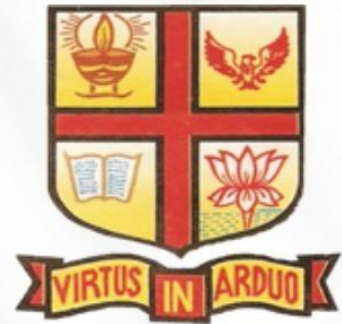


St. Aloysius College(Autonomous) Jabalpur (M.P.)

Reaccredited 'A+' Grade by NAAC(CGPA:3.68/4.00)
College with Potential for Excellence by UGC
DST-FIST Supported & STAR College Scheme by DBT

OUTCOME BASED EDUCATION MANUAL



PREFACE

This manual serves as a concise yet comprehensive guide to implementing Outcome-Based Education (OBE), a progressive educational framework designed to ensure that all learning and teaching activities are directed towards achieving specific, measurable outcomes. Central to OBE is its emphasis on the tangible skills and knowledge students acquire from their learning experiences, marking a significant departure from traditional education models towards one that values clear, observable, and assessable outcomes at both the course and program levels.

At the core of this manual lies an in-depth exploration of the methodologies for calculating Course Outcomes (COs) and Program Outcomes (POs). These calculations are essential for educators and institutions seeking to align their curricula, teaching methodologies, and assessment strategies with the defined outcomes. By introducing various parameters and metrics, the manual provides a structured approach to quantitatively assess the effectiveness of educational programs in achieving their intended outcomes.

Moreover, this guide offers practical tools and examples to aid educators in the planning, implementation, and evaluation phases of OBE. It aims to cultivate a deeper understanding of how to effectively apply OBE principles to enhance student learning and success. Through this manual, educators are empowered with the knowledge to create a more engaging, relevant, and impactful learning environment that equips students for real-world challenges.

Additionally, with the implementation of the National Education Policy (NEP), the focus of OBE has shifted towards major-wise subjects. This adaptation ensures that the principles of OBE are meticulously applied to the specific needs and outcomes of each major, further tailoring education to meet the diverse and evolving demands of the professional world. This targeted approach under the NEP enhances the relevance and applicability of OBE, ensuring that students not only achieve academic excellence but are also well-prepared for their future careers.

St. Aloysius College (Autonomous), Jabalpur

Outcome Based Education Manual

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KEY TERMS OF OUTCOME-BASED EDUCATION (OBE)

Course:

A course is a theory, practical or theory cum practical subject studied in a semester. For example, Mathematics.

Course Outcomes (COs): COs are statements that articulate the significant and essential learning achieved by students, which can be reliably demonstrated at the end of a course.

Program:

A program refers to a specific field of study, comprising a series of courses and activities designed to achieve certain goals, culminating in the award of a degree. For instance, B.Sc. in Computer Science.

Program Outcomes (POs): POs are detailed statements that specify what students should be able to do by the time of graduation, closely aligned with Graduate Attributes.

Program Specific Outcomes (PSOs): Program Specific Outcomes are more generalized statements that outline the knowledge and skills that students should possess upon finishing a particular program. These have to do with the abilities, comprehension, and conduct that students acquire.

Graduate Attributes (GA): These are qualities, skills and understandings that graduates of an accredited program are expected to possess.

Assessment:

This involves various methods employed by an institution to gather and analyze data to evaluate the achievement of Program Educational Objectives and program outcomes.

Attainment:

Attainment indicates the level of achievement of predefined goals, primarily measured through academic performance in tests or examinations.

VISION, MISSION AND OBJECTIVES OF THE INSTITUTION

Vision

St. Aloysius' College strives for quality in academics, character formation and developing a scientific temper thereby, opening new avenues for enriching life.

Mission

We, the members of St. Aloysius' College, aim to create and facilitate an environment for knowledge, research, skill, self-reliance and humanitarianism that moulds the youth to build up a better world.

