groups in relation to life style and attitudes to health and illness.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

☐ None	5 %	☐ All	54 %	☐ PHI	12 %
☐ Biomed	0 %	☐ Med Lab	8 %	☐ OH and S	11 %
☐ HI	5 %	☐ Med Rad	8 %	☐ PN	28 %
☐ P and O	20 %	☐ Nuc Med	11 %	☐ GN	28 %

24. describe common stresses associated with the life stages of man.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

☐ None	2 %	☐ All	55 %	☐ PHI	3 %
☐ Biomed	0 %	☐ Med Lab	5 %	☐ OH and S	11 %
☐ HI	0 %	☐ Med Rad	3 %	☐ PN	28 %
☐ P and O	12 %	☐ Nuc Med	6 %	☐ GN	22 %

EVALUATION A — How important is this objective in the curriculum of your program?

EVALUATION B — How important should this objective be in the curriculum of your program?

EVALUATION C — How easy would it be for us to make this objective part of the curriculum of your program?

EVALUATION D — Identify any health technologist programmes for which you believe this objective might be appropriate. (Do not include your own program.)

- ☐ None
- ☐ Biomedical Electronics
- ☐ Health Information
- ☐ Prosthetics and Orthotics
- ☐ All
- ☐ Medical Laboratory
- ☐ Medical Radiography
- ☐ Nuclear Medicine
- ☐ Public Health Inspector
- ☐ Occupational Health and Safety
- ☐ Psychiatric Nursing
- ☐ General Nursing

25. describe current trends in Canadian family life which influence health care needs.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

☐ None	9%	☐ All	40%	☐ PHI	15%
☐ Biomed	3%	☐ Med Lab	3%	☐ OH and S	14%
☐ HI	3%	☐ Med Rad	5%	☐ PN	31%
☐ P and O	11%	☐ Nuc Med	6%	☐ GN	26%

26. describe the role of values, attitudes and beliefs in influencing behaviour.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

☐ None	0%	☐ All	55%	☐ PHI	9%
☐ Biomed	0%	☐ Med Lab	3%	☐ OH and S	11%
☐ HI	2%	☐ Med Rad	5%	☐ PN	31%
☐ P and O	14%	☐ Nuc Med	0%	☐ GN	26%

27. recognize values, attitudes and beliefs in self and client which may interfere with effective communication.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

☐ None	2%	☐ All	65%	☐ PHI	5%
☐ Biomed	0%	☐ Med Lab	3%	☐ OH and S	9%
☐ HI	2%	☐ Med Rad	3%	☐ PN	23%
☐ P and O	14%	☐ Nuc Med	5%	☐ GN	23%

28. describe societal values, attitudes and beliefs in relation to the handicapped.

A 0 1 2 3 4 5

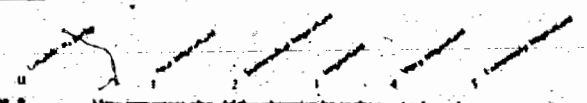
B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

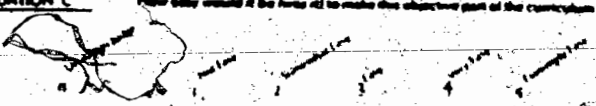
☐ None	2%	☐ All	55%	☐ PHI	11%
☐ Biomed	2%	☐ Med Lab	3%	☐ OH and S	12%
☐ HI	2%	☐ Med Rad	5%	☐ PN	29%
☐ P and O	34%	☐ Nuc Med	0%	☐ GN	31%

EVALUATION A — How important is this objective in the curriculum of your program?



EVALUATION B — How important should this objective be in the curriculum of your program?

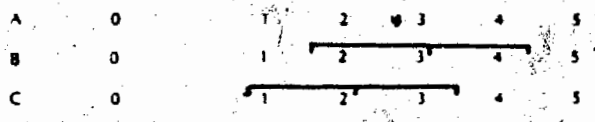
EVALUATION C — How easy would it be for us to make this objective part of the curriculum of your program?



EVALUATION D — Identify any health technology programs for which you believe this objective might be appropriate. (Do not include your own program.)

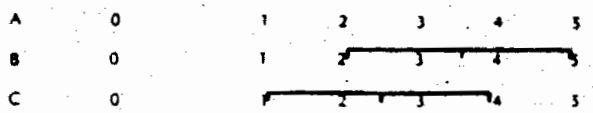
- ☐ None
- ☐ Biomedical Electronics
- ☐ Health Information
- ☐ Prosthetics and Orthotics
- ☐ All
- ☐ Medical Laboratory
- ☐ Medical Radiography
- ☐ Nuclear Medicine
- ☐ Public Health Inspector
- ☐ Occupational Health and Safety
- ☐ Psychiatric Nursing
- ☐ General Nursing

29. describe strategies for interacting more effectively with handicapped and minority clients.



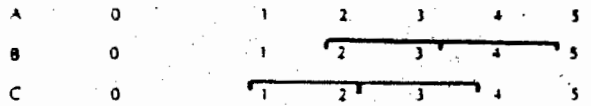
D	☐ None	0%	☐ All	55%	☐ PHI	11%
	☐ Biomed	2%	☐ Med Lab	6%	☐ OH and S	14%
	☐ HI	3%	☐ Med Rad	6%	☐ PN	35%
	☐ P and O	34%	☐ Nuc Med	9%	☐ GN	31%

30. describe healthy and unhealthy ways in which the basic emotions of fear, anxiety, anger, sadness and elation may be expressed.



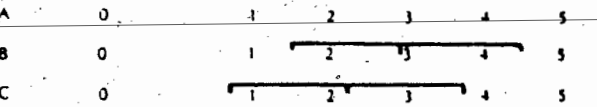
D	☐ None	0%	☐ All	60%	☐ PHI	5%
	☐ Biomed	2%	☐ Med Lab	8%	☐ OH and S	9%
	☐ HI	2%	☐ Med Rad	6%	☐ PN	25%
	☐ P and O	12%	☐ Nuc Med	11%	☐ GN	28%

31. act to promote the healthy expression of emotions by clients and families.



D	☐ None	0%	☐ All	35%	☐ PHI	8%
	☐ Biomed	3%	☐ Med Lab	11%	☐ OH and S	12%
	☐ HI	0%	☐ Med Rad	14%	☐ PN	29%
	☐ P and O	32%	☐ Nuc Med	15%	☐ GN	29%

32. describe socio-cultural and developmental factors which must be considered in meeting client learning needs.



D	☐ None	2%	☐ All	32%	☐ PHI	9%
	☐ Biomed	0%	☐ Med Lab	8%	☐ OH and S	14%
	☐ HI	0%	☐ Med Rad	9%	☐ PN	28%
	☐ P and O	32%	☐ Nuc Med	12%	☐ GN	45%

EVALUATION A — How important is this objective in the curriculum of your program?

