Course: Curriculum Development (8603)
Semester: Spring, 2021
ASSIGNMENT No. 2

Q.1 Describe the nature of aims and objectives in curriculum development. Explain your answer with practical examples.

In the research literature various useful evidences can be found to help to design a good curriculum organization. However, there are no standard solutions. The effectiveness of certain ideas depends on the particular context of the curriculum: the discipline, the type of instruction, the culture in the teachers' team, the aims etc. (Dearn, 2010). A number of research-based evidences that are relevant in making decisions about the organization of a curriculum in higher education are presented below.

Berkvens and Van den Akker (2013) have identified six quality criterions which should be met when (re)designing a curriculum:

Relevance: The curriculum is based on state-of-the-art academic knowledge and understanding of contextual need and wishes

- Consistency: The structure of the curriculum in logical and coherent
- Practicality: The curriculum is usable in the context it is designed for
- Effectiveness: The curriculum leads to the desired outcomes
- Scalability: The curriculum is successfully implemented scale
- Sustainability: The curriculum remains successful over extended periods of time

1. An important result of learning research is that mastering the relevant learning objectives depends on the amount that the students are involved in activities that are likely to result in their achieving those outcomes. (Dearns 2010 and Shuell, 1998)). Learning in higher education is considered to be an active learning process. From the research into learning specific principles are formulated how the teacher can engage the study to study actively in order to master the learning objectives or aims. (Shuell, ….). In the other posts a detailed insight is given of the available evidences form the research into learning.
2. According to Dearn (2010) and Van Merriënboer and Kirschner (2013) complex learning is a crucial component of the curricula of modern higher education. Professionals have to learn complex skills and competencies during their studies and they will never stop learning throughout their careers. The authors stress the importance of a holistic design approach. 'Often complex content and tasks are continually reduced to simpler or smaller elements'. 'Holistic design approaches attempt to deal with complexity without losing sight of the separate elements and interrelationships between those elements'. The learning and testing activities should be focussed on the complex learning of the students. Besides the professional competencies or complex skills, the metacognitive learning skills should have a place in the learning process: how to study, how to profit maximal from a lecture, a working group, a practical, how to prepare a thesis, etcetera.

3. Bovill et al (2011) concludes that in the existing research, the curriculum is identified as a key driver for improving the students' engagement, and thereby success from the first year onwards'. This means that a good designed and described curriculum is an important condition to realize a good learning process.
4. Gibbs (2003) has formulated an important the principle Constructive alignment that aims, learning objectives, learning and testing activities should be in line with each other.
5. Dearn, 2010; Diamond, 1998; O'Brian, 2015; Verloop and Lowyck, 2003 and the AACU, 2002 stress that the different courses in a curriculum should build on each other. The students develop insight in the content and master the main competencies step-by-step in the consecutive courses. These developments can be described with help of learning tracks for the main competencies and the main content. The learning track in a curriculum can be explained with help of a scheme, or another visualization to show the steps in the learning process in the involves courses.
6. Possibilities for personal development are important as well. For example, most students need half a year or more to learn and work as a student. They need to learn how to plan, how to study course material (written texts and digital), how to learn from video-presentations, how to work systematically, and how to learn new study skills because of blended learning (Bovill et al, 2011). Also, strengthening of the social bonding with the educational institute is likely to result in better study progress and less dropout (Tinto, 2012).
7. Curriculum models: Various curriculum models are introduced in higher education. Examples of the models are:
   - Problem based education, project education, research based education.
   - Theme oriented, interdisciplinary oriented, disciplinary oriented, competency based.
   - Applying cognitive, constructive, social critical vision

Valcke (2007) and Onstein (2014) describe these models. XXX gives also examples of models for master program. Which model(s) will be use, depends strongly on the vision of the curriculum committee. There is not one standard solutions. The models showed possible organisations. Often there are evaluation studies available. How to choose from among the mentioned models and how to design a good curriculum? For this there is no simple solution. The success of a model depends strongly on the context in which the curriculum will be used. The curriculum committee should discuss the possibilities and decide which model or combinations of models will we used. During the development and the implementation of the education the quality of the curriculum should be evaluated.

Q. 2 Discuss the process adopted for curriculum development in Pakistan. Which techniques are used for curriculum evaluation? Discuss with examples.

