

TECNIA INSTITUTE OF ADVANCED STUDIES

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-: Outcome Based Education:-

OBJECTIVES

- To understand the concept of outcome based education in higher education
- To be familiar in understanding the elements of outcome based research
- To choose an appropriate assessment technique for the outcome based education in higher education
- To sensitize the importance outcome based education in higher education.
- To effectively implement the outcome based education in higher education.
- To learn about the theories behind the outcome based education in higher education.
- To plan an outcome based education in higher education according to the need.

INTRODUCTION

In the early days, all the educational institutions usually to construct syllabus by some experienced teachers or experts who got expertise in the area. This type of previous curriculum organization will not help us to generalize that can be universally fit. In the traditional education system, the students were graded based on the marks scored in the assessment. In which some students might score high and some might not be. Although, there are many types of assessments to be integrated with the curriculum, there are some specific assessment could be well integrated through an appropriate yardsticks.

The outcome based education is one among such processes involved in constructing, reorganizing and restructuring curriculum, assessment and practices of education which replicate the achievement of higher learning or mastery learning among the learners. Thus, the outcome based education makes easier to have decided changes within the learners by enhancing knowledge, skills and positive attitude, values and judgment. The prime idea of outcome based education is focused on what need to be achieved once this goal of achievement is determined. The strategies, processes, techniques, and other ways and meanings can be put together to achieve the goal. In order to follow outcome based education for curriculum designing, we need to know the different expectation of the industries; employers and other institutions offer employment to the students. Hence, the outcome based education curriculum has become quite popular among all types of educational institutions in general and technical institutions in particular.

ELEMENTS OF OUTCOME BASED RESEARCH

There are four elements of outcome based education

- **Programme educational objectives**
 - These are the expected achievements of learners within the first few years after completing the course.
- **Programme outcomes**
 - The program outcome concentrates on learners attribute and feedback.
- **Course learning objectives**
 - This intends to make the learners to accomplish what intended to achieve at course or a subject level.
- **Topic learning objectives**
 - This is intended to make the learners to accomplish what intended to achieve at topic level within the course or a subject.

CONCEPT OF OUTCOME BASED EDUCATION

The previous studies apparently confirmed that there are several definitions for outcome based education. All the definitions together point a common emphasis on setting clear standards with observable and measurable outcomes among students so as to meet the demands of the society. Outcome based education used to provide a platform to make teaching learning process is more precise and transparent to both teachers and students.

The theory of outcome based education must have been built based on the notions such as (1) every student can be a successful; (2) a success leads to more success once learner experienced and (3) teachers necessitate understanding that they have control over the conditions which make every student to be enjoyed.

As far as the concept of outcome based education is concerned, it has been widely applied not only in primary and secondary level. Also in higher education with the emphasis of learners must be able to perform hands - on - work and knowledge, application and replication in different work setting. Along with that of students, the teachers should possess the all-round attributes lifelong learning aptitude, teamwork attitude, communication skill, etc. The outcome based education insists tertiary education needs to provide both professional knowledge or skills and all round attributes so as to enable the learner to face the pluralistic demands of the 21st century society. Hence, the outcome based education has become the need of the hour because of its reorientation of learning and interchangeable nature of learning outcomes.

ASSESSMENT ON LEARNING OUTCOMES OF OUTCOME BASED EDUCATION

As outcome based education intended to focus on what students can actually perform, the assessment techniques which need to be integrated with outcome based education also must get some metamorphosis so as to facilitate the tertiary education. The assessment of outcome based education must assess the learners against external objectives not in comparison with their peers. There are many approaches to serve for this purpose such as students cannot be failed, the levels instead of grades and understanding individual differences according to the different stages of development. The outcome based education also emphasis on Criterion Referenced Assessment [CRA] which used to align student performance with the learning objectives or criterion which is predetermined before the assessment rather comparing students each other. Therefore, criterion referenced assessment determines only individual performance in comparison to some standard or criterion. There is no possible to discriminate the students based on the level of performance.

PEDIGREE OF OUTCOME BASED EDUCATION

Outcome based approach has its own history by some 500 years back, especially in the middle ages in Europe in the form of apprenticeship training models and there are many examples till today. Spady, 1996 and Malan, 2000 analysed the educational reforms that really influenced to bring out outcome based education.