EVALUATION B — How important should this objective be in the curriculum of your program?

EVALUATION C — How easy would it be for us to make this objective part of the curriculum of your program?

EVALUATION D — Identify any health technology programs for which you believe this objective might be appropriate. (Do not include your own program.)

- ☐ None
- ☐ Biomedical Electronics
- ☐ Health Information
- ☐ Prosthetics and Orthotics
- ☐ All
- ☐ Medical Laboratory
- ☐ Medical Radiography
- ☐ Nuclear Medicine
- ☐ Public Health Inspector
- ☐ Occupational Health and Safety
- ☐ Psychiatric Nursing
- ☐ General Nursing

33. develop, implement and evaluate teaching plans for patients, families, peers and/or the public.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

☐ None	0%	☐ All	25%	☐ PHI	25%
☐ Biomed	3%	☐ Med Lab	6%	☐ OH and S	31%
☐ HI	3%	☐ Med Rad	6%	☐ PN	52%
☐ P and O	37%	☐ Nuc Med	11%	☐ GN	51%

34. using appropriate medical terminology, report and record behaviour/events accurately and concisely using descriptive rather than evaluative terms and fact rather than inference.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

☐ None	0%	☐ All	75%	☐ PHI	5%
☐ Biomed	0%	☐ Med Lab	5%	☐ OH and S	3%
☐ HI	5%	☐ Med Rad	5%	☐ PN	13%
☐ P and O	5%	☐ Nuc Med	5%	☐ GN	17%

35. describe self management strategies and techniques that assist him/her to maintain the interactive skills which are essential to effective relationships with clients and others.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

☐ None	0%	☐ All	74%	☐ PHI	5%
☐ Biomed	0%	☐ Med Lab	3%	☐ OH and S	5%
☐ HI	2%	☐ Med Rad	3%	☐ PN	14%
☐ P and O	6%	☐ Nuc Med	5%	☐ GN	17%

IV LEGAL AND ETHICAL RESPONSIBILITIES

By the end of the program the student will be able to:

36. discuss the following terms: client rights, consent to treatment, negligence, malpractice, assault, battery, invasion of privacy, duty of disclosure, defamation, civil liability, criminal liability.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

☐ None	0%	☐ All	89%	☐ PHI	3%
☐ Biomed	0%	☐ Med Lab	3%	☐ OH and S	3%
☐ HI	0%	☐ Med Rad	3%	☐ PN	3%
☐ P and O	0%	☐ Nuc Med	2%	☐ GN	6%

EVALUATION A

EVALUATION B

EVALUATION C

EVALUATION D

☐ None ☐ All ☐ Public Health Inspector
☐ Biomedical Electronics ☐ Medical Laboratory ☐ Occupational Health and Safety
☐ Health Information ☐ Medical Radiography ☐ Psychiatric Nursing
☐ Prosthetics and Orthotics ☐ Nuclear Medicine ☐ General Nursing

37. using selected case studies involving negligence, identify: the standard of care expected by negligence law, the responsibility of the worker and the responsibility of the health care agency.

A 0 1 2 3 4 5
B 0 1 2 3 4 5
C 0 1 2 3 4 5

☐ None	3%	☐ All	89%	☐ PHI	2%
☐ Biomed	2%	☐ Med Lab	0%	☐ OH and S	2%
☐ HI	2%	☐ Med Rad	0%	☐ PN	3%
☐ P and O	2%	☐ Nuc Med	2%	☐ GN	5%

38. explore ways in which client rights may be violated in selected fields of practice.

A 0 1 2 3 4 5
B 0 1 2 3 4 5
C 0 1 2 3 4 5

☐ None	0%	☐ All	85%	☐ PHI	0%
☐ Biomed	0%	☐ Med Lab	5%	☐ OH and S	2%
☐ HI	2%	☐ Med Rad	5%	☐ PN	11%
☐ P and O	3%	☐ Nuc Med	3%	☐ GN	11%

39. describe the nature and importance of adequate identification of patients, patient records, specimens and films.

A 0 1 2 3 4 5
B 0 1 2 3 4 5
C 0 1 2 3 4 5

☐ None	0%	☐ All	85%	☐ PHI	3%
☐ Biomed	0%	☐ Med Lab	12%	☐ OH and S	0%
☐ HI	11%	☐ Med Rad	11%	☐ PN	11%
☐ P and O	6%	☐ Nuc Med	9%	☐ GN	11%

40. describe his/her legal responsibilities to clients in relation to the duty of disclosure (informed consent) and client confidentiality.

A 0 1 2 3 4 5
B 0 1 2 3 4 5
C 0 1 2 3 4 5

☐ None	2%	☐ All	86%	☐ PHI	0%
☐ Biomed	0%	☐ Med Lab	6%	☐ OH and S	2%
☐ HI	6%	☐ Med Rad	5%	☐ PN	9%
☐ P and O	3%	☐ Nuc Med	3%	☐ GN	8%

EVALUATION A

EVALUATION B

EVALUATION C

EVALUATION D

- ☐ None
- ☐ Biomedical Electronics
- ☐ Health Information
- ☐ Prosthetics and Orthotics
- ☐ All
- ☐ Medical Laboratory
- ☐ Medical Radiography
- ☐ Nuclear Medicine
- ☐ Public Health Inspector
- ☐ Occupational Health and Safety
- ☐ Psychiatric Nursing
- ☐ General Nursing

41. describe his/her legal responsibilities in relation to documentation in patient and agency records.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

☐ None	2%	☐ All	86%	☐ PHI	3%
☐ Biomed	0%	☐ Med Lab	5%	☐ OH and S	2%
☐ HI	6%	☐ Med Rad	5%	☐ PT	8%
☐ P and O	6%	☐ Nuc Med	5%	☐ GN	6%

42. describe his/her legal responsibilities in relation to the administratation of medications or diagnostic agents to patients.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

☐ None	0%	☐ All	34%	☐ PHI	0%
☐ Biomed	11%	☐ Med Lab	26%	☐ OH and S	3%
☐ HI	2%	☐ Med Rad	46%	☐ PT	53%
☐ P and O	15%	☐ Nuc Med	54%	☐ GN	49%

43. describe his/her legal responsibilities for an accident or error in treatment occurring to a patient for whom he/she has direct or indirect responsibility (e.g., medication error, equipment malfunction, lab test error).

