

## **Learner-Centric and Outcome - Based Curriculum Development: Principles and Practices**

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### **1. ABSTRACT**

There is no single formula for developing a curriculum. Curricula are dynamic entities which are changing constantly. ‘Outcome-Based Education’ (OBE) is a student-centred, results-oriented plan based on the belief that all individual can learn. University and college programmes can be directed by standards that are articulated as learning outcomes. Achieving the learning outcomes means that the learner will be able to ‘show what they know’ at the end of the course. All curricula developed by institutions, however different they might be, must lead to achievement of these programme-level learning outcomes.

The pedagogy project of The National Mission Project on Education through ICT sponsored by MHRD, Govt. of India, which is coordinated by IIT, Kharagpur is referred in this paper as an example of one major attempt in India towards learner-centric curricula design. The author of the paper, as the Principal Developer of ‘English for Communication’ course of the MHRD project, will explore in this paper, the principles involved in designing and developing such learner-centric and outcome-based courses. The implications of these concepts to the course planners and teachers are also discussed.

Key words: Learner-Centric; Outcome – Based; Curriculum development

### **2. INTRODUCTION**

#### **2.1. Learner-centred Curriculum**

Globally there has been a shift from the traditional ‘teacher-centered’ approach to a ‘student-centered approach.’ This shift focuses on what the students are expected to be able to do at the end of the module or programme. Hence, this approach is generally called outcome-based approach. (*Kennedy, D. 2007*; quoted by *Bustos-Orosa 2012* ).

Learner-centered curriculum proposes to create highly developed individuals, providing them the skills to continue creating learning experiences, digest current knowledge, and create new knowledge within the curriculum itself (*Emes & Martha 2003*). A learner-centred curriculum must be open and easily understood by the learner and should serve as a good support to learning.

The term ‘learner’ refers to the role played by a group of students in a programme as a collective group. The term also refers to each individual's unique attributes when they play the role of learner. A learner-centered curriculum addresses both definitions of learner. The term ‘centered’ refers to the idea that the learner will be a continuous point of reference throughout the programme. A learner-centered curriculum implies that it facilitates learning to enable the learner to make curricular-decisions, both programme and course relevant decisions. Learners must play an active participatory, knowledgeable role in the teaching/learning process. The participation includes knowledge development in the area of learning and a thorough understanding of the objectives of the curriculum.

In a learner-centered curriculum students will be given opportunities for making informed curricular decisions. The teacher must adjust his role to accommodate the new role of the learner.

The definition of such a curriculum must include a host of learning experiences that will allow students to participate more fully in dealing with their own learning experiences. (Emes & Martha)

## 2.2. Learner-centred learning environment

Bransford, Brown, and Cocking (2000); Cullen et al (2012) are of the view that a learner-centered learning environment must have four features. It must be "student-centered, knowledge-centered, assessment-centered and community-centered." The efforts to transform educational environments into learner-centeredness are to a great extent an attempt to motivate students to be intentional learners. This needs a change in their attitude about learning in order to develop a new mind-set.

## 2.3 Outcomes and Outcome-Based Education

There are concerns that the education system cannot adequately prepare students for life and work in the 21st century. These concerns have prompted scholars across the world to explore new ways of designing education (Denver 1995). One such principle is outcome-based education or learning. 'An outcome' is nothing but the culminating demonstration of the learning. Outcomes are not content, they're performances and they occur at the end. From an OBE perspective, it's not a matter of what students had, or what courses they have taken. It's a matter of what they can do when they exit the system. (Spady; quoted by Brandt 1992)."

Outcome-based education is a student-centered approach to education that focuses on the intended learning outcomes resulting from teaching. The components of an outcome-based approach to learning are:

- Making a clear statement of learning, expressed as outcomes, which reflects educational aims, purposes and values of a programme.
- the strategy to enable the intended learning to be achieved and demonstrated (curriculum, teaching, learning, assessment and support and guidance methods)
- criteria for assessing learning which are associated with the intended outcome. (Jackson, 2002, quoted by Nicholson, Karen 2011)

Spady's "OBE Paradigm" (1994) is based on three premises and four principles. The premises are:

- learners have the ability to learn and succeed but not on the same day and not in the same way
- successful learning promotes more and more successful learning
- the conditions that directly affect successful learning is controlled by schools

The four "power principles" are:

- a clear focus aiming significant outcomes
- providing an expanded opportunity and support to learners to enable them achieve learning success
- scope to all learners to have high expectations to succeed
- design down from your ultimate, culminating outcomes.

## **2. 4. Innovative pedagogical principles**

Innovation can be introduced in any phase of the teaching/learning process. Any innovative practice which is adopted in a teacher-centred approach will lead to difficulty in the teaching/learning process. Innovative teaching/learning processes most often is characterized by group exercises, teamwork or individual study. The emphasis here is on learning rather than teaching (Körös-Mikis 2009).

## **2.5. Modern Approach to Curriculum Design**

The modern approach to curriculum design advocates the following principles:

- The course objectives must promote higher order thinking skills such as Analysis, Synthesis, Evaluation and Creativity ☐
- Course objectives must be expressed as knowledge, skills and attitudes, using measurable action verbs, which the students should be able to demonstrate on successful completion of the course. ☐
- Make the curriculum available to everyone concerned well in advance with the help of the ICT tools.

