

KALASALINGAM
ACADEMY OF RESEARCH AND EDUCATION
(DEEMED TO BE UNIVERSITY)

Under sec. 3 of UGC Act 1956. Accredited by NAAC with "A" Grade

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**Curricula Design,
Development and Update
Policy and Standard
Operating Procedure**

Version: 03

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The guidelines/protocols to be followed during the curricular design, development, and update have been modified in the year 2020 based on the recommendations made by the empowered committee.

The following table shows the difference between the earlier versions and the current one (History of the policies).

Sl. No.	Newly added subsections	Version: 1 (2014)	Version: 2 (2018)	Version: 3 (2020)
1	Policy Particulars	Available	Modified (Page no: 4)	Modified (Page no: 5)
2	Choice-based credit system	Available	Modified (Page no: 10)	Modified (Page no: 12)
3	National Education Policy	Not available	Not available	Newly added (Page no: 7)
4	Statutory and Regulatory Bodies	Available	Modified (Page no: 5)	Modified (Page no: 7)
5	UNESCO Curriculum competencies	Not available	Not available	Newly added (Page no: 8)
6	Accreditation Bodies	Available	Modified (Page no: 5)	Modified (Page no: 8)
7	Professional Bodies	Available	Newly added (Page no: 5)	Modified (Page no: 9)
8	Learning Outcomes and Learning Experience	Available	Modified (Page no: 11)	Modified (Page no: 10)
9	Flexibility and Mobility	Available	Modified (Page no: 13)	Modified (Page no: 12)
10	Assessment and Evaluation	Available	Available	Available
11	Curriculum design, development, and update processes	Available	Available	Modified (Page no: 13)

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Curricula Design, Development, and Update Policy

Version: 03

This policy is applicable to all the departments at KARE right from the Academic Year 2020 to 2021

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1. POLICY PARTICULARS

a. Policy Statement

The mandate of this policy is to ensure that all KARE curricula advance academic excellence by considering the multiple purposes of higher education as well as achieving its vision and mission. In pursuing these aims, curricula at all levels shall produce graduates with the required competencies to contribute to the social and economic advancements of the nation.

b. Background

This policy provides a framework for curriculum development and revision throughout a program's lifecycle that is purposeful and intentional and is student-centered regardless of the mode of delivery. Clearly articulated program and course learning outcomes support this student-centered curriculum. Curriculum development or revision may be required for the reasons including, but not limited to, the following:


- i) Changes in academic, industry, and/or community needs
- ii) Changes in pedagogy or instructional methodology
- iii) Changing needs of the students
- iv) Changes in regional, national, and international needs
- v) Changes recommended by the Professional bodies

New directions and initiatives from regulatory authorities (AICTE/UGC/ICAR/CoA)

The curriculum recognizes the diversity within our communities and contributes to the development of a respectful learning environment.

KARE will ensure that the curriculum:

- i) Is consistent with the vision and mission of the Kalasalingam Academy of Research and Education
- ii) Is student-centred

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- iii) Is outcomes-based with course content, learning resources, learning activities, assessment, and evaluation, all derive from, and align with, program and course outcomes.
- iv) Complies with the various policies and standards including National Educational Policy, UNESCO Competencies for SDGs, Model Curricula of statutory and regulatory bodies

2. NEED ASSESSMENT AND ANALYSIS

Needs assessment is the basic element of curriculum design, development, and revision. The needs assessment shall be carried out to identify the key competencies, desirable characteristics, desirable learning experiences in the curriculum development process. Need Analysis includes but is not limited to, the following:

- i) Policy Revision at the National Level
- ii) Statutory and Regulatory Bodies
- iii) UNESCO Curriculum competencies
- iv) Accreditation Bodies
- v) Professional Bodies
- vi) Stakeholders Feedback
- vii) Industry Associations

