CHAPTER 1
INTRODUCTION AND RESEARCH METHODOLOGY

1.1 Introduction: The statement of the problem:

In the times of multidisciplinary approach to teaching and research, commerce education has a challenge to respond to changing environment both in education sector as well as the market as Commerce education plays a significant role for the economic progress and the development of any country, especially India where the unemployment problem is increasing at a higher pace. As our nation is marching on the path of economic progress, there is a large gap between the demand and supply of commerce intellects. Government introduced private public partnership to meet this demand. Hence Government is encouraging the private entities to invest in commerce education. For past five-six years the number of commerce education colleges (conventional and non-conventional), increased at an alarming rate due to reforms in commerce higher education, thereby raising doubts about the quality of commerce education (not only this, all other higher education) and also education imparted to the students.

It is required to study whether commerce education stakeholders are aware the initiated reforms? To what extent they are aware reforms on governance, accountability, curriculum, e-technology adoption, examination and assessment? What is impact of commerce education reforms on conventional commerce education? What is expected and actual impact from commerce education reforms on conventional commerce education quality? Is there any difference between expected and actual impact from commerce education reforms on conventional commerce education quality? How to measure and identify the quality education impact on
conventional commerce education? Is SERVQUAL model used to measure and identifies the quality in commerce education? There is a need to take a look into these issues in depth such an attempt is made in the present study. Today, Commerce education is a fast developing discipline. The development in any discipline should be quantitative and qualitative. The commerce education in our country is imparted at three different but mutually interlinked strata viz. the pre-university stage, the undergraduate stage and the post-graduate stage. Now, practically there is no recognized college in India which does not offers one or other Commerce course, the demand for Commerce Programme commands third position after Arts and Science.

In India, commerce as an educational stream is first opted at intermediate level i.e. at 10+2 level or after class 10th. At under graduate level, one can either study a bunch of subject to earn a B.Com. The student who makes outstanding performance in the final examination is awarded with distinction. As part of post graduate studies, a candidate chooses to do specialization from the subjects that he / she have studied as part of Under Graduate studies; Commerce, / Accountancy, Business, / Finance etc . Master of Commerce (MCOM) is awarded in the relevant subject. Thereafter one can go for research studies viz. M.Phil and Ph.D. This is called as conventional commerce education.

The landscape of conventional commerce education is changing at a faster pace due to introduction of new courses like Bachelor of Management Studies(BMS), B.Com, (Accounting & Finance), B.Com (Banking and Insurance), B.Com (Financial Markets). These courses are self - financing and professionalized. They are costlier than conventional BCom (Bachelor of Commerce). This shows that new initiatives
and reforms are introduced in conventional or traditional Commerce education. The nature of appointment, salary structure, institutional approaches and administrative reforms are introduced. Academic and administrative reforms which include governance, accountability, finance, curriculum and examination reforms are initiated and introduced. These reforms were introduced at faster pace post 2005 and onwards. In this scenario it is interesting to study and know: (1) what is impact of governance and accountability reforms of commerce education on conventional commerce education? (2) What is impact of curriculum reforms and e-technology reforms in commerce education on conventional commerce education quality? (3) What is impact of examination and assessment reforms in commerce education on conventional commerce education quality? Therefore, an attempt has been made in the present study about the awareness of commerce teachers on commerce education reforms introduced in conventional commerce education and to assess the impact of commerce education reforms on conventional commerce education quality and to find out difference between expected impact and actual impact of commerce education reforms on conventional commerce education quality; by selecting colleges affiliated to the University of Mumbai and commerce teachers working in those colleges. Hence the statement of the problem is as under.

"Impact of commerce education reforms on conventional commerce education in Mumbai".

However before doing so, it is essential to get introduced briefly about conventional commerce education, reforms in commerce education and quality aspect of commerce education.
1.2 Commerce education:

1.2.1 Meaning of commerce education:
All the activities concerned with business comes under the study of conventional commerce education\(^1\), stated by Herrick (1904), Lyon (1922), Nicholas (1993) whereas Lomax (1928) and G Shield (1930) pointed out that commerce education is economic education\(^2\). It is the form of instruction that both directly and indirectly imparting knowledge of accounting and finance, taxation and law, Business and management, banking and insurance, transportation and communication, economic and statistics, marketing and e-commerce, trade and industry etc. Modern commerce education has opened new fields like e-commerce, e-media, internet, e-business, e-management which are designed to cater to the needs of new emerging business environment. This has become a part of commerce education in the recent times.

Thus, programmes like Arts, Commerce and Science are considered as conventional or traditional education in the context of this study. In other words, non-professional education is referred to as the conventional commerce education. The undergraduates (B.Com) and the post graduates (M.Com) students are imparted education by the various colleges and the University running programmes for the sake of completion of their degrees is known as conventional commerce education.

1.2.2 Aims and objectives of commerce education:
Following are some of the important aims and objectives of imparting commerce education\(^3\).

1. To impart the knowledge of commerce.
2. To impart the knowledge about different professions.
3. Base for higher education related to commerce.
4. Utility in future profession.
5. Help in selecting future profession.
6. Helpful in changing the vocations.
7. Development of human values.
8. Knowledge of vocational skills.
9. Development of logical and decision taking power.
10. To promote nationalism and international understanding.
12. There is an indispensible correlation between commerce and other subjects like mathematics, economics, psychology, geography, sociology, management etc. Hence, these subjects are included in the curriculum of commerce education. Because of this to teach these subjects along with commerce as a part of commerce education is one of the aims of commerce education.

1.2.3 Importance of commerce education:

Commerce education is science as well as Arts agreed by experts and it has theoretical and practical significance. Therefore, importance/ significance of the commerce education can be stated as under:

1. Commerce education provides the occupational training to the students like clerical, accounting secretarial and sales etc.
2. It develops the human value in the students like patience, honesty, co-operate etc. these human qualities will help a businessman to prosper in his business rapidly.
3. ‘Commerce education’ at 10+2+3 level will help student in being a good consumer in future.

4. Through commerce education, a businessman can also easily know about what is going in the foreign markets which would enable him to usher in new technology in the company on account of possessing current knowledge of emerging trends.

5. ‘Commerce education’ also helps in developing international understanding as the businessman comes into contacts with foreign businessman and learn a lot of others culture and mannerisms too, while doing business with them.

6. Commerce students receive the practical knowledge of commerce that helps in the future life of commerce students when they start their own business.

7. At graduation and post graduation level students are groomed with several skills such as project work, industrial visits, use of Tally package, information about stock exchanges etc.

8. Commerce education also provides the knowledge of various career options, banking operations, auditing, taxation laws, insurance etc.

9. Commerce education teaches student how to accumulate the money and how to invest in business.

10. Commerce education prepares student by developing logical skills and decision power also developing scientific attitude of the students.

Commerce education in our country has been developed to support the growing manpower needs of business enterprises that have come up after the beginning of British rule. Accordingly, the education imparted to the students of commerce intended to equip them with the specialized skills useful in different functional areas of trade, commerce and industry. Commerce degree had a considerable
weight age in the employment market. Most of the Education Commissions constituted to explore the higher education confirmed commerce education was primarily meant for providing the students in depth knowledge of different functional areas of business so as to prepare functional specialists as required by the community of trade, commerce and industry. In order to provide high quality conventional commerce education we need effective commerce reforms in administrative, academic, and examination and assessment area. In other words, governance, accountability, curriculum, e-technology, examination and assessment reforms effective and implementation bring the world class quality commerce education.