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

☐ None	14%	☐ All	68%	☐ PHI	3%
☐ Biomed	17%	☐ Med Lab	18%	☐ OH and S	5%
☐ HI	2%	☐ Med Rad	18%	☐ PT	22%
☐ P and O	18%	☐ Nuc Med	20%	☐ GN	20%

44. identify specific measures taken within selected fields of practice to safeguard the environment for patients, staff and others.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

☐ None	0%	☐ All	88%	☐ PHI	6%
☐ Biomed	8%	☐ Med Lab	9%	☐ OH and S	8%
☐ HI	3%	☐ Med Rad	8%	☐ PT	8%
☐ P and O	6%	☐ Nuc Med	2%	☐ GN	6%

EVALUATION A — How important is this objective in the curriculum of your program?

EVALUATION B — How important should this objective be in the curriculum of your program?

EVALUATION C — How easy would it be (was it) to make this objective part of the curriculum of your program?

EVALUATION D — Identify any health technology programs for which you believe this objective might be appropriate. (Do not include your own program.)

- ☐ None
- ☐ Biomedical Electronics
- ☐ Health Information
- ☐ Prosthetics and Orthotics
- ☐ All
- ☐ Medical Laboratory
- ☐ Medical Radiography
- ☐ Nuclear Medicine
- ☐ Public Health Inspector
- ☐ Occupational Health and Safety
- ☐ Psychiatric Nursing
- ☐ General Nursing

45. discuss the following terms: ethics, ethical dilemma, feelings, beliefs, attitudes, opinions, values.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

☐ None	3 %	☐ All	77 %	☐ PHI	2 %
☐ Biomed	0 %	☐ Med Lab	2 %	☐ OH and S	3 %
☐ HI	2 %	☐ Med Rad	2 %	☐ PN	0 %
☐ P and O	3 %	☐ Nuc Med	2 %	☐ GN	0 %

46. describe selected traditional and contemporary ethical theories.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

☐ None	11 %	☐ All	54 %	☐ PHI	7 %
☐ Biomed	0 %	☐ Med Lab	5 %	☐ OH and S	3 %
☐ HI	0 %	☐ Med Rad	3 %	☐ PN	20 %
☐ P and O	2 %	☐ Nuc Med	5 %	☐ GN	15 %

47. explore ways in which feelings, beliefs, attitudes, opinions and values influence the development of personal ethical standards.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

☐ None	3 %	☐ All	60 %	☐ PHI	2 %
☐ Biomed	0 %	☐ Med Lab	3 %	☐ OH and S	3 %
☐ HI	0 %	☐ Med Rad	3 %	☐ PN	15 %
☐ P and O	3 %	☐ Nuc Med	3 %	☐ GN	14 %

48. identify major ethical dilemmas existing in selected fields of practice.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

☐ None	3 %	☐ All	63 %	☐ PHI	2 %
☐ Biomed	0 %	☐ Med Lab	6 %	☐ OH and S	5 %
☐ HI	2 %	☐ Med Rad	6 %	☐ PN	20 %
☐ P and O	3 %	☐ Nuc Med	5 %	☐ GN	17 %

EVALUATION A — How important is this objective in the curriculum of your program?

EVALUATION C — How many would it be best all to make this objective part of the curriculum of your program?

EVALUATION B — How important should this objective be on the curriculum of your program?

EVALUATION D — Identify any health technology programs for which you believe this objective might be appropriate. (Do not include your own program.)

- ☐ None
- ☐ Biomedical Electronics
- ☐ Health Information
- ☐ Prosthetics and Orthotics
- ☐ All
- ☐ Medical Laboratory
- ☐ Medical Radiography
- ☐ Nuclear Medicine
- ☐ Public Health Inspector
- ☐ Occupational Health and Safety
- ☐ Psychiatric Nursing
- ☐ General Nursing

49. using selected case studies, identify the ethical dilemma, the rights and responsibilities involved, and the acceptable course(s) of action.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

☐ None	5%	☐ All	62%	☐ PHI	2%
☐ Biomed	0%	☐ Med Lab	5%	☐ OH and S	2%
☐ HI	0%	☐ Med Rad	5%	☐ PN	20%
☐ P and O	5%	☐ Nuc Med	3%	☐ GN	20%

V MANAGEMENT AND SUPERVISION

By the end of the program the student will be able to:

50. describe the organizational structure of an assigned agency including functions and responsibilities, line and staff relationships and channels of communication.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

☐ None	5%	☐ All	88%	☐ PHI	2%
☐ Biomed	2%	☐ Med Lab	2%	☐ OH and S	2%
☐ HI	2%	☐ Med Rad	0%	☐ PN	0%
☐ P and O	0%	☐ Nuc Med	0%	☐ GN	2%

51. describe his/her role, responsibilities and channels of communication in relation to other members of the health care team within the assigned agency.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

☐ None	3%	☐ All	88%	☐ PHI	2%
☐ Biomed	2%	☐ Med Lab	2%	☐ OH and S	2%
☐ HI	2%	☐ Med Rad	2%	☐ PN	2%
☐ P and O	0%	☐ Nuc Med	0%	☐ GN	2%

52. compare various leadership styles and their degree of effectiveness in directing health care personnel in selected settings.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

☐ None	5%	☐ All	80%	☐ PHI	0%
☐ Biomed	2%	☐ Med Lab	3%	☐ OH and S	2%
☐ HI	2%	☐ Med Rad	3%	☐ PN	6%
☐ P and O	0%	☐ Nuc Med	2%	☐ GN	

EVALUATION A — How important is this objective in the curriculum of your program?

EVALUATION B — How important should this objective be in the curriculum of your program?

EVALUATION C — How easy would it be (was it) to make this objective part of the curriculum of your program?

EVALUATION D — Identify any health technology programs for which you believe this objective might be appropriate. (Do not include your own program.)

- ☐ None
- ☐ Biomedical Electronics
- ☐ Health Information
- ☐ Prosthetics and Orthotics
- ☐ All
- ☐ Medical Laboratory
- ☐ Medical Radiography
- ☐ Nuclear Medicine
- ☐ Public Health Inspector
- ☐ Occupational Health and Safety
- ☐ Psychiatric Nursing
- ☐ General Nursing

53. demonstrate effective supervision of assigned patients and specified health team members.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

☐ None	5%	☐ All	54%	☐ PHI	2%
☐ Biomed	3%	☐ Med Lab	12%	☐ OH and S	3%
☐ HI	2%	☐ Med Rad	12%	☐ P	29%
☐ P and O	8%	☐ Nuc Med	11%	☐ GN	26%

54. describe performance appraisal systems and methods.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

☐ None	6%	☐ All	86%	☐ PHI	2%
☐ Biomed	2%	☐ Med Lab	2%	☐ OH and S	2%
☐ HI	2%	☐ Med Rad	2%	☐ P	3%
☐ P and O	2%	☐ Nuc Med	2%	☐ GN	5%

55. discuss effective strategies and techniques for motivating self and others.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

☐ None	2%	☐ All	86%	☐ PHI	0%
☐ Biomed	0%	☐ Med Lab	0%	☐ OH and S	0%
☐ HI	0%	☐ Med Rad	0%	☐ P	5%
☐ P and O	0%	☐ Nuc Med	0%	☐ GN	5%

56. employ basic strategies in planning, implementing and evaluating change.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D

☐ None	5%	☐ All	82%	☐ PHI	3%
☐ Biomed	0%	☐ Med Lab	0%	☐ OH and S	3%
☐ HI	0%	☐ Med Rad	0%	☐ P	3%
☐ P and O	0%	☐ Nuc Med	0%	☐ GN	7%

EVALUATION A — How important is this objective in the curriculum of your program?

