THE DEVELOPMENT OF A USEFUL CONCEPTUAL FRAMEWORK IN CURRICULUM DESIGN

LOIS E. GRAHAM
Dean, Faculty of Nursing
University of New Brunswick

The term "curriculum" currently includes all the means employed by a school or faculty to provide students with opportunities for desirable learning experiences. Instructional methodologies and procedures are included in the work of curriculum development. This is logical if the curriculum plan indicates the kind and variety of learning experiences recommended, since the identification of the latter will give direction to the methods to be employed in the teaching-learning process.

Virginia Conley in *Curriculum and Instruction in Nursing* (1973: 336-37) defines curriculum design as a pattern of relationships among elements of a curriculum plan which has been chosen as desirable in terms of the overall objectives. She states further that a curriculum design is useful only if it has the capacity to solve curriculum problems and to make clear the base upon which curriculum decisions are made.

Conley provides useful description statements in relation to the various aspects of designing a curriculum:

> The concept of curriculum design brings into focus the various theoretical and practical issues concerned with curriculum development. It is the design characteristics that makes one curriculum similar to or different from another. Any adequate curriculum design defines the important components or aspects of the curriculum and determines their relationship to each other and to the tasks to be undertaken. A curriculum pattern provides a consistent framework of values and priorities for dealing with the operational decisions of teaching-learning situations. ....

> It is likely that the problems of an individual teaching plan, an organizational plan for a subject area, an approach to the overall curriculum, and an overall plan for education in general are merely various descriptions of the same problem: curriculum design. All of the components of curriculum design are present in some degree at these various levels of planning and organizing.

> Curriculum design is a statement of the relationships that exist among the elements of a curriculum as they are used to make decisions about instruction. The role of curriculum design in the improvement of educational programs can best be seen as having the following functions: (1) defining the elements of the curriculum

and their relationships in curriculum development, (2) stating the means used for selecting and organizing learning opportunities, and (3) indicating the role of teachers and students in curriculum planning and development.

A curriculum design must provide answers for the following questions that teachers ask:

1. What do I know about the student, and how can I prepare and manage an environment that will promote optimal learning?

2. How can I identify, define, and use instructional objectives to determine the scope, direction, and emphasis of the student's learning opportunities?

3. How can I select and organize these opportunities so as to aid the student to achieve worthwhile educational ends?

4. How can I develop instructional strategies so that these opportunities are most efficiently utilized by the student to achieve these ends?

5. How can I evaluate performance to determine the extent and quality of the student's development toward these ends?

Since every learning situation must include a learner, a purpose, a content, and a process, curriculum design must also recognize and account for the part these factors play in the learning experiences of students. Learning does not take place in a vacuum; it is essentially social in nature and in context. Every learning experience involves all four of the above-mentioned elements in some degree. All curriculum activities have content and purpose; developing the curriculum is not a process of deciding either-or but of deciding what will produce effective development of students. (Conley: 305-306).

A conceptual framework is only part of a curriculum design, a part of curriculum strategy which deals with the selection and sequence of content and opportunities for learning. Instructional strategies follow from curriculum strategy, but are the specific plans by which events and opportunities are arranged to bring about the desired behaviours.

In curriculum planning, the term "conceptual system" (concepts in interrelation) or "conceptual framework" identifies the higher-order concepts and basic relationships among components, which, taken together, will constitute the curriculum. If well-constructed according to this definition, a conceptual framework will serve, along with philosophy, objectives, and faculty beliefs about teaching and learning, to facilitate decision-making in regard to the importance and placement of any proposed piece of content. Curriculum content here refers not only to subjects or courses but to themes which will appear in the syllabi or course outlines for the different units of teaching, and different areas of field work.

In using the terms, "conceptual framework" and/or ""theoretical framework" and/or "conceptual system," in this more restricted sense than was seen before this decade, I am following suggestions and trends seen in contemporary positions in the literature. For example, Oliver (1970) writes that curriculum theorists ought to be

concerned with developing powerful category systems for organizing the demands, capabilities, and instrumental procedures with which the designer must deal. Oliver states that a conceptual structure should identify the *range of decision points* with which the curriculum designer must deal — essentially what is to be taught and how it is to be taught. This need for identification of decision points seems especially relevant for nursing. The pre-requisite task in improving the rigor of curriculum design is to develop a conceptual structure for identifying the critical dependent and independent events with which curriculum designers must deal. (The dependent events of the curriculum, of course, are the outcomes, or the terminal behaviours of the "products" of the educational experience.)