1.3 Commerce education reforms:

1.3.1 Meaning of commerce education reforms:

The term ‘reform’ envisages the existence of something to be changed. Reform means to make changes in (something, especially an institution or practice, activities of education), in order to improve it. It can be referred as to improvement by alteration, correction of error or removal of defects, put in a better form or condition. Commerce education reform is the name given to a demand with goal of changing conventional commerce education. There are many new changes in commerce higher education due to privatisation. The information technology revolution compelled conventional commerce education to make necessary changes for total quality management. In order to remain in the other faculty competition, there is it is required to make changes in the conventional commerce education. It updated its curriculum. It changed course-content, text-book, teaching methods, examination pattern, assessment system, accountability principle, governance, e-technology application
etc. These changes are referred as reforms of commerce education. The concept of commerce education consist of a wide range of interdisciplinary branches including accountancy, business administration, e-commerce, finance, economics, costing, marketing, communication, management, banking etc. In these subjects introducing any new subject or dropping out any subject from it is the reforms. For quality upgradation any change i.e. admission pattern, examination, assessment, teaching method, governance, accountability etc. are called as reforms in commerce education. Historically reforms have taken different forms because the motivators of reformers have differed. In modern years, commerce education reforms desired to reform an existing system and structure; the changes from open ended admission to selective access, introducing cost sharing though fees, introducing self-financing courses, establishing accreditation, transforming scholarships into student loans, annual examination to continuous evaluation, converting marks into grades etc. are known as reforms of conventional commerce education.

The aim of these reforms is to make conventional commerce education more effective with higher standards and higher focus on the needs of the students. Additional, great focus has been given to closing the gap/difference between expected and actual quality impact. The necessity for strengthening commerce education in India has been widely acknowledged in the numerous education studies conducted (Chapter 2). Although the most powerful argument for improving the commerce education quality. A number of developments have served as catalysts for reform changes in the world economy, the general dissatisfaction with the state of education in the 1980s and 1990s and findings emerging from academic research on economic growth, returns to education and user fees among many other phenomenon have delivered much of the
impetus for education reforms\textsuperscript{4}. Specially, a more market-oriented environment for the provision of education, including measures to foster public-private approaches. Finally, in recent years a number of initiatives put forward by the international community have made education a priority on the development agenda\textsuperscript{5}.

\subsection{1.3.2 Types of commerce education reforms:}

Tiongson (2012)\textsuperscript{6} has classified education policy reforms into 3 parts viz, expenditure reforms, financing reforms and management and institutional reforms. In other words, these reforms can be classified alternatively like targeted policy reforms and universal reforms. The reforms that have been implemented over the last decade in India may be broadly classified as those that are primarily aimed at expanding access (expanding supply, restructuring expenditure, abolishing fees, self-funding, grade system, Shikshan Shulk committee, CAP etc) and those that are primarily aimed at improving quality, efficiency, performance and sustainability, accountability and governance (decentralization of admission, examination, teaching, appointing qualified staff) SET/NET implementation. These reforms are concerned with administration, academic and examination and evaluation. It means reforms are administrative, academic and examination and assessment.

Further they can be classified as under:

1. Governance reforms
2. Accountability reforms
3. Curriculum reforms
4. E-technology reforms
5. Examination reforms and
6. Assessment or evaluation reforms.
1.3.2.1 Administrative reforms:

Administrative reforms are the main reform introduced in India with the aim to improve quality of commerce education. Governance and accountability are the two key elements of this reform. Formal and informal arrangements allowing higher education institutions to make decision and take decisions and take action is the good governance and the changes introduced in the rules, regulations governing conventional commerce education are called as governance reforms. Accountability in U.S.A and India is compared by Nigavekar (2006)\(^7\). U.S.A has 3 accountability facets, namely state control, academic concerns and industry. As against this India has two more additional facets. They are social forces and international forces. Indian higher education is facing unprecedented crisis such as identity, accountability and quality. To overcome it, he suggested that there should be national policy for growth, governance and administration of education. A balance should be maintained between merits and non-merit in higher education. The following are the main administrative reforms initiated by UGC, Government and University.

1. Public - Private Partnerships (PPP) model is introduced and linking commerce education to job market.
2. Introducing of vocational courses in commerce faculty.
3. Granting more autonomy to the degree-granting colleges and allowing them to operate in an environment of more academic freedom.
4. Skill-based education like communication, entrepreneurial, personality development, internships, social interaction etc. introduced.
5. Professional and vocational education in commerce is introduced.
7. Bill for setting up of 15 new central Universities, 14 National Universities, model colleges for educationally backward districts, Quality assessment cell, NAAC, Deemed universities regulation etc.

8. To introduce NAAC; ISO 9000, total management concept, transparency and working culture.

9. Accountability in management, curriculum, examination, quality and working culture and teaching – learning process.

10. Governance and accountability in fee structure, decision making and participative management.

1.3.2.2 Academic reforms:

It is second important reform which includes curriculum and e- technology. Changes brought in these two sub-reforms is called as academic reforms. Changes in the reforms syllabus, content and credit based semester system, text books etc and adopting e-technology in academic as well as examination and assessment, admission process, enrolment etc. Naidu (2012)\textsuperscript{8} pointed out 14 academic reforms whereas Kasinath (2012)\textsuperscript{9} observed 5 key such reforms which are as under.

1. Higher decentralization of education governance and deregulation.

2. Enhanced focus on entrepreneurial, communication and interpersonal skill development.

3. Performance appraisal of faculty and related aspects.

4. Increased public spending on informal, distance and vocational education.

5. Locally and nationally integrated framework of informal learning and vocational training.
6. Creation of feedback loop-based structure within formal education for enhanced job market responsiveness.

7. Increased cross talk between public-private, formal-informal educational enterprises.

8. Integrating counseling, evaluation and career guidance initiatives.

9. Tuition fees in the public universities and colleges re-structured.

10. Regulations laws for private endowments and entry of private education eased.

11. Sales of patents, research reports, publications and consultancy are encouraged.

12. The central in order to be national in character be encouraged.

13. Moving away from marks and usher in grading system and division system initiated.

14. Uniform academic calendar introduced.

15. NAAC is playing a pivotal role in ensuring quality and excellence in higher education by undertaking accreditations of the colleges and universities based on the stipulated parameters.

16. The UGC has inspired the setting up of autonomous colleges’ concept.

17. The UGC has implemented the pay scales and re-structured the designations to colleges, universities and teachers to further enhance quality and the excellence in higher education.

18. The academic staff colleges are imparting the training to the college and University teachers and leaving no stone unturned in performing their duties by ensuring excellence and quality in higher education.

19. Semester system adopted in undergraduate and post graduate level.
20. Module, internships, 60-40 pattern, 5 hours mandatory premises duty model, Bio- metric, CCTV camera, quality cell, quality functional deployment etc are introduced as reforms.

### 1.3.2.3 Examination and assessment reforms:

There have been several issues related to regulation of the conventional commerce education such as (1) access, (2) quality, (3) funding, (4) governance, (5) admission, (6) management style, (7) appointment and qualified teaching staff in time, (8) examination centric education, (9) lack of practical approach, (10) mechanical way of study, (11) Teacher- student ratio, (12) less use of advance-technology etc. are observed by Gore (2012)\(^{10}\) Madhavan and Sanyal (2012)\(^{11}\). This shows that examination and assessment reform is the third major issue/ challenges before the conventional commerce education and hence multiple reforms are initiated here. Changes in rules, regulations, pattern, and structure are referred reforms in the examination and assessment. The 30 major changes initiated in examination and assessment reforms are observed by Pathan (2012)\(^{12}\); which are as under.

1. Doing away with excess usage of essay type questions requiring long answers which emphasis on mere memorization process, instead use short answer questions.

2. Shift from evaluation (tests and exams) to assessment (project work, tutorials, research, field study etc) for sound assessment of the student based on reliability, diversity, fairness and equity.

3. Developing an examination system which not only helps students to get the right jobs but also increases the possibilities of self- employment.
4. Percentage system for awarding the marks should be replaced by the grading system.

5. Setting up of objective type tests like true, false, multiple choice questions, match the columns, crossword, classification tests etc.

6. Continuous internal evaluation system instead of written once annual examination.

7. Single entrance test for admission as well as single examination authority.

8. Separate tests for admission for private colleges who fall in the purview of common entrance admission network.

9. Developing an examination system which helps the teacher more in assisting the learning instead of assessing the learning.