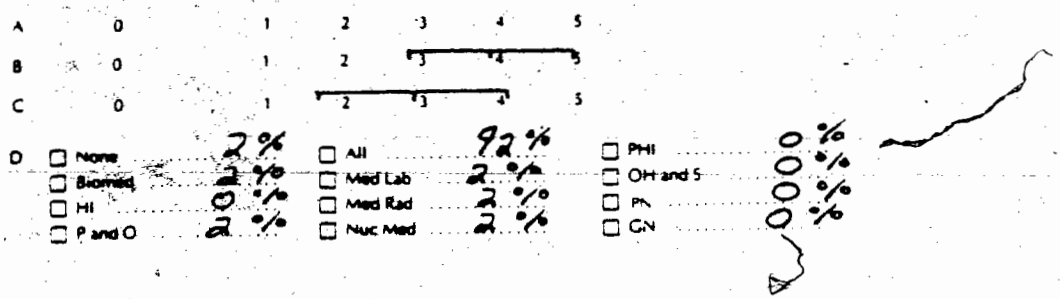
EVALUATION B — How important should this objective be in the curriculum of your program?

EVALUATION C — How easy would it be to make this objective part of the curriculum of your program?

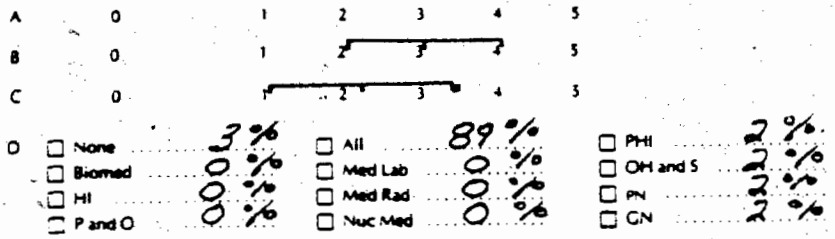
EVALUATION D — Identify any health technology programmes for which you believe this objective might be appropriate. (Do not include your own program.)

- ☐ None
- ☐ Biomedical Electronics
- ☐ Health Information
- ☐ Prosthetics and Orthotics
- ☐ All
- ☐ Medical Laboratory
- ☐ Medical Radiography
- ☐ Nuclear Medicine
- ☐ Public Health Inspector
- ☐ Occupational Health and Safety
- ☐ Psychiatric Nursing
- ☐ General Nursing

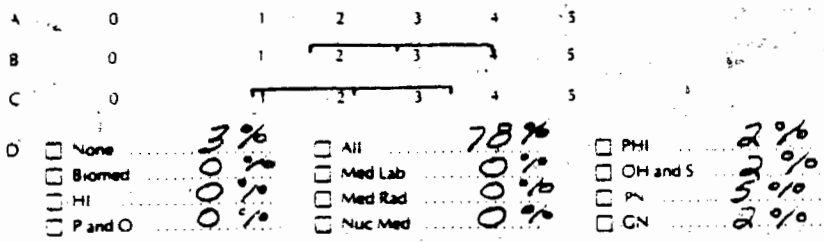
57. demonstrate skill in utilizing the decision making process.



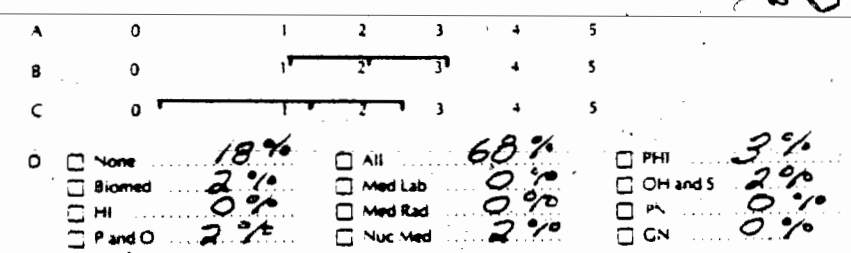
58. describe strategies for reducing conflict within organizations and groups.



59. describe key variables influencing an individual's behaviour in organizational settings (e.g., attitudes, values, personality, perception, motivation).



60. demonstrate the basic principles of budgeting and cost control.



EVALUATION A — How important is this objective in the curriculum of your program?

Unable to Judge (0) | Not Important (1) | Somewhat Important (2) | Important (3) | Very Important (4) | Extremely Important (5)

EVALUATION B — How important should this objective be in the curriculum of your program?

Unable to Judge (0) | Not Important (1) | Somewhat Important (2) | Important (3) | Very Important (4) | Extremely Important (5)

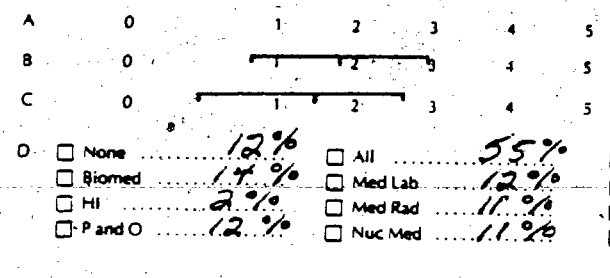
EVALUATION C — How easy would it be (was it) to make this objective part of the curriculum of your program?

Unable to Judge (0) | Not Easy (1) | Somewhat Easy (2) | Easy (3) | Very Easy (4) | Extremely Easy (5)

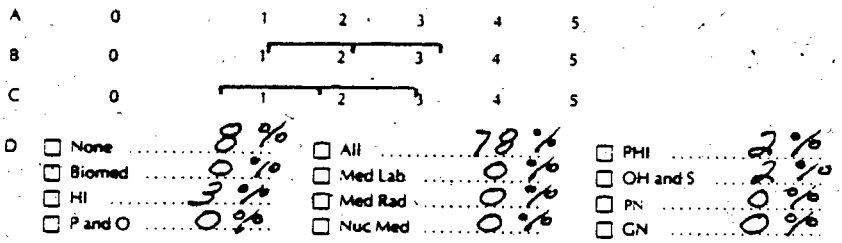
EVALUATION D — Identify any health technology program(s) for which you believe this objective *might* be appropriate. (Do not include your own program.)