Objectives

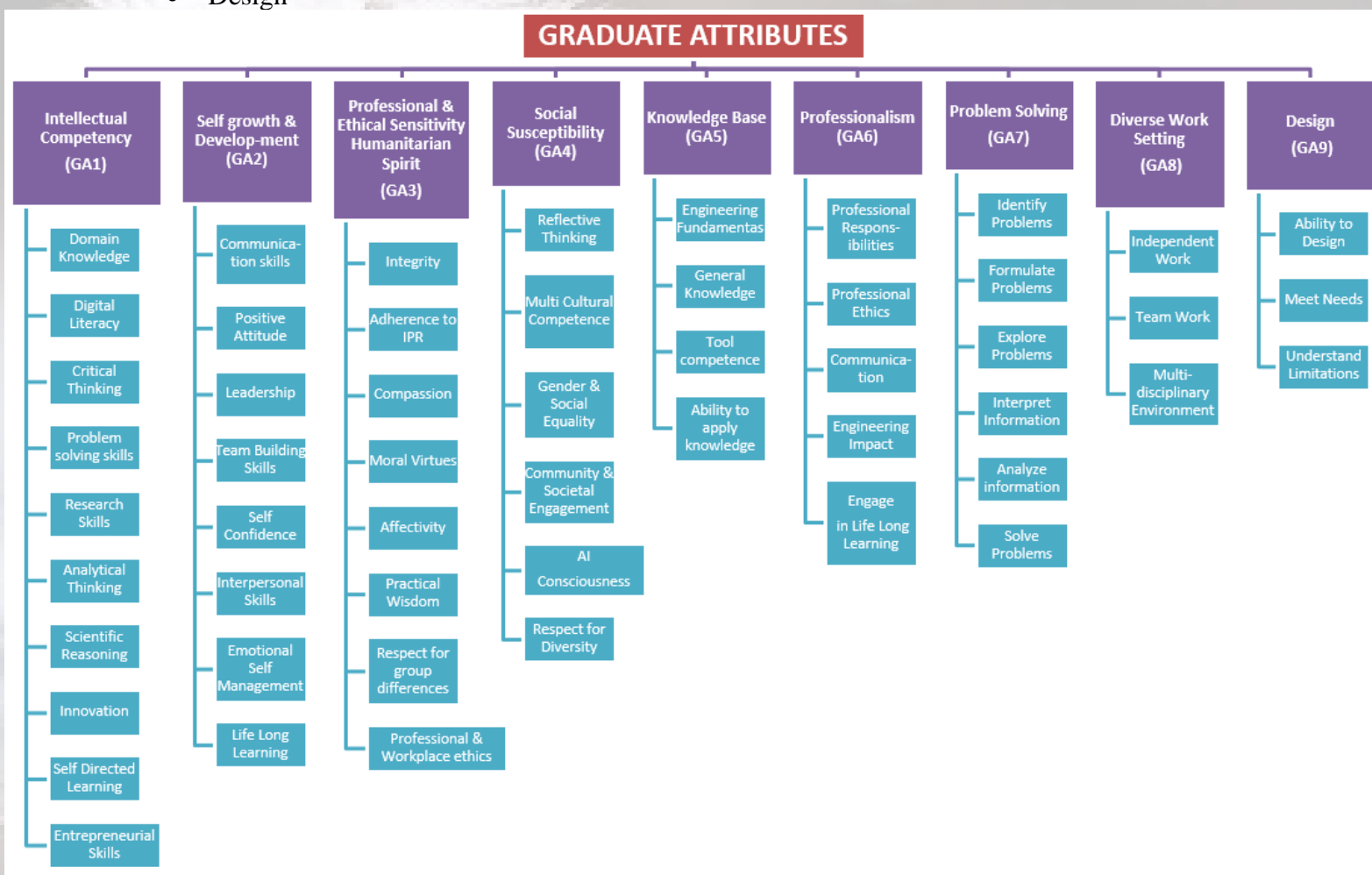
- *To impart qualitative teaching and rigorous training and to empower the youth professionally, to enable them to respond to the needs and challenges of the times.*
- *To mould intellectually competent youth who are responsive and committed to build an inclusive society.*
- *To inculcate moral values in the students and make them learned, competent, loyal and kind hearted citizens of this country.*
- *To help them realize the motto of the college Virtus in Arduo (Strength through Striving).*

GRADUATE ATTRIBUTES OF THE INSTITUTION

Graduate attributes refer to a set of skills, knowledge, and abilities that students are expected to develop and demonstrate by the time they complete their degree programs. These attributes are designed to ensure that graduates are well-prepared for the workforce and can contribute effectively to society. They typically encompass a broad range of competencies, including academic knowledge, technical skills, and personal qualities.