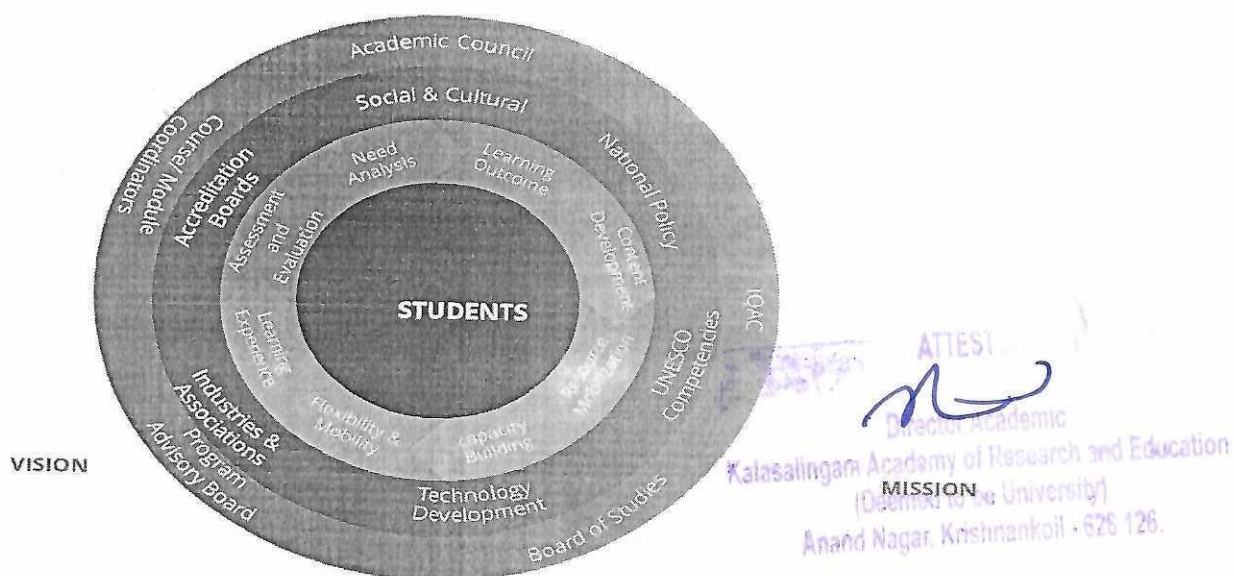


Figure 1: Illustration for design and development of student-centred curriculum

Figure 1 depicts the illustration for the design and development of a student-centred curriculum. The curriculum design in its entirety must follow the vision and mission of the institution. The need for a curriculum revision/redesign analysis can be acquired from the stakeholders' feedback mechanism, national education policy, regulatory bodies, accreditation boards, professional societies, industrial experts, etc. The Academic Council, Board of Studies, IQAC, Department Advisory Board, Program Coordinator, Course/Module Coordinator are collectively into the implementation, monitoring, and approval process of the curriculum design and development. The curriculum must portray a clear picture of the learning outcomes, learning experiences, flexibility, mobility, assessment and evaluation, resource, and content development.

The information from needs assessment and analysis is to ensure that the decisions about curriculum, course outline, course materials, and instruction are made on the principle of requirements and reasonableness. The needs assessment and analysis are not a one-time activity at the beginning of the new curriculum cycle, rather it's a continuous activity throughout the program life cycle.

a. National Educational Policy

As envisaged in the National education policy, curricula should focus on building character and creating holistic and well-rounded individuals equipped with the key 21st century skills along with cognitive development.

The curricula essentially shall cover the fundamental principles of National Education Policy (NEP) as indicated below, besides holistically meeting the objectives of NEP:

- Realization of Holistic Multidisciplinary Education
- Creativity and critical thinking to encourage logical decision-making and innovation
- Life skills such as communication, cooperation, teamwork, and resilience
- Respect for diversity and respect for the local context
- Synergy in curriculum across all levels of education
- Cross-curricular pedagogical approach
- Technological use and integration


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- Full Equity and Inclusion
- Internationalization

b. Statutory and Regulatory Bodies

The curricula designed, developed, and updated at the institution should have the essential aspects as mentioned in the Learning Outcomes-based Curriculum Framework (LOCF) recommended by the University Grants Commission (UGC) and adhere to the guidelines of the regulatory bodies of the respective program.