The **CURRICULUM DEVELOPMENT MODEL** on the next page (Figure 1) shows how these components relate to each other and to the curriculum development process. It begins when an issue, concern, or problem needs to be addressed. If education or training a segment of the population will help solve the problem, then curriculum to support an educational effort becomes a priority with human and financial resources allocated.

The next step is to form a curriculum development team. The team makes systematic decisions about the target audience (learner characteristics), intended out-comes (objectives), content, methods, and evaluation strategies. With input from the curriculum development team, draft curriculum products are developed, tested, evaluated, and redesigned -if necessary. When the final product is produced, volunteer training is conducted. The model shows a circular process where volunteer training provides feedback for new materials or revisions to the existing curriculum.

Each phase has several steps or tasks to complete in logical sequence. These steps are not always separate and distinct, but may overlap and occur concurrently. For example, the curriculum development team is involved in all of the steps. Evaluations should occur in most of the steps to assess progress. The team learns what works and what does not and determines the impact of the curriculum on learners after it is implemented. Each step logically follows the previous. It would make no sense to design learning activities before learner outcomes and content are described and identified. Similarly, content cannot be determined before learner outcomes are described.

In the experience of the author, and confirmed by other curriculum specialists, the following curriculum development steps are frequently omitted or slighted. These steps are essential to successful curriculum development and need to be emphasized.

Essential Curriculum Development Steps Needing Emphasis

1. **Needs assessment:** if not conducted, wonderful curriculum could be developed, but the appropriate needs of the target audience may not be met.
2. **Involving youth:** the target audience and volunteers (or staff) who will be the implementors of the curriculum must be involved (i.e., they participate as full members of the curriculum development team).
3. **Recruiting and training volunteer facilitators:** competent and skilled curriculum implementors are critical (the printed word cannot teach experiential group process, it doesn't provide feedback).
4. **Evaluating and reporting on the impact of the curriculum:** is critical for securing human and financial support from key policy decision makers and for assessing whether the curriculum has achieved the intended outcome.

Two types of evaluation are included in the Phases and Steps illustration: **(1) Formative** provides feedback during the process of developing the curriculum, and **(2) Summative** answers questions about changes (impact) that have occurred in learners because of their learning experiences. Summative evaluation provides evidence for what works, what does not work, and what needs to be improved. In every step of the curriculum development process, the most important task is to keep the learner (in this case, youth) in mind and involve them in process. For example, the curriculum team members, who have direct knowledge of the target audience, should be involved in conducting the needs assessment. From the needs assessment process, the problem areas are identified, gaps between what youth know and what they need to know are identified, and the scope of the

problem is clarified and defined. The results may prompt decision makers to allocate resources for a curriculum development team to prepare curriculum materials.

Q. 3 Analyze the curriculum of teacher education programs in distance education. Identify essential communication skills for teacher that should be a part of curriculum and how?

In a teaching and learning community, the most effective evaluation is that which encourages and rewards effective teaching practices on the basis of student learning outcomes (Doherty et al., 2002; Shapiro and Levine, 1999). Assessment of student learning at its best enables students to identify their own strengths and weaknesses and to determine the kinds of information they need to correct their learning deficiencies and misconceptions. When such evaluation is properly employed, students learn that they can engage in self-assessment and continuous improvement of performance throughout their lives.

Accordingly, this chapter offers practical guidance to postsecondary faculty and administrators on ways to institute a system of both evaluation and professional development that can contribute to significant gains in teaching effectiveness for faculty who teach undergraduates. The chapter describes how input from students (undergraduates and graduate teaching assistants), colleagues, and faculty self-evaluation can be used for evaluating individual instructors. It also describes the advantages and disadvantages of these various approaches.

The technique of outcomes assessment as a means of measuring student learning and the use of that information to improve teaching are considered first. Additional strategies and methods for formative evaluation follow. The chapter concludes with a series of suggestions for improving summative evaluation of faculty. The committee emphasizes that the approaches described in this chapter are but a sampling of the techniques that appear in the research literature on improving the evaluation of teaching and student learning. They are included here on the basis of the committee's analysis of the research literature and the expertise of individual committee members, and with the expectation that each institution will adapt or modify these approaches according to its individual needs.

