Outcome-Based Education: A Conceptual Framework and Review of Empirical and Theoretical Literature

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Abstract

The implementation of Outcome Based Education (OBE) in the Universities of India is a marked departure from the teacher-centric traditional teaching style practiced prior to the implementation. Given the blanket implementation of the program in a higher level of educational institutes across all fields of academics, it has become necessary to gauge the ground-level implementation. This encompasses the changes in Teacher's role, their perspective, and teaching pedagogy in a classroom environment. Learners' participation in a classroom environment, lifetime learning capacity building as well as ability to achieve exit outcomes has been necessitated through the implementation of OBE.

Keywords: Outcome-based Education, awareness, Design-down approach, learner experience

Introduction

Outcome Based Education has its relevance rooted in contemporary global standards for Education. Outcome Based Education (OBE henceforth), as defined by Spady (Spady, 1994), states that "a clearly focused and organized educational system is what is essential for all students to be able to do successfully at the end of their learning experience."

The definition focuses on content design, alignment, delivery, and assessment and collects feedback based on the assessments to re-design learning modules, courses, and programs. Outcome-based Education requires a large-scale implementation so as to make its effectiveness visible. It is also pivotal to use state-of-the-art pedagogical tools and practices of teaching and learning in an academic institution. It re-enforces the knowledge cycle by closing the loop/gap between research and practice, called the "cycle of innovation of education and practice ."OBE finds its strength in the foundations of a backward-looking design process- with exit goals as the end result- for effective course designs. These course designs create content based on Bloom's Taxonomy (Ruth A. Streveler, 2012).

What are the outcomes?

M.H. Davis defines outcomes as "a culminating demonstration of learning; it is what the student should be able to do at the end of a course"(Davis, 2003). Outcome-based Education, since the Washington Accord, has become the global approach to Education. It has been designed and standardized to bring uniformity across universities and other higher educational institutes. The designing and standardization of the curriculum of various subjects are based on commonly agreed exit goals that the students should be able to

display at the end of the course. Harden and his colleagues explain this concept in simple terms as "product defines the process ."Its purpose is to guide result-oriented thinking among the course curriculum designers.
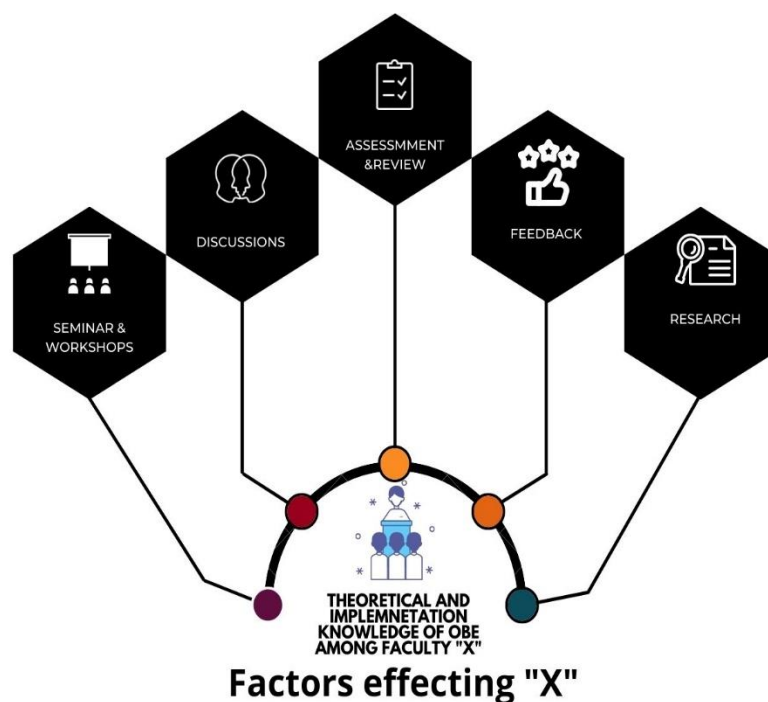

Figure1: *The various factors that contribute to the awareness and implementation of Knowledge Of OBE among faculty members*

This approach is contrary to input-based Education, which formed the basis of traditional Education was based on. Traditional or input-based teaching did not give much importance to outcomes. This created a vague conception of what students were supposed to learn. Thus, making it difficult to measure and assess the student's performance. This led to a schooling experience among students that were allowed to continue on irrespective of the results it produced. Spady warns us from having the wrong assumption regarding outcome-based Education. He insists that outcome-based education "does not mean curriculum-based education with outcomes sprinkled on top ."According to him, OBE is a pathway to a transformational way of doing business in education". This statement calls for an active transformation and engagement from the teaching faculty in teaching pedagogy and evaluation against the learning outcomes. This is in contrast to the traditional way of teaching, which was more teacher-centric. The traditional teaching methods did not provide for creating a rubric against which the assessment was supposed to be based.