Tyler's Educational Objectives

Tyler identified fundamental issues which are important for developing and planning instruction including purpose, content, organisation and evaluation. Tyler strongly believed that the systematic planning and identifying for the essential element for the post instruction as well as the content and context to apply within it. Tyler's education designing approach sustained to influence teaching for several decades and the basic philosophy of outcome based design is embedded thereof.

Bloom's Mastery Learning

Bloom's taxonomy for educational objectives emerged in 1950s and helped us to determine whether learners have attained the expected standards or not and compared to the planned learning objectives. Bloom's mastery learning theory in all three domains was based on the opportunities that support for an appropriate learning environment and successful in their learning task. The above said notion of Bloom is highly reflected in the outcome based education.

The characteristics of mastery learning are

Ascertaining prerequisite knowledge or skills to attain goals

- A flexible time frame to attain goals
- Using different media and materials to create enriched teaching learning context and
- Formative evaluation to provide feedback to both teaching and learning enhancement.

Competency Based Education

It was introduced in the year 1960s in North America to respond to the budding concern that students were not being taught what they required after they gone out from school. Malan, 2000 has summarised some of the following components from the competency based curriculum.

- get flexible time frame to Master skills
- one is a variety of instructional activities to facilitate learning
- Criterion referenced testing for the required outcomes
- certification based on demonstrated learning outcomes
- adaptable programs to ensure optimum learner guidance

These are the supporting notions of competency based education to the outcome based education.

Glaser's criterion-referenced learning

In 1963, Glaser described criterion referenced measurement testing the students' behaviour on continuum ranging from no proficiency to perfect performance. Criterion referenced instruction and assessment is based on attainment of some specific outcomes on testing the competency in terms of the stated criterion .This type of instruction compare learning outcome are the mastery of competencies with pre-planned external standard in which success is measured by demonstration of standards followed by remedial interventions. Spady's approach of Outcome Based Curriculum closely resemble with guidelines in terms of the expected performance of outcome based education. Learning outcome based program assessment and language competence can be compared to specific criteria competency in the required outcome which is nothing but learning behaviour would be demonstrated by culminated of significant learning with context and specified time frame required by the individual.

BENEFITS OF IMPLEMENTING OUTCOME BASED EDUCATION IN HIGHER EDUCATION

Andrea, 2003 Prosser et al., 2006 have declared that there are many evidences have been found that outcome based curriculum helps in improving student performance significantly towards the intended learning outcome and made them explicitly by the teaching faculty who are responsible to set the clear goals of learning. Many studies have proved that outcome based curriculum has enhanced the involvement of the educational community especially the employer's. The study of Lohman, 1999 endorsed that outcome based curriculum is a shift in the ownership from the curriculum planner or faculty head to the teachers and students. Andrea, 2003 has affirmed that outcome based curriculum gives direction to students learning and provides positive bond between teacher and students. Outcome based assessment gives an additional advantage to the stakeholders in education programs including high transparent of reporting alignment of teaching with that of Curriculum goals and assessment (Brindley, 2001; Prosser et al., 2006). Spady, (1994) believed outcome based education is a kind of way to go beyond from the meaningless percentage and marks to provide students with a broader and more transformative education. Also Spady, (1994) believed that outcome based curriculum can increase students motivation to learn. When outcome based curriculum was introduced in 1992 in the middle of nineties at the state of Pennsylvania, a total number of 22 schools alone had decided to try out in US. Outcome based curriculum is specifically emphasized in the several disciplines such as medicine, science engineering and soon. Outcome based curriculum has also been tried out in South Africa since 1990 to improve the rationality, coherence and quality of education. In Hong Kong, the University Gants Council also has encouraged universities to start outcome based curriculum.