- ☐ None
- ☐ Biomedical Electronics
- ☐ Health Information
- ☐ Prosthetics and Orthotics
- ☐ All
- ☐ Medical Laboratory
- ☐ Medical Radiography
- ☐ Nuclear Medicine
- ☐ Public Health Inspector
- ☐ Occupational Health and Safety
- ☐ Psychiatric Nursing
- ☐ General Nursing

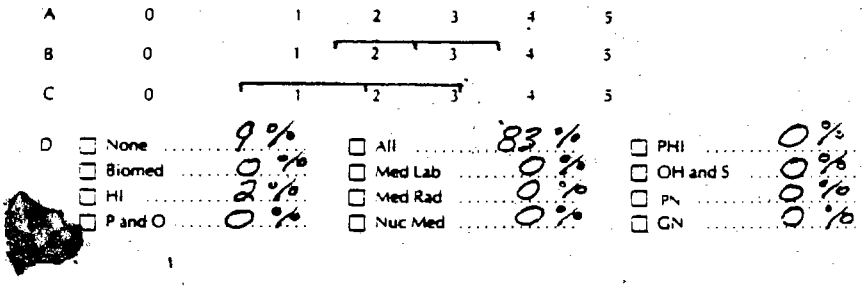
61. demonstrate selected methods for maintaining an inventory of supplies and equipment.



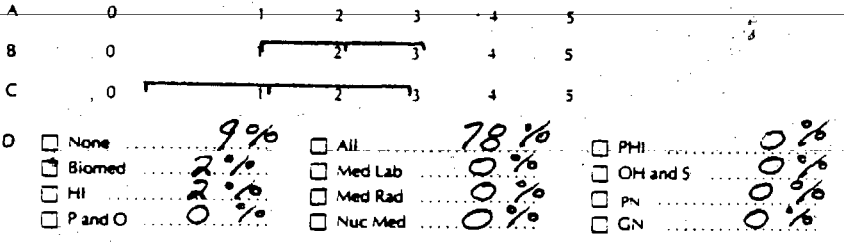
62. describe major legislation affecting labor relations within the health care system in B.C.



63. demonstrate awareness of rights and responsibilities as defined in own union contract and union contract of selected health team members.



64. describe grievance, mediation and arbitration procedures related to health labor relations



EVALUATION A How important *is* this objective in the curriculum of your program?

0 Unable to judge 1 Not important 2 Somewhat important 3 Important 4 Very important 5 Extremely important

EVALUATION B How important *should* this objective be in the curriculum of your program?

0 Unable to judge 1 Not important 2 Somewhat important 3 Important 4 Very important 5 Extremely important

EVALUATION C How easy *would it be (was it)* to make this objective part of the curriculum of your program?

0 Unable to judge 1 Not Easy 2 Somewhat Easy 3 Easy 4 Very Easy 5 Extremely Easy

EVALUATION D Identify any health technology programme(s) for which you believe this objective might be appropriate. (Do not include your own program.)

- ☐ None
- ☐ Biomedical Electronics
- ☐ Health Information
- ☐ Prosthetics and Orthotics
- ☐ All
- ☐ Medical Laboratory
- ☐ Medical Radiography
- ☐ Nuclear Medicine
- ☐ Public Health Inspector
- ☐ Occupational Health and Safety
- ☐ Psychiatric Nursing
- ☐ General Nursing

Additional Objectives:

65. Describe various schemes used to maintain liaison between professional associations and industry.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D
- ☐ None 12%
- ☐ Biomed 3%
- ☐ HI 3%
- ☐ P and O 3%
- ☐ All 62%
- ☐ Med Lab 3%
- ☐ Med Rad 3%
- ☐ Nuc Med 3%
- ☐ PHI 3%
- ☐ OH and S 3%
- ☐ PN 9%
- ☐ GN 9%

66. Demonstrate basic skills in clinical instruction and evaluation.

A 0 1 2 3 4 5

B 0 1 2 3 4 5

C 0 1 2 3 4 5

D
- ☐ None .....
- ☐ Biomed .....
- ☐ HI .....
- ☐ P and O .....
- ☐ All .....
- ☐ Med Lab .....
- ☐ Med Rad .....
- ☐ Nuc Med .....
- ☐ PHI .....
- ☐ OH and S .....
- ☐ PN .....
- ☐ GN .....

Thank you for your co-operation in completing **Phase Three** of the survey.

The results of the survey will be available to the **Health Division** within the next few weeks.

RESPONSE KEY

EVALUATION A — How important *is* this objective in the curriculum of *your* program?

Unable to judge	Not Important	Somewhat Important	Important	Very Important	Extremely Important
0	1	2	3	4	5

EVALUATION B — How important *should* this objective be in the curriculum of *your* program?

Unable to judge	Not Important	Somewhat Important	Important	Very Important	Extremely Important
0	1	2	3	4	5

EVALUATION C — How easy *would it be (was it)* to make this objective part of the curriculum of *your* program?

Unable to judge	Not Easy	Somewhat Easy	Easy	Very Easy	Extremely Easy
0	1	2	3	4	5

EVALUATION D — Identify any health technology program(s) for which you believe this objective *might be appropriate*. (*Do not* include your own program.)

- ☐ None
- ☐ Biomedical Electronics
- ☐ Health Information
- ☐ Prosthetics and Orthotics
- ☐ All
- ☐ Medical Laboratory
- ☐ Medical Radiography
- ☒ Nuclear Medicine
- ☐ Public Health Inspector
- ☐ Occupational Health and Safety
- ☐ Psychiatric Nursing
- ☐ General Nursing

Please detach for your convenience in answering the questionnaire.

APPENDIX F

COMMENTS MADE BY RESPONDENTS WHO
WERE OUTSIDE OF THE RANGE
OF CONSENSUS ON
PHASE TWO

DIPLOMA HEALTH SCIENCE TECHNOLOGY SURVEY

APPENDIX

Comments made by respondents who were outside of the range of consensus on Phase II

