

Outcome Based Education (OBE) - Trend Review

Soumi Das¹ Preetha Banerjee²

^{1,2}Lecturer

^{1,2}Department of Science & Humanities

^{1,2}Technique Polytechnic Institute, West Bengal, India

Abstract— The reform in the ever changing technological world that stresses on professionalism had brought the necessity to adopt outcome based education (OBE) in technical education. It is an approach of education that clearly identifies its intended final product – students’ competencies by determining the final curriculum outcome - planning the framework of the curriculum. The unambiguous outcome is used to plan the curriculum, monitor its implementation, evaluate it and assess achievement. The present paper is review of the origin, advantages, disadvantages, pitfalls and guidelines in implementation of outcome-based education in different educational programs in India. It is an attempt to provide a comprehensive coverage of a very popular current trend in technical education.

Keywords: Outcome-Based Education, Curriculum Planning

I. INTRODUCTION

With contrary to the fact that most teachers put the centre of their attention too much on what they teach rather than on what their students learn, OBE emphasizes on what is expected from the student to finally achieve when they complete their course rather than how they achieved it.

Outcome-Based Education (OBE) is a student-centric teaching and learning methodology in which the course delivery, assessment are planned to achieve stated objectives and outcomes. For a country like India, the transition from traditional teaching to outcome based education can be achieved by following the mandates by quality assurance and monitoring committees like National Board of Accreditation (NBA), India and National Assessment and Accreditation Council (NAAC). It focuses on measuring student performance i.e. outcomes at different levels. It highlights the fact that you have to know the final destination of your journey before you start voyaging.

II. ORIGIN OF THE OUTCOME BASED EDUCATION (OBE)

Outcome-based education (OBE) is an educational theory that bases each part of an educational system around goals (outcomes). By the end of the educational experience, each student should have achieved the goal. There is no single specified style of teaching or assessment in OBE; instead, classes, opportunities, and assessments should all help students achieve the specified outcomes. The role of the faculty adapts into instructor, trainer, facilitator or mentor based on the outcomes targeted.

OBE has been adopted for more than a century when educators brought to light the importance of appreciating students’ individual variation in the learning process, believing that education is best measured by encouraging individual students’ achievement that could occur at different rates for different students. OBE allows the students of different abilities to learn at their own rates with an emphasis

on programmatic outcome in professional technical knowledge, skills and attitudes.

III. NATURE OF THE OUTCOME BASED EDUCATION (OBE)

Outcome-based education approaches the curriculum decision making based on the competencies students should demonstrate at the end of their educational program, thus the outcomes or competencies dictate the curriculum content and organization, the teaching methods and strategies, the course offered, the educational environment and the assessment strategies. All curriculum and teaching decisions are made based on how best to facilitate the desired final outcome.

Different institutions have a different way of going about the OBE process and are at different stage of implementation in India. India has become the permanent signatory member of the Washington Accord on 13 June 2014. India has started implementing OBE in higher technical education like diploma and undergraduate programs. The National Board of Accreditation, a body for promoting international quality standards for technical education in India has started accrediting only the programs running with OBE from 2013..A few parameters to measure Outcome-Based Education are

- Graduate Attributes (GA)
- Program Educational Objectives (PEO)
- Program Outcomes (PO) / Program Specific Outcomes (PSO)
- Course Outcome (CO)

A. Graduate Attributes (GA)

As per the Washington Accord, “The graduate attributes are exemplars of the attributes expected of a graduate from an accredited programme.” The Graduate Attributes are defined by the National Board of accreditation (NBA).

B. Program Educational Objectives (PEO)

PEOs are broad statements that describe the career and professional achievements that the program is preparing the graduates to achieve within the first few years after graduation. PEOs should be consistent with the mission of the Institution. PEO’s can be measure by a PO-PEO matrix. The PEO’s should evolve through constant feedback from alumni, students, industry, management etc.

C. Program Outcomes (PO) / Program Specific Outcomes (PSO)

Program outcomes are narrower statements that describe what students are expected to be able to do by the time of graduation. POs are expected to be aligned closely with Graduate Attributes.

D. Course Outcomes (CO)

COs are major domain specific outcomes written using action verbs which are specific, measurable and can be demonstrated by students on completion of the course.

Steps for planning and implementing outcome based curriculum:

1) *Deciding on the Outcomes:*

The educational outcomes are clearly identified and unambiguously specified regarding the content, context and competence.

2) *Demonstrating Outcomes:*

The expected outcome should be defined by setting 'benchmarks' for each level of the program. Each benchmark is a skill that must be demonstrated by the student. Benchmarks should tackle and define specifically the goals of the curriculum and verify ways to assess whether students have reached these goals at that level of study.