10. Generating competent and skilled manpower required for industry requirements.

11. Measuring and emphasizing creativity on the part of students and teachers.

12. Adopting scientific procedures in the test development.

13. Introducing schemes for evaluation scholastic and non-scholastic aspect of student growth to suit the new structure and need of commerce education.

14. Use of examination for improving level of achievement rather than merely assessing the same through effective feedback machinery.

15. Development of question banks in all subjects.

16. Monitoring standards of exam through a regular review of testing materials and procedures in different state throughout the country.

17. Improvement in mechanism of conducting exams.

18. New guide lines of question paper setting.

19. Outsourcing examination work.

20. Synoptic answers and marking scheme.
21. Making questions specific in terms objectives, contents and language.
22. Introducing bar-coding, scrutiny and handing over the photocopy of answer sheet to the students.
23. Identification of areas of student growth not covered through evaluation.
24. Designing tools like check list rating scales and observation schedules for evaluating paper.
25. Developing procedure of recording, classifying and interpreting the data and preparing panel list on time and Decentralization CAP system.
26. Declaring examination result in time.
27. As far as possible, elimination of scope for examiners and workers subjectively.
28. Placing less emphasis on memorization and make student analytical oriented.
29. Discouraging selective study and selective teaching.
30. Introducing practical examination and improvement of objectivity in the assessment and proper weight age in the question paper covering entire syllabus.

1.4 Commerce education quality:

Commerce education is living discipline and is totally different from Arts, Science and any other discipline. Here it must charter new routes to service the aspirations of the nation. To manage economic affairs of the country and to meet the growing needs of the society, there is a greater demand for sound quality commerce education. Therefore, many reforms or changes have been initiated by the competent authorities for improving the quality of conventional commerce education since 2001 and onwards. Then what is the quality of education? What are the factors of quality education? Or what are the factors of total quality management commerce education?
How to measure it? These are the other aspects to be known before investigating the impact of reforms on conventional commerce education quality.

Quality in higher education means specifying worthwhile learning goals and enabling students to achieve them observed by Kaptan and Dhote (2004)\textsuperscript{13} whereas Harmann and Meek stated that quality in the context of higher education can be defined as judgment about the level of goal, achievement and the value and worth of that achievement (2000)\textsuperscript{14}. In the words of Doherty and Shaker, quality experience (2002)\textsuperscript{15}. Quality means total conventional commerce student satisfaction. It means measuring against a norm, standard or specification of commerce educational standard. Parasuraman, Ziehtml and Berry defined service quality as to the extent of difference between customer’s expectations or desires and their perceptions’ (1985)\textsuperscript{16}. In other words, two basic questions are raised and attempted by Sallis (2005)\textsuperscript{17}. It has been pointed out why to take the path of total quality management and what are the steps required making TQM work. The moral, professional, competitive and accountability are the key four imperative drivers and motivating forces that challenges any institution to take proactive stance on quality. There are a number of steps that can be taken to enhance a TQM culture. They are (1) develop leadership and strategy, (2) involves stakeholders, (3) appoint quality champions, (4) ensure that the senior management team monitors progress, (5) train staff, (6) communicate the TQM message, (7) Measure the costs of quality, (8) develop team work, (9) apply quality tools and techniques and (10) develop a self-assessment culture. Hence, the idea of client-centeredness which is the heart of the total quality approach is in tune with educational philosophy.
Commerce quality education is a package which means:

1. Conforming to comparable standards with innovative approach.
2. Fulfilling the academic intellectual requirement for the age stage or phase of education with optimal degree of excellence.
3. Adequate capability to consistently cope with the demands of the world of work and scope for employability
4. Development of innate qualities to optimum level.
5. Satisfying the stakeholder as per the social expectations and requirements to ensure quality teachers performance is the most crucial input to higher education.

On the basis of the above the following are the quality indicators of commerce education which has emerged:

1. The infrastructure should be developed as per international standards i.e. world class.
2. The curricula i.e. course structure should be dynamic in nature as compared to world class which would also include value education and culture in the curriculum.
3. The syllabus should serve the needs of the society and the industry.
4. Placement cell should be introduced providing job opportunities.
5. The performance appraisal of all stakeholder should be up to the mark and evaluative.
6. The governance and accountability principle should be world class level.
7. The feedback should be collected and communicated.
8. Grievance redressal cell for all stakeholders shall be formed.
9. Research and research activities should be at par i.e. world class.
10. New teaching methodologies and e-technology should be adopted.
11. The domestic educational institutes should tie-up with industries and encourage exchange programmes with the foreign educational institutes.

12. Good governance leadership is inevitable to achieve excellence.

13. Learning resources should be augmented to make teaching interesting.

14. Total quality management or six sigma or quality function deployment should be implemented in commerce education.

15. Examination and assessment related activities should be world class.

In general terms impact of reforms on quality education should be measured keeping in mind 3 parameters (1) qualitative measures (2) quantitative measures and (3) temporal measures. Immediate and dynamic are the two effects of education policy reforms on the distribution of income and access to and quality of services. One more effect must be considered is on power and authority. Now more programmes and education materials are available on line (e-format), the students are submitting assignments, projects online. Even examinations and grades are computerized; books and note books are being replaced by computers and laptops. Students and teachers are discovering knowledge through inquiry and experimentation rather than memorizing facts and figures in the classroom, governance and accountability as well as curriculum has become an integral part of quality education. Therefore, in this context it is pertinent to study and assess what the impact of commerce education reforms is on conventional commerce education quality.
1.5 Objectives of the study:

The main objectives of the present study are as under:

1. To study and assess the growth of and trend in conventional commerce education in India and Mumbai during 2001-2012.

2. To study and assess the extent of awareness of commerce teachers on administrative, academic and examination and assessment reforms on conventional commerce education during 2001-2012.

3. To study and assess the expected impact and actual impact of administrative, academic and examination and assessment reforms on conventional commerce education quality.

4. To study and assess the expected impact and actual impact of commerce education reforms on conventional commerce education quality.

5. To measure and identify the extent of difference/gap between expected impact and actual impact of administrative, academic and examination and assessment reforms on conventional commerce education quality.

6. To measure and identify the extent of difference/gap between expected impact and actual impact of commerce education reforms on conventional commerce education quality.

1.6 Hypotheses of the study:

In the light of the above cited objectives, the following hypotheses have been set by the researcher for the present study purpose:

**Hypothesis 1:** There is a significant difference/gap between expected impact and actual impact of administrative reforms on conventional commerce education quality.
Hypothesis 1.1: There is a significant difference/gap between expected impact and actual impact of governance reforms on conventional commerce education quality.

Hypothesis 1.2: There is a significant difference/gap between expected impact and actual impact of accountability reforms on conventional commerce education quality.

Hypothesis 2: There is a significant difference/gap between expected impact and actual impact of academic reforms on conventional commerce education quality.

Hypothesis 2.1: There is a significant difference/gap between expected impact and actual impact of curriculum reforms on conventional commerce education quality.

Hypothesis 2.2: There is a significant difference/gap between expected impact and actual impact of e-technology reforms on conventional commerce education quality.

Hypothesis 3: There is a significant difference/gap between expected impact and actual impact of examination and assessment reforms on conventional commerce education quality.

Hypothesis 3.1: There is a significant difference/gap between expected impact and actual impact of examination reforms on conventional commerce education quality.

Hypothesis 3.2: There is a significant difference/gap between expected impact and actual impact of assessment reforms on conventional commerce education quality.
Hypothesis 4: There is a significant difference/gap between expected impact and actual impact of commerce education reforms on conventional commerce education quality.