Need for outcome-based Education

Just like any sector in the country, Education is also facing massive pressure from the public for changes. This is a response to rapid development in the various fields of economic activities, subjected to specific developments and demand for a more skilled workforce due to globalization. All this is happening against the backdrop of changing political perspectives, public expectations, demands from within the professional workplace, and developments in teaching and Education accumulated over the last three decades. Jessup (Jessup, 1991), in this regard, gives us his essential thesis in relation to outcome-based Education (OBE), i.e., "if Education or training is defined by outcomes, it opens access to learning and assessment in ways which are not possible in a traditional syllabus or program-based systems. Once learning and assessment in ways that are not possible in a traditional syllabus or program-based systems. Once learning is targeted on outcomes, the other features of the model follow as a natural consequence. Many of the problems we face in Education and training could be solved by this model" (Jessup, 1991). To add more strength to this

argument, we quote Rowntree (Rowntree, 1982) as he noted, "to set the students off in pursuit of an unnamed quarry may be merely wasteful, but punish him for failing to catch it is positively mischievous." The OBE model aims to change this by stating clear statements as end goals that are expected out of students to learn and achieve and command proficiency at the end of the course duration (Harden, 2007).

It was also noted by Spady (Spady, 1994) that the shift in trend was from where, WHEN, and HOW students learn. Rather than WHAT is learned and WHETHER it is learned well. Such models are crucial for the execution of professional courses such as the fields of medicine and engineering, which are in huge demand globally.

Conceptual Framework of the study

As mentioned above, Outcome-based Education (OBE) is set on four principles, as suggested by Spady (Spady, 1994). The four Basic principles are

Clarity of Focus

This refers to clarity in understanding and focuses on what they want the students to know, understand and be able to know. The teachers should be in a position to help students develop the Knowledge, skills, and attitudes in order to achieve the set exit goals.

Designing Down

This implies that the designing of the curriculum starts from clearly defined exit outcomes, which then goes on to define course outcomes. This further informs the learning outcomes for each specific subject. The instructional decisions are made to achieve these goals.

High Expectations

It is imperative for teachers to establish high and challenging standards of performance among students in order to motivate them to perform to their best ability. This is also to encourage the students to engage deeply with their learning. Enabling students to achieve high standards is closely linked with successful learning.

Expanded opportunities

This principle is based on the idea that not all children have the same learning capacity. And therefore, insists that teachers must provide them with expanded learning opportunities so as to ensure that students get enough opportunities to learn from them at the end of the course and execute the exit outcomes.

OBE Process

The OBE process involves creating a follow-up procedure as a further build-up to the OBE syllabus. It aims to create a learning environment that supports the learning activities and their corresponding objectives to achieve the desired outcomes at the end of the course. These outcomes must be in line with the exit outcomes that were prepared initially. Such a process was termed "Constructive Alignment" by John Biggs in 1999 (Biggs, What the student does: Teaching for quality learning at University, 1999) (Biggs, The reflective institution: Assuring and enhancing the quality of teaching and learning, 2001). It is constructive in the sense that the learner is in a position to construct meaningful learning outcomes. Alignment refers to how these learnings are aligned with learning outcomes, course outcomes, program outcomes, and,finally, exit outcomes.
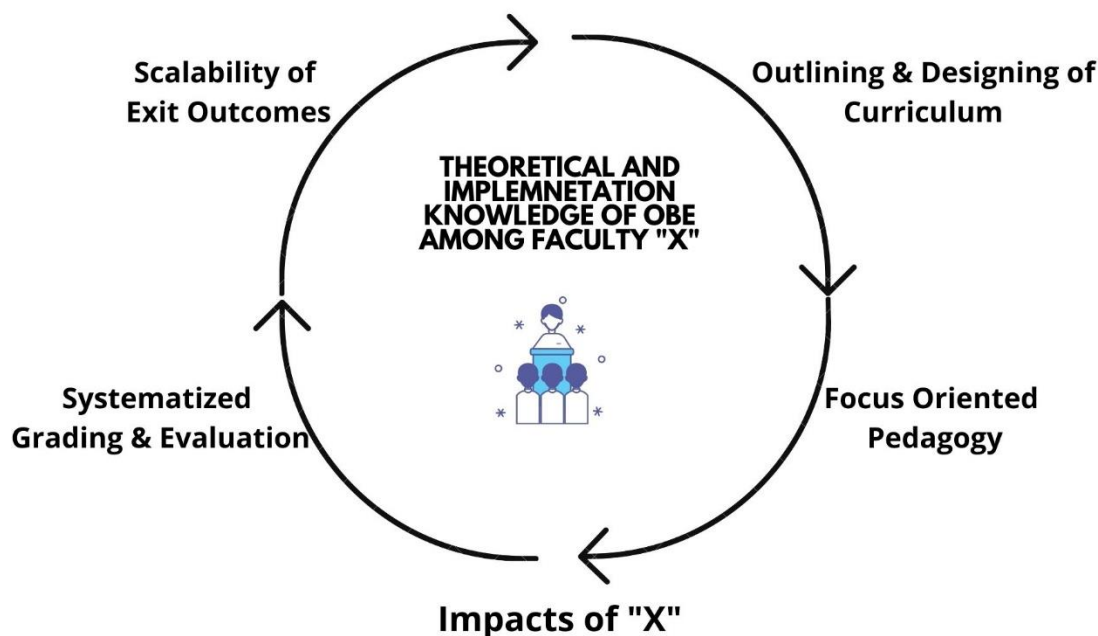
Figure 2: *Outcome-Based Education Implementation Cycle*