- The curricula of the Engineering and Technology programs offered at the institution should be compliant with the mandates described in the model curricula of AICTE.
- The curricula of the Agriculture and Horticulture programs should be as per 5th Deans committee report of the Indian Council for Agricultural Research (ICAR).
- The curricula of Architecture programs offered at the institution shall follow the guidelines of the Council of Architecture (CoA), and it shall be updated as and when the promulgations/announcements are made by the CoA.

c. UNESCO Curriculum Competencies

The curricula shall strive to accommodate the competencies suggested by UNESCO to address the different Sustainable Development Goals (SDG) of UN and make the students globally relevant:

- (a) Systems thinking
- (b) Anticipatory
- (c) Normative
- (d) Strategic action
- (e) (emphatic) collaboration
- (f) Critical thinking
- (g) Self-awareness
- (h) Integrated problem-solving

d. Accreditation Bodies

The objectives of the curricular design are to meet the standards put forth by the national and international accreditation agencies such as NBA, ABET to maintain the quality of

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education delivered to the students and enable them to transform and compete with others on gaining the competencies/attributes during their period of study. The curricula shall meet the institutional accreditation agencies criteria as well as the program accreditation agencies criteria in letter and spirit.

e. Professional Bodies

The program curricula shall mandatorily comply with the program (specific) criteria given by the respective professional bodies such as IEEE, ASME and ASCE as recognised by the accreditation agencies. For programs where such a professional body/regulatory body is not specified, they shall consider the relevant professional body governing the practice of profession such as The Institute of Chartered Accountants of India and Institute of Company Secretaries of India or the national level societies contributing towards evolving standards such as National Council for Hotel Management and Catering Technology (Society).

f. Stakeholders Feedback

Feedback mechanism leverages to intervene periodically and introspect into the curricula and syllabi of any programme, and the same will help to augment the teaching-learning processes, thus imparting quality education to the students. The stakeholders indeed analyze the institution's performance on various aspects/metrics, and henceforth, the institution shall make full efforts to receive, analyse, and implement the feedback from the stakeholders.

i. Feedback mechanism

The Institution has the 360 degrees type feedback reception system from students, alumni, teachers/academic experts, and employers/industrial experts, who are the constituents of the programme and share the collective responsibility in providing the essential inputs. The process of integrating the stakeholders' feedback in the curricula development is as shown in figure 2. The Internal Quality Assurance Cell (IQAC) has the onus of receiving feedback from the stakeholders, and some of the important/key elements of the feedback are taken into cognizance and reported to the department through the various quarter meetings of the IQAC. In addition to the structured feedback, departments and IQAC may collect the feedback through formal/informal interactions, workshops, and any other modes. The IQAC analyses the

feedback and shares with the departments with the necessary recommendations. The action taken report on the stakeholders' feedback is submitted back to the Academic Council through IQAC. The Academic Council analyses at all angles and suggest the same for implementation and to be included in the curriculum revision/redesign.