1.7 Significance of the study:

1. There are many stakeholders in the commerce education system: Students (both conventional and non conventional), prospective employers, clients, donors, sponsors, accreditation agencies, board of governors, Government, Policy makers, industry or business institution, trustees, teachers, society etc. In a market driven education system, stakeholders specially students and teachers are the key components who should be satisfied due to reforms and its impact. Before knowing whether the students and teachers are satisfied, it is primary task to know, understand and assess the awareness of the reforms in conventional commerce education and the impact of reforms on conventional commerce education quality. Since the aim of this study is to assess reforms in commerce education and its impact on conventional commerce education in terms of expected impact and actual impact quality. This study is very significant from all the stakeholders’ point of view.

2. This study helps to find out the awareness of the teachers, one of the key stakeholder and difference between expected impact and helps to know the experience of teachers towards impact of reforms implemented in conventional commerce education during study period. Therefore, it is very much significant for policy makers and particularly to fulfill the total objective of quality management.
3. This study attempts to know the gap between expected impact and actual impact of commerce education reforms on conventional commerce education. Hence, this study would be of immense utility to students who want new opportunities in their education, teachers would get job satisfaction, new dimensions in teaching can be added, Government will be guided to frame right type of polices, The Management of colleges, UGC would be able to design more better courses, and lastly society as whole would benefit as commerce is the most sought after education in University of Mumbai.

1.8 Research Methodology:
This includes research design adopted in the present study, area, scope and period covered under this study, samples and sample size and determinant procedures, sources of data collection and selected measures and indicators and their measurement and definitions.

1.8.1 Research design employed in the present study:
This study seeks to explore and investigate the responses of commerce teachers towards commerce education reforms initiated and implemented in conventional commerce education and find out the impact in terms of expected and actual impact of commerce education reforms on conventional commerce education particularly quality. For this purpose, a pilot survey was conducted and then questionnaire were utilized. The sample was drawn using the simple random sampling technique. The following is the research design adopted in the present study (Chart 1.1).
Chart 1.1
Research design

To study and assess the awareness, to measure and identify expected and actual impact, to find out difference/ gap between expected and actual impact of commerce education on conventional commerce education quality.

Research objective

Pilot, random and convenient survey method

Types of research

Qualitative and quantitative research

Sample

Commerce colleges and teachers in commerce degree colleges of Mumbai University

Sample size

600 degree commerce college teachers
155 colleges, comprising of Commerce and Economics 62, Arts and Commerce 26, Commerce and Science 14 and Arts, commerce and Science 53.

Data collection

Primary: Pilot, questionnaire, observation, discussion, mobile dialogue and personal interview. Secondary: Books, Journals, UGC and University annual reports, internet, websites etc.

Statistical tools used

Mean/ average, Likert- scale, Chi- Square test, Paired Sample ’t’ test, SERVQUAL gap model.

Interpretation and data analysis

Frequency, percentage, table, graph, chart, average/ mean, scale, Chi- Square test, Paired Sample ’t’ test, SERVQUAL gap model, ratio, comparison etc.

Testing of hypothesis

Pearson Chi- square test and Paired sample ‘t’ test

Summary of Conclusions

Findings and Suggestions
1.8.2 Area, scope and period of the study:

University of Mumbai is selected as the study area. The University caters to the students spread across 7 districts of the Maharashtra state; namely Mumbai city, Mumbai suburbs, Thane, Navi Mumbai, Raigad, Ratnagiri and Sindhudurg. Out of 7 districts, colleges in 3 districts namely Raigad, Ratnagiri and Sindhudurg have been excluded from the study due to the poor response received during the pilot survey. Hence, 4 districts- Mumbai city, Mumbai suburbs, Thane and Navi Mumbai are selected as the study area and colleges situated in those districts are selected for the study purpose in the present study.

There are 314 commerce degree education colleges affiliated to University of Mumbai, spread across 7 above mentioned districts as per the Annual report 2011-2012\(^\text{18}\). 38, 97, 88, 24, 33, 16 and 18 commerce colleges are situated in Mumbai city, Mumbai suburbs, Thane, Navi Mumbai, Raigad, Ratnagiri and Sindhudurg district. Out of these 67 colleges are located in Raigad, Ratnagiri and Sindhudurg districts. Colleges from these 3 districts have been excluded from the study after conducting pilot survey as the response received was very poor. Therefore, 247 colleges are considered for the selection purpose from the remaining 4 districts. Out of 247 colleges, 155 were selected. 27 degree commerce colleges from Mumbai city, 66 degree commerce colleges from Mumbai suburbs, 47 degree commerce from Thane and 15 degree commerce colleges from Navi Mumbai districts are selected and covered in this study. Furthermore 4 types of commerce colleges are selected and included in this study such as (i) Arts, Commerce and Science colleges (53), (ii) Arts and Commerce colleges (26), (iii) Commerce and Economics colleges (62) and (iv) Commerce and Science colleges (14) in the ratio 3:2:4:1 respectively. The Chart 1.2 shows the area and the scope of the study.
Chart 1.2

Area and scope of the study

Area: University of Mumbai and 4 districts

Mumbai City

27 degree commerce colleges

Mumbai suburbs

66 degree commerce colleges

Thane

47 degree commerce colleges

Navi Mumbai

15 degree commerce colleges

Arts, Commerce and Science (53), Arts and Commerce (26), Commerce and Economics (62) and Commerce and Science (14) colleges covered.

600 male and female commerce degree college teachers’ respondents and 155 colleges are covered.

The period of the study is 2001-2012. The study is extensive and purposeful.

1.8.3 Sources of data collection:

This study is based on both – primary and secondary data sources. The secondary data was collected through books, Journals, internet, websites, UGC, University, Government- reports, circulars and notifications etc. Researcher visited to University
of Mumbai library, S.N.D.T Women’s University, Tata institute of social sciences
library, UGC office Pune etc for collecting the desired data.

1.8.3.1 Primary data:
The primary data is collected through questionnaire, observations, discussions and
interviews technique. A survey was carried out by the researcher by personally
visiting to various sample colleges. The questionnaire was administered in 155
colleges.

1.8.3.2 Collection of data through questionnaire:
The researcher has designed a comprehensive questionnaire, covering awareness of
reforms in commerce education, impact of reforms on conventional commerce
education quality, expected impact and actual impact, difference/ gap in expected
impact and actual impact, socio- economic profile of the respondents etc.

A pilot survey was undertaken after preparing initial survey questionnaire and the
questionnaire were distributed to 50 commerce colleges. Discussions were conducted
with senior commerce faculty, Deans of Commerce Faculty belonging to S.N.D.T
Women’s University and University of Mumbai and then questionnaire was finalized.
6 main reforms were selected and the questionnaire was prepared on the basis of 6
reforms - its awareness, its expected impact and actual impact was covered.

In earlier questionnaire there were very general questionnaire on these 6 key reforms.
30 attributes (i.e. 5 each for 6 main reforms or dimensions) or sub- reforms were
selected and included in the questionnaire. The 6 main reforms are (i) governance
reforms, (ii) accountability reforms, (iii) curriculum reforms, (iv) e-technology reforms, (v) examination reforms and (vi) assessment reforms. They are also referred as Administrative reforms (governance and accountability reforms), Academic reforms (curriculum and e-technology reforms) and Examination and assessment reforms (examination and assessment reforms) respectively.

All are measured in the terms of rated scale of the expected and actual impact of reforms based on 7 scale (point) measurement. 7 point scale is no, low, average, moderate, high, very high and world class. They are rated 1 to 7. With the help of this questionnaire information regarding impact of reforms on commerce education quality was collected. Thus following is the summary of method of data collection (Chart 1.3).