The institution focuses on following Graduate Attributes (GA):

- Intellectual Competency
- Self-Growth and Development
- Professional & Ethical Sensitivity and Humanitarian Spirit
- Social Susceptibility
- Knowledge Base
- Professionalism
- Problem Solving
- Diverse Work Setting
- Design

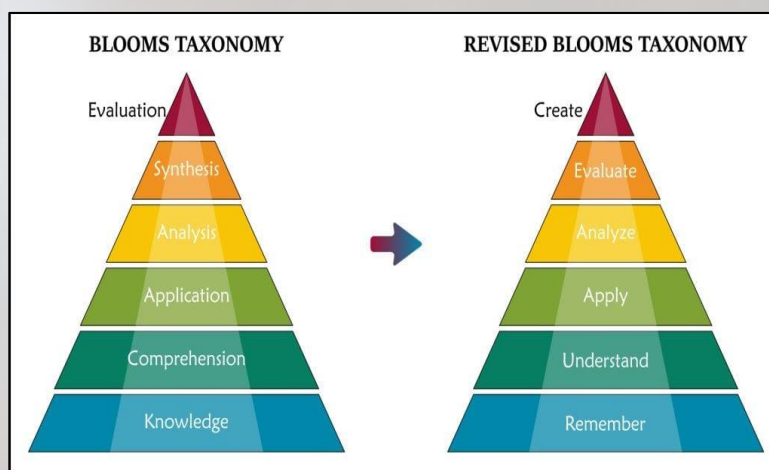


PROGRAMME OUTCOMES, PROGRAMME OUTCOMES AND COURSE OUTCOMES OF THE INSTITUTION

Please refer [link](#)

Bloom's Taxonomy Learning Activities and Corresponding Assessments Methods

Learning Outcomes	Revised Learning Outcomes	Learning Activities	Assessments
Knowledge	Remember	Highlight key words, Memory activities Reading Materials, Watching presentations and videos.	Multiple choice, Quizzes, True and false questions, Tutorials.
Comprehensive	Understand	Case studies, Concept map, Demonstrations, Diagrams, Flow charts, Group discussions, Mind map, Play/sketches, Peer Teaching, Summarize, Think-pair-share	Presentation, Panel Discussion, Short / Long Answers, Create a summary, Essay Writing
Application	Apply	Calculate, Case studies, Tutorials, Concept map, creating examples, Street Play, Demonstrations Flipped classrooms, Group work, Lab experiments, Problem-solving tasks, short answers.	Role Play, Group Discussion, Problem-solving tasks, Written Tests.
Analysis	Analyse	Participation in Local, State, National, International Seminar/ Workshop/ Conferences, Case studies, Compare and contrast (with charts, tables, Venn diagraph), Concept map, Debates, Discussions, Mind mapping, Questionnaires, Report/survey, Think-pair-share.	Budget Analysis, Case studies, Visit to Industries, Historical Sites, Research Institutes, Education Trips, Research paper, Review paper and book chapter writing.
Synthesis	Evaluate	Compare and contrast (with charts, tables, Venn diagrams), Concept map, Journal, Review paper/ book.	Debates, Discussions Presentation, Report writing
Evaluation	Create	Brainstorm, Decision-making, tasks, Model Exhibition Performances, Group Projects, Short Film Making Projects, Organizing, Hosting and participating in department fests, Youth Parliament.	Developing Software / Websites, Filing Income Tax Returns, Magazine and News, Model Exhibition, Mini Projects, Group Projects, Research projects, Written assignment, Organizing Curricular and Cocurricular Fests



PROCESS INVOLVED IN OUTCOME BASED EDUCATION

The OBE process for St. Aloysius College is a student-centered approach that prioritizes specific knowledge, skills, and attitudes graduates are expected to possess. This approach is structured around Programme Outcomes (POs), Programme Outcomes (POs) and Course Outcomes (COs), which are clearly defined objectives aligned with the institution's vision, mission. POs articulate the broad goals expected at the program level, PSOs measure the defined goals for the specific program, while COs detail the learning achievements expected from individual courses.

