An Overview on Outcome based Education

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I.   INTRODUCTION TO OBE

In today's world technology is growing rapidly. To cope up with this rapid technological development graduates must have high skillset like problem solving, ability to communicate with others effectively, ability to adopt to new technology quickly etc. These skills cannot be learned by traditional classroom teaching techniques. Hence an effective education system must be designed to meet these require-ments. "Outcome Based Education" is one such education system which got a lot of emphasis from several professors, scholars from all around the world in the recent years [1]. In Outcome Based Education System priority is given to students self-learning rather than learning from what teachers have thought in the classroom. In Outcome Based Education targets are set which need to be acquired by the student by the end of each course and also targets are set which must be obtained by the students by the end of their graduation. In Outcome Based Education lecturers act just as facilitators of knowledge for the students. Outcome Based Education is achieved by effective implem-entation of Course Outcomes (CO's), Program Outcomes (PO'S) and Program Educational Objectives (PEO's) in student's learning curriculum. Outcome Based Educa-tion is continuously developing process.

Keywords: Course Outcome (CO), Program Outcome (PO), Program Educational Objective (PEO), Program Specific Outcome(PSO).

A. DIFFERENCE BETWEEN TRA-DITIONAL EDUCATION SYSTEM AND OUTCOME BASED EDUC-ATION SYSTEM.

TRADITIONAL EDUCATION[2]
1. Traditional Education system [2] is effective where learning involves transfer of knowledge of previous generation to upcoming generation of students.
2. Focus is on inputs rather than outputs i.e., importance is given to what teacher has taught rather than what student has learnt.
3.No activities have been defined to assess the knowledge of a student in this approach.
4.In this approach students mem-orize what lecturers taught in the classroom.
5.Students just sit and listen to what lecturers say in traditional educa-tion.
6.In this approach student is highly dependent on lecturer i.e., the knowledge acquired by a student depends on the extent to which teacher has taught.
7.Students who have the ability to memorize things can only succeed in this system.

(continued)
8.Traditional approach cannot provide a student with the skill set that is required in today's globalised world.

OUTCOME BASED EDUCATION[1]
1.Outcome Based Education is effective where learning involves the application of a student's intellectual skills.
2. Focus is on outputs rather than inputs[1] i.e., importance is given to what   student has acquired rather than what teacher has taught.
3.In OBE activities are to be done by students using their learning experi-ences in order to attain skills.
4.In OBE students adjust their strengths and weaknessesto further develop their knowledge and skills.
5.In OBE students will listen, learn and demonstrate tasks out of their learning experience.
6.In OBE student is self-dependent i.e., the knowledge acquired by a student depends on what he has learnt. A teacher has partial role student's development.
7.In this approach success of a student is defined by extent to whi-ch he has acquired skillset.
8.It is proved by several scholars and professionals around the world that OBE can change the future of education system to cope with rap-idly changing technological world.

II STAGE AT WHICH OBE MUST BE IMPLEMENTED

There is no limitation that OBE must be implemented in particular stage of a student life. It can be included right from student's schooling but it is mandatory to shift from traditional learning to outcome based learning during the higher education of a student[3]. Since most of the technological requirements will be met by student during the higher studies in his life it is mandatory that a student must acquire knowledge and skills through his own self learning experience[2]. This can be achieved only by the implementation of Outcome Based Education in student's learning process.

B.FACTORS TO BE CONSIDERED DURING IMPEMENTATION OF OUTCOME BASED EDUCATION

- Effective design of the syllabus curriculum.
- Active involvement of student in the learning process.
- Effective framing of outcomes that a student must acquire upon completion of course and graduation.
- Careful examination of an organisation's vision and mission.
- Translating vision into goals.

- Identifying appropriate learn-ing solution.
- Aligning learning objectives to performance objectives.

III. ROLE OF STUDENT IN OUTCOME BASED EDUCATION

- The success of Outcome Based Education depends mostly on the active participation of student in the learning process.
- Student is the one who should understand the outcomes and learn from those outcomes.
- Student plays an effective role in the continuous development of Outcome Based Education by giving feedbacks, by participating in surveys, writing exams, doing projects etc.

Students are the one who will help in succeeding organisation's vision and mission.

C. ROLE OF TEACHER IN OUTCOME BASED EDUCATION

- A teacher is the one responsible for effective framing of syllabus curriculum.
- A teacher is the one who decides course outcomes and program outcomes.
- Framing syllabus and deciding the outcomes are the major factors which contribute to the success of student in OBE hence a teacher must frame those with high quality.
- Teachers are the ones who motivate students towards OBE and explain them about the benefits of OBE.
- Teachers also frame questions for exams and surveys to assess the development of student in OBE.