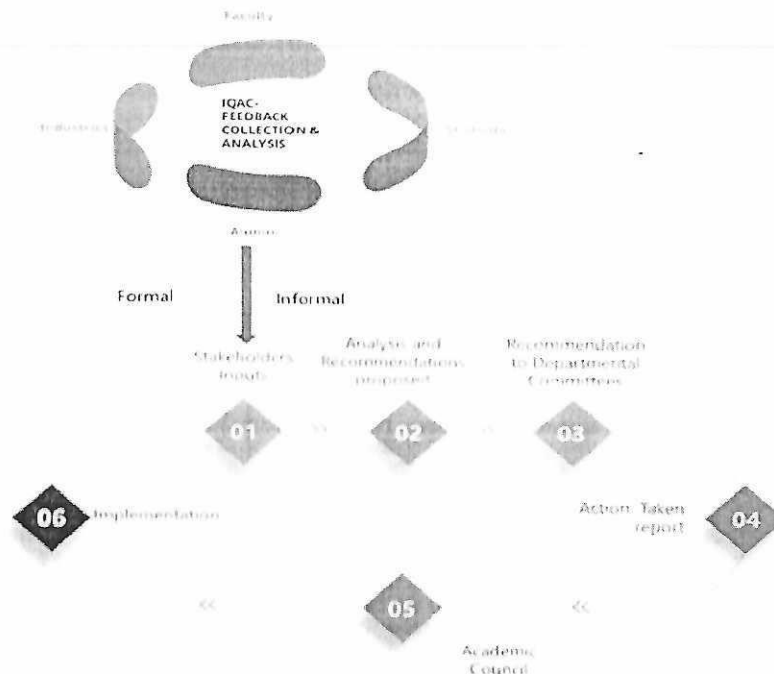


Figure 2: Integrating stakeholders' feedback in curricula development

g. Industry Associations

Associations of various industry such as CII, NASSCOM and SME India through their education division are producing the annual report/conclaves on the gap between industry and academia. The curricula shall strive to bridge those gaps and produce Industry-ready graduates by means of courses' content and learning experiences.

3. LEARNING OUTCOMES AND LEARNING EXPERIENCE

a. Learning outcomes

Learning Outcomes (LO) indicates clearly what students can do or what they can demonstrate when they effectively participate in the course or successfully complete the program. LO are observable, measurable, and demonstrable that the student had gained from the course or program. The intended LO should inform both the learning experience and guide the assessment process. They should be written in a way that is readily understandable to students. LO can be broadly categorized in three namely:

- 1) Program Outcomes (POs),
- 2) Program Specific Outcomes (PSOs),
- 3) Course Outcomes (COs).

The POs and COs framed must be in line with the Institution Vision and Mission and the same must be an effective reflection from the NBA POs, ABET SOs and any national / international accreditation boards/council for the respective course/program. POs can be statements of 10 to 12. COs of 03 to 06. When the POs and COs are mapped/correlated with the necessary measurable tools then the student can do or demonstrate their learnings/experiences. The mapping keywords to be correlated with the Bloom's Taxonomy.

Learning outcomes provide only signposts to the main areas of learning that the programme team, or programme committee intend. They cannot, and should not, hope to cover all that a student may get out of a course. Students are likely to have many other outcomes from their learning experience (such as increased confidence, personal satisfaction, new insights, improved skills, better job prospects and so on) which may not necessarily be on the list of 'intended' learning outcomes.

b. Establishment of Learning Outcomes

The Departments at KARE shall establish the learning outcomes, Program/Student Outcomes, Program Educational Outcomes and Program Specific Outcomes through a

consultative process involving stakeholders such as Alumni, Industry, Parents and Professional Bodies, future scope, and the societal requirements, as shown in Figure 3. The framed Vision and Mission are reviewed to check for consistency with the Vision and Mission of the institution.