Chart 1.3

Method of data collection

<table>
<thead>
<tr>
<th>METHOD</th>
<th>PURPOSE</th>
<th>JUSTIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Questionnaire</td>
<td>To know the response from the respondents a closed end questionnaire was used to collect information from commerce degree college Teachers.</td>
<td>To find out the impact of commerce education reforms on conventional commerce education.</td>
</tr>
<tr>
<td>Opinions</td>
<td>The opinion Would be sought from Coordinators, Policy makers to collect extensive information from them.</td>
<td>To find out the opinion of concerned persons.</td>
</tr>
<tr>
<td>Interviews Schedules</td>
<td>Specialized Interview schedules were used to seek information from the Principals; Academicians, senior teachers of commerce etc.</td>
<td>To obtain specific information on the impact of commerce education reforms on conventional commerce courses.</td>
</tr>
</tbody>
</table>
1.8.4 Samples and sample size of the study:

1.8.4.1 Samples:

Degree college commerce teachers and commerce colleges are the sample of the study. 4 districts namely Mumbai City, Mumbai suburbs, Thane and Navi Mumbai are the samples out of 7 districts of the University of Mumbai. University of Mumbai is the study area and unique sample. Sample is selected purposely.

1.8.4.2 Determining sample size:

University of Mumbai has 314 commerce colleges i.e. Universe of the study spread over 7 districts such as (1) Mumbai City, (2)Mumbai suburbs, (3)Thane (4)Navi Mumbai,(5) Raigad,(6) Ratnagiri and (7) Sindhudurg. The network of commerce colleges of University of Mumbai is presented in the Table 1.1.

Table 1.1

Network of commerce colleges affiliated to University of Mumbai

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Faculty</th>
<th>Mumbai City</th>
<th>Mumbai Suburbs</th>
<th>Thane</th>
<th>Raigad</th>
<th>Ratnagiri</th>
<th>Sindhudurg</th>
<th>Navi Mumbai</th>
<th>No. of colleges</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Arts, Science and Commerce</td>
<td>16</td>
<td>34</td>
<td>42</td>
<td>18</td>
<td>09</td>
<td>06</td>
<td>14</td>
<td>139</td>
</tr>
<tr>
<td>2.</td>
<td>Arts and commerce</td>
<td>06</td>
<td>15</td>
<td>30</td>
<td>09</td>
<td>07</td>
<td>08</td>
<td>01</td>
<td>76</td>
</tr>
<tr>
<td>3.</td>
<td>Commerce and Economics</td>
<td>15</td>
<td>37</td>
<td>06</td>
<td>01</td>
<td>-</td>
<td>03</td>
<td>04</td>
<td>66</td>
</tr>
<tr>
<td>4.</td>
<td>Science and commerce</td>
<td>01</td>
<td>11</td>
<td>10</td>
<td>05</td>
<td>-</td>
<td>01</td>
<td>05</td>
<td>33</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>38</td>
<td>97</td>
<td>88</td>
<td>33</td>
<td>16</td>
<td>18</td>
<td>24</td>
<td>314</td>
</tr>
</tbody>
</table>

Source: Compiled from the Annual reports of University of Mumbai 2001-2013.
Out of 7 districts, 3 districts namely Raigad, Ratnagiri and Sindhudurg have been excluded from the study due to non-response to pilot survey questionnaire. They have 33, 16 and 18 commerce colleges (together 67 commerce colleges) and are dropped out from study area. Therefore, 247 commerce colleges (314-67) are considered for selection purpose. Out of these for present study, all commerce and economics colleges (100%) and 50 percent of Arts, Commerce and Science, Arts and Commerce and Science and Commerce colleges are selected. Table 1.2 shows selected number of commerce education colleges for study purpose.

### Table 1.2
**Selected number of commerce education colleges**

<table>
<thead>
<tr>
<th>Types of Colleges</th>
<th>Mumbai City</th>
<th>Mumbai Suburbs</th>
<th>Thane</th>
<th>Navi Mumbai</th>
<th>Total colleges in 4 districts</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Arts, Science and Commerce</td>
<td>08</td>
<td>17</td>
<td>21</td>
<td>07</td>
<td>53</td>
</tr>
<tr>
<td>2. Arts and Commerce</td>
<td>03</td>
<td>07</td>
<td>15</td>
<td>01</td>
<td>26</td>
</tr>
<tr>
<td>3. Commerce and Economics</td>
<td>15</td>
<td>37</td>
<td>06</td>
<td>04</td>
<td>62</td>
</tr>
<tr>
<td>4. Science and Commerce</td>
<td>01</td>
<td>05</td>
<td>05</td>
<td>03</td>
<td>14</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>27</strong></td>
<td><strong>66</strong></td>
<td><strong>47</strong></td>
<td><strong>15</strong></td>
<td><strong>155</strong></td>
</tr>
</tbody>
</table>

Source: Based on Table 1.1.

1. There are 106 Arts, Science & Commerce colleges spread over Mumbai city (16), Mumbai suburbs (34), Thane (42) and Navi Mumbai (14) respectively. Out of them 50 percent selected. Hence for study purpose 53 Arts, Science and Commerce colleges selected from Mumbai city are 8, from Mumbai suburbs are 17, from Thane and Navi Mumbai 21 and 07 respectively.

2. There are 52 Arts and Commerce colleges consisting of 6, 15, 30 and 1 in Mumbai city, Mumbai suburbs, Thane and Navi Mumbai respectively. Out of them 50 percent colleges considered and selected as 3, 7, 15 and 1 total being 26 colleges. Since Navi Mumbai have only one Arts and commerce it is selected and one college dropped.
from Mumbai suburbs for adjustment therefore so total selected colleges from this
category remained 26.

3. Commerce and Economics or only commerce is the special category only commerce
education is imparted there. Hence 100 percent colleges are selected from this lot
assuming they will help to know the maximum and real impact of implementing
reforms. There are 62 such colleges 15, 37, 6 and 4 in Mumbai city, Mumbai suburbs,
Thane and Navi Mumbai and all are selected.

4. Science and commerce colleges are 27. Out of them, 14 are selected. Mumbai city
only one college is there hence it is selected, Mumbai suburbs have 11 colleges hence
5 are considered, Thane have 10 therefore 5 colleges are selected and Navi Mumbai
have 5 colleges, 3 are selected. Hence total selected colleges are here 14 instead of
13.5.

5. Total colleges were selected 155, 53 from Arts, Science and Commerce, 26 from Arts
and Commerce, 62 from Commerce and Economics and 14 from Science and
Commerce. In other words, selected colleges belonged to Mumbai city are 27, from
Mumbai suburbs 68, Thane 47 and Navi Mumbai 15 respectively. Researcher has
decided to purposely select 50 percent colleges from (1) Arts, Science and Commerce,
(2) Arts and Commerce and (3) Commerce and Science and 100 percent colleges
from Commerce and Economics. The practical working of selected colleges as
percentage type wise and district wise is presented in the Table 1.3.
Table 1.3
Sample size of selected colleges in percentage to total

<table>
<thead>
<tr>
<th>Types /district wise Colleges</th>
<th>No .of total Colleges</th>
<th>No .of selected Colleges</th>
<th>% of colleges/selected to total colleges</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A) : Type wise total colleges</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Arts, Commerce and Science</td>
<td>106</td>
<td>53</td>
<td>50.00</td>
</tr>
<tr>
<td>2. Arts and commerce colleges</td>
<td>52</td>
<td>26</td>
<td>50.00</td>
</tr>
<tr>
<td>3. Commerce and Economics colleges</td>
<td>62</td>
<td>62</td>
<td>100.00</td>
</tr>
<tr>
<td>4. Science and Commerce</td>
<td>27</td>
<td>14</td>
<td>51.85</td>
</tr>
<tr>
<td>(B) : District wise total colleges</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Mumbai City</td>
<td>38</td>
<td>27</td>
<td>71.05</td>
</tr>
<tr>
<td>2. Mumbai suburbs</td>
<td>97</td>
<td>66</td>
<td>68.04</td>
</tr>
<tr>
<td>3. Thane</td>
<td>88</td>
<td>47</td>
<td>53.41</td>
</tr>
<tr>
<td>4. Navi Mumbai</td>
<td>24</td>
<td>15</td>
<td>62.50</td>
</tr>
</tbody>
</table>

Source: Based on Table 1.1.