Propositions developed to be examined / Research Question.

The OBE principles and practices keep the Teachers and faculty members as the main force behind its implementation, even though it is a student centric approach to Education. Thus, it is essential to understand the level of awareness, Knowledge, teaching pedagogy and assessment techniques associated with it, among teachers and faculty members. *The paper proposes that faculty members' Knowledge and implementation of the OBE practices, keeping in mind its essence, is crucial to achieving the benefits of OBE, as propounded by it.*

The decentralization and widespread reforms in curriculum and instruction, seek active learning among students. This has affected the content and structure of the program for teacher learning (USAID, 2006). OBE implementation in the higher institutes of Education in the state of Tamil Nadu is one such widespread curriculum change. It can be safely assumed that implementation and degree of decentralization may vary across universities in the state of Tamil Nadu. But it should be ensured that the teaching pedagogy is aligned with the exit outcomes across all universities in the state. The way the teachers teach is of critical concern in any reform designed to improve quality and outreach (UNESCO, 2004), thus implying the fact that teachers are the key factor in ensuring education quality.

Higher education improvement is measured by basic indicators of effectiveness. Proxies for improvement can be identified in quality education (Leu, 2005). It has also been noted that criteria such as shared leadership, vision and goals, a conducive learning environment, high expectations, purposeful teaching, monitored progress, etc. have been listed to identify its effectiveness to bring about quality education (Leu, 2005).

On the other hand, Teacher effectiveness is expressed most commonly in terms of students' academic achievement and this element is more easily (and less expensively) measured than some other essential outcomes of good Education. The constructive approach generally involves a one-on-one approach and uses lots of resources and is time-consuming, which creates a challenge in many countries where there are resource-poor, overcrowded classrooms and minimally prepared teachers (O'Sullivan, 2004). There is a general tendency among teachers to fall back on unstructured forms of teaching which may not be effective and could prove to be a waste of learning time (UNESCO, 2004). This leads us to the conclusion that structured instruction would prove to be a far more pragmatic option for providing global standards set as Education is imparted, under severe resource constraints, high pupil/teacher ratio and underqualified or unmotivated teachers (UNESCO, 2004).

Teaching presence is also noted to be an important criterion for enhancing educational quality (Peter Shea). It is referred to as "the design, facilitation and direction of the cognitive and social process for the realization of personally meaningful and educationally worthwhile learning outcomes ."In Anderson and his colleagues' model, there are three components - instructional design and organization, facilitating discourse and direct instruction (T. Anderson, 2001).

The most obvious truth about the successful implementation of educational system reforms is, "reform should be incremental and gradual rather than wide-ranging" (Dalin, 1994).

In recent research it has been observed that creating lesson plans and their preparation by teachers is one of the appropriate ways to enhance the quality of Education (Amininik, 2000) (Amininik S. A., 2000). These may be the most effective tools to ensure learning outcomes are covered as lesson plans become the focus of structure and maintain scope for improvement as it establishes record keeping of their teaching style among teachers and faculties concerned. Also, as Houston and Beech (Houston, 2002) believed that there are students with varying capacities and abilities under the guidance of one Teacher, the use of lesson plans may also help achieve expected outcomes across all students irrespective of their characters and learning curve (Simmons, 2009). Apart from record keeping it helps teachers to gain experience through reflection on their respective teaching styles, and forces them to seek answers to questions such as what to teach, how to teach and how to evaluate (Yildirim, 2003).

While in the study conducted by Stella Kourieos and team (Stella Kourieos, 2013), which was concerned with English foreign language teachers and their teaching style, the study shed light, that the students preferred teaching faculties who showed consideration for his/her students' individual differences, language anxiety, abilities and interests and design learning environment, rather than a directive and authoritarian role in the learning process among University students. The study also suggests that individual students need a learning style, that may provide taken under consideration, which may provide effective Education.

