CHAPTER II

LITERATURE REVIEW

Literature review is “the use of ideas in the literature to justify the particular approach to the topic, the selection of methods and demonstration that this research contributes something new” (Hart (1995)).

2.1 Literature Review on Higher Technical Education

Tajnikar et al. (2008) tackle the issue of the higher education funding system in Slovenia. Its main attribute is that institutions are classified into study groups according to their fields of education, and funds granted by the state are based on their weights or study group factors (SGF). Analysis conducted using data envelopment analysis tested whether members of the University of Ljubljana are classified into groups according to their relative technical efficiency and SGF values are aligned with the relative differences between them. Results confirm the heterogeneity of the study groups, the inappropriate formation of one group, inaccurate classification of institutions and that the SGF values of different study groups are too high relative to the base group.

Bhatia et al. (2008) explain that the role of technical education is crucial to nation's development, because it is the major producer of human resource capital. It may be mentioned that education is not so much as what students learn in their classrooms, but it matters how do they learnt it. The environment and needs where the potential of this vast capital of human resource is tested and harnessed is changing constantly with time. Therefore, the learning process of the higher technical education should be directed such that students and young faculty members are able to give their best; both in terms of intellectual content and skillful efforts. This paper attempts to analyze the prevailing structure of the centers of higher technical education and suggests strategies to improve their performance. It also attempts to strengthen the importance of Participative Learning Pedagogy with emphasis on the equal and interactive participation of student in teaching process, in conjunction with generic skills, well-trained faculty, well-equipped laboratories, good student centric learning support, technical manpower support, infrastructure and entrepreneurship programme etc.
Prasad et al. (2013) explain that innovation in any place, including educational organisations, is directly proportional to the attitude of top and senior management of that organisation. Educational innovation in India needs to be regarded as one aspect of a multi-dimensional effort for the transformation of Indian education system and then Indian people. Almost 60 per cent of India's people are under 25 and, as the world's largest democracy; it will be forced to respond to their desire for higher education. However, Management, as it is practiced today, is more about the status than about improvisation or creativity. Large scale reforms are currently being tried in the education sector. And the decisions of the University, University Grants Commission and the government are very vital in this regard. Innovation in education is more about combined initiatives than only force compulsion by regulation. A right blend of continuity and change management is required for managing the innovation in higher education system in India.

Prasad et al. (2011) explain that education is on concurrent list in India and so, is not for profit. Private participation in higher and technical education has been in existence ever since the modern education system developed in India. In past it was more for philanthropy and fulfillment of inner needs of kings, industrial houses who donated the land for promotion of education and helped in setting up of BHU, AMU, TISS, TIFR, and ISS. As the aspiration of society for professional education increased while the public sector had limited access, sensing the business opportunity large number of entrepreneurs and business houses had worked meticulously to exploit the situation, while some offered access, some quality education and most offer run of the mill education to milk the cash cow. We have witnessed lot of changes in higher education sector in the last two decades, the public as well as private institutions are undergoing change but they also have to maintain continuity for growth, innovation, technology etc. The present paper had applied Interpretive Structuring Model to study the continuity and change forces in Education Sector the model has lot of policy implication for planner and implementers in Education Sector.

Gabdrakhmanova (2013) in his article describes ways and methods of improving the quality of graduation in Oil and Gas Engineering by means of implementation of the competence building approach within the modernization of the content of professional education. The article proves the expediency of use of the activity approach in formation of professional competence of students of technical University and the experience of implementing this approach. The author emphasizes the importance of the discipline of mathematics in its function as the basis.
of professional education and pays special attention to the determination of the types of competences and the formation of general professional skills of bachelors. The article deals with the basic concepts of the task and the author's understanding of the term «task». The author presented the experience of the development of practice-oriented tasks for students of technical University. The article also considers the experience of implementation of this technology at studying mathematics at the Petroleum Technological University in compliance with the requirements of the third generation standards. The technology of professional competences formation is offered. Special attention is paid to the technology of formation of professional competence of students of technical University. In this article, stages of organization of the study process at implementation of the technology of the problem-based approach in the education are provided. Specific examples are considered methods of organizing the formation of professional competences. The author reveals the subject matter of a mathematical problem in its function as the basic means of competence formation with the students of technical higher education institutions shows the relevance of treatment in learning process task approach and suggests specific methodology for forming key competences through solving technological problems.

Huang et al. (2012) explains that higher technical and vocational education institutions in Taiwan face the pressure of an oversupply of student places and fierce competition from domestic and international institutions. To cope with these challenges, higher technical and vocational education institutions that are better equipped to respond to market requirements are expected to achieve competitive advantage and superior performance. A sector-specific model of competitive advantage for higher technical and vocational education institutions in Taiwan is, therefore, developed and tested. The model integrates theories of strategy and competitive advantage, namely industrial organization theory and resource-based view theory. It is concluded that integration of industrial organization and resource-based view theories provides a useful framework in which to comprehensively and systematically analyse an industry sector in relation to competitive advantage. This study also highlights that institutional performance depends on the match between the state of the environment surrounding the higher technical and vocational education institutions and their use of resources.

Jain et al. (2013) explain that the changes in social and cultural framework, and even more in the economic order, have pushed the education system and higher education in particular, into a new environment in which quality plays an
important role. Thus, the purpose of the current study is to develop a multidimensional scale to measure service quality in higher education in the Indian context. Design/methodology/approach – The study, descriptive, diagnostic, and causal in nature, has been conducted on students of higher education, particularly technical education in India. A questionnaire consisting of 26 items was developed to measure the service quality construct and its dimensions. Construct validation using exploratory factor analysis showed an interpretable latent structure consisting of seven dimensions. Findings – It was observed that service quality in higher education setting comprises seven dimensions viz., input quality, curriculum, academic facilities, industry interaction, interaction quality, support facilities and non academic processes. Research limitations/implications – The study holds implications for institutes of technical education in India that seek to improve the quality of service that they provide. The scale developed can be used by practitioners as a diagnostic tool for identifying poor and/or excellent service performance. Originality/value – While studies in quality management for education have been conducted, this study lays emphasis on the student as a customer of education, and proposes to develop a scale to measure their perception of service quality. The study is an attempt towards developing and empirically validating a measurement scale for service quality in higher education in the Indian context.

Nugaras et al. (2014) in their paper present the results of the empirical research of the networking of Technical Higher Education Institutions (HEI’S) of the Baltic Sea region. The research was conducted in order to understand how the Social Network Analysis (SNA) and network mapping methods could help to strengthen institution's strategic perspective through networking. The author analyse the interaction phenomena in the Higher education sector; its' impact for networking of institutions and for the network itself; the role of the position in the networks; abilities to strengthen the node's perception of the network for the strategizing purposes. The research was based on the SNA of the Erasmus programme student mobility data. The results of the research cover the implications of aspects of the network centrality, clustering and ego networks let to identify the node's position in the network, and to understand surrounding network. The research disclosed that the SNA could be applied in supporting the strategizing process by: increasing of understanding of embedded networks, having more realistic network picture, also could be used as supplement evaluation and development planning method for the relationships portfolio management for HEI's.
Miranda et al. (2012) explain that the aim of the study is to contribute to the existing literature on the efficiency of higher education institutions. The technical efficiency of higher education has been mostly studied using methods such as data envelopment analysis and stochastic frontier analysis. Many researchers compare either the efficiency among public education institutions or among departments in a university by using variables that give equal importance to teaching and research. In this paper, both these methodologies are applied to measure the efficiency of higher education courses, especially the business administration courses offered by private for-profit institutions that focus just on education and are located in the same geographical region. The variables selected covered the specific aspects of these courses and the results showed the complementarities of these two approaches.