## **3. THE NATIONAL MISSION PROJECT ON EDUCATION THROUGH ICT, INDIA**

IIT, Kharagpur is coordinating the National Mission Project on Education through ICT, which is sponsored by MHRD, Govt. of India. This project is an experiment to systematically design and develop learner-centric curricula, suitable for outcome-based learning using innovative pedagogical principles, for 4 year degree programmes in six major engineering disciplines.

The project believes that the concept of outcome based teaching is comparatively new and there is very little expertise available in the country in this area. The new curriculum document, it is expected, will reflect a major shift from the currently prevalent teaching learning methodologies. It is a shift from the traditional teacher-centric approach to largely student-centric approach. It also combines the strength of face-to-face teaching with the power of technology enhanced learning. The curriculum places emphasis on blended learning, attempting to introduce concepts such as problem based learning and collaborative group learning. The document combines the best practices in pedagogy with appropriate e-learning tools to take care of the individual differences amongst learners of various classes and intellectual calibers.

### **3.1. Challenges addressed**

The project document tries to address the following challenges:

1. Can we develop curriculum documents for different engineering degree programmes which specify, in clear unambiguous terms, what knowledge skills and attitudes the students must possess to qualify as graduate engineers in the 21st century?
2. Can we make education learner-centric, so that individual differences amongst learners are taken care of?
3. Can we ensure that our students become efficient and effective lifelong learners?

### **3.2. Approach to Solutions**

The project intends to address these problems through the following measures:

- Sensitize a large number of faculty members to the problems and encourage them to find

pragmatic solutions by participating in this national project.

- Conduct motivation and training workshops in modern pedagogic principles for the interested faculty members
- Systematically design and develop learner-centric curriculum, suitable for outcome-based learning, for a representative range of 4 year degree programmes in major engineering disciplines, with the help of a large number of motivated, trained and experienced faculty members drawn from a diverse range of institutions across the nation.
- Develop and use appropriate ICT tools to train faculty members, to design, develop, monitor and review curricula, to manage the project and to eventually conduct field trials through wider participation of students, teachers and industry professionals.
- Write curricula not as a list of vaguely defined topics but in terms of measurable Specific Instructional Objectives.

### 3.3. Course Structure

Each course of the project is being structured using the following criteria:

- Every course is divided into suitable number of modules and each module into suitable number of units.
- Specific Instructional Objectives are written at Course level, Module level and at Unit level.
- References to appropriate learning material for all instructional objectives (texts, websites, journals, videos etc.) are included as a part of learning strategy suggestions.
- Adequate number of practice problems, assignments etc. matching every instructional objective, to allow students test their learning success are also included.
- Peer-to-peer interaction, peer-to-mentor interaction, encourage collaborative group learning, self-paced learning, life-long learning, development of literature search skills, communication skills, problem solving skills, development of concern for societal issues through appropriate choice of instructional objectives, by suggesting appropriate learning strategies, and through provision of appropriate ICT tools during the operational phase are facilitated.
- The document (Developed Courses) are made available to all concerned.
- The courses being developed are not meant to be prescriptive for anyone but, it is believed, they could act as guidelines for others who wish to develop their own curricula.

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## 4. THE IMPLICATIONS FOR COURSE PLANNERS AND TEACHERS

The course planners while planning must take into concentration all the issues referred here especially outcome-based learning. The teacher's role in transacting these types of courses becomes critical. They can try to follow these strategies to achieve the course objectives:

- The teacher provides students with opportunities to learn independently and from one another and teaches them in the skills they need to do so effectively (Collins & O'Brien; Quoted by Froyd & Simpson 2010)
- The approach includes techniques which substitute lectures with active learning experiences.
- Open-ended problems and problems which enable critical or creative thinking that cannot be solved by merely following text examples must be assigned to the students.

- Involving students in simulations and role plays, using self-paced/cooperative learning.
- The approach must be construed that it can lead to increased motivation to learn, greater retention of knowledge, deeper understanding and more positive attitudes towards the subjects being taught.
- Students should influence the content, activities, materials, and pace of learning. This learning model places the learner in the center of the learning process.

## 5. CONCLUDING REMARKS

The concepts like learner-centered curricula, outcome-based learning are the order of the day. For the success of these innovations, the teachers must contribute a lot. Creativity, on the part of the teacher, is most important to be successful in this method of teaching. After all creatively productive people use a number of methods and they discover and invent possible answers. Moreover teachers should know what the expectations are for good teaching and what they can do to improve their practice. They must also willingly come forward to implement any new pedagogical principles in their teaching to achieve the intended learning objectives.

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### **Biographical Sketch**

Dr. G. Venkatraman is currently a faculty of English at the SASTRA University, Tamil Nadu and has got 30 years experience in English language teaching at various levels. His Ph.D. was on ‘Developing a set of competencies for teachers of English in Engineering Colleges.’ His areas of interest include: English Language Teaching, Teacher Competency Development, Soft Skills Training, and Materials Production. He has edited five course books in English and has been serving as the member of editorial board of SASTRA University’s quarterly newsletter for more than 10 years. Currently he is developing a course on “English for Communication,” as the Principal Developer, which is part of National Mission Project on Education through ICT, Govt. of India. He has got six publications and a number of conference papers to his credit.