IV. TERMINOLOGIES USED IN OUT-COME BASED EDUCATION

D. Course Outcomes (COs):

Course outcomes (Cos) are the statements of know-ledge/ skills/ abilities that students are expected to know, understand and perform as a resultfromthe-ir learning experiences in each course.

E. Program Outcomes (POs):

Program Outcomes (Pos) 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.

F. Program Educational Object-ives (PEOs):

The educational objectives of an engineering degree program are the statements that desc-ribe the expected achieveme-nts of graduates in their career, and what the graduates are expected to perform and achi-eve during the first few years after graduation.

PEOs areStatement of areas or fields where the graduates find employment

- Preparedness of graduates to take up higher studies

G. Program Specific Outcomes (PSOs):

These are what the students should be able to do at the time of graduation. The PSOs are program specific. PSOs are written by the department offering the program. There usually are two to four PSOs for a department.

PSOsare decided by the head of the institution with the help of HOD's and department experts.

Assessment:

Assessment is a process of collecting data.

Evaluation:

Evaluation means interpreting the data and doing whatever you want with data and finally telling that this is the extent to which program outcome has been achieved [2].

V. APPROACHES TO OUTCOME BASED EDUCATION

There are two types of Assessment

1. Direct Assessment

2. Indirect Assessment

H. Direct Assessment:

- Direct Assessment involves looking at actual samples of student work produced in our programs.
- These include capstone projects, senior theses, and performances.
- Direct Assessment is conducted while the student is under-going a test.
- Direct Assessment is mainly used for calculating attainment of students.

Procedure for calculating Direct Assessment:

1. Assignments, projects and examinations are conducted during and after the calculation of particular.
2. Level of attainments is fixed depending on the outcomes mentioned for the course.
3. Average marks of the students in a section are calculated.
4. The average marks of students in a section are matched to one of the levels of attainment.
5. Depending on level of atta-inment one can assess the extent to which students in the class have successfully acqu-ired the prescribed outcomes.

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I. Indirect Assessment:

- Indirect assessmentis gath-ering information through means other than looking at actual samples of student work.
- These include surveys, exit interviews, and focus groups.
- Indirect Assessment is cond-ucted after the completion of graduation of a student.
- Indirect Assessment is mainly used for deciding the extent to which the syllabus is useful to the development of student.

Procedure for calculating Indirect Assessment:

1. Feedbacks, surveys are cond-ucted to the alumni, parents, job holders by designing que-stionnaires.
2. The questionnaires are mapp-ed to program outcomes.
3. Based on the results from feed-backs and surveys attainment levels are calculated.
4. If the level of attainment is high then no changes to the syllabus are made.
5. If the level of attainment is low then changes to the syllabus are made.

VI. ADVANTAGES OF OUTCOME BA-SED EDUCATION

- Outcome Based Education increases clarity of focus among the students and lecturers so that learning process becomes more focused and productive.
- OBE gives the student ability to self-evaluate and measure his progress at every stage [2].
- As Outcome Based Education is a student centric approach teacher can focus on designing effective curriculum for the improvement of student rather than focusing on how to teach.
- As Outcome Based Education assures skill development and self-learning ability student can have better employment chances.
- With Outcome Based Educ-ation students can develop their knowledge so that they can do their job work with ease.
- Continuous Quality Improve-ment (CQI) can be achieved using OBE.

VII. DISADVANTAGES OF OUTCOME BASED EDUCATION

- It is difficult to design effective program outcomes and requi-res a lot of knowledge.
- Each institute designing their own outcomes is one of the limitations of OBE [4].
- Effective participation of student and teacher is required for the OBE to be successful.
- Students and Teachers must have complete idea about the outcomes designed in order attain it.
- If the scope of development in a field is less than this approa-ch is less effective.
- This approach is difficult and time consuming to implement [4].

VIII. CONCLUSION

Identify the need for, and have the preparation and ability to engage in independent and continuous learning in the widest view of techno-logical change, the OBE model is a recursive and continuously progre-ssive model. Better implementation will give the new ideas and challenges to develop the educational sector with improved learning outcomes. However, the academic staff and students must know the learning and roles of both teachers and learners to adopt the OBE successfully in the education system. We cannot gene-ralize that the OBE learning approach is suitable for science streams in comparison with social science stre-ams[1].

IX. REFERENCES

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