Aristovnik et al. (2011) in their study apply a non-parametric approach, i.e. data envelopment analysis (DEA), to assess the relative technical efficiency of higher education across countries, with a particular focus on Croatia and Slovenia. When estimating the efficiency frontier we focus on measures of quantities outputs/outcomes. The results show that the relatively high public expenditure per student in Croatia could have resulted in a relatively better performance regarding the outputs/outcomes, i.e. a higher rate of higher education school enrolment, a greater rate of labour force with a higher education and a lower rate of the unemployed who have a tertiary education. On the other hand, regardless of the input-output/outcome mix, the higher education system in Slovenia is shown to have a much higher level of efficiency compared to both Croatia and many other comparable EU and OECD countries.

Rukmini et al. (2013) explain that English language and communication skills are gaining importance on a par with technical subjects in higher education and corporate sector. Due to Globalization/Internationalization, English language teaching in Engineering, Sciences and IT education has become mandatory and is accorded equal importance along with other basic and applied sciences. Good command in English language and communication skills has become the mantra for high employability among engineering and management students. Amongst the various language skills, Professional Communication (PC) skills are considered very important for engineers and IT professionals for excelling in their profession. Poor PC skills have been identified by the corporate sector as one of the main factors for the gap between education and employability. Professional communication differs from general communication, in that it requires command over Scientific and
Technological Terminology (STT) and domain knowledge. Professional grooming integrates STT along with the required English language and communication skills. The present paper aims to discuss the basics of PC, its importance, the role of STT and how to integrate it into English Language Teaching (ELT). Learning STT serves twin benefits: it not only develops skills for effective PC, but also helps the vernacular medium students to grasp the concepts of basic sciences and technology with complete understanding.

Çokgezen et al. (2009) explain that this is the first study of technical efficiencies of higher education institutions and the first study evaluating performance at faculty level in Turkey. The study also compares technical efficiencies of private and public institutions. Estimation shows low overall efficiency with high variations across the faculties of economics. The results also demonstrate that average efficiency of public institutions is higher if the quality of data is not considered. However, when qualities of the outputs are taken into account, average efficiencies of public and private institutions converge.

Agasisti et al. (2009) explain that we employ Data Envelopment Analysis to compute the technical efficiency of Italian and English higher education institutions. Our results show that, in relation to the country-specific frontier, institutions in both countries are typically very efficient. However, institutions in England are more efficient than those in Italy when we compare jointly their performances. We also look at the evolution of technical efficiency scores over a four-year period, and find that, in line with an error-correction hypothesis, Italian universities are improving their technical efficiency while English universities are obtaining stable scores. Policy implications are addressed.

Fajardo et al. (2014) in their article present a report from the Gaither International poll which reveals the large percentage of adults who take technical courses or degrees of higher education in the U.S. It states that the technical courses are called vocational course which is a short program of one to two years of study. It cites the decline of the percentage of adult who completed bachelor's degree.

Holmes (2013) explain that there is an enduring belief by UK policymakers that a large higher education sector is an important driver of long-run economic growth, which has been part of the narrative since the Robbins Report. Back then, there was plenty of conjecture and assumption, but strikingly little concrete evidence to support such a belief. This paper asks whether the evidence base has strengthened
in the 50 years since it was published. It looks at a number of different growth equation specifications and, using international education data, attempts to draw out the contribution of both the number of, and the growth in, graduates since the 1960s. There are three main findings. Firstly, many growth relationships, including those estimated elsewhere in the literature, are quite sensitive to the countries included – which often depends on the variables used – and time period of analysis. I argue that, given these issues, growth equations should always be treated with caution. Secondly, and remembering this caveat, neither the increase nor the initial level of higher education is found to have a statistically significant relationship with growth rates both in the OECD and worldwide. This result is robust to numerous different specifications. Thirdly, there is some evidence, consistent with the existing literature, that levels of technical skills at the end of compulsory education matter. The employment of higher level technical skills (proxied by the number of employed researchers in an economy) is also a strong predictor of growth. This gives a possible mechanism linking the output of (some) of the higher education sector with economic growth. However, it does not imply that mass higher education necessarily leads to higher growth. This depends on the skills produced by an expanding tertiary sector and their utilisation (or underutilisation) in the jobs available to increasing numbers of graduates.

Schramm (2012) in his article reports on predictions by human resource (HR) professionals that an increasing number of jobs will require higher education and specific technical skills between 2012 and 2022. Topics include why even low-skilled jobs are requiring high school diplomas and certifications, how the prohibitive cost of higher education is limiting students’ employment options, and the difference between on-site job training and higher education.

Joumady et al. (2005) in their study examine technical efficiency in European higher education (HE) institutions. To measure efficiency, we consider the capacity of each HE institution, on one hand, to provide competencies to graduates and, on the other hand, to match competencies provided during education to competencies required in the job. They used a large sample of young graduates interviewed three years after graduation from 209 HE institutions among eight European countries. A non-parametric approach (Data Envelopment Analysis) was used to evaluate efficiency of converting multiple inputs into multiple outputs. Objectives selected were consistent as the same types of institution were found to be efficient in different specifications.
Watson (2006) in his article presents a response to the article "Management Education as if both Matter," by Jonathan Gosling and Henry Mintzberg. The author inferred that people who are in the field of management education must believe in the importance of both management and education. He averred that the work of Gosling and Mintzberg attacked a specific form of management education as exemplified by the full-time Master of Business Administration degree in Great Britain. Furthermore, he stressed that the requirements needed for an effective management should include the general intellectual skills gained from a good higher education, the technical knowledge about organizations, and managing skills. He stressed that most business schools are concentrating on the technical side of educating managers.

Amdam (1994) in his article describes the Norwegian system of management education and training before World War II as a system different from the main European systems. The study focuses especially on how Norwegian managers compensated for deficiencies in the educational system by travelling abroad. It also discusses the relationship between the strong foreign dimension to the educational system and the Norwegian industrial development, as well as how this foreign influence contributed to the formation of the Norwegian system of higher business education before World War II. Historical research has shown great variations in the systems of management education in different Western nations. Studies on recent shifts in international industrial leadership also identify management education as one explanatory factor. If it is true that differences in the systems of education are important for understanding how the economic relationships between nations have changed, a major research effort should be undertaken to elaborate descriptions of, and theories on, the differences in educational systems. In general, Germany influenced the formation of both higher technical and business education in Norway, as well as in other Scandinavian countries. However, Norway had in fact a specific system characterized by an efficient use of institutions in different foreign countries to train future managers.

Glatter (1999) provided discussion regarding the redefinition of the field of educational leadership and management in academic settings within the United Kingdom. Focused on the framework for educational policy-making; Influence of research and the contribution to higher education; analysed the technical-rational approach to leadership and management.
Bhatia et al. (2008) explain that the role of technical education is crucial to nation's development, because it is the major producer of human resource capital. It may be mentioned that education is not so much as what students learn in their classrooms, but it matters how do they learnt it. The environment and needs where the potential of this vast capital of human resource is tested and harnessed is changing constantly with time. Therefore, the learning process of the higher technical education should be directed such that students and young faculty members are able to give their best; both in terms of intellectual content and skillful efforts. This paper attempts to analyze the prevailing structure of the centers of higher technical education and suggests strategies to improve their performance. It also attempts to strengthen the importance of Participative Learning Pedagogy with emphasis on the equal and interactive participation of student in teaching process, in conjunction with generic skills, well-trained faculty, well-equipped laboratories, good student centric learning support, technical education.