Sample size of selected colleges is based on Type wise college. However, in practice 51.85 percent of colleges are selected from Commerce and Science and rest is as selected criteria. Now when it was worked out to what extent sample colleges are selected based on district it comes to 71.05 percent, 68.04 percent, 53.41 percent and 62.50 percent colleges are selected from Mumbai City, Mumbai suburbs, Thane and Navi Mumbai respectively. Overall 62.50 percent colleges are selected as sample size and 155 colleges out of 247 are selected as sample size.

Commerce teachers who are teaching in these 4 districts and working with these selected types of colleges are the respondents of this study. After proper pilot survey
and after finalizing the questionnaire it was decided to cover teachers as the respondents and minimum 4 teachers be selected from each college and to exclude other stakeholders i.e. students, management, non-teaching staff and society. Earlier it was decided to take four stakeholders for the study such as students, management, non-teaching staff and society but after in depth understanding on this area and keeping in mind the nature of the study related impact it was finally decided only teacher is the best suitable respondent. Although creative ideas regarding reforming commerce education could be ascertained from many sources (stakeholders), only commerce teachers can provide the insights that emerge from intensive, direct experience in the classroom itself. They bring to task of reform to knowledge of students. Here commerce teacher means a person who teaches the commerce subjects and accountancy. Hence only 4 respondents are considered to be sample size. Therefore, total sample size of the respondents is as under (i.e. Table 1.4).

Table 1.4
Sample size selection for teachers’ respondents

<table>
<thead>
<tr>
<th>Types of Colleges</th>
<th>No. of Colleges</th>
<th>No. of sample size respondents i.e. 4 from each college</th>
<th>Total sample size</th>
<th>No of questionnaires rejected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts, Science and Commerce</td>
<td>53</td>
<td>04</td>
<td>212</td>
<td>05</td>
</tr>
<tr>
<td>Arts and commerce</td>
<td>26</td>
<td>04</td>
<td>104</td>
<td>03</td>
</tr>
<tr>
<td>Commerce and Economics</td>
<td>62</td>
<td>04</td>
<td>248</td>
<td>10</td>
</tr>
<tr>
<td>Science and commerce</td>
<td>14</td>
<td>04</td>
<td>56</td>
<td>02</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>155</td>
<td>04</td>
<td><strong>620</strong></td>
<td><strong>600</strong></td>
</tr>
</tbody>
</table>

Source: Based on Table 1.1.
620 questionnaires were administered in the selected sample colleges and all were received. However, on scrutiny it was found that 20 questionnaires were incomplete. Hence they were rejected and final sample size was determined 600 commerce teachers. Thus, 155 commerce colleges and 600 teachers are the sample size of this study.

1.8.5 Selected measures and indicators assessing quality impact:

Taking into account the problem of data availability from primary and secondary sources, the following measures and indicators for measuring and identifying the impact of reforms on conventional commerce education (hence referred here conventional commerce education quality) have been selected. For this study purpose, 30 reforms are selected and their impact on conventional commerce education are studied and assessed. 30 reforms are divided into 3 main reforms or dimensions in equal numbers i.e. 10 each. In other words, 3 main reforms and each one have 10 sub-reforms here are called as attributes.

1. Administrative reforms:

This consists of governance reforms and accountability reforms.

(A) Governance reforms includes 5 attributes:

<table>
<thead>
<tr>
<th>Statement No.</th>
<th>Statement/attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Improve decision –making and management process</td>
</tr>
<tr>
<td>2.</td>
<td>Enhances total quality management</td>
</tr>
<tr>
<td>3.</td>
<td>Enhances participative and democratic management style</td>
</tr>
<tr>
<td>4.</td>
<td>Enhances competency of stakeholders</td>
</tr>
<tr>
<td>5.</td>
<td>Enhances work culture of stakeholders</td>
</tr>
</tbody>
</table>
(B) Accountability reforms includes 5 attributes:

<table>
<thead>
<tr>
<th>Statement No.</th>
<th>Statement/attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.</td>
<td>Effectively working the accountability pentagon in conventional commerce education.</td>
</tr>
<tr>
<td>7.</td>
<td>The self – financing accountability reforms creates equal opportunities to take conventional commerce education to all social strata.</td>
</tr>
<tr>
<td>8.</td>
<td>Ensuring maximum Transparency and fairness in conventional commerce education.</td>
</tr>
<tr>
<td>9.</td>
<td>Enhances association between private and public partnership (PPP) and generating resources.</td>
</tr>
<tr>
<td>10.</td>
<td>Resolve the identity and total quality management crisis of conventional commerce education.</td>
</tr>
</tbody>
</table>

2. Academic reforms:

This includes (A) Curriculum reforms (B) E- technology reforms.

(C) : Curriculum reforms includes 5 attributes:

<table>
<thead>
<tr>
<th>Statement No.</th>
<th>Statement/attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.</td>
<td>Credit based semester curriculum reforms improves the performance, capabilities of the conventional commerce education stakeholders, specially employability of the students</td>
</tr>
<tr>
<td>12.</td>
<td>An internship curriculum reform enhances opportunities of conventional commerce education to develop communication skills, high morale and personality and meet the demand of the industries to create entrepreneurs.</td>
</tr>
<tr>
<td>13.</td>
<td>Module curriculum reforms for professionalization of conventional commerce education like Doctor, Engineer, Counselor, Economists and Chartered accountant etc.</td>
</tr>
<tr>
<td>14.</td>
<td>Grade based marking curriculum reforms to narrow down existing mismatch between training as per the needs of industry and conventional commerce education</td>
</tr>
<tr>
<td>15.</td>
<td>60: 40 pattern(Theory and practice) curriculum reforms reduced stress of conventional commerce education stakeholders and it would demonstrate the high quality conforming total quality management i.e. high standard</td>
</tr>
</tbody>
</table>
(D) : E- technology reforms includes 5 attributes:

<table>
<thead>
<tr>
<th>Statement No.</th>
<th>Statement/attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>16.</td>
<td>E- technology reforms improves the teaching-learning process of conventional commerce education</td>
</tr>
<tr>
<td>17.</td>
<td>E- technology reforms enhances effective interactions and coordination between stakeholders of conventional commerce education</td>
</tr>
<tr>
<td>18.</td>
<td>E- technology reforms effectively quality functional deployment (QFD) or six sigma model to complete the mission of total quality service/management of conventional commerce education</td>
</tr>
<tr>
<td>19.</td>
<td>Bio- metric and CCTV camera technology reforms enhances /brings academic discipline in conventional commerce education</td>
</tr>
<tr>
<td>20.</td>
<td>Five hours mandatory model adoption reforms introduced satisfactory sound educational environment in conventional commerce education</td>
</tr>
</tbody>
</table>

3. Examination and assessment reforms:

This includes examination reforms and assessment reforms.