Some curriculum planners in nursing also use the term "theoretical framework" to refer to a way of depicting both the structural and functional connections between the related phenomena. Hadley (1970:11) stated that the first order of business in developing a nursing or any other professional curriculum is to have a theoretical framework that depicts the nature of the service of the profession, that makes sense, and that represents logical connections between related internal and external phenomena. She stated further that the relative adequacy of a theoretical framework is then determined by its usefulness in giving direction and guidelines for curriculum development, research, and practice of the profession.

Many curriculum workers and authorities have made statements to the effect that new curriculum plans should be more than a collection of ideas. The term "conceptual in nature" today seems to mean based upon a limited number of fundamental ideas and necessary basic skills." One should be able to see in any curriculum plan, or framework, an organization which is logical and integral. In a curriculum with a true conceptual framework, whatever basic concepts (core concepts) are chosen, these should in implementation, pass the test of being developed horizontally through the related disciplines and vertically through the increasing levels of complexity from term to term or from year to year.

The Western Council on Higher Education for Nursing (WCHEN) reported in 1970 on the development of its project "Improvement of Curricula in Schools of Nursing Through Selection and Application of Core Concepts of Nursing." For purposes of this project, core concepts of nursing were defined as those generalizations and corresponding responses that are central, essential, and pervasive in the discipline called nursing. Subconcepts were defined as those generalizations and corresponding responses that are inherent in defining higher order generalizations and corresponding responses.

Concepts of increasingly higher order were seen as resulting from cumulative experiences of reality, and while not always orderly or systematic, attainment of one concept may permit or inhibit the attainment of still other concepts (Western Interstate Commission on Higher Education 1970:1)

An integrated nursing curriculum may be regarded as essentially a type of spiral curriculum. Bruner (1960) has described the spiral curriculum as one which turns back on itself at higher levels, revisiting the basic ideas repeatedly and building upon these basic ideas. Believers in the spiral curriculum underscore the point that the basic ideas that lie at the heart of all science and mathematics and the basic themes that give form to life and literature are as simple as they are powerful. Very young students can obtain an "intuitive" grasp of these ideas and begin to use them. But, to be really in command of these ideas and use them effectively, continual deepening of one's understanding of them is required and this deepening comes from learning to use them in progressively more complex forms.

In the University of New Brunswick curriculum design, (1) the concepts and principles related to human needs, (2) the integrating threads of factors which influence the severity and type of patient and nursing problem, and (3) the nursing roles, will be utilized and deepened with each progressively more complex term and course. (Please see article following in this issue for details.)

QUESTIONS A FACULTY MIGHT ASK (EARLY) AS A TEST OF THE POTENTIAL USEFULNESS OF ANY PROPOSED CONCEPTUAL FRAMEWORK

Harms (1969:31) suggested that a conceptual framework for identification of curriculum content and placement springs from experience and is tested for usefulness by experience. By evaluation of its usefulness, a better (more useful) framework can be constructed and tested in the future. The most important facet Harms saw in curriculum building was the establishment of a flow or rhythm from theory (source factors) to design, to curriculum practice, to evaluation, and back to theory. One question any faculty planning a new curriculum needs to ask is whether or not any proposed conceptual framework can be effectively implemented and modified by, or combined with, the experience of practice.

The final test of the usefulness and applicability of any conceptual framework comes when we begin construction or revision of course outlines. This is where we examine our ability to apply such a guide to the development of all types and levels of learning experiences. It is important to attempt to develop course outlines in small groups when first working with a new conceptual framework. Useful input

is obtained from students, alumni, employers of alumni, and representatives from other health care disciplines. Others may see more clearly than we do, any omissions, inconsistencies, unnecessary repetitiveness, and areas needing clarification.

However, a useful early test of the usefulness of a proposed curriculum framework is "to try it on for size and fit" in relation to (1) modern curriculum theory and (2) faculty ability to change long held positions and approaches. Some ideas of "goodness of fit" can be obtained by asking and answering the following questions of any proposed theoretical or conceptual framework.

1. Does it deal with the human being properly set in the center of his world? With his nature and needs in relation to the mandate given by society to this professional group? Does it, and the objectives it proposes to help attain, appear to be compatible with needs of the potential student group? Will it direct the teaching and learning of nursing to fit the needs of the community and region? (Accountability and uniqueness) Are the theoretical and practical experiences available?

2. Does it suggest an interdisciplinary approach — with the needs and problems being explained and "dealt with" by many related disciplines?

3. Can the multi-disciplinary ideas and approaches to problem-solving be seen in the framework? Are these apt to come through in the learning process when translated in behavioral terms?

4. Is the stage set for inquiry about the nature of the universe and man in relation to the mandate given by society to nursing to try to help meet certain needs of other human beings?