ISSUES IN THE IMPLEMENTATION OF OUTCOME BASED EDUCATION

From the findings of the most of the review of related literature, it can be concluded that the increase of workload was experienced highly by the teaching staff. The increase of workload was high in particular in the area of assessment where the individual student was assessed on his or her attainment on the level of learning which was quite different from the traditional summative evaluation. It was also found that this outcome based curriculum is quite time consuming in writing the set of assessment criteria such as rubric. In order to measure the students learning outcomes, some of the research have found that considerable amount of time is required to spend on writing the measurable and performable learning outcomes. It was also difficult to design or compile a coherent set of learning outcomes according to the outcome based curriculum. Doubts also were expressed as the validity and reliability of criterion referenced assessment which can truly reflect students' ability and grapple of knowledge. Also, there were many queries have been put forth that whether outcome based curriculum for too vocational oriented or not.

Brindley (2001) identified some of the common problems in the implementation of outcome based education are as follows:

The one is tensions between summative and formative evaluation, doubts contain the validity of outcome statements and reliability of the assessment tool that are used to study students' performance. Difficulties in ensuring the comparability of teacher developed assessment, high cost complex logistics and time demands of developing and administering individualized performance assessment. It was also identified that assessment system in outcome based curriculum needs to be sufficiently resourced which was more expensive to administer and required great skills and handling on teachers. Some other studies have found that the learning outcome focus too narrowly on details and it was difficult and time consuming to define the learning outcomes of outcome based curriculum. Educational stakeholders further criticized the outcome based curriculum that setting the explicit learning outcomes might lead to the neglect of attitudes and values motivation and interest which are not measurable through the objectives of outcome based curriculum.

These are some of the limitations which have been scanned through the different studies that have already done on the outcome based curriculum area.

STRATEGIES TO IMPROVE EFFECTIVENESS OF OUTCOME BASED EDUCATION

Although it is divisive on the implementation of outcome based curriculum in education, many countries widely used outcome based curriculum as worth of minimising problem. The concepts which can facilitate outcome based curriculum are as follows.

The role of faculty is very important in outcome based curriculum. Well organised collaboration among the teaching faculty would facilitate the implementation of outcome based curriculum. Proesser, 2006 has asserted that outcome based curriculum made to improve the inter departmental relationship with significant formulation of the roles of teachers and economic policies. The structures of outcome based curriculum also offer the opportunities for self-directional and autonomy in learning. The great consideration is also need to be given to the role of teacher in the outcome based curriculum approach. Accountability of the teachers studied as the biggest struggles in the implementation of outcome based curriculum was the resistance from the academic staff members. It was believed that resistance can be alleviated in increasing the sense of belongingness of the teacher. The increasing workload of academic staff members is another by-product of outcome based curriculum. This type of situation must be minimized or even avoided by reducing the number of assessments. The above stated notions can be conceived as the procedure of minimizing the problems encountered in the implementation of outcome based curriculum.

Brady, 1997 identified some of the common attributes for the successful implementation of outcome based curriculum.

- The one is statement of specific outcome
- The second one is planning of appropriate learning activities to achieve the outcome
- The third one is the monitoring of individual performance through the use of criterion referenced assessment and the production of remediation and enrichment.

OUTCOME BASED APPROACH IN HIGHER EDUCATION

In the recent decades, there is an extensive or developed interest in the outcomes of educational experiences and how those outcomes summon the variety of societal needs. Learning outcomes are important to be asked among the students and the graduate that 'what you can do now after getting your degree rather what you do to obtain your degree'. This approach is relevant to the labour market and definitely more flexible breating into an account issues of lifelong learning not traditional learning and other forms of non-formal educational experience has actually find out by Ewell, 2000. This approach in higher education is in fact arising from the so-called assessment movement that became in the mid of 1980 in USA. The assessment Movement in higher education focusing on students learning outcome as the emerging measure of institutional excellence and effectiveness ideas about what constitutes high quality education have shifted from traditional view of what features provided to ethical concerns for what learners actually learn and achieve. The indicators of student learning outcome as part of larger accountability framework have become prominent in USA which in turn leads to many other countries such as Australia, Newzealand, UK, South Africa and now China.

Improvement in the implementation of outcome based education

By giving the overwhelming focus on learning outcomes in higher education in the recent years ,there is high time the value system for educational outcomes and Standards have given rise to the issues and concerns about the due emphasis on the instrumental and economic value of education measured in terms of efficiency and effectiveness. In the model cultural context, the central core of the outcome based approach consists of some indicators of efficiency and effectiveness.