OBE ensures that all educational activities are directed towards achieving these outcomes, making the learning process more focused and measurable. This alignment not only supports a cohesive educational experience but also ensures that the curriculum remains relevant to the evolving demands of the professional and academic communities. Additionally, OBE aligns with the Graduate Attributes (GAs) as specified in the Washington Accord, emphasizing the development of a set of common competencies among graduates. This comprehensive approach guarantees that students are well-prepared for their professional careers, reflecting the institution's commitment to delivering high-quality education.

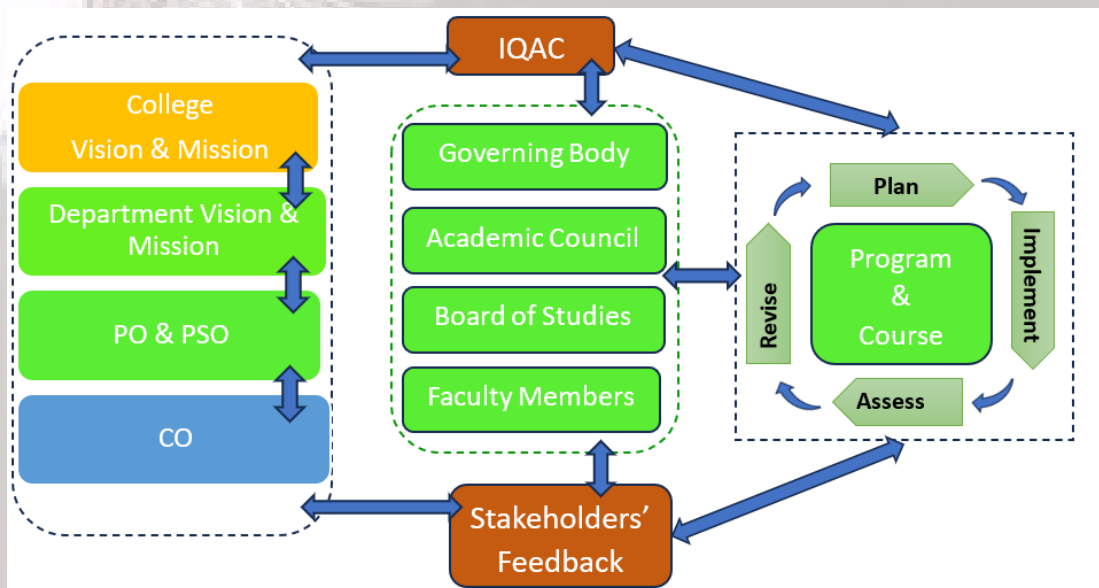


Figure: Defining Process of Different Outcome Statements

Implementation of outcome statements in teaching and learning

The education establishment's conventional knowledge is challenged by the teaching and learning approach known as outcome-based teaching and learning (OBTL). Outcome-based teaching and learning (OBTL) offers several significant benefits:

Clarity and Purpose: OBTL clearly defines the specific knowledge, skills, and attitudes students are expected to achieve, aligning curriculum, instruction, and assessment with these outcomes. This clarity helps both educators and students understand the goals of the educational process.

Student Engagement and Motivation: By focusing on tangible and relevant outcomes, students can see the practical applications of their learning. This relevance increases their engagement and motivation to learn.

Personalized Learning: OBTL allows for differentiation in instruction to meet the diverse needs of students. Educators can tailor their teaching strategies to ensure that all students can achieve the desired outcomes, regardless of their starting point.

Continuous Improvement: OBTL includes systematic evaluation and feedback mechanisms that help educators assess the effectiveness of their teaching methods and learning activities. This ongoing assessment promotes continuous improvement in teaching practices and curriculum design.

Accountability: OBTL holds educators and institutions accountable for student learning by focusing on outcomes rather than just inputs like content coverage or instructional hours. This accountability drives higher standards in education.

Skill Development: By emphasizing specific competencies, OBTL ensures that students develop essential skills that are directly applicable to their future careers and life situations, enhancing their employability and readiness for real-world challenges.

Enhanced Assessment: OBTL uses varied assessment methods aligned with the learning outcomes, providing a more comprehensive evaluation of student learning and abilities beyond traditional exams and tests.

Alignment with Industry Needs: OBTL often involves input from industry and professional bodies to ensure that the learning outcomes match the skills and knowledge required in the workplace, thus bridging the gap between education and employment.