2.2 Literature Review on Entrepreneurship in Higher Technical Education

Entry of entrepreneurs in Higher Education including Management / Business Education, Engineering, I.T., both at institute as well as private University levels is not unique to India. Review of available literature on the subject reveals that while Capitalistic philosophy in countries like U.S.A., U.K., Canada, Australia ensured large role for private entrepreneurs in this field during the twentieth century, developing and emerging economies including those pleading communism as an economic philosophy like China, Russia, Czechoslovakia, Poland and those having faith in the role of both private and public sectors (mixed economy) like India, Bangladesh have experimented with higher presence of private entrepreneurs during last 20 to 30 years in the field of professional education.

National Policy on Education, as adopted by Parliament in May 1986 was modified in May 1992 in the light of recommendations by committee headed by Shri N. Janardhana Reddy, Chief Minister of Andhra Pradesh. The revised policy laid due emphasis on Technical and Management Education in Chapter VI, clause 6.1 by clubbing two streams in view of their close relationship and complementary concerns. It emphasizes that ‘re-organisation of Technical and Management Education should take into account the anticipated scenario by the turn of the century, with specific reference to the likely changes in the economy, social environment, production and
management processes, the rapid expansion of knowledge and great advances in science and technology.

Under clause 6.15, it champions need for promoting efficiency and effectiveness at all levels by according high priority to modernization and removal of obsolescence. It recognizes that technical and management education is expensive and major steps would be taken for cost-effectiveness and promoting excellence (National Policy on Education with modifications undertaken in 1992, Ministry of Human Resources, Govt. of India, New Delhi).

The 10th Five year plan document (1999) defined nature and scope of regulation of private higher education by stipulating in an unambiguous way: “Laws, rules and procedures for private, co-operative and NPOs (Not for Profit Organisations) on supply side of education must be modernized and simplified, so that honest and sincere individuals and organizations can set up Universities, Colleges and Schools. Oppressive controls on fees, teacher salaries and infrastructure and staff strength must be eliminated. The regulatory system must be modernized, based on economics of information and global best practices.

In her paper on “Private Sector Participation in Education Services”, Somaiah M. (2003) emphasizes need for creation of social infrastructure, organizations which manage higher education, quality control in terms of teaching & learning processes and certification- in the context of globalization. India being a signatory to GATS agreement, several foreign Universities are looking to set up operations in India. She examines the implications of this development in terms of quality aspects, cost of education, issues of equity and justice. She opines that the crucial issue of “Education as Investment” needs to be addressed separately for primary school education and higher education. As far as primary school education is concerned, considering it as still a welfare activity in this age of liberalization does not seem to go with the times. The Indian educational system has certainly reached a level of maturity to be able to take the position that quality of school education and cost go together. While providing access to school education for all sections of the society is a constitutional obligation of the government, providing quality school education is an equally important obligation. In order to achieve the latter, looking at education as an investment becomes inevitable.

“Privatisation of Higher Education, Opportunities and anomalies’, an analytical article by Dr. M. Anandakrishna (2008) raises issues connected with rapid expansion of Higher Education in India in the context of achievement of national
goals by 2020. He feels that merely increasing the number of higher educational institutions and their enrolment capacity will not achieve the national developmental goals without concurrent attention to quality of the educational system, its access to those who desire and equity measures ensuring fair and impartial treatment of the disadvantaged sections of the society. In recent years the rapid expansion in the number of institutions and their intake capacity has resulted in decline in their quality, partly due to insensitive attitude of the agencies intended to promote academic quality.

Andrić et. al. (2006) in their article present abstracts related to entrepreneurship and corporate governance in Europe. They include “The Impact of Privatization Investment Funds on Corporate Governance in Croatia,” “Change Management in the Process of Restructuring of Enterprises in Serbia,” and “Examining the Efficiency of Croatian Higher Education: An Application of Student Attainment Modelling.”

The subject of ‘Private Higher Education in India: Status and Prospects” up to 2007 was closely examined by Agarwal P. (2007), Secretary, Dept. of Science and Technology, Govt. of West Bengal, Kolkata and Fulbright, New Century Scholar on higher education in 2006-07. According to him ‘Knowledge’ has replaced ‘physical capital’ as a major source of present and future wealth. He feels that since higher education is the instrument of transmission of that knowledge, its immense growth in both public and private sector is inevitable. He observes that higher education in India has followed a trajectory away from public ownership, financing and controls. In terms of quantity, he finds that India enjoys the distinction of having the largest number of institutions of higher education (more than 18,000 at the time of his study in July 2007) in the world, which was four times the number in U.S. or Europe and more than seven times that in China.

Findings of National Knowledge Commission (2008), regarding Indian Entrepreneurs suggest that a successful Entrepreneurship ecosystem is the function of a number of factors working in tandem. Key ‘Entrepreneurial Triggers’ are: Individual Motivations, Socio-cultural Factors, Access to Early-Stage Finance Education and Business Environment.

Prominent ‘Motivation Triggers’ are ‘Independence’, ‘Market Opportunity’, ‘Family Background’, ‘New Idea’, ‘Challenge’, and ‘Dream Desire’. Motivation Triggers vary according to parameters such as region, gender, age, family background, and work experience. ‘Challenge’ is the principal ‘Motivation Driver.’ 99.4% of the entrepreneurs interviewed did not want to be in a routine job. 74% of the
entrepreneurs interviewed received family support, underscoring its crucial significance.

63% of the entrepreneurs interviewed were self-financed, while other sources included banks, venture capital (VC), angel investors and state finance corporations. Among those financed by banks, a majority who approached banks (61%) did receive bank finance. Yet there is a widely held perception among entrepreneurs that it is very difficult to get bank loans at the start-up stage while becoming comparatively easier at the growth stage. Perceptions regarding bank finance have not improved in case of entrepreneurs who started ventures after 2000 and are mainly in knowledge intensive sectors. 95% of entrepreneurs believe education is a critical success factor. Education is a key trigger to evoke entrepreneurial inclinations. 98% of the entrepreneurs are graduates. However, only 16% chose a specific sector as a result of their educational background.

Nearly one in two entrepreneurs considered skill shortages in recruitment to be a problem of average importance, while nearly one in three considered it ‘somewhat difficult’ or ‘very difficult’ to find candidates with the right skills. More than a third of the entrepreneurs faced problems in accessing as well as retaining employees generally. 50% of the entrepreneurs experienced difficulties while seeking statutory clearances and licences. Two-thirds faced hassles while filing taxes and 60% claimed to have encountered corruption. Another hurdle was in accessing reliable information on registration procedures, finance and other schemes. 56% claimed that the paucity of quality infrastructure – especially transport, power, and telecommunications – was a critical barrier.

According to NKC (2008) there is a need to demystify perceptions of risk and failure by facilitating dissemination of best practices as well as documentation of unsuccessful ideas in the entrepreneurial space. Recognition and rewards right from the local up to the national level will energize and encourage new entrepreneurs. Involving entrepreneurial networks and associations will also help in giving visibility and encouragement to Entrepreneurship.

An imaginative combination of assessing debt and equity would require positive efforts on the part of banks, financial institutions, VCs, angel investors and private equity (PE) funds. In India, financiers need to be more proactive in assessing the business opportunities generated by Indian entrepreneurs. Innovations in risk management will also reduce information asymmetry and make funding more accessible.
Synergies between Education (including modern vocational education training/skill development), Innovation (converting ideas into wealth and employment) and Entrepreneurship should be encouraged.

Gazi Mahabubul Alam (2009) in his research paper “Can governance and regulatory control ensure private higher education as business or public goods in Bangladesh?” discusses the existing role, status and quality of Higher Education imparted in Private Universities in Bangladesh and finds that private sector considers education as “business goods”. Private Entrepreneurs feel that bazaar of education will determine whether private Higher Education sector is providing quality and epoch-making education. They believe that the increasing number of students enrolling with private sector demonstrates that this sector is doing right. Measurement of ‘educational product’ is a difficult task and there are few traditions of quality assurance.