3) *Deciding on Contents and Teaching Strategies*

OBE can be implemented as a 'Whole-class' models which aim to bring all learners in a classroom up to high levels of learning before proceeding further or by the 'Flexible' models which use flexible grouping, continuous progress, technological approaches and instructional management.

4) *Assessments in OBE:*

OBE is driven by assessments that focus on well-defined learning outcomes and not by other factors such as what is taught, the duration taken by the student to achieve the outcomes or which path the students take to achieve their targets. In OBE standard-referenced assessment could be used which is similar to criterion - referenced assessment but with clearer description of expected performance and since OBE requires ongoing feedback between the student and the lecturer, continuous assessments and student portfolios would be of a great help in assessing OBE.

IV. BELIEFS AND FEATURES OF OUTCOME-BASED EDUCATION (OBE)

Spady, W. D, in his book, "Outcomes Based Education: Critical Issues and Answers" highlighted the following seven Beliefs and Features of Outcome-based Education (OBE).

- 1) All students can learn and succeed, but not on the same day in the same way.
- 2) Success breeds success.
- 3) Schools control the conditions of success.
- 4) It emphasizes authentic, achievable and assessable learning outcomes.
- 5) It is primarily concerned with what students' culminating capabilities at graduation time. It centers curriculum and assessment design around higher order exit outcomes.
- 6) It is accountable to the stakeholders, the learners, the teachers, the employers and the public.
- 7) It leads to the change of schooling, including the curriculum, instruction and assessment.

V. ADVANTAGES

The adoption of OBE is perceived as a valuable addition to the educational process believing that with its clear specified outcomes it encourages participation and collaboration from multiple disciplines and interest groups in planning and implementing the curricula which will foster learning in various areas of the program.

Educators believe that OBE does not only guaranty the clarity and assures the absence of controversy in curricula

planning but also its relevance to the students' future practice. The clear, straightforward outcomes provided by OBE form a framework for decision - making and guidelines for assessment and program evaluation

VI. DISADVANTAGES

The shift to OBE has attracted lots of opposition. Opponents believed that, education should be an open ended and should not be constrained by outcomes and that education should be valued for its own sake, not because it leads to some outcome. They believe that defining education as a set of outcomes - decided in advance of teaching and learning - conflicts with the wonderful, unpredictable voyages of exploration that characterize learning through discovery and inquiry. The disadvantage of outcome-based approach is that certain things might be left out that might be equally important but more difficult to quantify, such as creativity, being able to apply knowledge in solving real life problems, common sense, adaptability, verbal communication skills, persuasiveness, resilience, happiness, determination, fairness, negotiation skills, and the ability to make good choices, etc.

It is mistakenly assumed that teaching will be inappropriately limited by this model. Moreover they are arguing and emphasizing on what they believe; that the inclusion and emphasis on attitudes and values in stated outcomes is inappropriate.

VII. PITFALLS IN IMPLEMENTATION

While implementing OBE we have to clear certain obstacle that we may face:

- The Unclear and ambiguous setting of certain outcomes either for the teacher, student or both hinder student achievement and teacher contribution in the curriculum.
- The teachers' unawareness of the curriculum's outcome will limit the collaboration and cooperation between the faculties to reach a common goal; creating a state of traditionalism and faculty resistance.
- The improper assessment tool that doesn't match the aimed outcome or that doesn't consider the variability in student's achievement.

VIII. GUIDELINE TO IMPLEMENT OBE

For a successful of OBE program collaborative effort from administrators, educators, parent, teachers and students should be sought to assure a successful planning and implementation and to guarantee commitment and decrease resistance.

The basic characteristics and principles for OBE implementation would include:

- A clear institutional endorsed mission statement that reflects commitment to success for all the students and provides the means for translating that commitment into action.
- Clearly defined 'exit outcomes' that issued to articulate the curriculum framework of the program and that convey what students must demonstrate before they graduate.

- Engagement of large, complex and geographically dispersed faculty staff in an extended period of highly collaborative, cross-disciplinary dialogue, innovative thinking and planning to assure ownership and full commitment of the faculties.
 - A system of instructional decision making and delivery that employs a variety of methods to assure successful demonstration of all outcomes and to provide more than one chance for students to be successful.
 - Multiple instructional and assessment strategies that meet the needs of each student by allowing adequate time and assistance for each student to reach the maximum potential.
 - A criterion-referenced system of assessment and an ongoing system of improvement programs that ensure staff accountability, effective leadership and staff collaboration with a data base of significant, visionary outcomes for all students, plus key indicators of institute effectiveness, that is used and updated regularly to improve conditions and practices affecting student and staff success.
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IX. CONCLUSION

The key benefit of this approach is that we can actually see what students have learned and adapt our pedagogical approach in response to this valuable feedback. The OBE accreditation process is one of assurance and building of trust and once this position has been established then all parties can work cooperatively to further the quality of engineering education for students and society.

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