83.05.04

APPENDIX

OBJECTIVE NUMBER	COMMENTS	TECHNOLOGY
	HEALTH CARE SYSTEM (#1 - 13)	
1	Basic to P.H.I. functions Not essential to beginning level RN	P.H.I. G.N.
	Post diploma level x3	Med Lab, Nuc Med Med Rad
	Important as now part of new directions from our accreditation agency	H.I.
2	Unable to judge ease of implementation - problem of time and amount of material	Biomed
	Very important for Med Lab as it is moving to unit cost formulae financing	Med Lab
	Post Diploma x2	Med Lab, Med Rad
3	Post Diploma x3	Med Lab, Med Rad, P.N.
	Important as this is the financial direction of Med. Lab.	Med Lab
	Unable to judge ease of implementation - problem of time and amount of material	Biomed.
	Given the recent swing towards additional "fee for service" an understanding of these two concepts becomes more important	P.N.
	Important because it is often related to where and how people access the system	P.N.
4	By understanding these roles one can be involved in addressing inequities in the health care system re consumers	P.N.
	This information is needed so people can work to bring about change x2	P.N. (x2)
	Post Diploma level x4	Med Lab, P.N.(x2) Med Rad
	Important in order to understand private vs. public lab practise	Med Lab
5	Important since graduates are members of health team	P.H.I.
	Need so people can work to bring about change	P.N.
	Post diploma level x6	G.N., P.N., Nuc Med, Med Lab, Med Rad x2

OBJECTIVE NUMBER		TECHNOLOGY
6	See this as a very important area as legislation could mean control of standards within the work place and of level of education. Awareness of this might encourage involvement so that the technologists have a "voice" in standard making	Nuc Med
	Basic to PHI program	P.H.I.
	Minimal application in Med Lab but excellent for post diploma x2	Med Lab x2
	A problem of content and time - unable to judge ease of implementation	Biomed
7	Extremely important - the "automated office" in hospitals health record dept. is increasing the use of computers.	H.I.
	Important in relation to hazards assessment	P.H.I.
	A must - not sure of accessibility to equipment (computers) for the numbers of students we are talking about x2	G.N. x2
	It's the mandate of our technology!	Biomed
	Post Diploma x3	Med Rad, P.N., Nuc Med,
	Not high priority in a basic program	G.N.
	Of little value except as directly related to Med Lab - handled by own technology	Med Lab
8	I believe these variables have a lot of bearing on compliance, follow-up, overall health of society	G.N.
	Changing use and demands of clients need to be recognized by health care team members	G.N.
	Important concept for understanding client behavior	P.N.
	Not essential in basic program x5	Med Lab, Med Rad (x2), P.N., Nuc Med
	Unable to judge ease of implementation due to time and amount of content	Biomed
	Very important - Health Care Delivery System and Epidemiology are two important areas of curriculum	H.I.T.

OBJECTIVE NUMBER		TECHNOLOGY
9	An understanding of the logistics of medical care for all might help alleviate the reality shock of realizing that not all of B.C. has the services of the Lower Mainland. Also - that medicine does not necessarily have to have "hi technology" to serve people	Nuc Med
	Not applicable x2	Med Lab, Med Rad
	Post diploma x3	P.N. x2 Med Rad
10	Not applicable x2	Med Lab Med Rad
	Already part of Issues in Psychiatric Nursing	P.N.
	Very important - would influence the type of interventions selected x2	P.N. x2
	Post diploma x4	Med Lab, P.N x2 Med Rad
	All health care workers should be aware of this	G.N.
11	Patient rights are a big issue - relates to patient seeing his medical record, medicolegal implications	H.I.
	Patients' rights and patients' demands are changing health care	G.N.
	Essential information - an increasing trend x2	P.N. x2
	Post diploma x4	Med Rad x2, P.N., Med Lab
	Difficult to implement due to time and amount of content	Biomed
	Of no value	Med Lab
12	Health care team members all have a responsibility for the promotion of health and prevention of disease	G.N.
	Post diploma x3	Med Rad., P.N. Med Lab
	Not appropriate in a 2 year program	Med Rad
	Clients should be aware of what is available to them	G.N.
	Of no value	Med Lab

OBJECTIVE NUMBER		TECHNOLOGY
13	Very important - Health Record employees interact with all health team members who contribute to patient care.	H.I.
	Right on - mutual respect should start here at BCIT.	Nuc. Med.
	Very important to add to the curricula since the students are not well informed.	P.N.
	The success of interventions is higher when the team approach is implemented well.	P.N.
	PROFESSIONAL ROLE (#14 - 19)	
14	All professionals need a better understanding of each others role - increases interdisciplinary functioning	P.N.
	Post diploma	Med Lab
	An important responsibility - involvement produces change/improvement x2	P.N., G.N.
15	A commitment to life long learning started here at BCIT should provide professional organizations with some resource people who know what they want	Nuc Med
	Post diploma	Med Lab
	Needs to be discussed by individual departments	G.N.
	I don't think a student at this point in time has the time or capability of recognizing other professional standards	Med Lab
	Should be aware of if not able to describe	G.N.
16	Accreditation (CCHA) is an important area of curricula	H.I.
	Post diploma x2	Med Lab x2
	Important as applied to Med Lab field only - otherwise of no value. Should be taught by Med Lab personnel as part of Med Lab course	Med Lab
17	Post diploma x3	Med Lab x2 Biomed
18	I feel if we could foster awareness of respect for and interest in the others in the health team, we might avoid some of the "snafus" that take place within an agency. Increased open communication between members would raise the standard of patient care.	Nuc Med

OBJECTIVE NUMBER		TECHNOLOGY
18	Awareness of responsibilities of self and others is essential for any team work	G.N.
	Difficult to implement due to time and amount of content	Biomed
	Post diploma x2	Med Lab x2
	Role of nurse taught but often only in relation to physician and other nurses	P.N.
19	Important to share expertise and monitor performance	Nuc Med
	All members of health care team must know and maintain professional standards	G.N.
	Not vital to members of team	P.H.I.
	Post diploma x3	Med Lab x3
	INTERACTIVE ROLE (#20 - 35)	
O. 20-35	Of "no importance" to "somewhat important" due to absence of direct patient contact	H.I.
20	Our students should communicate effectively, but I'm not sure about being able to describe a model of communication	Biomed
	Not important - performance is important - not describing - of no value - would turn students off	Med Lab
21	Minimal application x2 - no patient or family contact	Med Lab x2
	Not applicable	H.I.
22	This skill will become more important when we have our Health Record Technician program.	H.I.
	Not easy to implement - no expertise on faculty.	P.H.I.
	Not easy to implement as this objective is difficult to evaluate in clinical setting x3	P.N. x2 G.N.
	Not important	Med Lab
	A life process and must be meshed into the 2 years. Can most instructors do?	Biomed
	Somewhat important - part of Behavioral Science course - question the necessity of a whole course with time a problem	Med Lab
	A skill learned only by workshops or extended interaction. No time in our curriculum. x2	P & O Med Rad
	Difficult to build into a curriculum	Nuc Med