In “Entrepreneurship European Development Strategy in the field of Education” the authors Cotoi E. et, al.,(2010) suggest Europe developing a new entrepreneurial culture, adjusted to society and based on knowledge, innovation and involvement of a large number of people in entrepreneurial projects.

The networks which support entrepreneurs, entrepreneurship improvement, analysis and dissemination could ensure the dissemination of good ideas across the entire E.U. (European Union) and can contribute to the development of a new entrepreneurial spirit in the future.

In another study it was found that there is not much to education without quality. We have set a system of tight controls, with formidable entry- barriers and plethora of rules about not just education, but the fees that students must pay and the salaries that professors must get. The casualty of this ‘licensing system’ has been exactly what these bureaucratic rules were supposed to promote- quality. They explain that it is important to realize that doing something for profit does not mean not doing it for quality. If we set a few essential rules, insist on transparency of fees and salaries (but not try to fix them), top quality private corporations will come into education.

Subject of Knowledge Transference (KT) in the context of entrepreneurship and higher education has been researched by Cavaller V., UOC – Universitat Oberta de Catalunya (2010) in “Portfolios for Entrepreneurship and Self Evaluation of higher education institutions” as published by International Conference on Education and Education Psychology. The aim of the paper was to explore application of methodologies to assessment and quality assurance of seats of higher education
including universities. Effort has been made to evolve new systems for measuring relationship, performance & efficiency. Rich literature has been developed to explore inputs and outputs indicators of missions of universities: learning, teaching, diffusion and production of knowledge in research, patents and licensing, entrepreneurship-management / Social and economic.

In the research conducted on "The impact of entrepreneurial capacity, experience and organizational support on Academic Entrepreneurship" by Clarysse, Valentina Tartari & Ammon Salter (2011), factors like entrepreneurial capacity, social environment (supportive or critical), entrepreneurial experience have been examined and analysed to assess success of enterprises.

Mekhla Sinha (2010) in her article ‘Entrepreneurship & Management Education’ opines that ‘entrepreneurs are simply those who understand that there is little difference between obstacle and opportunity and are able to turn both to their advantage. They willingly assume responsibility for the success or failure of a venture and are answerable for all its facets.

Heben R. and Link A. (1988), share their perception about entrepreneurs which is that ‘Entrepreneurs are risk takers, willing to roll the dice with their money in support of an idea or enterprise. In this paper, the writers explain concept of entrepreneurship, discusses about growth of an idea at the preliminary stage, development of business plan, finance, operations, HR Management, project management, success, failures and all related aspects. While emphasizing importance of business idea, they quote Warren Buffett, “today’s successful companies live and die according to the quality of their ideas”. Success of an enterprise, according to the author, depends upon market research, segmentation, positioning, targeting, branding, pricing, promotion etc.

The book dwells upon the importance of CSR (Corporate Social Responsibility) of an entrepreneur and refers to Triple Bottom Line (TBL) coined by John Elkington which includes People (shareholders, stakeholders, community and owners / promoters), Planet (protecting environment by sustainable environmental practices) and Profits (economic benefits enjoyed by society as a whole).

In a seminar entitled ‘Strategic Management in Higher Educational Institutions: Emphasis on career orientation in Management & Technical Institutes’ speakers opined that strategic factors and career orientation concepts are driving economic development of nations. Revolution in higher educational institutes is also the outcome of shift in strategic focus of students, society and industry. Focus was on
participation of self-financed, as well as government institutes, especially in field of management and technical education. It discussed different strategies of such institutes viz. career-orientation driven, event-focused, facility-related, short-term approach to learning, workshops, live projects, seminars etc.

In developed and fast developing countries 'Entrepreneurship' has emerged as an 'important field of research. Charlotte Carey and Harry Matlay (2011), in their research paper “Emergent Issues in enterprise education: The educator’s perspective”, recognize the importance of innovation and entrepreneurship for competitive advantage and of the role of the small firms in driving forward this agenda with resulting effects on higher education. Related ideas of risk, responsibility and rewards have also been discussed in this article.

Dr. Brinda Kalyani (2012) at all researched on 'Women as Entrepreneurs'. This is relatively a new subject and has not so far attracted much attention. Research in the field of motivations and factors that attract and influence women to Entrepreneurship has been very limited. In their research study on “Motivational Factors, entrepreneurship and education: study with reference to women in S.M.E.”, authors feel that women entrepreneurial developments are one of the important areas which a majority of countries have focused upon as a part of over all Human Resource Development.

The concept of ‘self-financing’ has found acceptance in professional courses of higher education as concept of privatization has shifted funding paradigm from tax-payers to user beneficiaries bearing the burden.

Editorial article published in Economic Times in May, 2012 titled "India spends less on higher education" states that despite all possible efforts and initiatives by the central government to promote spread of higher education in India, the percentage of its GDP spending on higher education in the last couple of years has remained stagnant at around 0.37 percent against 1.41 percent, 1.07 percent and 0.50 percent of US, UK and China respectively, according to industry body ASSOCHAM (The Associated Chambers of Commerce and Industry of India).

A paper on 'Future of Indian Higher Education' brought out by ASSOCHAM (2012) also reveals that economies such as Japan and Korea also spend less than 0.40 percent of their GDP on higher education but 80 percent of their students seek their higher education through non-subsidised private educational institutions. In India, the higher education is highly subsidised and this is one of the reason that its quality of higher education is often questioned overseas.
According to the paper, while India attracts only 15,000 to 18,000 students for higher education every year, China in contrast hosts more than 140,000 foreign students. Singapore and Malaysia attract over 70,000 and 30,000 foreign students respectively for their higher education each year.

As a result of their higher GDP spending on higher education, Singapore, Malaysia and China have emerged as global players in the cross-border higher education thereby attracting many reputed universities from the advanced countries and hosting a large pool of globally mobile students.

Agrawal R. (2013) tried to provide an insight into the life of an individual who moved to edupreneurship, despite belonging to a family of entrepreneurs, after being motivated by the lack of modern technical education. She observed that literate and skilled population is the foundation stone of a growing economy. This created a need for establishing and developing an education system that prepared our future generations in a proficient manner. Most of the schools and colleges, with socially driven mission statements, portray to be non-profit and social service ventures, but in reality have turned into educational factories where no serious attention is given to quality, but only the numbers matters. Today there is a great need for individuals with entrepreneurial minds and social sensitivity to penetrate into this sector and bring about a change. The term ‘Edupreneur’ means an Educational Entrepreneur, who ventures into the entrepreneurial aspects of educational domain.

Waters (2010) in his article discussed the technical entrepreneurship and engineering and management education in the U.S. The author cited the reasons for the failure of entrepreneurship to penetrate into more engineering, management programs including dominance of business schools in the field, unappealing engineering schools, and scarcity of funds and difficulty of positions to justify. He suggested about Stanford Technology Ventures Program which he believed were a good starting point in entrepreneurship.

Binks et al. (2006) in their paper examine education in the light of debates about the future of the business school, the nature of the MBA, with which management education is generally synonymous, and the links that need to be created between teaching and research. There is increasing focus on the general utility of entrepreneurial skills and aptitudes (i.e. creativity, independent thinking, opportunity recognition and exploitation, etc.), and it is our contention that entrepreneurship education offers an innovative new paradigm for business school education that answers some of the challenges that are currently levelled
against the MBA. Given the breadth of relevance in terms of the issues around entrepreneurship Education and future pedagogical development in Business Schools, this paper is also well placed as a vehicle to introduce the rest of the coverage in this special issue of TASM. This paper therefore also summarises the papers presented in terms of their contribution to our understanding of the role of entrepreneurship and innovation in higher education. All suggest the need for the broadening of human and social capital, while some propose a fundamental shift in the delivery of professional education.

