CHAPTER III

RESEARCH METHODOLOGY
3.1. INDIAN SYSTEM OF HIGHER EDUCATION:

India as a great country has demonstrated consistently a high rate of economic growth in the recent years. It has now become a major player in the global knowledge economy. Skill-based activities can make significant contribution to this growth. Such activities depend on the large pool of qualified manpower that is fed by its large higher education system. The National Skill Development Mission (NSDM) recently formulated by Government of India has recognized the importance of supporting economic growth by training the youth in the Industry-Specific Skills.

It is a fact that the higher education is critical to the India’s emergence in the global knowledge economy. However it is believed that a crisis is plaguing the Indian higher education system. While, the National Knowledge Commission (NKC) set up by the Prime Minister calls it a ‘quiet crisis’, the Human Resource Minister calls higher education ‘a sick child’.

Industries routinely point towards huge skill shortages and are of the opinion that growth momentum may not be sustained unless the problem of skill shortages is addressed.

The higher education system produces graduates who are unemployable. The standards of academic research are low and declining. At the same time, there are mounting skill shortages in a number of sectors.
The problems of higher education could be listed below:

- An unwieldy affiliating system
- Inflexible academic structure
- Uneven capacity across subjects
- Eroding autonomy of academic institutions
- Low level of public funding
- Archaic and dysfunctional regulatory environment
- Lack of innovation and creativity
- Large gap between academic curricula and industry needs

Senior academics from the University of Pune, Mihir Arjunwadkar, Abhay Parvate, and Dilip G. Kanhere, in their report to UGC have stated,

“In our collective experience of past two decades or so as teachers, we observe that the great Indian undergraduate education system, on the average, serves to effectively curb independent thinking, self-study skills, resourcefulness, intellectual maturity, academic confidence and the very motivation to learn with excellence.

Academic excellence is often identified wrongly, with performance in examinations that tend to assess mostly memorization skills of a student, and the true measures of academic excellence such as depth of understanding, originality, authenticity, creativity, and perseverance are systematically discouraged.”
It is also reported that the Indian Higher Education System suffers from a number of deficiencies and the higher education policy is driven by populism.

More than 35 years ago, Nobel laureate Amartya Sen, while analyzing the crisis in Indian education, rather than attributing the crisis in Indian education to administrative neglect or to thoughtless action, pointed out that the ‘grave failures in policy-making in the field of education require the analysis of the characteristics of the economic and social forces operating in India, and response of public policy to these forces’ (Amartya Sen, ‘The Crisis in Indian education’, Lal Bahadur Shastri Memorial Lectures, 10–11 March 1970). He emphasized that ‘due to the government’s tendency to formulate educational policies based on public pressure, often wrong policies are pursued.’ Unfortunately, it is believed that policy-making suffers from similar failure even today. Rather than pragmatism, it is populism, ideology and vested interests that drive policy.

There is an impression that the policy makers set goals arbitrarily and these goals were often elusive and pursued half-heartedly. Such an education system can only stifle Innovation and Entrepreneurship. Entrepreneurship Orientation may energize both the faculty and students towards Innovation and Creativity. The technology institutions are encouraged by the Government of India to register more patents for the innovative ideas of the students and faculty members.
It is important to understand the meaning of Entrepreneurship in the context of Higher Education.

Wikipedia.com defines Entrepreneurship as,

“Entrepreneurship is the act of being an entrepreneur, which can be defined as “one who undertakes innovations, finance and business acumen in an effort to transform innovations into economic goods”

The Business Dictionary.com defines Entrepreneurship as,

“The capacity and willingness to undertake conception, organization, and management of a productive venture with all attendant risks, while seeking profit as a reward.”

The investorWords.com defines Entrepreneurship as,

“The assumption of risk and responsibility in designing and implementing a business strategy or starting a business.”

The Merriam Webster Dictionary defines an entrepreneur as

“one who organizes, manages, and assumes the risks of a business or enterprise”.

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From the above said definitions, the following may emerge as the dominant characteristics of entrepreneurship:

1. Initiative
2. Innovation and creativity
3. Business sense
4. Sustainability of the activity
5. Productivity and profitability
6. Organizational ability
7. Leadership and responsibility
8. Risk management and strategy
9. Passion and voluntarism

The above said characteristics may be applicable even to the non-business situations viz. job or working for a social cause. Hence Entrepreneurship is not an activity but a state of mind. It has to be inculcated as a culture. Such characteristics are highly relevant to the stakeholders in higher education also.