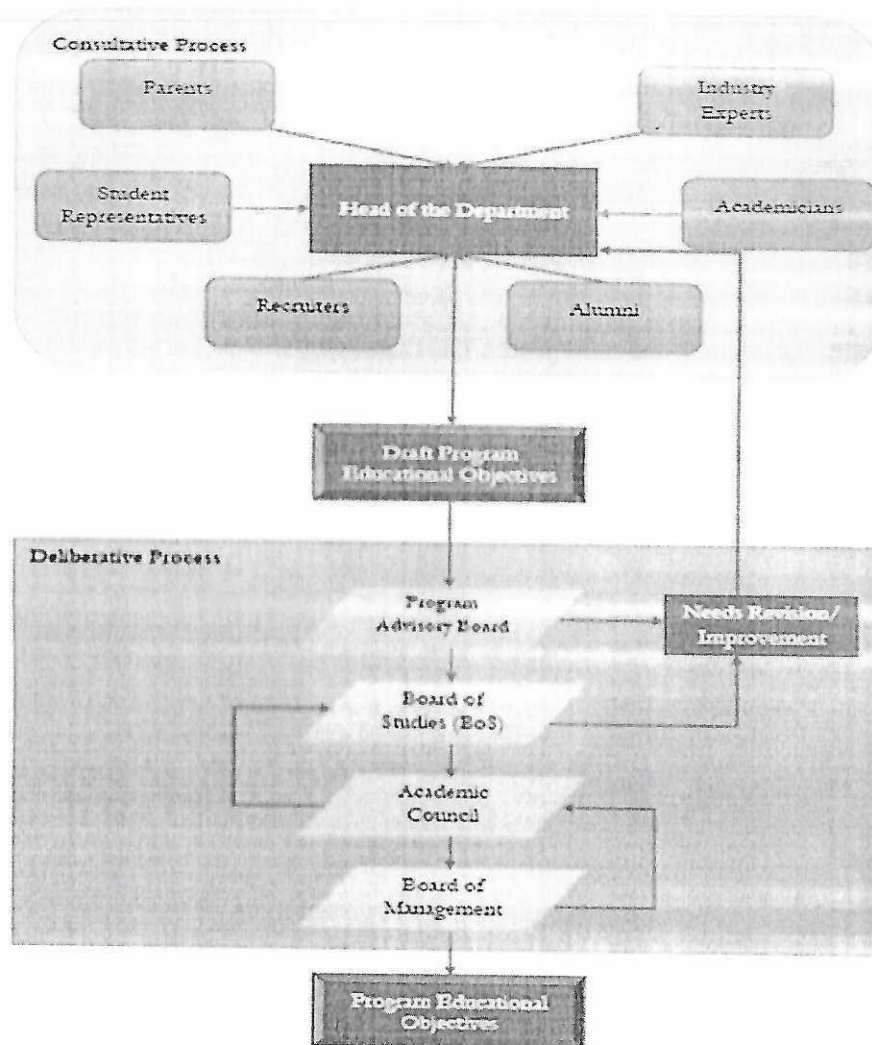


Figure 3: Establishment of Learning Outcomes

c. Learning Experiences

It involves identifying Learning Experiences (LEs) (lectures, webinars, solving problems, work in groups, peer instruction, flipped classrooms, etc.) that would, if a learner completed them, lead to the attainment of LOs. LOs help instructors to choose the most appropriate LEs for supporting learners to achieve desired LOs. If LOs include demonstration,

then the LEs must be consistent with learner abilities to demonstrate what they've. LEs and LOs must be aligned.

4. FLEXIBILITY AND MOBILITY

a. Flexibility

Flexibility in education is about people and their capacity to learn at their will and adaptively work on their own behalf. The flexibilities shall permit the students, both fast achievers and slow achievers, to choose their courses and experiences from wider options such as choice of semester, courses from other programs/schools, and different co-curricular/extra-curricular skills to develop themselves holistically. Systems and structures should be especially flexible and responsive to changing needs of the students to achieve their ambitions beyond the program objectives such as entrepreneurship while studying and engaging with industry for prolonged period.

b. Mobility

Curriculum should be flexible enough to encourage the mobility of students from one program to another program, or to/from other institute in India or abroad. Curricula shall facilitate seamless horizontal and vertical mobility.

5. ASSESSMENT & EVALUATION

Assessment of Learning Outcome attainments shall be carried out throughout the semester using both formative assessments and summative evaluations.

Formative Assessment (Continuous assessment) to understand the on-going assessment of how students are learning, undertaken by the faculty and the student during the learning process. The assessment tools and frequency of assessment be decided based on the nature of the course and learning outcome and be produced in the course plan. The rubrics as and when required are given priorly for better understanding of the student's performance.

Summative Assessment (semester end examination) is the assessment of learning at the end of a course of study to measure how students have met curriculum standards. This

assessment shall allow students to synthesize, apply, and present information in a variety of forms based on the nature of course and learning outcome.