Mustar (2009) highlights the design of a new specialization on innovation and entrepreneurship at a leading French engineering school by addressing four broad concerns: (1) How to develop a highly selective technology management and entrepreneurship specialization for students in an institutional and country environment traditionally resistant to the notion of entrepreneurship; (2) How to combine the acquisition of knowledge and the development of skills; (3) How to develop entrepreneurial skills and students’ ability to take responsibilities; and (4) How to encourage imagination, creativity, involvement, and risk taking. In addressing these questions, a major challenge was to develop a distinctive learning method combining lectures, studies of start-ups and incubators, interviews with entrepreneurs and professionals, business plans, teamwork in creating new business ideas, project work, and in-depth involvement in an actual, 3-month entrepreneurial field study. All these educational activities exist at other institutions, but they have never been combined in a single program. The novelty of this program lies in this extensive mix and in the shift from classical teaching models to experiential-learning approaches.

Jones (2014) in her article posits the idea of the ‘fictive entrepreneur’ and the ‘fictive student’ to explore how the historical masculinisation of entrepreneurship has informed UK policy and higher education (HE) approaches to entrepreneurship education, and the implications of this for female students. Using a Bourdieuan perspective, discourse analysis is employed to critically analyse policy and research documents and identify entrepreneurship discourses that construct both a ‘fictive entrepreneur’ that students should aspire to become, and a ‘fictive student’ who will benefit from HE entrepreneurship education. It argues that rather than being gender neutral or meritocratic, these discourses of entrepreneurship are saturated with gendered meanings which position Higher education students and entrepreneurs in potentially damaging ways.
Field et al. (2010) in their article presented an exploration into the limitations and constraints present in traditional business cultures towards women entrepreneurship. Questions were raised asking whether the structure of traditional institutions inherently pose obstacles for would-be businesswomen, focusing on whether inadequate access, limited demand, or social norms primarily lead to fewer women entrepreneurs. Concluding comments were offered, noting positive effects of business education on the prospective incomes of businesswomen.

Keng (2004) explains that in response to the positive impact of entrepreneurship on the economy, many institutions of higher learning offer entrepreneurship education to address the manpower development needs. This article determines the effectiveness of the traditional lecture-tutorial entrepreneurship education in promoting entrepreneurial learning. It argues for a change in the content and process of entrepreneurship education to provide for authentic entrepreneurial learning that can better equip the graduates to be ready for entrepreneurship. This article describes the experiences of the faculty at a polytechnic in Singapore in their effort to help their students become entrepreneurs by transforming the entrepreneurship curriculum using problem-based learning. It describes how they implemented the problem-based learning approach. Evidence of the success of the new curriculum is provided.

Teixeira et al. (2008) explain that institutions of higher education have an important role in the generation of high tech 'entrepreneurial capacity'. Being entrepreneurship in Portugal an emergent phenomenon there is an urgent need to better understand and develop this area not only by analyzing the 'supply side' (i.e., the courses taught in this field) but also the 'demand side', that is, the attitudes of students, future potential entrepreneurs, to new venture creation. Based on 4413 responses of students enrolled in Portuguese higher education institutions, gathered in June-July 2008, we found, using a multivariate model, that students who had already created a firm although, on average, possess larger entrepreneurial experience and knowledge, they do not reveal high risk propensity or creativity. Those students that have taken some steps to create new businesses and, to a larger extent, those foreseeing their future career as owning their business have higher risk and creative profiles. Students who live in an environment which 'breeds' entrepreneurship have stronger desire to become entrepreneurs. This supports the contention that entrepreneurship is a learned process and that school, teachers, and other
institutions and individuals may encourage entrepreneurial behaviors. ‘Role models’ seem indeed to constitute a key factor fostering entrepreneurship among Portuguese higher education students - in the Portuguese case, the entrepreneur and entrepreneurial company references are, respectively, Belmiro de Azevedo and Sonae. Although in a descriptive analysis students enrolled in non-university (e.g., polytechnics) and private higher education institutions reveal higher effective and potential entrepreneurial propensities, when we (simultaneously) control for a vast number of factors which are likely to affect entrepreneurship propensity, such differences cease to be statistically relevant. Students’ personality (risk, creativity) and demographic traits (gender and age), competencies and familiarity with entrepreneurship (entrepreneurial experience, knowledge, awareness, interest), and contextual factors (professional experience, role models) are important determinants of entrepreneurial propensity, whereas the type of higher education institutions (public vs private, non-university vs university), and, to some extent, the degree (postgraduate vs undergraduate), and the scientific area, fail to emerge as key determinants.

Osiri et al. (2014) explain that the practice of academic entrepreneurship continues to rise as many institutions of higher learning embrace its role in stimulating the economy through commercialization of intellectual property. In contrast, research in the field pales relative to other areas of entrepreneurship. In order to reverse this problematic trend we first present a framework for academic entrepreneurship. Secondly, we conducted an extensive review of articles published in leading entrepreneurship journals from journal inception till the end of 2010 and compared the frequency of publication in academic entrepreneurship-related research to entrepreneurship research as a whole.

Safranski (2004) in his article examines three articles, “The Growth and Advancement of Entrepreneurship in Higher Education: An Environmental Scan,” prepared by the Kauffman Center for Entrepreneurial Leadership Staff; “The Contribution of Entrepreneurship Education: An Analysis of the Berger Program,” by Alberta H. Charney and Gary D. Libecap; and “Impact of Entrepreneurship Education,” also by Charney and Libecap. The Kauffman staff article is a simple inventory of programs and funding growth across the U.S. It displays a wealth of statistics on the size of entrepreneurship and small business education programs. According to this report, the growth of
collegiate entrepreneurship programs appears to be nothing less than phenomenal, from only 16 programs in 1970 to nearly 2000 colleges and universities offering some entrepreneurship training in 2004--three fourths of these programs being added in the last decade alone. In the next two articles, Charney and Libecap take a very different look at the issue of impact, attempting to assess the learning and employment of alumni of the Berger Entrepreneurship Program at the University of Arizona. Graduates of the entrepreneurship program were compared with graduates of other programs at the University of Arizona in a research design that attempted to isolate the impact of a Berger Program education from other factors.

De Jorge-Moreno et al. (2012) in their paper aim to evaluate the effect of participation in business and economics education programs on the student's entrepreneurial intention in terms of perceptions of the desirability and personal feasibility of starting a business. Design/methodology/approach – The methodology used to measure the student's entrepreneurial intention is the data envelopment analysis (DEA). This approach involves mathematical programming and as a new tool in this field has permitted enrichment of the results achieved. Findings – Results reveal that the explanatory factors for both types of students are different. This could be explained because the students choose one career or another according to their expectations of employment. In this sense, the student's entrepreneurial intention decreases in the business students when they progress in their studies and they are closer in contact with the business reality. However, the student's entrepreneurial intention increases in the case of business students when they choose a future work option different to work in public administration. Research limitations / implications – Although the work reaches conclusive findings, further research is required in a longitudinal way. Practical implications – The article provides new methodology and results in the field of entrepreneurship and employability in higher education in Spain. Originality/value – In the context of the theory of planned behaviour, the article is innovative on a methodological level in arguing for "connected" perceptions of the desirability and personal feasibility of starting a business with an approach toward employability and enterprise development for students. The authors think that the understanding of the sources of "entrepreneurial intention" at the students' level is crucial for policymakers to develop appropriate educational polices to improve entrepreneurship performances.
Venkatachalam et al. (2005) explained that expansion of employment opportunities among management graduates is an important objective of the management schools across India. At the same time, however, the rate of employment growth in India slowed down from 2.7 percent to 1.07 percent in the last decade. Given this fact, it is increasingly realized that most of the management schools do not offer any assurance of employment to students in the formal job market. The role of entrepreneurship education in management schools becomes extremely important as it will foster job creation, encourage risk taking and innovation, and improve the global competitiveness of Indian enterprises.