(E) : Examination reforms includes 5 attributes:

<table>
<thead>
<tr>
<th>Statement No.</th>
<th>Statement/attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>21.</td>
<td>Commerce teachers’ information database reform would help to improve the availability of teachers for conventional commerce examination work.</td>
</tr>
<tr>
<td>22.</td>
<td>Outsourcing commerce examination form submission reform improves the efficiency in generating and distributing hall-tickets in time (i.e. before eight days semester end commerce examination) in conventional commerce education.</td>
</tr>
<tr>
<td>23.</td>
<td>New guidelines of question paper setting enhance uniformity and removes differentiation in paper setting of conventional commerce education.</td>
</tr>
<tr>
<td>24.</td>
<td>Bar-coding, scrutiny and handing over of photocopy of answer sheet removes malpractices in conventional commerce education.</td>
</tr>
<tr>
<td>25.</td>
<td>Switching from annual examination (i.e. one time) pattern to continuous (i.e. two times) examination improves the quality of service of conventional commerce education.</td>
</tr>
</tbody>
</table>
Assessment reforms includes 5 attributes:

<table>
<thead>
<tr>
<th>Statement No.</th>
<th>Statement/attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>26.</td>
<td>Synoptic answers and marking scheme reforms removes biasness and differentiation in paper assessment of conventional commerce education (i.e. enhances standardization in conventional commerce).</td>
</tr>
<tr>
<td>27.</td>
<td>Grading assessment (i.e. 7 scale, O, A, B, C, D, E, F) builds employability in students of conventional commerce education.</td>
</tr>
<tr>
<td>28.</td>
<td>Decentralized CAP system reforms speedup assessment work and enhances total quality service in conventional commerce education.</td>
</tr>
<tr>
<td>29.</td>
<td>Shift from evaluation (test examination) to assessment (project work, assignment, research, field study etc.) discourages selective study and selective teaching in conventional commerce education.</td>
</tr>
<tr>
<td>30.</td>
<td>Assessment reforms help to declare result of conventional commerce education in time (i.e. within 40 days from last paper)</td>
</tr>
</tbody>
</table>

Thus to measure and identify the impact of reforms on conventional commerce education quality 3 main reforms are divided into 6 reforms and further 5 attributes are selected to measure and identify the expected impact and actual impact. In all 30 attributes divided into 6 main dimensions or measures or indicators or parameters and further into 3 key dimensions have been selected as measures and indicators for the present study.

**1.8.6 Definition of selected measures and indicators:**

1. **Extent of awareness of reforms:**

To what extent respondents (i.e. degree commerce teachers) know the initiated / introduced reforms on conventional commerce education to improve the status/quality of conventional commerce education towards world class. It is measured by
taking governance, accountability, curriculum, e-technology, examination and assessment indicators/measures. As the extent of these indicators increases quality of conventional commerce education increases. They are measured in terms of ‘Yes’, ‘To some extent’ and ‘No’ aware. They are expressed as under.

i. ‘Yes’ awareness on governance % = \( \frac{\text{Total Yes responses reported on governance reforms}}{\text{Total No. of respondents in the study}} \times 100 \)

ii. ‘To some extent’ awareness on governance % = \( \frac{\text{Total To some extent responses reported on governance reforms}}{\text{Total No. of respondents in the study}} \times 100 \)

iii. ‘No’ awareness on governance % = \( \frac{\text{Total No responses reported on governance reforms}}{\text{Total No. of respondents in the study}} \times 100 \)

In the present study total (sample) respondents are 600 degree college teachers. In this manner, accountability and other indicators/dimensions of awareness are measured and identified.

2. Extent of administrative, academic and examination and assessment reforms:

It is calculated for example in case of administrative reforms as under:

i. ‘Yes’ awareness on administrative reforms% = \( \frac{\text{Governance Yes reforms awareness} + \text{accountability Yes reforms awareness}}{2} \times 100 \)

ii. ‘To some extent awareness on administrative reforms% = \( \frac{\text{Governance to some extent reforms awareness} + \text{accountability to some extent reforms awareness}}{2} \times 100 \)

iii. ‘No’ awareness on administrative reforms% = \( \frac{\text{Governance No reforms awareness} + \text{accountability No reforms awareness}}{2} \times 100 \)
3. Extent of expected impact and actual impact:

Expected impact and actual impact is measured and identified for governance, accountability, curriculum, e-technology, examination and assessment as well as it is measured for administrative, academic and examination and assessment reforms impact on conventional commerce education quality is calculated. It is measured based on 7 scale Likert scale. The expected impact and actual impact of reforms on conventional commerce education quality is measured as under:

<table>
<thead>
<tr>
<th>Expected impact of reforms on conventional commerce education</th>
<th>Actual impact of reforms on conventional commerce education</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Average</td>
<td>Average</td>
</tr>
<tr>
<td>Moderate</td>
<td>Moderate</td>
</tr>
<tr>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Very high</td>
<td>Very high</td>
</tr>
<tr>
<td>World class</td>
<td>World class</td>
</tr>
</tbody>
</table>

Extent is expressed in percent as under. For example:

Governance reforms expected impact:

For No $= \frac{\text{Total No responses}}{\text{Total sample respondents}} \times 100$

Low $= \frac{\text{Total Low responses}}{\text{Total sample respondents}} \times 100$

Average $= \frac{\text{Total Average responses}}{\text{Total sample respondents}} \times 100$

Moderate $= \frac{\text{Total Moderate responses}}{\text{Total sample respondents}} \times 100$
High  =  \frac{\text{Total High responses}}{\text{Total sample respondents}}  \times 100

Very high  =  \frac{\text{Total Very high responses}}{\text{Total sample respondents}}  \times 100

World Class  =  \frac{\text{Total world class responses}}{\text{Total sample respondents}}  \times 100

Similar exercise was undertaken for actual impact also.

4. Difference between expected impact and actual impact:

It is experienced as under i.e. for governance

\text{Difference for Governance} = \text{Expected impact on Governance} - \text{Actual impact on Governance}

5. Extent of gap:

SERVQUAL model is used to measure and identifying the gap in conventional commerce education quality. 7 scale (points) are used such as ‘No’, ‘low’, ‘average’, ‘moderate’, ‘high’, ‘very high’ and ‘world class’ quality. They are rated 1, 2, 3, 4, 5, 6 and 7 and it was expected that 1 to 7 must be given by the respondents. In this expected rated score and actual rated score is received and then averaged. After average gap is calculated as under (For detail procedure see chapter 6).

\text{E} - \text{A} = \text{G}

Where E stands for expected rated score and A stands for actual rated score and G stands for Gap between expected impact and actual impact.

6. There has been usage of simplified impact assessment procedure and steps in research methodology.

The above measures and indicators and their definitions state that 3 main measures/ indicators/ dimensions are divided into 6 sub- indicators and 30 attributes are used to
measure and identify the expected impact and actual impact and to find out the difference /gap between them. Chart 1.4 highlights this

**Chart 1.4**

Summary of used measures and indicators for finding expected and actual impact of reforms on conventional commerce education quality

<table>
<thead>
<tr>
<th>Main Indicators</th>
<th>Sub- Indicators</th>
<th>Statements/ attributes in each sub-indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative reforms</td>
<td>Governance</td>
<td>1 5</td>
</tr>
<tr>
<td></td>
<td>Accountability</td>
<td>1 5</td>
</tr>
<tr>
<td></td>
<td><strong>AR</strong></td>
<td>2 10</td>
</tr>
<tr>
<td>Academic reforms</td>
<td>Curriculum</td>
<td>1 5</td>
</tr>
<tr>
<td></td>
<td>E- technology</td>
<td>1 5</td>
</tr>
<tr>
<td></td>
<td><strong>AdR</strong></td>
<td>2 10</td>
</tr>
<tr>
<td>Examination and assessment reforms</td>
<td>Examination</td>
<td>1 5</td>
</tr>
<tr>
<td></td>
<td>Assessment</td>
<td>1 5</td>
</tr>
<tr>
<td></td>
<td><strong>EAR</strong></td>
<td>2 10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>3 6 30</td>
</tr>
</tbody>
</table>

Note: For detail main model used refer Chapter 5. Thus 7 steps research methodology is used here which is as under.
**Chart 1.5**

Procedure to identify the difference/ gap between expected impact and actual impact

<table>
<thead>
<tr>
<th>Step No.</th>
<th>Description of the step</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>To know what is growth of conventional commerce education during study period.</td>
</tr>
<tr>
<td>2.</td>
<td>To know what are the various administrative, academic and examination and assessment reforms implemented by the competent authorities.</td>
</tr>
<tr>
<td>3.</td>
<td>To know whether sample respondents are aware or not of such initiated reforms and if so, to what extent they are aware of these reforms.</td>
</tr>
<tr>
<td>4.</td>
<td>To know what impact is expected from these reforms by the sample respondents i.e. commerce teachers.</td>
</tr>
<tr>
<td>5.</td>
<td>To know what impact was actually experienced/ achieved from these reforms implementation by the sample respondents.</td>
</tr>
<tr>
<td>6.</td>
<td>To know what is difference / gap between expected impact and actual impact of reforms on conventional commerce education quality.</td>
</tr>
<tr>
<td>7.</td>
<td>To make some suggestions to meet difference / gap between expected impact and actual impact of reforms on conventional commerce education quality.</td>
</tr>
</tbody>
</table>