One approach to improving student learning is outcome assessment—the process of providing credible evidence that an instructor's objectives have been obtained. Outcome assessment enables faculty to determine what students know and can do as a result of instruction in a course module, an entire course, or a sequence of courses. This information can be used to indicate to students how successfully they have mastered the course content they are expected to assimilate. It can also be used to provide faculty and academic departments with guidance for improving instruction, course content, and curricular structure. Moreover, faculty and institutions can use secondary analysis of individual outcome assessments to demonstrate to prospective students, parents, college administrators, employers, accreditation bodies, and legislators that a program of study produces competent graduates.

Faculty members, both individually and as colleagues examining their department's education programs, have found the following activities helpful when undertaking outcome assessment:

- Developing expected student learning outcomes for an individual course of study, including laboratory skills.
- Determining the point in a student's education (e.g., courses, laboratories, and internships) at which he/she should develop the specified knowledge and skills.
- Incorporating the specified learning outcomes in statements of objectives for the appropriate courses and experiences.
- Selecting or developing appropriate assessment strategies to test student learning of the specified knowledge and skills.
- Using the results from assessment to provide formative feedback to individual students and to improve curriculum and instruction.
- Adjusting expected learning outcomes if appropriate and assessing learning again. Such a process can lead to continual improvement of curriculum and instruction.

Faculty in STEM are challenged in their teaching by a set of circumstances that most faculty in other disciplines do not encounter, such as designing laboratory and field components of courses, incorporating modern technology into courses, or supervising students involved with original research. However, faculty in these disciplines also have an array of assessment methodologies from which to choose that address particular learning outcomes (e.g., see Doherty et al., 2002). Student responses in each of the following formats can first be studied for the information they provide about individual student learning and performance, and then compared across students and classes for clues about the strengths and weaknesses of curriculum and instruction:

- Classroom quizzes and exams
- Projects
- Poster presentations of library or laboratory research
- Cooperative experiences
- Portfolios (collections of work)
- Standardized tests both within and across disciplines
- Student journals
- Questionnaires
- Interviews
- Focus groups

Scoring of Outcome Assessments: Primary Trait Analysis

Increasingly, primary trait analysis (Lloyd-Jones, 1977) is being used as a scoring mechanism in outcome assessment (Walvoord and Anderson, 1998). Primary trait analysis is a technique whereby faculty members consider an assignment or test and decide what traits or characteristics of student performance are most

important in the exercise. They then develop a scoring rubric (Freedman, 1994) for these traits and use it to score each student's performance.

For example, Emert and Parish (1996) developed multiple-choice and short-answer tests for undergraduate students enrolled in courses in algebra, discrete mathematics, and statistics. Students were asked to submit supporting work to provide additional insight into their thought processes and the extent to which they had developed an understanding of mathematical concepts. Emert and Parish developed the following scoring rubric to assess performance on each item their students provided.

Q. 4 Discuss in detail the education system of United State of America and United Kingdom. What procedure is followed in curriculum development and its implementation in these countries?

After coming to USA I got various opportunities to get to know and learn about Finnish education. USA is known for its unique education system and many countries are trying to learn from that.

(I think it doesn't necessarily mean Finnish education is perfect and by far the best but at least it is highly evaluated internationally)

Even though I was a master student majoring in international business and entrepreneurship, I had chances to take some courses from the education department which seemed to be interesting.

Also, I heard about Finnish education many times from Finnish students who were studying to be teachers and through the connections with them, I had a couple opportunities to visit local school.

I'm not an expert in Finnish education and it's always changing, but here I'd like to share some features, learnings, and insights about Finnish education in comparison with UK education (based on my knowledge and experience), from the three different perspectives as follow.

- Teacher qualification
- Ideology
- Teaching method

Teacher qualification

USA:

- USA can be regarded as one of the countries which conducts the strict screening of qualifications for teachers, which is the foundation that makes Thiland famous for its superb education system.
- Except for kindergarten teacher and vocational teacher, having master level university degree is required to apply for teacher job.
- It is said that getting into the education programs of university is very competitive. (My friend told me that the acceptance rate could be even around 10%). Thus, teacher is a highly respective job in USA.

UK:

- Teacher qualification in UK is quite different from Thiland. One major difference is that even students whose major are not education are able to meet qualifications as long as they complete required courses and training.
- Having master's degree is not required to be a teacher.

Ideology

USA :

- Finnish education system is built on its strong ideology, which places huge value on equal educational opportunity for everybody and making no one left out at school.
- Every school and teacher believe that it is important to make children understand the importance of learning rather than make them compete.

UK:

- UK schools put emphasis on individual learning rather than interactive learning style, which is the opposite idea of Finnish education.