In order to implement an outcome-based curriculum in the classroom, teachers must take a calculated approach that starts with clearly defining and communicating learning objectives to students. These objectives are the focus of the curriculum, which includes pertinent material and interesting teaching strategies like interactive lectures, group projects, and problem-based learning exercises. Both formative and summative continuous assessment is combined to monitor students' progress toward meeting the

objectives, and frequent feedback is given to promote growth. The learning process is supported and enhanced by technological tools such as digital simulations and learning management systems. By fostering an active, student-centered learning environment and continuously refining instructional strategies and resources in response to feedback and performance data, this strategy guarantees that students acquire the necessary knowledge, skills, and competences.

Attainment framework

Attainment of outcome statements involves evaluating whether the defined learning outcomes are clear, measurable, and achievable, and whether they effectively guide both teaching and learning processes. Here are the steps to implement the same:

Attainment of Course Outcomes and Program Outcomes

1. Threshold Marks for Achieving the Course Outcome and Program Outcomes

The benchmark for attainment of Course Outcomes and Program Outcomes is determined using a threshold value, which is calculated based on students' performance levels. This threshold is derived through the application of a Normal Distribution.

For Course Outcomes:

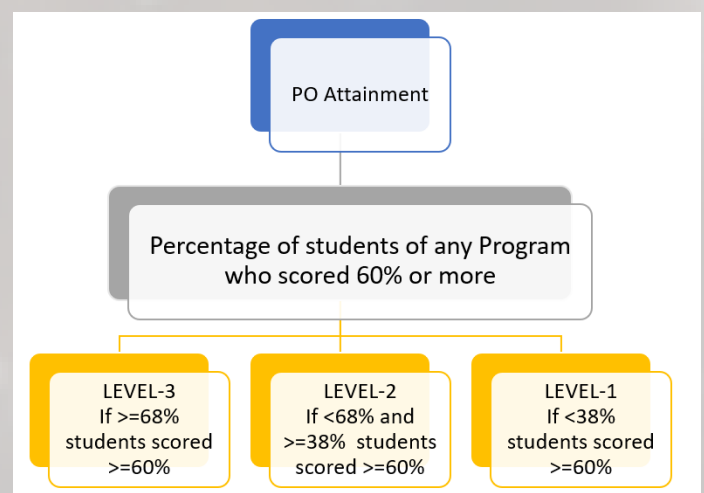
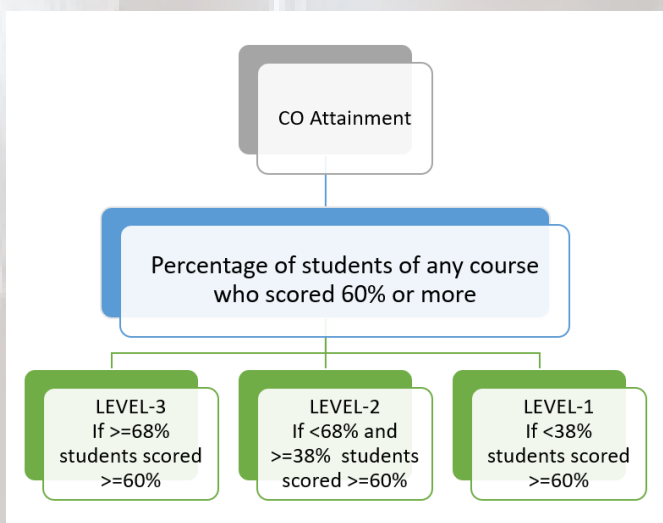
- 1 Standard distribution corresponds to scenarios where 68% or more of the students registered for the course achieve 60% or more marks.
- 0.5 Standard distribution applies when 38% to 68% of students score 60% or more marks.

Levels of attainment are classified as follows:

Level 3 (Highest): Achieved when students' performance falls within 1 standard deviation.

Level 2 (Moderate): Achieved when performance is within 0.5 standard deviation.

Level 1 (Lowest): Assigned when performance falls below 0.5 standard deviation.