Clarysse et al. (2009) explained that in the nineties, postgraduate technology management education was mainly concentrated upon structuring the product development cycle and positioning technology strategy within the overall strategy of the company. To gain insight into the implications of this change, authors conducted a number of exploratory interviews with leaders from both the demand and supply sides in Europe based in higher education institutes, the corporate sector, and public institutes. Authors found important implications for technology management education with respect to its location within universities and identified opportunities for business schools to provide technology entrepreneurship and commercialization skills. Education has been acknowledged by European governments as a promising way to improve the work insertion of young people and, at the same time, contribute to general purposes of social and economic welfare. Particularly, social entrepreneurship is considered an emerging area of growth which provides the opportunity to make a difference in global community contexts. From this view, paper proposed a model of entrepreneurship education based on the European Framework on Key Competencies for Lifelong Learning to analyze the involvement of universities in related actions as perceived by students within Humanities and Social Sciences. Descriptive analysis was used to examine the development of entrepreneurship-related knowledge, skills and attitudes among students and its implications for labour insertion of future graduates in Humanities and Social contexts.

Fletcher (1999) in her paper presents findings of a research study carried out to review the outcomes of the Scottish Graduate Enterprise Programme (GEP). Two hundred and forty-five graduates participated in the nine GEP business start up courses from 1983 to 1991. They came from a range of academic institutions and disciplines. At least a half have started a business at some point, we found 69 (50
percent) of those traced were in business, almost half were female. They did not tend to come from entrepreneurial backgrounds, though most had previous work experience. They had considered a range of career options. They started up with low amounts of capital and found finance a constraint, although a range of other problems were identified. On average the businesses have shown growth in capital, turnover, profits and number of employees. They rated their business performance high on quality standards, innovation and competitiveness, though average on sales and profit performance. The Graduate Enterprise Programme helped those with sufficient motivation, to gain the ability to convert their idea into a business. We conclude with recommendations, based on the experiences of the Graduate Enterprise programme, for supporting graduates to create their own businesses.

Osiri et al. (2013) explain that as universities promote and implement technology transfer activities, it has become increasingly important for universities to pinpoint university-, college-, and department-specific factors that enable academic technology transfer activities. We prose that within academic institutions a culture of entrepreneurship is the most important factor in generating economic gains from university entrepreneurial activities. We posit that differences in entrepreneurial culture across universities partially accounts for the variations in entrepreneurship outcomes between universities. We further proposed several factors which, when combined, create a culture of entrepreneurship which other universities could model in order to promote academic entrepreneurship.

Katz (1991) explains that just as nations take a small measure of their success in their counts of Olympic medals, academics and the media see counts of professorships and chairs as indicative of the strength of a field. For the field of entrepreneurship, Vesper and Kierulf provided an overview of endowed positions in the 1985 edition of Entrepreneurship Education (Vesper, 1985). However the field’s growth since that time has been explosive. Recent guestimates of roughly 100 chairs have made media headlines and have stood without verification or rebuttal. This paper establishes a list of endowed academic positions related to the diverse interests of the field of entrepreneurship, taken broadly. The focus of this first effort has been positions in the United States; future versions will attempt to better cover positions throughout the world.

Florea et al. (2013) aimed to analyze the evolution of the concept of entrepreneurship over time. Authors studied the management literature which
approached the concept of entrepreneurship, and reports, strategies, policies and action plans of the European Commission regarding the subject of entrepreneurship in the European Union, the involvement of higher education institutions in promoting entrepreneurship etc. The paper also aimed to highlight the role of entrepreneurship in the development of Small and Medium Enterprises in the European Union and in creating new jobs. The paper also examined the way in which education and training programs, implemented within higher education institutions, could contribute to the development of entrepreneurship in the European Union countries.

Kabongo et al. (2009) explain that the purpose of their paper is to examine the extent to which higher education institutions (HEIs) in sub-Saharan Africa are seeking to make students more enterprising. To do this, the paper investigates the state of entrepreneurship course offerings, examines the opportunity to specialized studies in the area, and identifies entrepreneurship centers in business administration/management curricula. The results of the study demonstrate that most of the HEIs in the sample offer courses in entrepreneurship and/or small business management. Few institutions offer a specialization in the area of entrepreneurship. Newly created institutions are more likely to report entrepreneurship courses and specializations than traditional ones. A very small number of institutions operate university-based entrepreneurship centers. The findings of this study are consistent with the environmental school of entrepreneurial thought. The paper will assist researchers, practitioners, policymakers, and other stakeholders of higher education institutions in strengthening the discussion between enterprise and entrepreneurship education in sub-Saharan business programs.

Robinson et al. (1991) explain that the field of entrepreneurship has grown at an incredible rate over the past 20 years as evidenced by the increased number of endowed positions, academic organizations, journals, and other publications. A telephone survey of all (232) U.S. universities with at least 10,000 students was conducted to determine the extent of the growth of educational programs focusing on entrepreneurship. The results indicate that educational programs are widely spread throughout this segment of the educational infrastructure but that most remain relatively underdeveloped.

Sial et al. (2011) explain that the goal of their study was determining the factors which were actually responsible for low inclination
towards entrepreneurship in business students of Islamabad. Data was collected from the business students of five universities, which are located in Islamabad. The information to be collected on variables was range from determining simply the presence or absence of a variable to ranking the variables on a given scale depending upon the nature of the variable. Study was Descriptive and Exploratory nature and Z-test Analysis was carried out in order to unearth the relationship between Hypothesized Factors (Lack of innovation and creativity, Lack of risk tolerance, lack of resources, unsupportive social environment, Lack of support from self-employed people, the lack of promotion of self-employment from teachers, Lack of entrepreneur-ship education, Low number of self-employed parents, Lack of required human skills, Long working hour) and low inclination towards entrepreneurship in business students of Islamabad. Researchers found that business students who were pursuing their business and management education at various public and private institutions throughout the country. Being the business student they were the most relevant people to the field of business and were taught how to manage and run a business successfully. They were expected to have a high level understanding of the dynamics of business and consequently should be expected to start their own business after completing their business studies. But the study proved that the inclination towards entrepreneurship among business graduates still remains very low. Only a small proportion of business students were interested in doing their own business. The study concluded that the aptitude of students towards entrepreneurship was not very strong. Though the state of affairs seemed changing but still the general inclination towards self-employment remained very low. The relative rates of self-employment in South Asian countries remains very low as compared to those of west and many other developed countries.

Lugar-Brettin et al. (2013) explain that entrepreneurship promotes, implements, and rewards innovation and is the catalyst behind the creation of the university’s entrepreneurial learning community. This community is a university-wide network designed to “enable the free flow of ideas between students” and “concentrate students in a culture of innovation.” By connecting academic disciplines, entrepreneurial learning, and business opportunities, this web of innovation facilitates the creation of interdisciplinary learning, creative initiatives, and market-focused entrepreneurship.

Vesper (1987) in his article discusses the scope and definitions of entrepreneurship in the context of independent business creation. In this discussion, the definition will be viewed as a target, at the center of which is independent business
creation. Other useful meanings radiate from that point, but have only some aspects in common with the core. Personal business entry through acquisition is one possible offshoot including individual initiative, rather than directed behavior and business performance that is innovative or fast-changing. It would be comforting to assume that expanded intelligence from entrepreneurship research could help measurably in both teaching and outreach services. It would be very helpful for teachers of entrepreneurship to be better able to convey information which is pertinent and goes beyond what everybody already knows or can quickly read.