To maximize the attainment of individual educational goal as well as the societal outcome, this curriculum will reduce the criminal and maximise educational effectiveness. The following points will give us some insights to maximise educational efficiency.

- Educational activity be directly towards the attainment of specific decide goals
- Is education activity must be directed towards the attainment of the satisfaction of the interest minimised success (Bagnall, 1994).

DIFFERENT LEVELS OF OUTCOMES

The word outcome means different things depending on the level of analysis and the kind of result of academic experience that we are talking about. In fact learning outcomes approaches have been used at many levels ranging from instructional design to the individual student.

The individual level learning outcomes

This outcome used to express what the learners are expected to do at a time and how they are expected to demonstrate the things that learnt.

Institutional level learning outcomes

At the institutional level, the objectives are generally defined and are related to the assessment of institutional performance for quality assurance (Ewell, 2008). To this end, institutions need to collect evidence about student abilities to prove that the institution-level outcomes or goals are achieved. In value-added terms, outcomes can be referred to the “before-after development” or “enhancement” as a result of a student’s attendance at an institution of higher education.

PLANNING OUTCOME BASED EDUCATION

The first step of planning outcome based education is identifying the desired level of students learning after appealing in a meaningful learning experience. The action verbs used in writing the outcome statements define the required level of understanding and competencies. The Precise verb chosen will drive and suggest the type of teaching and learning activities that students need to undertake in order to achieve the level of superiority at which they are expected. For instance, the action verbs such as explain, diagnose, or problem solving label the different learning outcomes at various level that need to be very specific and should not get any ambiguity among the learners in achieving learning outcome through learning experience.

The second step is to consider what students need to be able to achieve outcomes. This process intimates the kind of student activity that links the level of each learning outcome for curriculum designer and teachers to plan and select teaching learning activities appropriate to the expected outcomes. It is no longer enough for curriculum designers and teachers to be competent in their discipline they are required to create and manage stimulating learning environment using variety of resources methods and technologies including assessment resources and teaching resources. This type of shift is necessary in the role of designer for teachers to

form the subject of learning which implies the teaching learning activities next to the stage of designing appropriate teaching learning activities.

BENEFITS OF OUTCOME BASED EDUCATION

Like other types of curriculum models and curriculum designing, the outcome based education also has its own merits such as clarity, flexibility, competition and portability.

Clarity

This outcome based education can communicate various stakeholders that the kind of learning accepted at the end of learning or program or courses. Students also must know what is expected from them and the level and standard which learners need to reach the intended outcomes.

Flexibility

Although the intended outcomes are specified, the means to achieve the ends are fairly open in an outcome based approach. A great deal of flexibility is also built in the model for the selection of means of instruction as long as same intended level of knowledge and skills.

Comparison

With the outcome based approach, it is more believable to establish comparable standards across program and institutions for accreditation benchmarking as well as accountability purpose. The summative and formative comparisons will help the Institutions to verify the standards against each other and which marks for the improvement as they learn from each other through cross checking of outcomes is also possible among the students from different Institutions and different background.

Portability

It suggests that students can earn and transfer credit from program offered by one institution to another program in a different Institution .This is made possible by having the articulated learning outcomes in different programs using clear criteria and double standards.

It will also increase the mobility and exchange of students' knowledge industries not locally but internationally.

LIMITATIONS OF OUTCOME BASED EDUCATION

Despite many benefits the outcome based approach; it has also some limitations such as definition of outcome based education, legitimacy fractionation and the serendipity.

Definition

Definitions of learning outcomes are subject to the context of the application and judgement made by some specific team or group of people who involved in the processing of outcomes. The outcomes which are identified for particular course may not be generalized across the context due to consistency required for a valid and reliable judgement about the ability for characteristics in question.

Legitimacy

Many academicians opined that learning outcome statements are inadequate to capture those aspects of learning which may result in reductionism and reification. Outcome statements tend to break down the holistic conceptions of learning and reduce them to learning abilities of change in behaviour that are specific, observable and measurable.