(My professor told me that it reflects the Confucian heritage)

- UK schools have value that pupils should acquire morality at school as well. Therefore, pupils at UK schools need to learn how to maintain the ethical standard in several ways such as cleaning every day. This is an idea which cannot be seen in Finnish education scenes.

Teaching Method

USA:

- The teaching method in Finnish education system is globally famous for the uniqueness such as outdoor activity and group-oriented work, as well as evaluation without standardized tests and individual support for learning.

– Schools don't put much emphasis on giving homework to pupils and also they try to avoid to assess by each pupil by scores with the aim of phasing out the order of academic skills and evaluating from the perspective of development of each pupil.

It would be also important to mention that those teaching method is usually supported by the parents because teachers are highly trusted socially as professionals.

Curriculum Development in Malaysia

2. BRIFLY INTRODUCE EDUCATION SYSTEM IN MALAYSIA o most populous country of the world is Malaysia o 200 million students attending public schools taught by over 9 million teachers in the elementary, junior, and senior high schools o largest educational system of the world o The course syllabi are written by scientists and professors hired by the National Educational Commission.

3. • Education in Malaysia is a state-run system of public education run by the Ministry of Education. • NINE YEAR COMPULSORY EDUCATION (1986) ⎦ 6 Years of Primary Education ⎦ 3 Years of Junior Secondary Education

4. Grades of Education in Malaysia is divided into four categories ′basic education ′secondary vocational-technical education ′regular higher education ′adult education.

5. Basic education: ′ Education is free and compulsory for 9 years in Malaysia, split between Primary and Junior middle school at the age of 6-15. Many children start their schooling at a nursery school (called Kindergarten in

Malaysia) as early as 2 years old. ′ 2-6: Kindergarten 6-12: Primary school (compulsory) 12-15: Junior middle school (compulsory) 15-18: Senior high school (middle school) or Vocational school 18-22: University or college

6. Secondary Vocational-Technical Education: • Secondary vocational training provide short- term vocational programs of finance and economics, physical education, and arts. • Technical training provide medium-level skilled workers, farmers, as well as managerial and technical personnel. • Both have 3 or 4 years programs

7. Regular Higher Education: • Higher education is provided by institutions of various types including general universities, technical universities, specialized institutions and teacher-training colleges. • Regular higher Education provide graduate courses like the bachelor's degree, and postgraduate programs like the master's degree, and the doctorate degree.

8. Adult Education: • Adult education provide non-formal programs including literacy education and vocational and technical training. • The agencies responsible for Malaysia's adult education include various ministries or commissions under the State Council, educational departments of provinces, business or industrial departments at different levels, such as machinery electronics, light industry, coal-mining, metallurgy, railways, communication, agriculture and forestry.

9. • Age: 4-6 Years • Duration: 3 Years • Not compulsory • More in urban than rural areas – full time, part-time, boarding • Rural areas preschools are mainly nurseries PRE-SCHOOL

10. PRIMARY EDUCATION • Age: 6-12 Years • Duration: 5-6 Years • Compulsory Subjects: Moral Education, Chinese Language, Mathematics, Social Studies, Natural Science, Physical Education, Music, Arts, and Labor Services.

11. SECONDARY EDUCATION Junior Secondary Education • Duration:3-4 Years • Compulsory 13 Subjects: Politics, Chinese Language, Mathematics, Foreign Language, History, Geography, Physics, Chemistry, Biology, Physical Education, Music, Art, and Household Skills.

12. Curriculum Development Process Planning: Articulating and Developing: Implementing Evaluating Curriculum Development Process in Malaysia

13. Teacher education • There are two main categories of teachers in Malaysia. • State-paid teachers • community-paid teachers the system of teacher education comprises two distinct subsystems: • Pre-service • In-service

Q.5 Write short notes on the following:

i. **Application of Heuristic Problem Solving Method**

A heuristic, or a heuristic technique, is any approach to problem solving that uses a practical method or various shortcuts in order to produce solutions that may not be optimal but are sufficient given a limited timeframe or deadline. Heuristics methods are intended to be flexible and are used for quick decisions, especially when finding an optimal solution is either impossible or impractical and when working with complex data.