If the teachers become entrepreneurial, it may lead to significant improvements to the quality of higher education. Innovation is the foundation for entrepreneurship. The students should be encouraged to become entrepreneurial persons. Such persons will be naturally inclined to become innovative. Innovation may be defined as the creation of better or more effective products, processes, services, technologies, or ideas that are accepted by markets, governments and society.
3.2 ENTREPRENEURSHIP AND ECONOMIC DEVELOPMENT:

The economic development of a Nation depends on its industrial development. The industrial development is based on the entrepreneurial competencies of the people. In fact, entrepreneurial competency is the foundation of industrial development. Thus, Entrepreneurship Promotion is a nation building exercise. Through effective entrepreneurship training the job seekers can be moulded into job providers.

3.3 HIGHER EDUCATION AND ENTREPRENEURSHIP:

There is paradigm shift in the approach of Government of India towards Higher Education. They have an ambitious plan of raising the Gross Enrollment Ratio (GER) as 25% as prevalent in the developed countries. The Ministry of HRD is encouraging private participation in Higher Education leading to the establishment of around 30000 colleges, 600 universities and more than 2000 Management Institutions in the country.

However, the quantum jump in the number of colleges did not lead to the enhancement quality standards in Higher Education. This has been deteriorated over a period of time which is causing concern among the policy makers and academicians. Lack of innovation and creativity are evident in Higher Education. The Engineering and Science graduates have been turned out from the academic institutions as unemployable.
3.4 THE NEED FOR TRAINING THE TEACHERS IN ENTREPRENEURSHIP:

Therefore, the teachers and researchers in the higher education system should possess innovation and entrepreneurship. There was a structured and consistent attempt by the Ministry of Science and Technology to promote entrepreneurship among the Science and Technology teachers. The FDP was designed as a Trainers Training Programme and offered through the reputed training institutions throughout the country. It was popularly known as Faculty Development Programme in Entrepreneurship. It was designed as one of the corrective measures to change the alarming situation in Higher Education. This programme has been implemented over the past 20 years. Therefore, it was proposed to conduct a survey among the teachers trained in FDP in Entrepreneurship through CED (Tamil Nadu) over a period of 5 years to understand the impact of the programme on their knowledge, skill and attitude.

3.5 FACULTY DEVELOPMENT PROGRAMME:

The Ministry of Science and Technology designed the Faculty Development Programme (FDP) in Entrepreneurship to train and develop professionals in entrepreneurship development so that they can act as resource persons in guiding and motivating young S&T persons to take up entrepreneurship as a career. Through each FDP, 15-20 faculty members of Science and Engineering colleges, Polytechnics and Entrepreneurship Development Organizations are trained for a period of 2-3 weeks.
The following Entrepreneurship Development components have been well structured in the FDPs.

1. Behavioural components – The specialty of the FDP is Achievement Motivation Training (AMT) which consists of a set of behavioural and management games.
2. Business Opportunity Guidance (BOG)
3. Formulation of Preliminary Business Plan and Market Survey
4. Business Plan Preparation
5. Managerial Inputs
6. Marketing Skills
7. Soft Skill Development
8. Legal System
9. Technical Orientation and Skill Development
10. Interaction with successful entrepreneurs
11. Factory Visit
12. Role of Development Agencies to promote MSMEs

The training methodology includes case studies, group discussion, games and simulation exercise, field visits and classroom lectures.
3.6 CENTRE FOR ENTREPRENEURSHIP DEVELOPMENT (TAMIL NADU):

The programme has been implemented in Tamil Nadu by Centre for Entrepreneurship Development (Tamil Nadu) for the past 15 years and has trained more than 600 teachers of the Engineering and Science Colleges. Centre for Entrepreneurship Development (Tamil Nadu) is a state level entrepreneurship development institution supported by Ministry of MSME, Government of India and Industries Department, Government of Tamil Nadu. It was established during the year 1990 and for the past 22 years, it has been implementing a number of Entrepreneurship Development Initiatives in Tamil Nadu. CED (Tamil Nadu) is one of the premier institutions in Tamil Nadu which implemented FDP in Entrepreneurship. The Department of Science & Technology, Government of India, New Delhi availed the services of CED (Tamil Nadu) for implementing the various Entrepreneurship Development Initiatives of the Ministry of Science & Technology.