5. Do any proposed continua move from simple to complex (as from health to deviations from health, from individuals to groups)? Do all continua - whether knowledge concepts or applied experiences - suggest an orderly sequence based on increasing knowledge and abilities of students? (Relatedness)

6. Does such a framework meet the criterion of relevance in that it can suggest content that will portray life in all of its manifestations? Can a curriculum be developed under such a framework in which the "pieces of content" will articulate all of the aspects of human needs and behaviors with the forces that constantly shape those needs and behaviors? (Relevance and relatedness in the sense of internal consistency)

7. If such a framework were kept before the student from the beginning might it help him or her to gain a more clear mental picture of the complex nature of man and the nature and relationships of the helping professions? (Relatedness)

8. Might such a framework form the basis for an intellectual process which could be used again and again — long after the bits of knowledge through which the process was conveyed have been changed or forgotten? (Accountability)

9. Does it (the conceptual framework) suggest development of the "most powerful" category systems available for organizing content and management procedures for learning experiences?

10. Does it identify the *range* of decision points with which the curriculum designer must deal, suggesting what is to be taught and how it is to be taught?

11. Does it depict the structural and functional connections between the related phenomena? Or, does it portray logical connections between related internal and external phenomena? (Relatedness)

12. Does it suggest or reflect the beliefs of the faculty about the nature of the practice of nursing, and about the specific roles and functions of the baccalaureate graduate in nursing?

13. Does it appear to have potential usefulness in giving guidelines for selection and placement of content in the educative process, as well as for research and practice of the profession? Does it appear to have some capacity to solve curriculum problems at all levels and to make clear the base upon which curriculum decisions can be made?

14. Can the more traditional content with which some teachers are comfortable and which they see as necessary to include be fitted into such a structure (e.g. body systems approaches)?

15. Can the available clinical experience be fitted in for purposes which are portrayed in the framework?

16. Will such a plan clarify the subsequent tasks of curriculum planning for most teachers? If so, how? If areas of confusion are identified, how can these be resolved by plans of reading, workshops, etc.?

Such questions as these have been suggested in articles in the current literature describing the functions of a conceptual framework (or frameworks) in planning a curriculum. One representative article which has provided some of the ideas and has generated some of the questions presented here is Pierce's "Curriculum Development in Higher Education" (1971). The publication in which this article is found, *Improving College and University Teaching,* frequently contains useful articles on some aspect of curriculum design currently important to CAUSN, such as "relevance". The monthly publication *Educational Technology* carried many useful articles on curriculum design in the early 1970s. In my experience, nursing faculty members have not expected to find curriculum theorizing in such a journal, and few have discovered its potential contributions unless working intensively with performance objectives, or with some aspect of individualized instruction, or with newer audiovisual methods and materials.

Questions such as those listed above can become very pragmatic guides if faculties, or small groups of faculty members will consider

each question in relation to each proposed content or clinical area as well as in relation to the overall curriculum goals. When faculty members are working on curriculum building, they may find it useful — where they can answer "yes" to any question — to try to state or show *how* they see the proposed framework performing that particular function in the specific areas for which each is responsible. This helps the individual member clarify her thinking and helps other faculty members who may be still in need of examples. Where faculty members must say "no" in answer to any particular question, it may sometimes be even more helpful because the next step is to suggest those changes or additions which they believe might make the framework more useful.

A faculty in nursing which would be likely to adopt and use effectively such a conceptual framework is envisioned as holding some of the following beliefs.

1. Belief that there are many avenues to a single worthy goal, and that the most effective approaches for preparing nurses at all levels have not yet been found.

2. Belief that the immediate college environment is ripe for changes regarding traditional requirements and sequences, such as pre-requisites, credits for majors, methods of teaching and learning, methods of evaluation.

3. Belief that nursing, like many other applied sciences and basic sciences, can be taught most effectively through the identification of a few concepts, sub-concepts and principles, especially when accompanied by demonstration of the operation of these in increasingly complex situations, and in relation to increased numbers of variables operating in the more complex situations.

4. Belief that students will be no more clear on the meaning and usefulness of any concept, principle, conceptual framework, or goal of nursing action than are their instructors at the time of the teaching-learning experience.

5. Beliefs
    a) that college students are calling justifiably for more relevance in college instruction and campus experience;
    b) that relevance in college instruction will require ongoing changes and adaptations;
    c) that the university should provide the bridge between theoretical constructs and practical situations;
    d) that this bridging process must begin as a student enters university and be elaborated as he moves through the process by increasingly complex illustrations and examples;
    e) that relevance in instruction and learning experiences must reflect a thoughtful analysis of positions and life styles for which students are being prepared;
    f) that relevance requires an interaction style of teaching-learning;

g) that relevance requires the preparation of university teachers to be broad enough and integrated enough to prevent fragmentation of knowledge in the learning experiences of the classroom and laboratory (Edwards 1971).

