Curriculum Development in Nursing Education. Where is The Pathway?

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***Abstract:** Curriculum is defined as, "All the learning which is planned and guided by the school, whether it is carried on in groups or individually, inside or outside of school"[1]. To develop or revise nursing curriculum is a difficult task and requires a thorough knowledge of the curriculum development process. The faculty and curriculum committee members need a proper direction right from planning, implementation and monitoring of the curricular exercise. The curriculum development reflects the future of nursing education, changing trends in healthcare system and expectation of stake holders. The nursing faculties involved in curriculum development process spend a lot of time in thinking how to analyze and organize in writing a new curriculum. The pathway to curriculum revision and development still remains as an unknown lane. This article would help the novice curriculum developers with guidelines to develop a comprehensive nursing curriculum. It mainly focuses on curriculum development institutional level.*

***Keywords:** Curriculum revision, Curriculum template, faculty role, institutional curriculum development,revision in nursing curriculum.*

I. Introduction

Curriculum development simply means the sum total of all planned learned experiences which an institution decides for its students. Some authors define curriculum as the total effort of the school to bring about desired outcomes in educational institution and also out of college situations.More than ever nowadays nurses are to be prepared to meet the dynamic health care needs of the society. To prepare competent nurses, the basic nursing education needs to be sound enough to meet the demanding needs of the health care system. The nursing graduates have to be prepared to meet the essential competencies, to incorporate evidence based practice, take up leadership roles to maintain and improve the quality of health care. Initial nursing or midwifery education aims to prepare individuals to fill a role in the professional workforce where they will be called upon to strengthen health systems to meet population needs and protect the public. High quality education programmes that meet a global standard are therefore imperative [2] .The global standards for initial nursing and midwifery education identify essential components of education. Implementation of the standards will facilitate progress towards the highest level of education attainable in a country or region, assure equitable and appropriate placement of nurses and midwives in health-care roles and, potentially, simplify recruitment practices throughout the world [3].Hence to develop a new nursing curriculum or to revise an existing curriculum is a major factor in meeting the global standards. Curriculum development or revision is an ongoing process and requires a great deal of work from the faculty. It requires lot of support from the educational institution. Developing a new curriculum is different from curriculum revision with major or minor changes. Knowing how to develop a new curriculum and to revise an existing curriculum is like an expedition.

II. What is curriculum revision in nursing?

Curriculum revision means making modifications and changes in the current curriculum to give new direction. It involves making changes in the existing curriculum in its aims, objectives, course contents, learning outcomes and assessment strategies.The curriculum revision can have various approaches. It can either be adding, deleting something into the existing curriculum. It can also be a process of organizing the current curriculum into a better shape. The general educational system in schools follows either a traditional or progressive curricular pathway. Since nursing is a clinical oriented course, developing an integrated curricula with evidence based concepts incorporated into it will help the faculty to develop a desired nursing curriculum.

Nurses and midwives must have an evidence-based education that enables them to meet changing health-care needs, working both on their own and in teams with other professionals along the entire continuum of health and illness. In addition, their work needs to be systematically evaluated to show its efficiency and effectiveness, and they need to be involved in decision-making for health policy, for which preparation must begin in the initial education programme [4].

2.1Curriculum development and preliminary procedures:

There should be a legal basis for the procedural guidelines and implementation in an academic institution where curriculum revision or development is planned. It can be a new curricular innovation or revision from the existing curriculum. Many documents and standards are required to be included in the curricular revision.

➢ Resolutions from university council regarding the approval for the curricular revision or development.
➢ Approval by curriculum committee.
➢ The rationale for the revision along with the objectives for the revision.
➢ The proposed implementation scheme for the curricular revision.
➢ Copy of current study plan.
➢ Copy of national standards for nursing practice and higher education.
➢ Copy of international standards for nursing practice and education.
➢ Budget plan for the curriculum implementation.
➢ Written certification from the dean (institutional head) to all the members of the committee for the review process.

Major and minor revisions require more or less of the same documents mentioned above. The major revision of curriculum additionally needs some documents like end user survey, and rationale for major revision in the curricula.

Designing new nursing program curricula needs few additional things like specializations available in the campus. The proposed new programme should be in par with the requirements of the desired programme. Feasibility of introducing new curricula depends upon resources like infrastructure, physical facilities, and faculty appointments, availability of non -academic administrative staff, library and laboratory facilities.

2.2. Stating the Need for curriculum development

Advances in nursing science and research have an impact on the current standard and level of nursing education programs. It is inevitable that nursing curriculum needs a reexamination of the traditional concepts and to be modified according to the needs. If the current curriculum has gaps and implementation problems there arises a need that it should be reviewed. The nursing education at undergraduate level will inform the future direction of nursing profession.