Another study was conducted to test the causal relationship and its strength between Bandra's theory, where it was hypothesized, that there is a causal relationship between sources of teacher self-efficacy beliefs and students' achievements. Various Teacher's self-efficacy factors such as mastery experience, vicarious experience and verbal persuasion, increase Teacher's self-efficacy (Fatemeh Shaterian Mohamadi, 2011).Among these three factors mastery experience is the most important factor. OBE plays a crucial role in ensuring this, with the added feature of uniformity across a given area of effect.

Defenders of OBE have stressed more importance on procedural Knowledge rather than on propositional Knowledge based on the distinction provided in Ryle (Ryle, 1971). The study tries to stress the difference in the impact of trying to teach a certain subject and enabling learning, development of abilities and competencies, and acquisition of skills and efficiencies. Ryle also points out, the role of teachers as facilitators of developing competencies and skills at the procedural level of imparting Knowledge. The defenders of OBE also tend to defend the role of teachers in the OBE system (Mason, 2000). Mason in his study makes persuasive arguments in defense of teachers' role as mediators of Knowledge. He also draws from the argument on Knowledge, truth and value from the works of Dewey, Vygotsky, Freire (Freire, 1970), and Gramsci among others for the need for critical mediators of Knowledge, who not only act as mediators of Knowledge as previously discussed but also as socio-cultural critics.

Dewey (Dewey, 1963) stresses the role of experience in Education which is based on his pragmatist approach to acquiring Knowledge. Meaning that Knowledge is a source of action rather than a passive reflection of the Knowledge so gained. Which when compared to the OBE practices, seems to be in line with this thought. OBE encourages learning by doing, for this purpose, the teachers and faculty members provide various opportunities to work with Knowledge so gained through internships, group activities, seminars, and assignments. Thus, highlighting the fact that teaching is not about the transmission of information from one medium to another and learning does not entail a mere passivity to the information espoused in the

classrooms. It involves active engagement with the information to form and Knowledge that could be applied in real life experiences. The teachers act as enablers and mediators in this process. It is also worth noting that Dewey comes to this conclusion empirically. Outcome Based Education is designed to facilitate and ensure lifelong learning Dewey recommends that teacher mediation and learner behavior must inculcate lifelong learning.

Vygotsky (Vygotsky, 1978), on the other hand agrees that teachers play a far more important role rather than a mere transmitters of Knowledge. He goes a step beyond Dewey, by bringing in the concept of intentional mediation. Where he suggests that the Teacher, as someone who stands between the learner and the Knowledge to be gained induces a higher level of thinking and enables interpretation of and understanding of the significance of the learned Knowledge, this motivates the students to be lifelong learners as well as enhance their critical thinking ability. But for this to happen Vygotsky, just like Dewey, stresses on the teachers' experience as well as the learner experience in learning. With the exception being, in Vygotsky's theory, the intrinsic assumption is that the Teacher is always aware of the learners' level of thinking and understanding. It should also be noted that Vygotsky brought about this theory as part of his study in cognitive development among learners.

Possible biases/ preferences / challenges

While the proposed research intends to keep the data collection as genuine as possible, there is a possibility of teachers giving a biased or false statement. This could be due to the fear involved in being honest with their responses and later facing the repercussions from higher authorities of the institute, for the same.

There are also chances of participation biases as the data is restricted to those from state government faculty members, who would have to take some time out to complete the survey. In such a scenario, it's possible that the data collected may not reflect their true opinion. There is also the case of Implicit Bias. The OBE practices implementation is a top-down approach. Thus there might be a case where teachers and faculty could espouse the same assumption and preferences that the higher authorities have. Also, crucial to note here is that the teaching methodology of the faculty members is strongly based on their understanding and working Knowledge. Any lack of awareness of the basics of the functioning of OBE would render 70-80% of the survey useless. Thus, making it difficult to assess and measure their impact on university students' Education as per the OBE guidelines.

Rectification measures

To prevent any recording of false or untrue statements, they would be made aware to the respondent that their identity and associated responses would be kept confidential and will only be used for academic and research purposes only. Thus, helping the potential respondent from having any fear or anxiety while giving honest responses.

The participation biases would be minimized by requesting, prior permission and appointment would be taken from the institute and concerned faculty to ensure that such biases are negated from the early stages of data collection. In the case of negating Implicit Bias being recorded as part of data collection, certain critical questions would be added that may or may not be included as part of the survey questions, to bring about more honest views based on their working Knowledge and experience.

Final Thoughts

The role of teachers in the 21st century and given the restrictions placed on the teaching style due to COVID lockdown around the world, has led teachers to adapt and build up their expertise in the digital teaching field. This also has led to revising and updating the syllabus to align it with learning outcomes. It should also be noted that higher Education faces many opportunities as well as challenges. This is so because of the digital revolution and its use in research and development that is essentially carried out in

higher educational institutes and research-based institutes. The availability of scholarships, fellowships and funds in these institutes has further enhanced, reliance on digital interface.

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