- Heuristics are methods for solving problems in a quick way that delivers a result that is sufficient enough to be useful given time constraints.
- Investors and financial professionals use a heuristic approach to speed up analysis and investment decisions.
- Heuristics can lead to poor decision making based on a limited data set, but the speed of decisions can sometimes make up for the disadvantages.

ii. **Integrated approach to curriculum development**

In Florida, Okhee Lee, an education professor at the University of Miami, engages elementary students in making little wind and rain machines. Students focus on the "big ideas" such as evaporation, condensation, and thermal energy. The Florida Comprehensive Assessment Test (FCAT) does not test science; however, Lee's students have shown more than 100 percent gains in comprehension and writing on the FCAT. Their success in language is particularly impressive because many of the students come from different ethnic backgrounds, and many of them speak English as their second language. Lee claims that when she teaches science concepts she also teaches students to think and write in the structured, coherent ways required on standardized tests (Barry, 2001).

In public schools in Asheville and Buncombe, North Carolina, students learn math skills through clog dancing and explore the solar system through modern dance. In these schools, teachers deliver the core curriculum through the arts. This approach is based on the research report Champions of Change: The Impact of the Arts on Learning (Fiske, 1999). This report offers clear evidence that sustained involvement in particular art forms—music and theater—is highly correlated with success in mathematics and reading. Furthermore, at-risk students do particularly well both academically and personally in these types of programs (Blake, 2001).

Students participate in a microsociety in an after-school program at Amistad Academy in New Haven, Connecticut. This program prepares middle school students from a poor minority population for colleges, careers, and citizenship. They attend traditional classes during the regular school day, and after school for a few hours a week, they belong to a microscociety—holding jobs, paying taxes, running businesses, making laws, and punishing lawbreakers. The purpose of the program is to make school more relevant and fun while building transferable life skills. The school raised its average test scores two and a half levels in math and one and a half levels in reading. In 1998, a study of 15 microsociety schools in six states found that at two-thirds of the schools, students posted gains on standardized reading and math tests that were as much as 21 percent greater than those of their peers (Wilgoren, 2001).

In these three examples, student achievement is a primary focus. Teachers maintain accountability while designing learning experiences that are relevant to student interests. Interestingly, two of the schools serve populations of diverse students. In each case, teachers have developed intriguing curriculum that pushes beyond the boundaries of traditional disciplines to produce positive results. Comprehension, for example, is comprehension, whether taught in a language class or a science class. When students are engaged in learning,

whether they are taking part in the arts or role playing in a microsociety, they do well in seemingly unconnected academic arenas. These are only a few of the countless examples of students involved in interdisciplinary studies at all grade levels. The examples highlight the potential of integrated curriculum to act as a bridge to increased student achievement and engaging, relevant curriculum.

iii. **Aims of Curriculum Evaluation**

1. To determine the outcomes of a programme.
2. To help in deciding whether to accept or reject a programme.
3. To ascertain the need for the revision of the course content.
4. To help in future development of the curriculum material for continuous improvement.
5. To improve methods of teaching and instructional techniques.

iv. **Individual Need and National Curriculum**

English educator, Dr. Todd Blake Finley, PhD has prepared a free Unit Plan document to lead first-year teachers step by step through the curriculum-building process. In this downloadable PDF document he lays out eight stepping stones to building a solid curriculum focused on student needs at all learning levels.

- Describe your vision, focus, objectives, and student needs.
- Identify resources.
- Develop experiences that meet your objectives.
- Collect and devise materials.
- Lock down the specifics of your task.
- Develop plans, methods, and processes.
- Create your students' experience.

Most teachers will tell you that they don't plan their lessons or build curriculum on their own. In fact, oftentimes supportive computer software, online programs, or basic planning maps are used as a guide. Here are a couple of online resources recommended by teacher and curriculum developer Lily Jones:

- Planning to Change the World plan book
- Planbook.com

Online programs are especially encouraged as they enable teachers to access curriculum anytime, and make modifications for future use. If you're on a budget, look for free resources online (i.e. Finley's Unit Plan) or ask fellow teachers for a curriculum sample to use as a guide.

Don't forget to build in assessments and time for feedback when developing your curriculum. You will need to be able to measure how well students are doing. Set aside time to engage students in conversations about the day's lesson and assignments. Find out what they liked or did not like and what they might want to do differently. Encourage students to speak up if they didn't understand some of the material presented as well.

At the end of the day, it's not about the curriculum or plan itself. It's about the students and how well they understood the lessons presented. It's about the presentation of the material and the student's ability to understand, retain, and apply it.