OBJECTIVE NUMBER		TECHNOLOGY
0.22-27	Too esoteric	Med Lab
23	Not applicable to our technology x3	Med Lab x2 Biomed
24	Perhaps not as important as in the "helping" professions	P.H.I.
	Not applicable x3	Med Lab x2 Biomed
25	Must prepare people for the future as well as the present	P.N.
	Post diploma x2	Nuc Med Med Lab
	Not applicable x3	Med Lab x2 Med Rad
26	Not applicable x3	Med Lab x2 Biomed
	Difficult to judge ease of implementation due to time and amount of content	Biomed
27	Not applicable x4	H.I., Med Lab x2, Biomed
	Not easy to implement - a difficult level to attain and requires an enhanced level of awareness of self and others. Requires very skillful faculty (resources) and time x2	P.N. P & O
28	Not a direct concern for students. x3	H.I., Biomed P.H.I.
	No direct relationship to Med. Lab. duties x2	Med Lab x2
29	Not a <u>direct</u> concern for our students x5	H.I., Biomed, Med Lab x2 P.H.I.
	Many of those we deal with fit into this category - must be aware of appropriate dynamics	P.N.
	Too esoteric	Med Lab
31	Post diploma Not applicable x5	Med Lab H.I., Med Lab x2, Biomed, Med Lab

OBJECTIVE NUMBER		TECHNOLOGY
32	Not important x7	Nuc Med, Med Lab x3, H.I. Med Rad x2
	Critical if the objective of care is to improve self esteem	P.N.
	Not a high priority in basic program	G.N.
33	Not important x2	Med Lab x2
	Cannot produce teachers in 2 years at the same time as producing technologists	Biomed
	Extremely important in relation to using medical technology correctly	H.I.
34	Not important x2	Med Rad, Med Lab
	Health Information technologists must know and assist with recording requirements	H.I.
35	Technologies such as ours can become repetitive with high throughput and not enough time for patient care as one would like. This, plus high stress levels, is need enough for skills in maintenance of interactive skills. I feel even more than in Nursing etc., as our instrumentation becomes the most important factor!	Nuc Med
	Too esoteric	Med Lab
	LEGAL AND ETHICAL RESPONSIBILITIES (#36 - 49)	
36	Good idea for addition to Biomed curricula.	Biomed
	Extremely important background information for documentation requirements.	H.I.
	Somewhat important - I believe a student should be able to define some of these terms, but not all of them.	G.N.
	Of increasing importance because of increasing medicolegal use of patient record.	H.I.
37	If case studies were available would be valuable.	G.N.

OBJECTIVE NUMBER		TECHNOLOGY
38	Not applicable x2	Biomed, P.H.I.
	If only own technology perhaps relevant.	Med Lab
39	Not applicable	P.H.I.
	Very important but to be taught by the technology during appropriate lab periods. (same applies to 40,41)	Med Lab
40	Application is different	P.H.I.
42	Not applicable x4	P.H.I., H.I. Med Lab x2
	All need to have this skill - but some technologies to a greater degree.	G.N.
	Objective not easily met in application.	P.N.
43	Not applicable x2	H.I., P.H.I.
	Very important but to be taught by the technology during appropriate lab periods.	Med Lab
45	Not easy to implement as ethics and feelings are not easy topics to discuss.	P.N.
	Somewhat important - these are developed throughout life - more important to have acceptable ones - not to be able to discuss them. These should be reinforced throughout the program.	Med Rad
46	This is the crux of the subject. We all tend to be traditional - that is why we are in these fields. But the dilemmas will have to be dealt with in depth of the contemporary scene.	Nuc Med
	No value x2	Med Lab x2
	Many decisions that must be made can be more realistic if this background were present	P.N.
	Post Diploma x1.	Med Rad
	Should be aware of scope of ethical theory	G.N.
47	Not applicable x4	Med Lab x2, Biomed, Med Rad

OBJECTIVE NUMBER		TECHNOLOGY
48	Not applicable	Biomed
	Post diploma x4.	Med Lab x2, Biomed, Med Rad x2
	Important in order to make us think, support and help those that make the decisions	Nuc Med
49	Not applicable x2.	P.H.I., Med Lab
	Very important in psych. nursing	P.N.
	Post diploma x2.	Med Lab, Med Rad
	MANAGEMENT AND SUPERVISION (#50 - 64)	
Q. 50-64	Because of time and "mental preparedness" these objectives would be ineffective in the initial training of a technologist.	Med Lab
Q. 50-65	Post diploma	Med Lab
50	Care is best delivered utilizing a team approach - basic knowledge is important.	P.N.
51	Already part of current management program	Med Rad
	Post diploma x 2	Nuc Med., Med Rad
52	Not important in a 2 year program - lack of time.	G.N.
	Post diploma x2.	Biomed, Med Rad
	Must have this knowledge as the graduates would/will be in positions of authority.	P.N.
53	Vital part of nursing and extremely important.	G.N.
	Post diploma x4.	Biomed, Med Lab x2, Med Rad.
	Not easily implemented in practise.	P.N.
	Not applicable	H.I.

OBJECTIVE NUMBER		TECHNOLOGY
	Level of supervisory skills needs to be quite basic.	P.N.
54	Evaluation is an essential part of nursing in order to insure high standard of patient care.	G.N.
	Post diploma - focus on self evaluation is appropriate here. This will/should be part of daily responsibilities.	P.N.
	Difficult to implement due to problem of time and amount of content.	Biomed
	Post diploma	Med Lab
55	Motivation is an important behaviour in psychiatric nursing	P.N.
	Post diploma x2	Med Lab, Med Rad
56	Post diploma x5	Nuc Med., Med Rad x3, Med Lab.
	Change is an important factor in psychiatric nursing x2.	P.N. x2
	Not applicable	Biomed
	Extremely important because of increasing use of high technology in Health Record Dept.	H.I.
57	As a manager of people must be aware of the process.	P.N.
	Post diploma x2	Biomed x2
58	Post diploma x3	Med Lab, Biomed, Med Rad
	Good idea to add to curriculum.	Biomed
59	Understanding co-workers' behaviour is very important x2	P.N. x2
	Not applicable	Biomed
	Post diploma x3	Med Rad x2, Med Lab
60	Not relevant to beginning level R.N. x2	G.N. x2

OBJECTIVE NUMBER		TECHNOLOGY
	Post diploma x5	P.N. x2, Med Lab x2, Med Rad
	Very important since our grads are frequently in department head positions	H.I.
	How can budget and cost control not be important!	H.I.
61	Very important - in our small departments technologists essentially do everything x2.	Nuc Med, Biomed
	Post diploma x3	Med Lab x2, P.N.
	Hard to fit into time frame.	Biomed
62	I think it has some relevance for all areas re: health care - but not high priority.	G.N.
	Working condidtions are dictated by these factors - awareness is important.	P.N.
	Very important since legislation greatly affects documentation requirements and release of information.	H.I.
	Post diploma x2.	Med Rad, Med Lab
	I think these matters are essential now-a-days - especially when we might have discussed ethical dilemmas in a course.	Nuc Med
63	Very important as labor relations will have direct impact as soon as students graduate x2.	P.N. x2
	Not important - soon learn about this when employed x2.	Nuc Med, G.N.
	Working conditions are dictated by these factors - awareness is important.	P.N.
	Very important because most Health Record Department Heads have to deal with 2 unions and administer 2 contracts.	H.I.
64	Very important as labor relations will have a direct impact as soon as students graduate.	P.N.
	Not important as student level - only needs to be made aware of need to do so at employing agency.	G.N.
	Post graduation - not appropriate as students do not belong to the union.	Med Rad
Q 62-64	Too esoteric.	Med Lab