An article about curriculum revision in the 21st century discusses regarding an overloaded curriculum. It emphasizes that the overloaded curriculum does not respond to students' interests and teachers feel pressured to cover the curriculum that may be pitched at a level that is too high for students to achieve. Additional challenges in curriculum development often arise from gaps between the intended curriculum, the implemented curriculum and lastly, the attained curriculum. If a curriculum revision process is overly ambitious, is carried out within short timelines and is within an environment of low investment in teachers, problems will inevitably arise. A particular curriculum may include knowledge and require pedagogy that teachers may or may not have [5].

The 21st century has seen a dramatic change in the development of nursing curricula. Many of the programs of nursing have determined the need to move from the old way of nursing instruction, which included a focus on formal abstract theories and less focus on how this abstract knowledge-technology would be used in clinical practice[6].

Nursing education programs are obligated to challenge long-held traditions and design evidence-based curricula that are flexible, learner-responsive, inter-collaborative, provide a diverse experience, and use current technology. Unlike initial development, curriculum revision is not one-time event. Instead, curriculum revision should be reviewed as a process to ensure a quality program [7].

Transformative learning should be considered as the basic reason for curriculum revision. The relationship between transformative learning and institutional level changes are clearly described in the Lancet commission report as follows.

Transformative learning is the proposed outcome of instructional reforms; interdependence in education should result from institutional reforms. Instructional reforms should: adopt competency-driven approaches to instructional design; adapt these competencies to rapidly changing local conditions drawing on global resources; promote inter-professional and trans-professional education that breaks down professional silos while enhancing collaborative and non-hierarchical relationships in effective teams; exploit the power of information technology for learning; strengthen educational resources, with special emphasis on faculty development; and promote a new professionalism that uses competencies as objective criteria for classification of health professionals and that develops a common set of values around social accountability. Institutional reforms should: establish in every country joint education and health planning mechanisms that take into account crucial dimensions, such as social origin, age distribution, and gender composition, of the health

workforce; expand academic centers to academic systems encompassing networks of hospitals and primary care units; link together through global networks, alliances, and consortia; and nurture a culture of critical inquiry [8].

The feedback from stake holders, graduating students, faculty focus group discussions and feedback from current students will give a solid reason for the institutional curriculum revision. The current curriculum may have implementation difficulties and may also lead to proposed changes. The curriculum revision will take up a better shape when it is done in phases. This allows more time to plan and organize the review process.
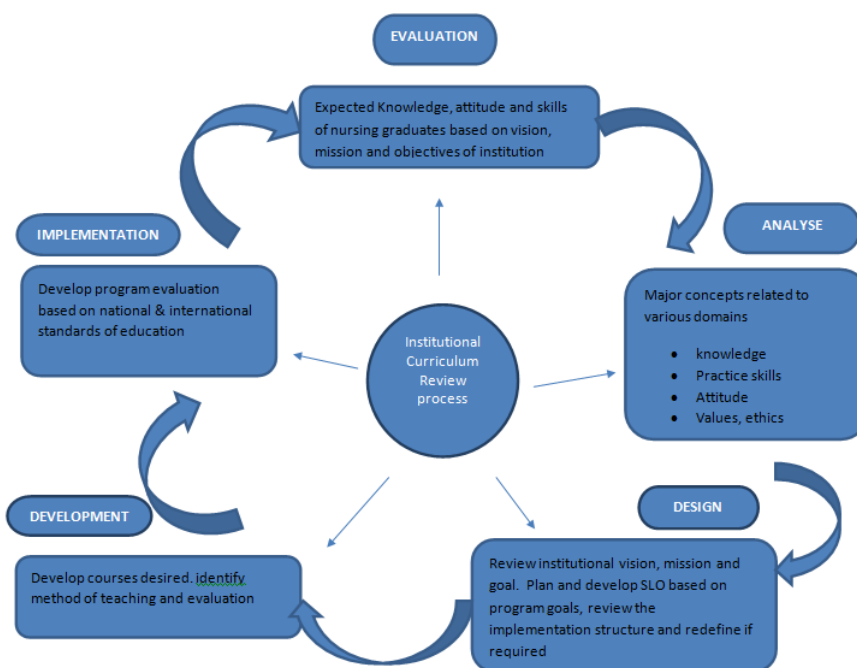
2.3. Nurse educator's role in development of curriculum

When considering curriculum revision, the program faculty should consider factors that occur within the nursing program and academic institution that may influence the outcome of curriculum revision. These factors include: • type of program; • institutional policies; • human factors such as the number of faculty and staff; • physical resources such as classroom space, • types of course delivery, • clinical sites; • student characteristics; • financial resources [7].