Glassman et al. (2003) explain that given the disquieting changes in higher education worldwide, universities need new directions and ways of thinking about how to operate. In this article, we propose the notion of academic entrepreneurship, in which each employee pursues or supports those who pursue opportunities to build and improve their units, colleges, or universities. We present ways that individual faculty members, program managers, department chairs, deans, and provosts can support academic entrepreneurship through helping to create opportunities, nurturing people who recognize and act on them, garnering resources to support opportunities, and creating a culture that supports the entrepreneurial activities of universities.

Holmes (2008) in his article discusses effective ways to prepare for entrepreneurship. According to Case Western Reserve University economics professor Scott A. Shane, working in an industry before opening a business in that field is one of the best ways to prepare, as it increases a business’ odds of success. Another effective way to prepare for entrepreneurship is higher education.

Claudia (2013) explains that the central focus of universities should be the improving the quality and quantity of entrepreneurs or students with an entrepreneurial attitude. We argue that the academic field of entrepreneurship is at a very low level in Romania on several axes and the University must determine the best fit for them given their students, their alumni, their stakeholders, the region and its economic base and the aspiration of institutions. Entrepreneurship should it be something that will have high and positive impact for students not just another course in the curriculum. Entrepreneurship is concerned with establishing new activities and about being able to perceive new opportunities. Entrepreneurship competence is relevant for all areas of working and business life, in both new and established activities and enterprises. The aim of this paper is to provide an analysis of the present
situation and recent evolution of entrepreneurship education in Romanian universities and to discuss these courses and curricula match the demand for entrepreneurial competences. This paper presents a short summary of the status of entrepreneurship curriculum and different challenges. The information collected through the Internet refers to the academic year 2012-2013. The range of theoretical choices, objectives, publics, pedagogical methods and institutional context should be structured around a general framework.

Lockett et al. (2009) explains that Knowledge transfer (KT) has been identified as an essential element of innovation that drives competitive advantage in increasingly knowledge-driven economies and in which small firms have an important part to play. A number of recent UK Government reports have sought to increase awareness of the importance of KT within higher education institutions (HEIs). In light of this, there is an urgent need for relevant empirical research that examines how KT policy is translated into practice, particularly in the area of small firms. This paper responds to this need by reporting on in-depth longitudinal case studies of small firms co-located in a high profile HEI ‘centre of excellence’ for research and development (R&D) and commercialization of information and communications technologies (ICT) in the Northwest of England. The paper seeks to explore what is it that the SMEs are getting out of this co-location and more specifically the research asks, how do the views of entrepreneurs change over time? Five main themes are identified, namely: (1) increased strategic focus; (2) awareness of core competences; (3) enhanced R&D activities; (4) importance of both technical and business support; (5) the need for a knowledge database to facilitate KT. The study concludes by highlighting the need for more structured yet flexible approaches to KT activities in order to meet the needs of entrepreneurs for different kinds of support at different times in the development of their businesses.

Hommel et al. (2013) explain that business schools are increasingly positioning themselves as entrepreneurial risk-takers. In doing so, they are front-runners of a marketization trend affecting the entire higher education sector. In response, governments have begun to subject higher education sectors to systems of risk-based regulation. The purpose of this paper is to study the likely impact of regulatory change on business school behaviour. Design/methodology/approach – The article focuses on the financial dimension of institutional performance and draws on the corporate risk management literature to derive general design principles for
managing risk-taking in business schools. These are matched with a review of the regulation literature to evaluate regulatory effectiveness. Findings – Business schools are facing a double-hurdle test when managing their risk position. They need to protect their financial solvency with the maintenance of properly functioning risk management systems. At the same time, they will increasingly be subjected to regulatory scrutiny with regulatory shortcomings likely to be mapped into binding but sub-optimal behavioural constraints. The article offers initial reflections as to how business schools can cope with this double-hurdle. Originality/value – Risk management in higher education, here with a specific reference to business schools, has so far been under-theorized from a financial perspective and, as a consequence, the debate on risk-based regulation lacks a proper foundation. The article addresses this shortcoming.

Lans et al. (2014) explain that sustainable entrepreneurs, i.e. those who proactively facilitate latent demands for sustainable development, are now in higher demand than ever before. Higher (business) education can play an important role in laying the foundation for these sustainable entrepreneurs. Traditionally, however, educational scholars focus either on the issue of education for sustainability or on entrepreneurship education. There is little work which explores and/or crosses the boundaries between these two disciplines, let alone work in which an effort is made to integrate these perspectives. In this article, a competence approach was taken as a first step to link the worlds of education for entrepreneurship and for sustainability because we postulate that both, apparently different, worlds can reinforce each other. Based on a literature review, focus group discussions with teachers in higher education (n = 8) and a structured questionnaire among students (n = 211), a set of clear, distinct competencies was developed, providing stepping stones for monitoring students’ sustainable entrepreneurship development in school-based environments.

Fayolle (2000) explains that the question of whether entrepreneurs are made or born is one that has been the subject of many studies in the entrepreneurial field. Education initiatives in entrepreneurship show a belief in the possibility of developing entrepreneurial skills through appropriate programs. Now, do various programs have different impact on students’ propensity to start a business? The research presented here aims at identifying the variables which provide an understanding of the influence exercised by entrepreneurship courses. We collected
data from 25 “Grandes Ecoles” (French Business School) and qualified their objectives when setting up such programs, as well as the means dedicated to them. Simultaneously, we submitted to our respondents (entrepreneurship programs managers) a Likert scale evaluating their perception of the direct and indirect impact of the courses. We conclude with a proposition to better anticipate the effects that can be expected from such course offerings, including dimensions which are often underestimated such as the strategic positioning of the schools.

Basu et al. (2013) explain that the purpose of their paper is to identify and explore the various range of business incubation services being provided to the nascent entrepreneurs which is based on comprehensive compilation and subsequent analysis of literature followed by case based approach in context to Indian higher educational institute (HEI) based business incubation centres. The objective behind this research is to critically assess the assistance services and to prioritize the service dimensions provided by the business incubation centres. Data has been collected from various business incubation centres to capture the experience of the incubated clients and other stakeholders who are directly and indirectly attached to the business incubation centres. The novelty of this paper is that there is no available literature that has followed a similar approach in measuring most influential business incubation service parameters taking different HEI based Indian incubation centres. Statistical analysis has been deployed for investigation of service dimensions and prioritized it accordingly as well as a model has been proposed with the identified service dimension that influences the creation of the new ventures. The findings suggests that HEI based business incubation centres are providing services to emerging economies by leveraging talent and thus creating value. The findings have both entrepreneurial and managerial implications for decision makers in universities, industry and government. The management of incubators, entrepreneurs as well as researchers can take input from this study in order to accomplish effective service management for scalable ventures.

Nayyar et al. (2012) develop a conceptual model of public sector corporate entrepreneurship for the state government higher education institutions. The proposed model is intended to depict the main antecedents that relate to corporate entrepreneurship within the public sector higher education institution and the impact of corporate entrepreneurship on public sector HEI’s performance, as well as factors influencing its continuous performance.
Peterman et al. (2003) examine the effect of participation in an enterprise education program on perceptions of the desirability and feasibility of starting a business. Changes in the perceptions of a sample of secondary school students enrolled in the Young Achievement Australia (YAA) enterprise program are analysed using a pre-test post-test control group research design. After completing the enterprise program, participants reported significantly higher perceptions of both desirability and feasibility. The degree of change in perceptions is related to the positiveness of prior experience and to the positiveness of the experience in the enterprise education program.