APPENDIX G

OBJECTIVES RECOMMENDED

FOR CORE CURRICULUM

Table A

Objectives Recommended for Inclusion in Base Core Curriculum

Objective Number	Objective Statement
	Interactive Role (10)[a]
20	describe the components of a model of effective communication including listening and verbal and nonverbal communication.
21	demonstrate behaviours which enhance his/her ability to initiate, maintain and effectively terminate a relationship with patients, families and others.
22	demonstrate skills in directly expressing feelings in a respectful, constructive manner.
24	describe common stresses associated with the life stages of man.
26	describe the role of values, attitudes and beliefs in influencing behaviour.
27	recognize values, attitudes and beliefs in self and client which may interfere with effective communication.
30	describe healthy and unhealthy ways in which the basic emotions of fear, anxiety, anger, sadness and elation may be expressed.
33	develop, implement and evaluate teaching plans for patients, families, peers and/or the public.
34	using appropriate medical terminology, report and record behaviour/events accurately and concisely using descriptive rather than evaluative terms and fact rather than inference.
35	describe self management strategies and techniques that assist him/her to maintain the interactive skills which are essential to effective relationships with clients and others.
	Legal and Ethical (10)
36	discuss the following terms: client rights, consent to treatment, negligence, malpractice, assault, battery, invasion of privacy, duty of disclosure, defamation, civil liability, criminal liability.
37	using selected case studies involving negligence identify: the standard of care expected by negligence law, the responsibility of the worker and the responsibility of the health care agency.
38	explore ways in which client rights may be violated in selected fields of practice.
39	describe the nature and importance of adequate identification of patients, patient records, specimens and films.
40	describe his/her legal responsibilities to clients in relation to the duty of disclosure (informed consent) and client confidentiality.

Table A (Continued)

Objectives Recommended for Inclusion in Base Core Curriculum

Objective Number	Objective Statement
41	describe his/her legal responsibilities in relation to documentation in patient and agency records.
42	describe his/her legal responsibilities in relation to the administration of medications or diagnostic agents to patients.
43	describe his/her legal responsibilities for an accident or error in treatment occurring to a patient for whom he/she has direct or indirect responsibility (e.g., medication error, equipment malfunction, lab test error).
44	identify specific measures taken within selected fields of practice to safeguard the environment for patients, staff and others.
45	discuss the folllowing terms: ethics, ethical dilemma, feelings, beliefs, attitudes, opinions, values.

a Numbers in parentheses indicate the number of objectives.

Table B

Objectives Recommended for Possible Addition to Base Core Curriculum

Objective Number	Objective Statement
	Professional Role (5)[a]
14	describe the major roles of selected health organizations at the provincial and national level.
15	describe ways in which selected professional organizations seek to maintain the competency of their members.
16	describe selected accreditation requirements and standards which must be met by specified health care agencies (e.g., safety practices, equipment quality, staff qualifications, infection control).
18	explore the limits of his/her responsibility and expertise in relation to other members of the health care team.
19	explore his/her role in relation to the health care team in maintaining selected accreditation requirements and professional standards.
	Management and Supervision (10)
52	compare various leadership styles and their degree of effectiveness in directing health care personnel in selected settings.
54	describe performance appraisal systems and methods.
55	discuss effective strategies and techniques for motivating self and others.
58	describe strategies for reducing conflict within organizations and groups.
63	demonstrate awareness of rights and responsibilities as defined in own union contract and union contract of selected health team members.
64	describe grievance, mediation and arbitration procedures related to health labor relations.

Table B (Continued)

Objectives Recommended for Possible Addition to Base Core Curriculum

Objective Number	Objective Statement
50	describe the organizational structure of an assigned agency including functions and responsibilities, line and staff relationships and channels of communication.
51	describe his/her role, responsibilities and channels of communication in relation to other members of the health care team within the assigned agency.
53	demonstrate effective supervision of assigned patients and specified health team members.
57	demonstrate skill in utilizing the decision making process.

a Numbers in parentheses indicate the number of objectives.

Table C

Objectives Recommended for Possible Later Addition to Base Core Curriculum or as Content for a Subgroup of Programs

Objective Number	Objective Statement
	Health Care System (10)[a]
1	describe the structure and function of the major parts of the health care system of British Columbia (e.g., roles of various levels of government, health regulation, levels of care.)
2	describe the financing of health care in British Columbia.
3	describe the basic concept of health insurance and compare it to the "fee for service" concept.
5	describe common professional responsibilities of selected health team members in relation to the development and implementation of health care policies.
6	describe the content and impact of selected legislation on health care policies in British Columbia (e.g., narcotic control, radiation protection, public health).
8	discuss selected variables which increase an individual's use of health care services (e.g., age, sex, education, social class, values).
9	discuss selected characteristics which enable an individual to access health services (e.g., existence of service, geography).
10	discuss selected characteristics which influence an individual's perception of need for health services (e.g., social and cultural influences).
11	describe the impact of consumerism on the health care system (e.g., right to information, involvement in policy formation).
12	describe strategies for producing better informed consumers of health care.
	Professional Role (1)
17	describe the purpose and nature of quality control systems used by health care agencies.

Table C (Continued)

Objectives Recommended for Possible Later Addition to Base Core Curriculum or as Content for a Subgroup of Programs

Objective Number	Objective Statement
	Interactive Role (1)
28	describe societal values, attitudes and beliefs in relation to the handicapped.
	Legal and Ethical (3)
47	explore ways in which feelings, beliefs, attitudes, opinions and values influence the development of personal ethical standards.
48	identify major ethical dilemmas existing in selected fields of practice.
49	using selected case studies, identify the ethical dilemma, the rights and responsibilities involved, and the acceptable course(s) of action.
	Management and Supervision (4)
56	employ basic strategies in planning, implementing and evaluating change.
59	describe key variables influencing an individual's behaviour in organizational settings (e.g., attitudes, values, personality, perception, motivation).
60	demonstrate the basic principles of budgeting and cost control.
62	describe major legislation affecting labor relations within the health care system in B.C.

a Numbers in parentheses indicate the number of objectives.

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