

OBE FOR AFFILIATED INSTITUTIONS

S.Venkatesh¹

Associate Professor, Dept. of ECE
Dhirajlal Gandhi College of Technology, Salem, India
srivenkatesh2010@yahoo.com

M.Sumathi²

Professor and Head, Dept. of ECE
Dhirajlal Gandhi College of Technology, Salem, India
nnsuma@yahoo.com

Abstract: Indian education system is one of the largest system in the world, to monitor the quality of the higher education the government established two bodies they are NAAC (National Assessment and Accreditation Council) and NBA (National Board of Accreditation). Implementation of Outcome Based Education in Indian education system becomes necessary. NBA has already given the process and procedure for establishing OBE in universities and autonomous (Tier I) and affiliation institutions (Tier II). The objective of this paper is to establish the OBE structure for the affiliated institutions. At present proper procedure or process are not available to establish assess and evaluate the Programme Educational Objectives, Programme Objectives and Course Outcomes for the affiliation institutions.

Keywords- NBA, NAAC, OBE, Tier I & II

I. INTRODUCTION

In India, higher education institutions count has increased highly for the past few decades. As per a survey of UGC report (2011-2012), 700 universities and 35,000 colleges are functioning, among these 2457 are technical institutions and are approved by AICTE for 2014-2015 academic year. The enrolment of students in private sector is 58.9%, state government is 38.6% and central government is 2.6%. Among these Engineering/Technology enrolment is 16.1% (3,261,500 students) [3]. This shows that India plays an important role in human resource development. NAAC and NBA are two major bodies in India that plays an important role in improving the quality of education. NAAC gives accreditation to institutions and NBA gives accreditation to programmes. Only 31.2% of universities and 14.5% of colleges are accredited by NAAC. In 2007, NBA became a provisional member in Washington Accord and started implementing Outcome Based Education system in Engineering/Technology institutions. In July 2014 it has become permanent membership. Only few programmes are accredited by NBA in Tier-I category which comes under Washington Accord. NBA Tier-II category for affiliated colleges does not come under Washington Accord. Though the Self Assessment Report format is same the mark weight

age differs. The objective of this paper is to bring certain changes in university policies to involve affiliated institutions in OBE [4].

II. PROCESS FOR ESTABLISHING PEOs, POs AND COs

PEOs, POs and COs are the parameters in the OBE system to ensure the quality of the education. First, administrative committee are to be established in the university and institution to monitor the overall process of PEOs, POs and COs [1].

PEOs are broad statements that Graduates are expected to possess after their graduation in their chosen profession. The behavior of the Graduates after graduation depends on the extent to which they are moulded while doing their programme. The PEOs, POs and COs of the department are developed in consultation with stakeholders like faculty, students, alumni, members of professional bodies and industry professionals. The administrative committee for both university and affiliated colleges are given in fig. 1.

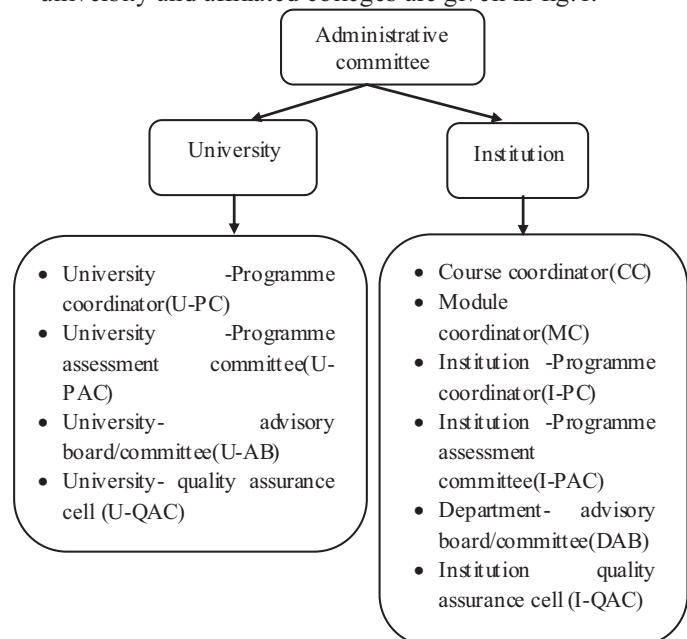


Fig. 1: Administrative committee

The process flow for establishing PEOs, POs and COs are given in the fig .2.