6. CURRICULUM DESIGN, DEVELOPMENT AND UPDATE PROCESS

Committees shall be constituted as per the statutory bodies norms and as well the institute rules, which includes Academic Council (AC), Board of Studies (BoS) and Department Advisory Board (DAB) and these committee. The requirement of curriculum revision/redesign or curriculum for the new programme should evolve from the need analysis and the expectation of stakeholders, govt bodies (State and Central) and UNESCO competencies. The curriculum design, development and update process framework is as shown in Figure 4. The course/module coordinators would provide sufficient inputs after the need analysis, that are needed to draft curriculum revision/redesign. The Program Coordinator would propose the draft curriculum revision/redesign to the DAB for evaluation. After the DAB recommendation, the curriculum, course contentment and evaluation shall be placed at BoS for consideration. After the BoS recommendation, the curriculum, course contentment and evaluation shall be placed at AC for consideration. After the AC approval, the curriculum shall be implemented.

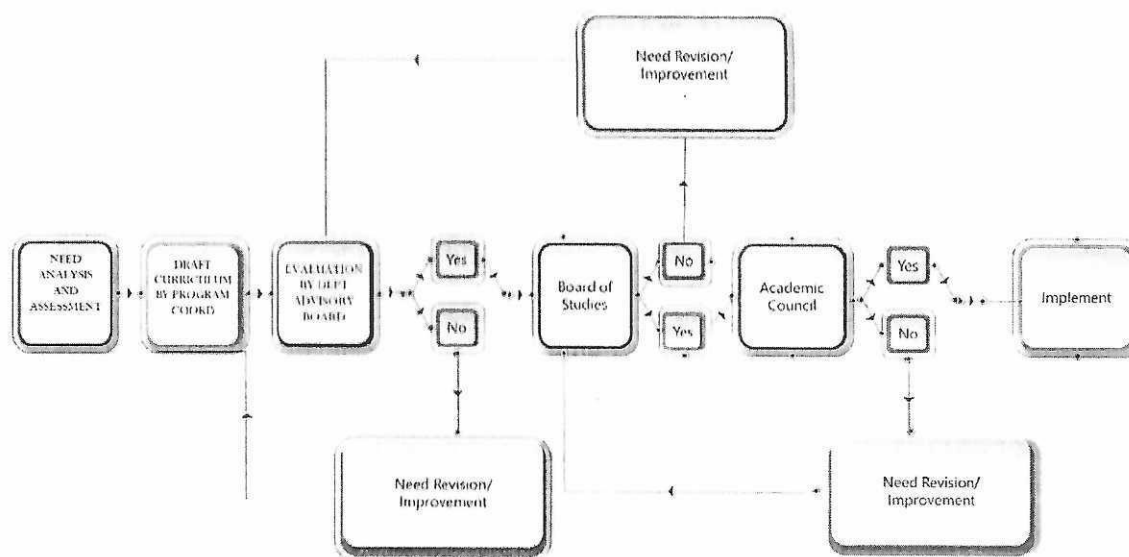



Figure 4: Curriculum design, develop and update process framework

After the BoS recommendation, the curriculum, course contentment and evaluation shall be placed at the Academic Council for consideration. After the Academic Council approval, the curriculum shall be implemented.

7. OUTCOME ATTAINMENT PROCESS

Course Outcomes (CO) attainment process shall have two evaluation methods namely Direct and In-direct methods. Direct assessment of a CO shall be determined after considering the examinations and rubrics across all courses addressing the COs as mentioned in Figure 5. Indirect assessment of a CO shall be determined based on the course exit survey, programme exit survey, co-curricular activities, and extracurricular activities as shown in Figure 5. Course exit survey will be taken at the completion of every course at the end of each semester by the course faculty(s). Similarly, programme exit survey shall be gathered after the completion of all the courses as per the curriculum by the respective class coordinator(s)/Programme Coordinator concerned.