Adoption of competency-based curricula those are responsive to rapidly changing needs rather than being dominated by static coursework. Competencies should be adapted to local contexts and be determined by national stakeholders, while harnessing global knowledge and experiences. Simultaneously, the present gaps should be filled in the range of competencies that are required to deal with 21st century challenges common to all countries—e.g., the response to global health security threats or the management of increasingly complex health systems [8].

III.   Figure -1 Institutional curriculum development process
The curriculum review process at the institutional level is explained with the following diagram:

The institutional curriculum revision or development is an ongoing process. It begins with the analysis of the major concepts related to various domains involved in the curriculum. The next step is to use a framework or design for the intended changes to be made. Review the vision, mission and goals of institution and develop the student learning outcomes based on program goals. Review the implementation structure and redefine if required. Developing the desired courses with the ideal methods of evaluation is an important element in the curricular exercise. Developing the study plan and the required syllabi is the major time consuming work in the designing and implementation phase. After developing the new curriculum for the process of evaluation a trail run is required to monitor the implementation difficulties. If required the process may need to be repeated from the analysis phase again.

3.1. Participants in the curricular development process

Stakeholders, potential employers, outgoing graduates, faculty, students, higher level administrators (advisory council), members from clinical practice and the curriculum committee of the institution are the most

important people to get involved in the curriculum revision process. The curriculum review committee shall consist of at least 8-10 members appointed by the advisory board including clinical practice nurses, nurse educators, nursing administrators and a nominee from the ministry of health. One member from the ministry of higher education should also be involved in the curricular review process. It is advisable that the committee should include one non nursing nominee appointed by the advisory board. The person responsible for the college or school of nursing is the key person in the curricular review process.

32. Principles guiding curriculum development:

Principles which guide to general teacher education curriculum development according to Hansen 1995 can be still utilized in the nursing curriculum development.

Principle 1: The Essence of Curriculum Design The Need for a Conceptual Framework.
Principle 2: Conceptualizing Attitudes and Beliefs about Learning
Principle 3: An Epistemological Rationale
Principle 4: The Curriculum Development/Planning Process
Principle 5: The Political Realities of Curriculum Development

These five principles can be taken as collective and as specific entities, which provide a backdrop against which curriculum planning, in education settings and in schools, can be made and against which the nature of technology and technological education can be showcased[9].

Orientation of the participants by the head of the institution or the committee chair person is the first step in the review process. The following should be oriented to the curricular committee members:

Current curriculum plan: The faculty and the curriculum committee members need to have a thorough understanding of the current study plan and its pros and cons. Identification of gaps or implementation problems in the current study plan is required. During the curriculum revision process the vision, mission and objectives of the institution has to be reviewed. Detailed information about the following is important for the curriculum development members:

➢ curriculum review plan and procedures
➢ international nursing education standards
➢ national nursing council standards
➢ national higher education standards
➢ health statistics of the country
➢ health infrastructure of the country
➢ health vision of the country
➢ information about local and regional nursing institutions
➢ curriculum revision template

3.4. Curriculum development plan:

Basically, there are two ways in which a curriculum can be organized: one way is to place the emphasis on the learning of subjects that the experts in the field consider to be what a nurse ought to know; alternatively, the curriculum can be based on the acquisition of the whole range of skills that the graduate nurse is expected to practice (at defined levels of proficiency) in nursing care [10].

Ongoing changes in broad global and national contexts raise questions about the position of nurses and nursing education and whether the legal framework of practice in which nurses operate should evolve with the same momentum that marks healthcare [11].

The curriculum development plan should contain information about effective instructions including the following:
➢ Measurable learning outcomes: Use direct and indirect methods of measuring learning outcomes.
➢ Instructional tools or the methodologies planned including multimedia
➢ Instructional formats planned including strategies like lecture, demonstration, practical skills etc.
➢ Learning outcomes matrix which matches with the general graduate attributes
➢ Evaluation methods based on learning outcome.

3.5. Knowledge of national nursing council standards:

A thorough knowledge of the national nursing council requirements and the competencies required by the council for the nursing graduates will help in planning or revising the new curriculum. The proposed curriculum should reflect upon the basic skills and competencies required from the national nursing council for successful practice.

3.6. Knowledge of international nursing council standards:

The goal of the global standards is to establish educational criteria and assure outcomes that: a) are based on evidence and competency; b) promote the progressive nature of education and lifelong learning; and c) ensure the employment of practitioners who are competent and who, by providing quality care, promote positive health outcomes in the populations they serve [2].

The need for global standards has arisen for several reasons – the increasing complexities in health-care provision, the increasing number of health professionals at different levels, and the need to assure more equitable access to health care. The great variation in the levels of initial education for professional nurses and midwives around the world can no longer be neglected [2].