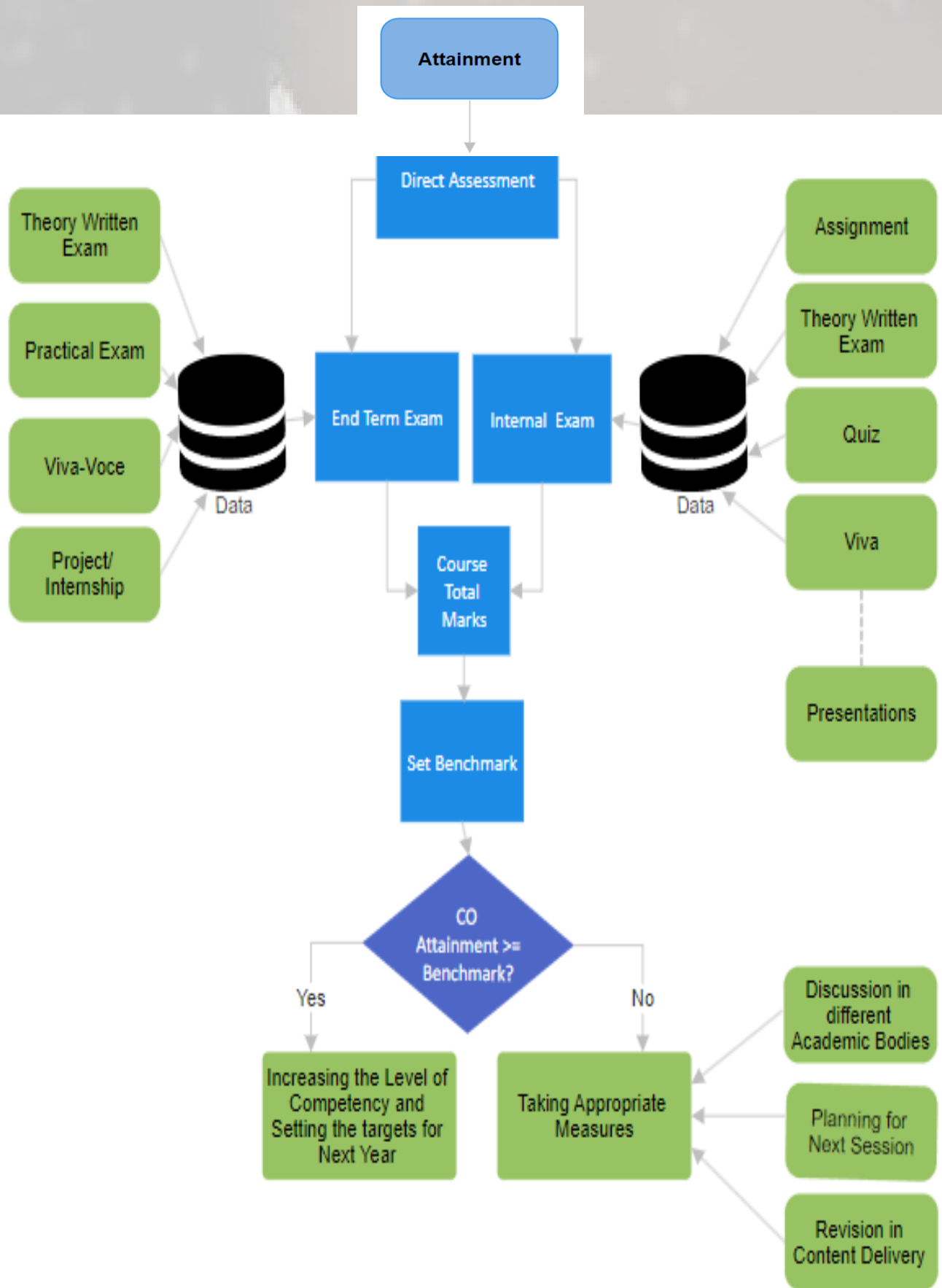
2. Quantitative Assessment of Course Outcomes

Carry out the assessment using questions designed with Bloom's Taxonomy levels. (Refer Annexure 1)

- **Collect Data:** Gather quantitative data on students' performance in assessments related to each Course.
- **Calculate CO Achievement:** Use the data to calculate the achievement level of Course Outcomes.
- **Comparison with threshold:** Compare students' performance against the threshold marks. If satisfy then increase the level of competency and setting the target for next year otherwise take appropriate measures.
- **Aggregate for PO Achievement:** Aggregate the CO achievements to assess the overall achievement of each PO, providing a comprehensive view of how well the program meets its objectives.