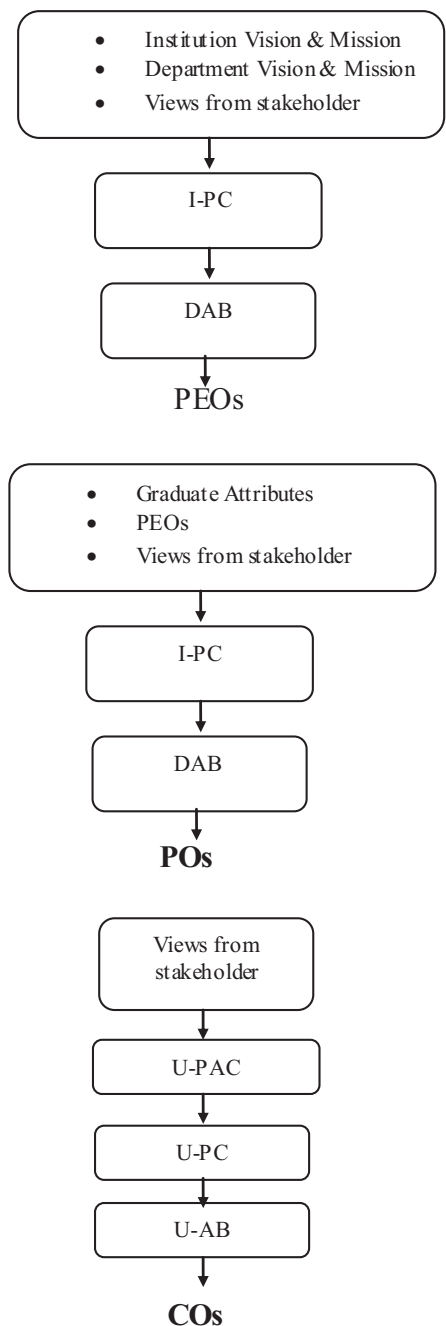


Fig 2: Establishing PEOs, POs and COs

University should frame the courses with six modules instead of units. All the six modules are six COs of that particular course. These COs have to be evaluated both in direct and indirect measurements. The direct evaluation is given in the Table 1 and rubrics can be used for assessment. The indirect measurement is, for each course a survey has to be taken at the end of the particular course (Course End Survey) and weight of 10% should be given and 90% from direct measurement.

Direct Measurement				
Internal				External
Modules	COs	Cycle Test (60 Marks)	ASS/TUT (40 Marks)	End Semester Exam
M-I	CO1	CT-I	Assignment /Tutorial	Totally, six questions without choice each question carries 15 marks. (90 marks)
M-II	CO2			
M-III	CO3	CT-II	Assignment /Tutorial	
M-IV	CO4			
M-V	CO5	CT-III	Assignment /Tutorial	
M-VI	CO6			
20%				70%

Table 1: Direct and indirect measurements of COs

III. PROCESS FOR ASSESSMENT OF PEOs, POs AND COs

PEOs, POs and COs are evaluated based on direct and indirect measurements. Some of the direct measurements for PEOs are pass percentage, placement, attainment of POs and attainments of COs, and indirect measurements are alumni survey and employer survey [2]. Fig.3 show the contribution of courses and surveys in the evaluations of PEOs and C, L and P represents course, Lab and project . Direct measurements for POs and COs are internal and external marks, and indirect measurements are programme exit survey and course end survey. At the end of each semester, Course/Module Co-ordinator evaluates and analyses the attainment of course outcomes through direct and indirect assessment methods for each course. If the attainment of course outcomes is less than the goal, it is brought to the notice of programme coordinator for necessary action. Effectiveness/change required in the modes of content delivery is decided based on data obtained from course end survey.