Fractionation

The way of assessment works in outcomes teams may sometimes be found to be too slender and even motorized. While assessing learning, the other part of human aspects are missing. From this perspective, we can say that assessment for outcome based curriculum could become too focused on the students' acquisition skills and knowledge only.

Serendipity

Problem is considered to be more obvious in advanced level of studies and specific disciplines such as Fine Arts where unexpected important learning occurs during the instructional process.

CONCLUSION

In order to meet the demands of accountability and accurate action in education, the outcome based education is the most widely used approach by educators. All the outcome based approaches have been widely adopted in many countries such as USA, UK, Australia and South Africa since 1986. But, at the same time, there are arguments on the effectiveness of outcome based education and the benefits of the outcome based education to the education system in India. Also, there is no second thought that outcome based education helps in improving students' performance, enhancing the involvement of the educational community and providing a platform to shift the ownership of knowledge and skills from administrators to the teachers and learners. Apart from all the benefits, there are a number of problems also have been identified by the previous studies such as workload, doubts about the validity and reliability of assessment tools, difficulties in implementing newly developed assessment methods and development of macro capable students. Anyhow, outcome based education has proven that this is the

right approach to design curriculum which serves for the education demand of 21st century learning. If outcome based curriculum well organised, it is possible to attain best learning outcome in every educational institution in general, and higher educational institution in particular.

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WEB LINKS

- <https://www.hsaj.org/articles/679>
- <https://www.emerald.com/insight/content/doi/10.1108/QAE-09-2011-0059/full/html>
- <https://oapub.org/edu/index.php/ejse/article/view/999>
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- <https://docdrop.org/static/drop-pdf/Tam---Module-7-PmHFi.pdf>
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- <https://www.berea.edu/academic-assessment/wp-content/uploads/sites/56/2017/03/Bereas-Outcomes-Based-Assessment-Plan-for-Academic-Programs.pdf>

FAQ

What are the elements of outcome based education?

- Programme educational objectives
These are the expected achievements of learners within the first few years after completing the course.
- Programme outcomes
The program outcome concentrates on learners attribute and feedback.
- Course learning objectives
This intends to make the learners to accomplish what intended to achieve at course or a subject level.
- Topic learning objectives
This is intended to make the learners to accomplish what intended to achieve at topic level within the course or a subject.

2. Jot down the concept of outcome based education

The previous studies apparently confirmed that there are several definitions for outcome based education. All the definitions together point a common emphasis on setting clear standards with observable and measurable outcomes among students so as to meet the demands of the society. Outcome based education used to provide a platform to make teaching learning process is more precise and transparent to both teachers and students. The theory of outcome based education must have been built based on the notions such as (1) every student can be a successful; (2) a success leads to more success once learner experienced and (3) teachers necessitate understanding that they have control over the conditions which make every student to be enjoyed.

As far as the concept of outcome based education is concerned, it has been widely applied not only in primary and secondary level. Also in higher education with the emphasis of learners must be able to perform hands - on - work and knowledge, application and replication in different work setting. Along with that of students, the teachers should possess the all-round attributes lifelong learning aptitude, teamwork attitude, communication skill, etc. The outcome based education insists tertiary education needs to provide both professional knowledge or skills and all round attributes so as to enable the learner to face the pluralistic demands of the 21st century society. Hence, the outcome based education has become the need of the hour because of its reorientation of learning and interchangeable nature of learning outcomes.

3. How outcome based education emerged?

Outcome based approach has its own history by some 500 years back, especially in the middle ages in Europe in the form of apprenticeship training models and there are many examples till today. Spady,1996 and Malan, 2000 analysed the educational reforms that really influenced to bring out outcome based curriculum.

Tyler's educational objectives

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Competency Based Education

It was introduced in the year 1960s in North America to respond to the budding concern that students were not being taught what they required after they gone out from school.

Glaser's criterion-referenced learning

In 1963, Glaser described criterion referenced measurement testing the students' behaviour on continuum ranging from no proficiency to perfect performance. Criterion referenced instruction and assessment is based on attainment of some specific outcomes on testing the competency in terms of the stated criterion .This type of instruction compare learning outcome are the mastery of competencies with pre-planned external standard in which success is measured by demonstration of standards followed by remedial interventions. Spady's approach of Outcome Based education closely resembles with guidelines in terms of the expected performance of outcome based education. Learning outcome based program assessment and language competence can be compared to specific criteria competency in the required outcome which is nothing but learning behaviour would be demonstrated by culminated of significant learning with context and

specified time frame required by the individual.