3. Quantitative Assessment of Program Outcomes

- **Collect Data:** Gather quantitative data on students' performance in assessments related to each Program.
- **Calculate PO Achievement:** Use the data to calculate the achievement level of Program Outcomes.
- **Comparison with threshold:** Compare students' performance against the threshold marks. If satisfy then increase the level of competency and setting the target for next year otherwise take appropriate measures.



4. Sample Calculation of Outcome Attainment

Course Name- B.B.A.			
Course Outcomes- First Year			
Subjects	Total Student	First Division	ATTAINMENT LEVEL
Major-I (Business Management)	130	102	LEVEL-3
Major-I (Micro Economics)	49	14	LEVEL-1
Major-I (Financial Accounting)	69	36	LEVEL-2
Major-II (Communication Skills)	130	108	LEVEL-3
Major-II (Business Statistics)	49	16	LEVEL-1
Major-II (Business Mathematics)	69	52	LEVEL-3
Minor (Communication Skills)	72	39	LEVEL-2
Minor (Business Statistics)	130	39	LEVEL-1
Minor (Business Mathematics)	46	26	LEVEL-2
Elective (Communication Skills)	46	27	LEVEL-2
Elective (Business Statistics)	68	15	LEVEL-1
Elective (Business Mathematics)	129	82	LEVEL-2
Overall	248	213	LEVEL-3

Course Outcomes- Second Year

Subjects	Total Student	First Division	ATTAINMENT LEVEL
Major-I (Human Resource Management)	129	117	LEVEL-3
Major-I (Marketing Management)	49	25	LEVEL-2
Major-I (Financial Management)	66	24	LEVEL-1
Major-II (Organizational Behaviour)	129	45	LEVEL-1
Major-II (Marketing Research)	49	42	LEVEL-3
Major-II (Financial Market and Financial Service)	66	17	LEVEL-1
Minor (Organizational Behaviour)	66	8	LEVEL-1
Minor (Marketing Research)	129	120	LEVEL-3
Minor (Financial Market and Financial Service)	49	19	LEVEL-2
Elective (Organizational Behaviour)	46	9	LEVEL-1
Elective (Marketing Research)	65	56	LEVEL-3
Elective (Financial Market and Financial Service)	128	61	LEVEL-2
Overall	253	218	LEVEL-3

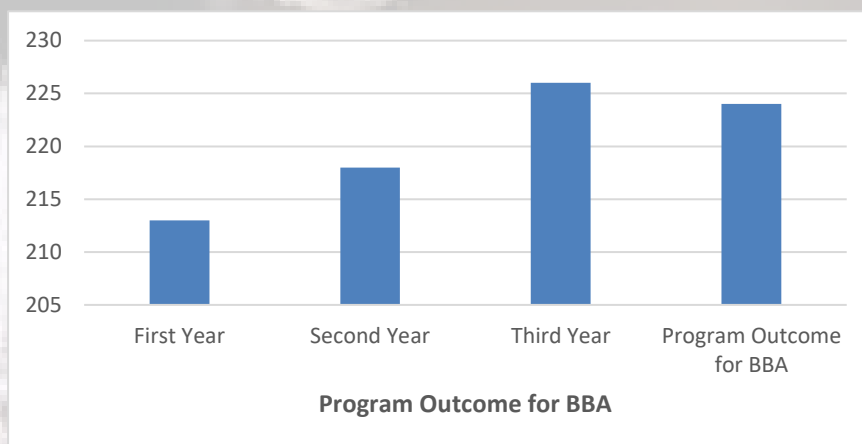
Course Outcomes- Third Year

Subjects	Total Student	First Division	ATTAINMENT LEVEL
Major-I(Human Resource Development)	128	74	LEVEL-2
Major-I(Consumer Behavior)	49	27	LEVEL-2
Major-I(Security Analysis and Portfolio Management)	65	56	LEVEL-3
Major-II(Employee Relation & Compensation Management)	128	83	LEVEL-2
Major-II(International Marketing)	49	30	LEVEL-2
Major-II(International Finance)	65	56	LEVEL-3
Minor(Functional Management)	128	65	LEVEL-2