Birds (2014) explained that policy-makers in the United Kingdom increasingly emphasize the contribution of innovation and entrepreneurialism to the economy. Drawing on a recent ethnographic study of a university commercial enterprise, this article examines the notion of entrepreneurialism in a higher education institution as understood and practiced by its employees. The concept of the entrepreneur-manager borrowed from an industrial environment is utilised to frame the higher education experience and to challenge assumptions about entrepreneurial activities in the sector. The research tentatively supports the emergence of the entrepreneur-manager as a new role requiring a different blend of skills and responsibilities but problematises the organisational culture of the research-intensive university which fails to capitalise on the potential offered.

Boscai et al. (2012) explain that in Romania, higher education institutions can be considered one of the main partners in entrepreneurship development because they have the necessary infrastructure to coordinate and materialize certain entrepreneurship education projects in order to stimulate the entrepreneurial mindsets of young people. In this paper work they analyzed this infrastructure having as starting point some successful projects from Romania funded by the European Union where the main initiators and partners were the higher education institutions. Authors compared some Romanian entrepreneurial development programs with other programs from various countries of Europe. Most projects used the classic model of training for entrepreneurship development, so we propose E-training as a better solution. The paper aimed to develop a theoretical model of "E-training for entrepreneur- ship in higher education institutions" starting with the basic idea: "

Kailer (2009) explained that on their way to becoming entrepreneurial universities, the development of university-wide concepts of entrepreneurship education was of high importance. Paper analysed surveys given to students,
alumni and academic staff of universities in the German speaking area. Findings concerning design-parameters of central importance for the development of such concepts (professional experience and competence, anticipated obstacles, supporting infrastructure, organizational structure) were presented. Based thereupon practical proposals for the design of university-wide concepts concerning the organizational embedding, target groups, support measures and evaluation were discussed as well as key elements for the design of courses (e.g. modular structure, establishing networks with external experts and entrepreneurs, tackling of anticipated obstacles, developing of broad competence portfolios) were implemented.

Kvedaraite (2014) examined entrepreneurship as a measure for youth inclusion in the labour market, as well as causes, benefits and obstacles to starting a business, based on the experiences of students of Lithuanian higher education institutions. Although Lithuania implements a variety of measures intended for promoting student entrepreneurship, students remain in a worse situation in terms of opportunities for entrepreneurship than the remaining society. The purpose of the research was to study the reasons and obstacles for inclusion of the undergraduate students in entrepreneurship. The research of inclusion and participation of students in entrepreneurship revealed that only a small part of them were engaged in business. This was caused by unwillingness to be a hired employee. Students associate engaging in business with personal revenues, which they rate as the most significant benefit, while the main obstacle was the lack of information on starting a business.

Baptista et al. (2011) explained that the presence of universities had generally been associated with technological entrepreneurship. But what was the real impact of new universities on the levels of firm creation in a region? Paper used policy evaluation methodologies and longitudinal data on the establishment of higher education institutions in Portuguese municipalities for the period 1992–2002 to examine its effect on entry rates of new firms in different sectors. Authors felt establishment of a new university had a positive and significant effect on subsequent levels of knowledge based firm entry in municipalities, and a negative effect on the levels of entry in other sectors, such as low-tech manufacturing.

Mutsuddi (2012) explains that in recent times, government policies, technology innovations, and changes in consumer spending have created enormous opportunities for economic growth in our nation. Although the private sector in India is booming, the number of jobs created remained far short of what is required to provide adequate employment for management and technically-trained students.
passing out from business schools and other technical institutions. In the last decade or so, we have witnessed a sudden growth in the number of business schools and technical institutes throughout the country, and employment generation for the 'to be professionals' has become a daunting task for the educators, trainers and management consultants. Top institutes of the nation like the IIMs, IITs, NITs and particularly noted business schools have found the importance of entrepreneurship cells (e-cells) on their campus as a strategic need. Professional organizations and institutes like National Entrepreneurship Network (NEN) and Entrepreneurship Development Institute of India (EDII) have played a major role in motivating the students and faculty members in promoting entrepreneurial awareness and development of entrepreneurial capabilities across the nation. This paper aimed to discuss the relevance, opportunities, benefits and developmental perspectives of e-cells and also the issues hindering the growth and development of e-cells in technical institutes and business schools.

Winkel et al. (2013) explain that entrepreneurship, new business start-ups and small business growth are viewed by most countries as a means to improved growth in gross national product, reduce unemployment and increased quality of life. Entrepreneurship offers individuals a chance to build successful careers without having to join large corporations with little ability to impact decisions. Many institutions of higher education around the world have stepped forward to support entrepreneurship by developing programs that provide students with the skills, knowledge, abilities and opportunities to be successful entrepreneurs and small business managers. The types of programs available, however, vary greatly. This study provided a description of these diverse programs from 321 universities located in over 60 countries representing all continents except Antarctica. The programs are described in terms of a number of factors including: courses available, types of programs, faculty positions and infrastructure, program location in the university and types of external support.

Southerst (2014) in his article looked at trends in the business and management education programs offered by colleges and universities as of 2014, focusing on Canada. It noted some institutions have begun to offer shortened master of business administration (MBA) programs, or mini-MBAs, citing examples including the University Of Toronto Rotman School Of Management in Ontario. It also discussed programs with specific focuses including corporate social responsibility (CSR) and entrepreneurship.
Leovaridis (2009) in his article proposed the identification, in Romanian universities, of those elements that indicate the foundation of entrepreneurial universities. The analysis of some programmatic documents from their Internet sites had accomplished (university charters, strategic plans, operational plans, scientific research strategies etc.) in order to mark the stage that different Romanian universities reached in their institutional innovation process. Among the identified institutional innovation signs: research centres and labs; technological transfer centres; consulting centres; institutes created near universities; partnerships with private companies and public institutions; students involved in research; financing from economic agents; participation in international research networks; involvement in local development of the area where the university was placed.

Ebersberger (2011) in his article explored the determinants of academic entrepreneurship. In particular, it investigated the effects of gender and supplementary management education on academics' willingness to start up a company. His results indicated that supplementary management education did not in general have a significant effect on the willingness to start up. Yet, for female academics supplementary management education exerted a significantly positive effect almost offsetting the gender effect.

Elia, Gianluc; Margherita, at all (2011) in their study explained that the pervasiveness of scientific developments had raised the role of entrepreneurship as a driver of socio-economic value. Higher education institutions are thus asked to create entrepreneurial mindset and competencies with the purpose to make students people able to proactively identify opportunities and transform them in market solutions. In particular, engineering education programs can be of relevance to develop technology entrepreneurship competencies through hands-on and experiential approaches. In such vein, paper proposed a model as an "activation" process which used four critical levers with the purpose to infuse the essence of entrepreneurship in tomorrow's engineering professionals. The key features of the initiative were discussed in the perspective of exploring new models of entrepreneurship for engineering students.

Praag et al. (2013) explained how valuable was formal education for entrepreneurs' income relative to employees’? And if the income returns to formal education are different for entrepreneurs vis-à-vis employees, what might be a plausible explanation? To explore these questions, researchers analyzed a large representative US panel. They showed that entrepreneurs had higher returns to
formal education than employees. They referred to this as the entrepreneurship returns puzzle. They ran post hoc analyses to explore a number of potential explanations of the puzzle. Indirectly, their analysis indicated that the higher returns to formal education for entrepreneurs might have been due to the fewer organizational constraints they face, leading to more personal control over how they used their human capital, compared to employees.

Dell, Jenna (2014) in her paper presented the distinction between commercial and social entrepreneurism in higher education and provided a historic framework to examine the social contract as it related to higher education. Paper explored how that charter existed and introduced a social entrepreneurship pedagogy through which that charter was met. Pedagogy maximized added value to the students participating in programs and facilitated reciprocal, shared-value relationships between students and the communities in which they were a part, thus resulting in a new social contract.