6. Belief that nurses on all levels of functioning share the care of individuals and groups with many other members of the helping professions and occupations, and that most nursing functions may be assistive, collaborative, or autonomous at various times.

7. Belief that the baccalaureate graduate (beginning professional practitioner) needs not only conceptualization skills, highly developed communication and leadership skills, but also technical and technological skills of many kinds.

The term "technical" as used above refers to the "rational management of reality" and "technological" to the "specialized knowledge and skills which seem to comprise the major dimensions of applied science in any field. The modes of "communicating caring" and "theoretical bases for judgment" must be known and used by teachers and practitioners on all levels of the educative process or the scientific, technical and technological approaches alone will be sterile and lacking in nourishment. However, technical and technological skills of many types must be available to the professional practitioner (professionals being people who profess to be *able to do,* with rationale for their actions). Otherwise, quite highly developed interpersonal and leadership approaches may not have a reassuring effect. Many individuals (ill or well) are helped most effectively by what others do, or demonstrate, rather than by what they may say in isolation from action.

8. Belief that *mastery of the process* by which we acquire knowledge and make it transferable is as valid an index of satisfactory progress through a curriculum as is *mastery of content.*

SUMMARY

Statements are seen often to the effect that designers of new educational programs, or revisers of programs, have the responsibility of anticipating difficulties and incorporating compensating mechanisms. This implies an omniscience, a clairvoyance, which is missing in most of us! It should be useful, however, to test perceptions with others involved in the same educative process and with those observing the performance of the "products" of similar educative processes. Faculty members soon discover how useful any plan is, and whether it really represents their beliefs, after they have tried to organize the components of the curriculum by the new framework.

The test of the usefulness of a framework is whether or not it shows the capacity (has the necessary guidelines) to help faculty members solve curriculum problems or to make clear the base upon which curriculum decisions will be made. When this is understood by all members of a working group, a conceptual framework or curriculum design becomes much more than an idealistic pattern of

thoughts, attractively written or symbolically portrayed (as necessary or desirable as these might be to the overall process). The conceptual framework then becomes a set of criteria or guidelines by which to make decisions at all levels of program planning, including (a) selection of content, (b) arranging the sequence of learning experiences, and (c) evaluating the effectiveness of the teaching-learning process.

REFERENCES

Bruner, J. *The Process of Education.* Cambridge, Mass.: Harvard University Press, 1960.

Conley, V. *Curriculum and Instruction in Nursing.* Boston: Little, Brown and Co., 1973.

Edwards, C. H. Relevance in college instruction. *Improving College and University Teaching* 19:322-25, Autumn 1971.

Hadley, B. J. The utility of theoretical frameworks for curriculum development in nursing. *Improvement of Curricula in Schools of Nursing Through Selection and Application of Core Concepts in Nursing.* Boulder, Colo.: WICHE, July 1970.

Harms, M. *Development of a Conceptual Framework for a Nursing Curriculum.* Atlanta, Ga.: Southern Regional Education Board, 1969.

Oliver, G. L. Toward improved rigor in the design of curricula. *Educational Technology* 10:18-23, July 1970.

Pierce, D. E. Curriculum development in higher education. *Improving College and University Teaching* 19:278-79, Autumn 1971.

Western Interstate Commission for Higher Education. *Improvement of Curricula in Schools of Nursin Through Selection and Application of Core Concepts in Nursing.* Boulder, Colo.: WICHE, July 1970.

L'élaboration d'un cadre de travail conceptuel efficace

Un cadre conceptuel efficace pour élaboration d'un programme d'études peut, et devrait, présenter bien plus qu'un schéma idéaliste de concepts, joliment formulé ou présenté sous forme de symboles et paradigmes. Pour être vraiment utile, un tel cadre doit aider les professeurs à résoudre les problèmes inhérents à la composition d'un programme d'études et à concilier les points de vue divergents à l'égard de la planification individuelle des cours. Il peut y arriver en énonçant clairement sur quelles bases prendre des décisions de planification efficaces et logiques en termes de planification.

Cet article propose une série de questions servant à évaluer la contribution possible d'un cadre conceptuel, adopté ou non, pour la création d'un programme de baccalauréat en sciences infirmières. Si ce cadre répond à la plupart de ces critères explicites ou implicites, il se transformera en un ensemble de lignes directrices qui aideront à prendre des décisions à tous les niveaux de la planification des cours. Il s'agira notamment (a) de choisir le contenu (b) de déterminer la progression de toutes les expériences d'apprentissage et (c) d'évaluer l'efficacité du processus d'enseignement-apprentissage en fonction des résultats et du degré de satisfaction de l'étudiant.