Minor(Retail Management)	49	35	LEVEL-3
Minor(Working Capital Management)	65	61	LEVEL-3
Elective(Functional Management)	110	41	LEVEL-1
Elective(Retail Management)	127	117	LEVEL-3
Overall	242	226	LEVEL-3

Program Outcome

First Year	248	213	LEVEL-3
Second Year	253	218	LEVEL-3
Third Year	242	226	LEVEL-3
Program Outcome for BBA	242	224	LEVEL-3



Attainment Criteria

If 68% or more of total students attain 60% or more	LEVEL-3
If less than 68% and more than 38% of total students attain 60% or more	LEVEL-2
If less than 38% and more than 1% of total students attain 60% or more	LEVEL-1

5. Action Taking Strategies

To Enhance the attainment of outcomes, enable the implementation of several post-activities. These activities generally aim to enhance teaching methods, improve student learning experiences, and ensure that the course meets its educational objectives effectively. To take follow-ups, different academic bodies take following actions:

- **Analyze the Results**

Identify Strengths and Weaknesses: Determine which COs have been attained successfully and which have not. Identify patterns in student performance.

Benchmarking: Compare current attainment levels with past performance, departmental goals, or industry standards.

- **Feedback Collection**

Student Feedback: Gather feedback from students on the course content, teaching methods, and assessment tools.

Faculty Feedback: Collect insights from faculty members regarding the curriculum, student engagement, and areas needing improvement.

- **Reflect and Adjust Curriculum**

Curriculum Revision: Based on the analysis, consider revising the curriculum to address areas of low attainment. This may involve updating course materials, introducing new topics, or removing less relevant content.

Re-alignment with Program Outcomes: Ensure that the COs align with the overall Program Outcomes (POs) and educational objectives of the department.

- **Enhance Teaching Strategies**

Professional Development: Organize workshops or training sessions for faculty to adopt new teaching methodologies and technologies.

Active Learning: Encourage the use of active learning strategies such as group projects, problem-based learning, and interactive simulations.

Assessment Techniques: Improve assessment techniques to better evaluate student learning and provide meaningful feedback.

- **Implement Support Systems**

Tutoring and Mentoring: Provide additional support for students who struggle with specific COs through tutoring or mentoring programs.

Resources and Tools: Make supplementary learning resources available, such as online tutorials, reference materials, and practice exercises.

- **Monitor and Reassess**

Continuous Monitoring: Establish a system for continuous monitoring of CO attainment. Use regular assessments to track progress.

Reassess Periodically: Conduct periodic reassessments to determine the effectiveness of the implemented changes and make further adjustments as needed.

- **Documentation and Reporting**

Maintain Records: Keep detailed records of CO attainment data, analysis, and subsequent actions taken.

Reporting: Prepare reports for stakeholders such as accreditation bodies, departmental reviews, and faculty meetings.

CONCLUSION

This manual delineates a comprehensive framework for implementing Outcome-Based Education (OBE) within academic settings, specifically tailored to the evolving landscape of higher education. By emphasizing specific, measurable outcomes, OBE shifts the educational focus towards ensuring students acquire tangible skills and knowledge, marking a departure from traditional education models. This approach not only enhances the relevance and applicability of educational programs but also aligns with the dynamic demands of the professional world.

Central to the manual is the detailed methodology for calculating Course Outcomes (COs) and Program Outcomes (POs), providing educators and institutions with a structured approach to align curricula, teaching methodologies, and assessment strategies with defined outcomes. The inclusion of practical tools and examples further aids in the planning, implementation, and evaluation phases of OBE, fostering a deeper understanding of its principles to enhance student learning and success.

Moreover, the adaptation of OBE to major-wise subjects, as encouraged by the National Education Policy (NEP), underscores its flexibility and responsiveness to specific educational needs and outcomes. This targeted approach ensures that students not only achieve academic excellence but are also well-prepared for their future careers, equipped with the skills and competencies necessary to navigate real-world challenges.

Through the lens of St. Aloysius College's vision, mission, and objectives, this manual exemplifies how OBE can be meticulously applied to cultivate intellectually competent, morally upright, and socially responsible individuals. By integrating OBE principles with the college's commitment to quality education, character formation, and scientific temper, it sets a precedent for creating an engaging, relevant, and impactful learning environment that prepares students for the complexities of the modern world.