A thorough knowledge about the health vision or strategic goals of the countrywill help the reviewers to base the content of the courses in the proposed study plan. The health care system and infrastructure information will help to plan the content for the courses like community health nursing, public health nursing and advanced care directives. The faculty in the curriculum review committee requires a lot of out of box thinking to incorporate these broad areas into the curricular content.

Knowledge of standards of higher education council of a country is must for the review committee. Each country has its own standards for higher education in par with the international standards. The graduate attributes of the institution should meet the competency levels required from the higher education council.

3.7. Benchmarking

Benchmarking is a kind of performance improvement process by identifying, understanding and adopting outstanding practices from within the same organization or from other businesses [13]. The growing healthcare system demands and encourages ensuring uniform provision of standardized high quality health care to the society. The system of benchmarking pushes the boundaries for the best learning and practices. Also it encourages the use of Plan-Do-Study-Act (PDSA) cycles when action planning and implementing improvements. For the purpose of bench marking, knowledge on local, regional and international college level nursing programs should be included.

Benchmarking is a well-planned and systematic process with clear objectives and mechanisms to measure, compare and discover innovative practices, evaluate if these suit or adapt practices, and implement improvement. In educational institute the bench marking is an important decision making process. Learning and teaching are thought to be a challenging area to benchmark because it is difficult to quantify the outcomes and performance in learning and teaching [14].

Institutional benchmarking is an important tool and an evidence based process to enhance good learning practices .It can take place at either inter institutional or intra institutional level.

3.8. Benchmarking helps in multiple ways:

➢ Helps in establishing reliable and realistic goals and measures its progress.
➢ Monitors the performance based on the mission, vision of the institution.
➢ Helps to set prioritize in which the area needs to be improved.
➢ Identify similar challenges and facts on the field.

3.9. Sample of curriculum development template:

This depends on the template approved by the national higher education council of a country. Ideally the institutional curriculum review will have the following areas to be considered to be included in the proposal.

➢ An executive summary of the proposal
➢ Introduction followed by the institutional vision, mission and goals
➢ Programme details (example name of the institution , name of the program, title of the degree offered, number of years of program, start and end date of the proposed programme, number of students intake, language and mode of instruction, credit hours, major tracks and pathways, any exit points for the program and program fees)
➢ Justifications for the program offered (includes local, regional and international trends.) the impact of the program on the society should be emphasized.
➢ Program structure includes the vision, mission and objectives of the program, learning outcomes, graduate attributes, core competencies etc.
➢ Program alignment with the vision, mission and objectives of the institution. A note on the recent developments in the nursing profession will help in explaining better the reason for the proposed change.
➢ Program bench marking in comparison with local, regional and international nursing institutes will help to understand and adopt practices from within the same institution or other outstanding organizations.
➢ Program study plan, requirements and certification samples.

➤ Internship and graduation project requirements and information
➤ Alignment of the program with the national higher education qualification framework
➤ Student characteristics and admission requirements
➤ Program design, development and review process.
➤ Attendance , completion requirements and regulations for the program
➤ Library and text book reference materials
➤ Faculty requirements for the proposed program
➤ Program planning, monitoring, review, quality assurance and program evaluation.
➤ The improvement process of the program
➤ The physical resources and infrastructure required for the program
➤ The university council and college board approval
➤ Appendix.

3.10. Appendix and attachments required
➤ It depends upon the curriculum revision template. Ideally the following are required to be attached in the appendix.
➤ The complete CV of faculty, non- teaching faculty, administrative staff and part time faculty.
➤ Current faculty workload
➤ The course content or syllabus for all the courses in the study plan
➤ The list of library books and journals including virtual library
➤ A blue print of the physical facilities and resources
➤ The financial budget for the proposed new curriculum or revision

3.11. Implementation of curriculum: if it is newly developed one; it should be done in phases. Initial implementation of the proposed curriculum can be done as a trial run. The initial implementation can be carried out over an academic year period. The faculty can practice the new proposed curriculum and give a feedback about the feasibility and gaps observed. The trial curriculumcan be observed and made into a report so that it helps in completing the final curriculum. The final implementation process is followed by program evaluation.

IV. Conclusion

The Curriculum is the backbone of the technical, professional and graduate Programs of academic institutions. It may be viewed as a processing machine that determines the quantity and quality of the desired outputs. In the University setting, all activities undertaken in its operation may be directly or indirectly related to the curriculum [15]. For implementing the revised curriculum and well-designed plan is required. Self-motivated personnel are suitable for the curricular exercise. The curriculum revision is an ongoing process and cannot be done in isolation. It is a team work and requires a lot of commitment and time from the faculty.It is mandatory that the nursing institutions and nurse educators accept the fact of rapid changes in the world of education and science and cope up with the changes.

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