3.7 EXPECTED OUTCOME OF THE FDP:

The Department of Science and Technology (DST), Government of India has not come out with any specific expectation out of the FDP in Entrepreneurship.

- However, through the FDPs a resource pool of Entrepreneurship Trainer – Motivators is developed to support the Entrepreneurship Development Initiatives.
• The Trainer – Motivators are encouraged to conduct a 2 / 3 day Entrepreneurship Awareness Camps (EACs) in their respective institutions.

• They are also encouraged to establish institutional arrangements for counseling the students to take up entrepreneurship as career.

• In this connection, the Department of Science and Technology (DST), Government of India is supporting the Science and Engineering Colleges and also Polytechnics to establish Innovation and Entrepreneurship Development Centre (IEDC) with a grant in aid support of Rs.47 lakhs. DST provides a non recurring grant of Rs.7 lakhs towards infrastructure and annual grant of Rs.8 lakhs for five years for Entrepreneurship Development Initiatives in the colleges.

• Such IEDCs should be managed by competent faculty members with knowledge and skill in Entrepreneurship Promotion. Therefore, the Faculty Development Programme in Entrepreneurship will provide the information to the teachers as how to establish IEDCs in the respective institution.
3.8 RESEARCH METHODOLOGY:

3.8.1 Statement of the Problem:

Thus, Entrepreneurship Promotion is a nation building exercise. Through effective entrepreneurship training the students become entrepreneurial. They may exhibit entrepreneurial talents in any activity whether it is a job, business venture or social service. The managements of the private colleges become satisfied when the students transform themselves from job seekers to job providers. The prominent dimensions of a professional education are teaching, research, training, consultancy and extension activities. The faculty members who are normally confined to teaching are encouraged to take up additional activities through the FDP in Entrepreneurship. The purpose of this study was to determine the impact of Faculty Development Programme in Entrepreneurship on the performance of the faculty members.

3.8.2 Scope of the Research:

The research work is confined to the faculty members serving in the colleges of Tamil Nadu trained through the FDP in Entrepreneurship Scheme by Centre for Entrepreneurship Development (Tamil Nadu), Madurai over a period of 5 years i.e. 2009 – 2013 which was sponsored by NSTEDB, Department of Science and Technology, Government of India, New Delhi.
3.8.3 Research objectives:

1. To study the expectations of the teachers while attending the FDP in Entrepreneurship training at CED, Madurai.

2. To study the experiences of the teachers during the FDP in Entrepreneurship and to understand the synergy between expectations and experiences.

3. To study the change in the knowledge, skill and attitude of the teachers in providing Entrepreneurship Orientation to the students.

4. To study whether the teachers have improved their professional activities in terms of teaching, research, training and consultancy based on the inputs received from the FDP.

5. To study whether the teachers have undertaken any non-student activities, networking with development institutions, Industry – Institute interactions, etc. to support the socio-economic development of the region.

6. To study and understand the inadequacies of the FDP in Entrepreneurship, if any and to propose recommendations to strengthen the FDP in Entrepreneurship.
3.8.4 Research Design:

The researcher has adopted descriptive research design to conduct the study among the faculty members serving in the engineering colleges, polytechnic colleges, Arts and Science Colleges as well as university teachers who attended FDP in Entrepreneurship at CED (Tamil Nadu). Special focus was given to include as many women faculty members as possible.

3.8.5 Data Collection Method:

The researcher adopted the following research methods to elicit information from the respondents.

1. Survey method:

Centre for Entrepreneurship Development (Tamil Nadu), Madurai has conducted on an average 4 FDPs in Entrepreneurship in a year. During the five years, 20 FDPs would have been conducted. There was a minimum enrollment of 20 candidates in each FDP. Therefore, it was proposed to have a census method i.e. to include all the faculty members who attended the FDP in Entrepreneurship training programme at CED (Tamil Nadu) during the five year period of 2009 - 2013. Around 1000 faculty members were trained by CED (Tamil Nadu) during the span of five years and all the members were contacted by mail.
2. Sampling strategy:

The researcher decided to contact all the faculty members who attended the FDP in Entrepreneurship at CED (Tamil Nadu) during the period of five years i.e. 2009 – 2013. Around 1000 faculty members were contacted by the researcher. No sampling method was adopted. Everyone was contacted through email. Reminders were sent by email. They were contacted through their mobile number. Some of them were contacted personally. The researcher was able to get response from as many as 200 faculty members.