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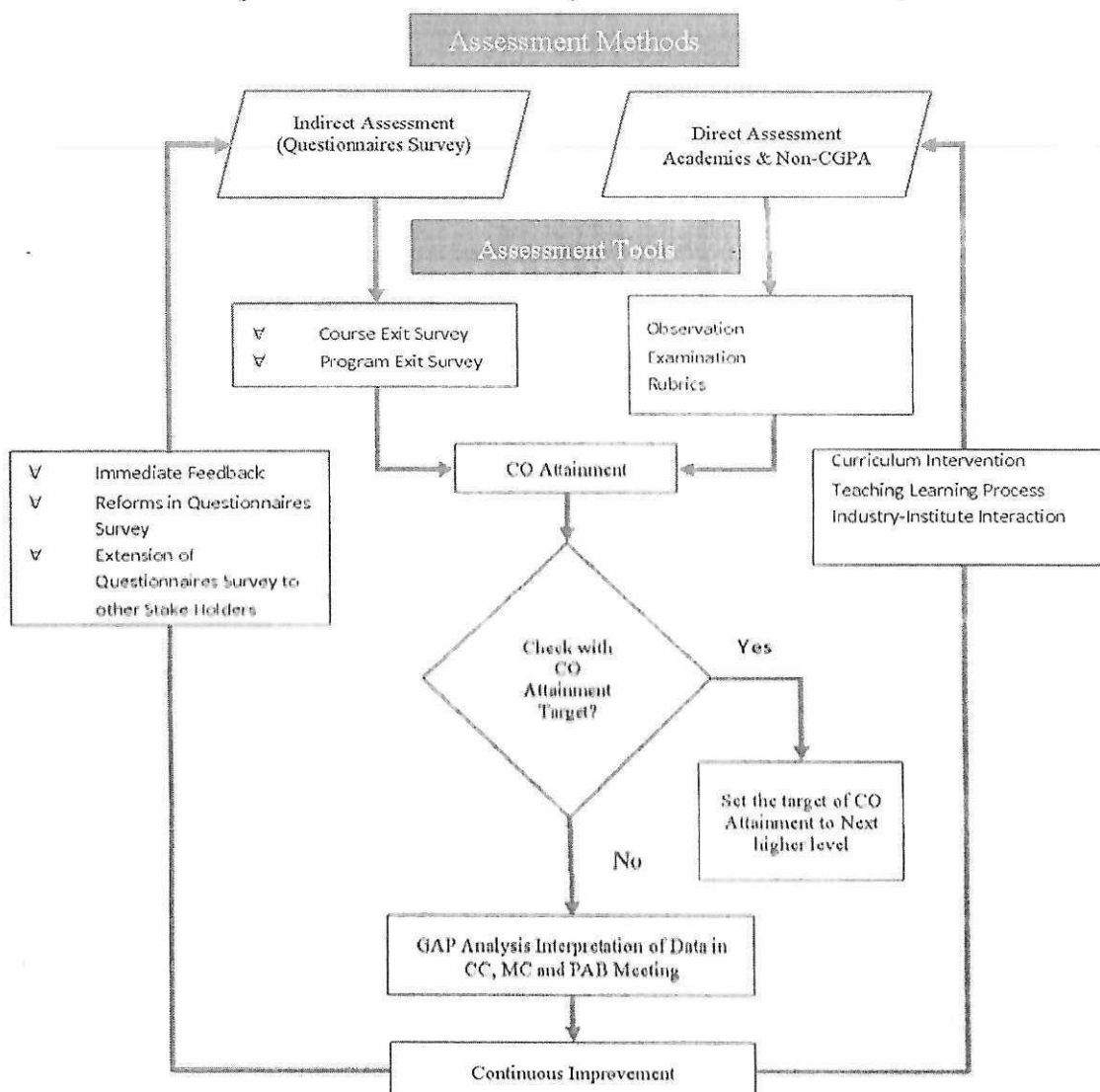


Figure 5: Outcome attainment measuring process.

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