These are the supporting notions of competency based education to the outcome based education.

4. List out the strategies to improve effectiveness of outcome based education

Although it is divisive on the implementation of outcome based curriculum in education, many countries widely used outcome based curriculum as worth of minimizing problem.

- The concepts which can facilitate outcome based curriculum are as follows.
- The role of faculty is very important in outcome based curriculum. Well organised collaboration among the teaching faculty would facilitate the implementation of outcome based curriculum.
- Proesser, 2006 has asserted that outcome based curriculum made to improve the inter departmental relationship with significant formulation of the roles of teachers and economic policies.
- The structures of outcome based curriculum also offer the opportunities for self-directional and autonomy in learning.
- The great consideration is also need to be given to the role of teacher in the outcome based curriculum approach. Accountability of the teachers studied as the biggest struggles in the implementation of outcome based curriculum was the resistance from the academic staff members.
- It was believed that resistance can be alleviated in increasing the sense of belongingness of the teacher.
- The increasing workload of academic staff members is another by-product of outcome based curriculum.
- This type of situation must be minimised or even avoided by reducing the number of assessments.
- The above stated notions can be conceived as the procedure of minimising the problems encountered in the implementation of outcome based curriculum.

5. Describe outcome based approach in higher education

In the recent decades, there is an extensive or developed interest in the outcomes of educational experiences and how those outcomes summon the variety of societal needs. Learning outcomes are important to be asked among the students and the graduate that 'what you can do now after getting your degree rather what you do to obtain your degree'. This approach is relevant to the labour market and definitely more flexible breathtaking into an account issues of lifelong learning not traditional learning and other forms of non formal educational experience has actually find out by Ewell, 2000. This approach in higher education is in fact arising from the so-called assessment movement that became in the mid of 1980 in USA. The assessment Movement in higher education focusing on students learning

outcome as the emerging measure of institutional excellence and effectiveness ideas about what constitutes high quality education have shifted from traditional view of what features provided to ethical concerns for what learners actually learn and achieve. The indicators of student learning outcome as part of larger accountability framework have become prominent in USA which in turn leads to many other countries such as Australia, Newzealand, UK, South Africa and now China.

6. What are the different levels of outcomes?

The word outcome means different things depending on the level of analysis and the kind of result of academic experience that we are talking about. In fact learning outcomes approaches have been used at many levels ranging from instructional design to the individual student.

- The individual level learning outcomes
- Institutional level learning outcomes

7. List out the benefits of outcome based education

Like other types of curriculum models and curriculum designing, the outcome based curriculum also has its own merits such as clarity, flexibility, competition and portability.

- Clarity
- Flexibility
- Comparison and
- Portability.

8. List out the benefits of outcome based curriculum/ education

Despite many benefits the outcome based approach; it has also some limitations such as definition of outcome based curriculum/education, legitimacy fractionation and the serendipity.

- Definition
- Legitimacy.
- Fractionation and
- Serendipity.

QUIZ

1. The expected achievements of learners within the first few years after completing the course is
 - a) Programme Educational Objectives
 - b) Programme Outcomes
 - c) Course Learning Objectives
 - d) Topic Learning Objectives

2. The outcome based curriculum emphasis
 - a) NRT
 - b) CRT
 - c) Both
 - d) None of the above

3. The Competency Based Education introduced in
 - a) 1950s
 - b) 1960s
 - c) 1970s
 - d) 1980s

4. Serendipity is one the of outcome based curriculum
 - a) Limitations
 - b) Benefits
 - c) Characteristics
 - d) Elements

5. The one who identified common problems in the implementation of outcome based curriculum is -----
 - a) Brindley
 - b) Spady
 - c) Lohman
 - d) Andrea

6. The model which is also known as the technical model.
 - a) Scientific Model
 - b) Non-Scientific Model
 - c) Experiential Model
 - d) Social-Critical Model

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