### 1.9 Statistical tools and techniques:

After completion of data collection, questionnaire was edited properly to make them ready for data entry. Data entry was done with the help of Microsoft excel. The master table was prepared to incorporate all the information available in the questionnaires. The various statistical tools and techniques were used to analyze the data like Chi-square test, t-test, tables, graphs and frequency, percent and average. SPSS package 17.0 version was applied.
1.10 **Data analysis and interpretation:**

The research study is based on secondary and primary data. Secondary data which was collected from various published and unpublished sources including the reports of UGC, PhD thesis, Dissertation, Annual reports of University of Mumbai for 2001-2012. The primary data collected was processed, classified, tabulated and analyzed with the help of tables, graphs, frequency, percent, average, test such as Chi-square, t-test, and then finally logical conclusions are drawn.

1.11 **Limitations of the study:**

1) Out of 7 districts only 4 districts are considered for the study purpose and therefore study is not applicable to the entire Mumbai.

2) The sample respondents are commerce degree college teachers only.

3) The study was limited to University of Mumbai and hence it may not be applicable to other Universities.

4) The study did not include other stakeholders of commerce education i.e. students, parents, Government, educational institutes, industry etc.

1.12 **Chapter outline:**

The entire study is divided into seven chapters as under:

1. Introduction and Research Methodology.

2. Review of literature.


4. Awareness of the respondents on reforms in conventional commerce education.

5. Impact of commerce education reforms on conventional commerce education in Mumbai.
6. Measuring and identifying the gap between expected impact and actual impact of commerce education reforms on conventional commerce education

7. Summary of the Findings and suggestions.

1.13 Meaning of the terminology used for the present study:

1. Reforms:

Reforms are the changes or introduction of new trends in the conventional commerce education in University of Mumbai. It means to make changes in (something, especially an institution or practice) in order to improve it.

2. Governance reforms:

The term ‘Governance’ indicates the formal and informal arrangements allowing higher education institutions to make decisions and take decisions and take action. The changes introduced in the rules, regulations governing conventional commerce education are called as governance reforms.

3. Accountability reforms:

Accountability is the academic, administrative and financial responsibility with defined goals for each constituent. Accepting responsibility towards the stakeholders like students, teachers, parents, government, institutions etc. of conventional commerce education is called as accountability reforms.

4. Curriculum reforms:

Curriculum reforms means changes brought about in curriculum, changes in the syllabus, change in the Continuous evaluation, Choice based credit system, Conversion to credit based semester system, Affiliation reforms, Project based curriculum etc introduced during 2001-2012 in University of Mumbai.
5. E-technology reforms:

Using e-technology in admissions, examinations, students’ enrolment, attendance, feedback from the students, attendance of teaching and non-teaching staff etc. E- Technology is introduced in conventional commerce education.

6. Examination reforms:

The main objective of examination is to have correct and fair assessment of the performance of the students so that result communicated to him/her correctly reflecting his/her performance with respect to the knowledge and understanding of the subject. Recent changes taken place in case of examination are referred as examination reforms.

7. Assessment reforms:

Assessment means the evaluation of a student's achievement in the conventional commerce education. There has been a paradigm shift in the assessment pattern from marks to grades. Here it means assessment reforms.

8. Administrative reforms:

Administrative reforms consist of (i) governance policy reforms (ii) accountability reforms.

It mainly focused around at macro level with changes and improvement in the governance structure to ensure transparency, autonomy and accountability in commerce education.

9. Academic reforms:

Academic reforms include (i) Curriculum reforms (ii) E-technology reforms.

Academic reforms may include merit-based admission policy, semester system, grading system, uniform curriculum, content of syllabus, credit system, uniform
academic calendar, application of e-technology in teaching-learning and administration process.

10. Examination and assessment reforms:
   New changes brought in the examination pattern and the assessment together is referred as examination and assessment reforms.

11. Commerce education:
   The commerce education means a detailed course of study offered at 10+02+03 level consisting of total number of subjects; electives; compulsory papers, optional paper and prescribed syllabus in each paper for three years integrated Bachelor of Commerce (BCom) and Master of Commerce (MCom) programmes. Hence commerce education is able to provide the knowledge about the trade, industry as a whole.

12. Commerce education reforms:
   The changes introduced/emerging trends in the commerce education are called as commerce education reforms.

13. Conventional education:
   Programmes like Arts, Commerce and Science are considered as conventional education in the context of the study. Non professional education is referred as conventional education.

14. Conventional commerce education:
   Conventional commerce education for the purpose of this study means the undergraduates (BCOM) and the post graduate students (MCOM) are imparted education by the various colleges and the University running this programme for the sake of completion of their degrees.
15. Quality commerce education:

Quality in commerce education means to upgrade the present status of commerce education and make it competitive in comparison with foreign counterparts and thus increase the employability of the students.

16. Conventional commerce quality education:

Conventional commerce quality education means providing quality with the help of Total quality management to satisfy the needs and requirements of the stakeholders through providing and upgrading the commerce education.

17. Accountability pentagon:

Accountability pentagon means each of the five corners of the pentagon represents the interests and/or pressures of the stakeholders involved, and provide a framework to analyze their receptiveness to accountability in the Indian higher education system. Here for the present study it means accountability towards conventional commerce stakeholders.

18. Credit system:

Credit based semester system takes into account a student’s performance throughout the entire course. Credit based semester system evaluates a student’s performance throughout the entire course of his study. The credits are earned by the learner after completion of each semester.

19. Grade system:

Grades can be assigned instead of marks in letters, as a range (for example 1 to 6), as a percentage of a total number correct, or as a number out of a possible total (for example out of 20 or 100). As per the recommendation of UGC, Plan of Action for Examination Reform (1973) regarding the grading pattern in the
Universities and the Colleges, there was introduction of 7 point grading scale. It included letter grades O, A, B, C, D, E and F respectively.

20. Semester system:
   Change from annual pattern (one time exam) to semester based pattern (i.e. two times exam) in a year is called as semester system.

21. Scale- Low to world class:
   Extent of impact in terms is divided into 7 scale or points namely no, low, average, moderate, high, very high and world class and respondents were requested to respond according to their expectations and experience.

22. World class commerce education:
   The highest level of expectations from the teacher respondents was termed as world class commerce education.

23. Total quality management in commerce education:
   Applying TQM and its characteristics to conventional commerce education means total quality management in commerce education.

24. Total quality management:
   (TQM) is concerned with promoting organizational effectiveness through the excellence, reliability and quality of an organization’s goods and services.

25. Impact:
   Impact means the effect of conventional commerce education reforms. Impact can be measured with (i) qualitative (ii) quantitative and (iii) temporal measures.

26. Expected impact:
   The respondents were having certain expectations to be fulfilled from the reforms introduced in conventional commerce education here means expected impact.
27. Actual impact:

Actual impact means the respondents were having certain expectations to be fulfilled from the reforms introduced in conventional commerce education whether it was fulfilled or not and if yes to what extent.

28. Gap:

Gap means deviation between expected impact and actual impact of conventional commerce education reforms on conventional commerce education.

29. Difference:

It means gap between expected impact and actual impact of conventional commerce education reforms on conventional commerce education.
References:


2. Ibid.


4. Burnett and Patrinos, 'Review of some of the developments that have created the conditions for reform, 1997.


6. Ibid.


14. Harmann, G and Meek, V.; 'Repositioning quality assurance and accreditation in Australian higher education’, EIP, Department of education training and youth affairs, Canberra; 2000.