3. Data Collection Instrument:

The researcher has adopted a structured non-disguised questionnaire for collecting data from the college and university teachers. A pilot study was conducted with 10 faculty members to understand the response and comfort level of the respondents. Based on the feedback, the questionnaire was further improved before using it in the general survey.

4. Construction of the Questionnaire:

The present study is mainly based on the primary data collected from the faculty members. The questionnaire was divided into five important parts.
• The first part of the questionnaire included the enriched profile of the faculty members.

• The second part of the questionnaire focused on the awareness level of FDP in Entrepreneurship.

• The third part of the questionnaire covered the Entrepreneurship and Skill Practices after attending the FDP in Entrepreneurship.

• The fourth part of the questionnaire focused the Attitude towards Entrepreneurship among the faculty members.

• The final part of the questionnaire focused the impact of the faculty development programme in Entrepreneurship.

5. Focused Group Discussion (FGD) among Women faculty members:

The researcher held informal discussion with few women faculty members serving in the colleges and universities to understand their expectations and experiences of the Faculty Development Programme in Entrepreneurship as well as the post training follow up initiatives.
Since they had expressed specific problems to be addressed such as balancing the domestic and professional life, need to network with the government and non-government agencies, working beyond the stipulated office hours, support from colleagues and superiors, etc., the researcher adopted a Focused Group Discussion (FGD) inviting women faculty members working in public institutions and private institutions.

The findings and conclusions of the deliberations with women faculty members have been provided as a separate section in the chapter V Findings and conclusions.

Similarly, the recommendations emanated from the findings and conclusions are also included as a separate section in the chapter VI Summary of recommendations.

3.9. ANALYSIS:

The data generated in the survey were analyzed using SPSS package which included percentage analysis, chi-square and one-way ANOVA using F-test. The association of variables i.e. profile of the participants and their awareness, attitude and impact of FDP in Entrepreneurship on the participants was tested using the above said statistical tools.
3.10. LIMITATIONS:

The National Science and Technology Entrepreneurship Development Board (NSTEDB), Ministry of Science and Technology, Government of India has been supporting faculty development programme in Entrepreneurship for the past two decades. Reputed training institutions were identified to implement the FDP in Entrepreneurship.

In the state of Tamil Nadu, Centre for Entrepreneurship Development (Tamil Nadu), Madurai is a prominent state level entrepreneurship development institution implementing the FDP in Entrepreneurship for the past two decades. Other institutions such as Industrial and Technical Consultancy Organization of Tamil Nadu (ITCOT), Chennai, PSG College of Technology, Coimbatore and Trichy Regional Engineering College are the other major institutions conducting FDP in Entrepreneurship for the past several years.

However, CED (Tamil Nadu) is quite well known in implementing FDP in Entrepreneurship drawing the faculty members from all over Tamil Nadu and has trained more than 1000 faculty members during the past five years.
Confining the research to the teachers trained by CED (Tamil Nadu):
The researcher has confined to study the impact of Faculty Development Programme in Entrepreneurship conducted by CED (Tamil Nadu), Madurai since the faculty members have been drawn from all over Tamil Nadu.

This may be viewed as a limitation since the other institutions such as ITCOT, Chennai, PSGCT, Coimbatore and TREC – STEP, Trichy were not included. It was a conscious decision by the researcher because there will be uniformity in the inputs received by the different faculty members through the FDP in Entrepreneurship.

Confining the study to the period of five years i.e. 2009 – 13:
The National Science and Technology Entrepreneurship Development Board (NSTEDB), Ministry of Science and Technology, Government of India has been supporting faculty development programme in Entrepreneurship for the past two decades.

However, the researcher has confined her study for a period of five years i.e. the FDPs in Entrepreneurship implemented during 2009 – 2013. This may be perceived as a limitation. However, the impact of a programme on a person may be better analyzed when they are recent in nature.
Conducting the survey through email:

The researcher decided to contact all the faculty members who attended the FDP in Entrepreneurship at CED (Tamil Nadu) during the period of five years i.e. 2009 – 2013. Around 1000 faculty members were contacted by the researcher. No sampling method was adopted. Everyone was contacted through email. This may be perceived as a limitation. But, the researcher was serving in CED (Tamil Nadu) as a Programme Officer and assisted CED (Tamil Nadu) in the conduct of FDPs in Entrepreneurship for several years. She was able to develop personal contact with most of the faculty members during the training programmes. They were also personally reminded through their mobile numbers to add personal touch in the survey. Some of them were contacted personally by the researcher.

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