The programme assessment committee evaluates the attainment of POs. This is done with the attainment of COs, course end surveys and programme exit survey. Table 2 show the important parameters of COs, POs and PEOs

Cos		Pos		PEOs	
Direct	Indirect	Direct	Indirect	Direct	Indirect
Internal Marks	Course End Survey	From Cos	Exit Survey	Direct parameters depend on the PEOs like results, placements etc.	Alumni Survey
External Marks			Alumni Survey		Employer Survey

Table 2: Important parameters

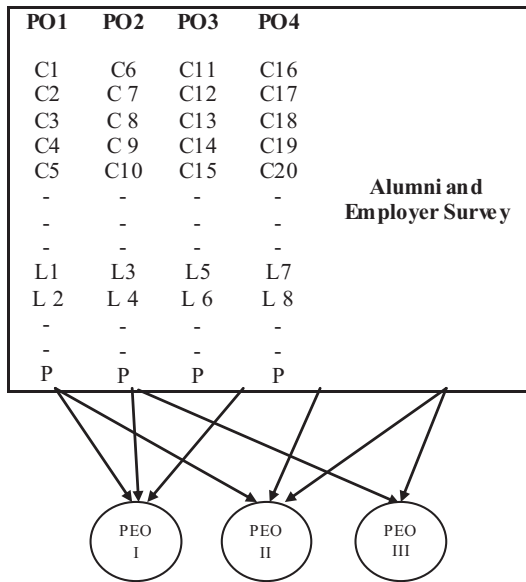


Fig.3. Contribution of courses and surveys
Using the following formula PEOs, POs and COs are evaluated:

Attainment	
CO	$\sum_{n=1}^6 CO_n + \sum_{m=1}^k CES_m w_m$ <p>Where, n=six number of COs in a course k=number of questions in the course end survey w_m=weight given to the particular question.</p>
PO	$\sum_{m=1}^k \sum_{n=1}^6 CO_{mn} w_m + \sum_{m=1}^k CE_m q_m$ <p>Where, n=number of Cos in a course m=number of courses Cos contributing n=number of Cos from each course w_m =weight given to the particular course m=number of questions in the course exit survey q_m=weight given to the particular question.</p>
PEO	$\sum_{n=1}^k PO_n r_m + \sum_{m=1}^k A_m s_m + \sum_{m=1}^k E_m t_m$ <p>Where, r_m = weight given to the particular PO s_m = weight given to the particular question in the alumni survey. t_m = weight given to the particular question in the employer survey.</p>

All the assessment results have to be discussed with university committee and further action should be taken. University has their zonal office for conducting the exams, similarly the zonal monitoring committee (ZMC) should be established to monitoring the OBE system.

IV. PROCESS FOR REDEFINING THE PEOs, POS AND COS

PEOs, POs and COs are redefined after every four years. Before redefining it should be ensured that the attainment of PEOs, POs and COs attained the target goal or not. The processes for redefining are as follows in the fig.3.

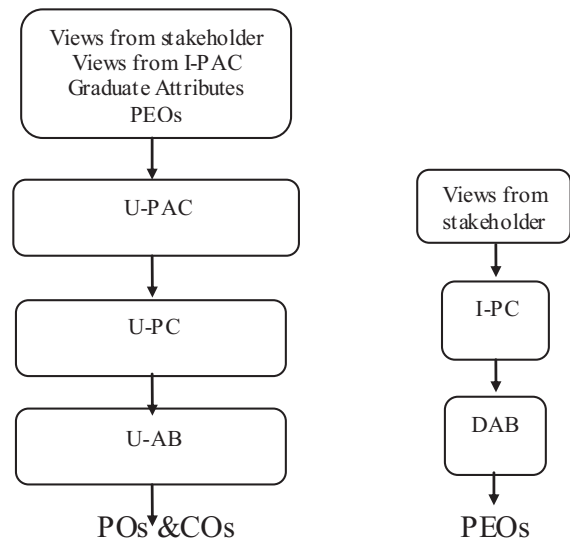


Fig.3. Redefining of PEOs, POs and COs

V. CONCLUSION

The proposed process and monitoring committee can be implemented in the afflicted institutions in India for the effective outcome based education.

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