CHAPTER III  
CONCEPTUAL FRAMEWORK

3.1 Introduction

The Chapter ‘Review of Literature’ has thrown light on the research topic ‘competency mapping’, and has helped immensely in gaining insight into the topic and also in tracing the research gap. All the pertinent concepts that have been used in this thesis are dealt in this chapter. This would help in understanding how ideas are interconnected and how they function in relation to the topic discussed.

3.2 Meaning and Definition of Competency Mapping

Competency mapping is the process of identifying the competencies require for effective performance on any given job at a point of time and assessment of competencies of individuals to measure the competency gaps against the desired level of competencies.

Hogg (1993) defined competency as “competencies are the characteristics of a manager that lead to the demonstration of skills and abilities, which result in effective performance within an occupational area. Competency also embodies the capacity to transfer skills and abilities from one area to another.”

3.3 Types of Competency

Generic Competency

Generic competencies are the set of general competencies for a job. The study limits the term Generic competencies to interpersonal communication, creativity, team orientation, negotiation and achievement orientation.

Managerial Competency

Managerial competency is the skill needed to perform managerial functions. It pertains to the interaction with individual or group. The study limits the term Managerial Competency to leadership and customer orientation.
Functional Competency

Functional competency pertains to specific knowledge and skills required. It relates to the abilities to use procedures, techniques and knowledge of a specialised field. The study limits the term Functional Competency to knowledge and skill, core competence, functional expertise and job suitability.

The theoretical concepts pertaining to competency mapping discussed in the above paragraphs highlight the relationship of the concepts of competency mapping to the study. Many of these concepts were helpful in identifying factors of competency mapping. The impact and influence of these factors were observed from the literature of earlier research studies that have already been highlighted in the chapter ‘Review of literature’. An in-depth knowledge of these factors would facilitate in studying the influence of competency mapping.

3.4 Factors Influencing Competency Mapping

The researcher identified 11 factors pertaining to competency mapping. The factors are knowledge and skill, leadership, interpersonal communication, customer orientation, achievement orientation, core competence, team orientation, negotiation, functional expertise, creativity and job suitability. Description of these factors and their impact on competency mapping is discussed in the following paragraphs.

3.4.1 Knowledge and Skill

Knowledge is awareness, information, processes of a job needed to perform a task successfully. Skill is the ability to perform certain physical or mental task. Knowledge and skill makes an employee work efficiently.

3.4.2 Leadership

Leadership involves catalysing the learning process among followers as well as creating an environment that contributes to improving performance. The leader is an important source of knowledge about the tasks, the organisation and HRM policies, programmes and goals. The experience and style of a leader will influence employee’s performance. Also, a leader maintains an effective relationship with individual and team as a whole.
3.4.3 Interpersonal Communication

Interpersonal communication is important to an organisation as it facilitates team work. Interpersonal communication helps managers to gain confidence by interacting effectively with people at all levels and respond appropriately to others.

3.4.4 Customer Orientation

Customer orientation implies a desire to help or to respond to customer’s need through development and application of sound strategies and action plans.

3.4.5 Achievement Orientation

Achievement orientation is a concern for working well or for competing against standard of excellence. People with a high need for achievement enjoy doing challenging works for which they are personally responsible for their success. They are quite concerned with appropriate deadlines until the work gets completed successfully. Achievement orientation involves managing the internal and external resources to achieve the goals of the company.

3.4.6 Team Orientation

Team orientation implies working collaboratively with others to promote a positive climate, good morale and cooperation among members. Team leader works together effectively to achieve a common goal. Treating members with dignity and respect helps the team to have a friendly atmosphere.

3.4.7 Core Competence

Core competence refers to a set of skills and technologies that enable a company to provide extremely high value to customer. Core competence helps an organisation to distinguish itself from its rivals as well as to reduce its cost than competitors and thereby attains a competitive advantage. Core competence helps the company to be innovative and to adopt new technology which ensures the delivery of standardised products and services to the clients.
3.4.8 Negotiation

Negotiation is exchange of views and proposals. Negotiators communicate information or arguments effectively to gain support in order to reach agreement or solution. The success of negotiation depends on skills and abilities of the negotiators.

3.4.9 Functional Expertise

Functional expertise comprises of the skills possessed by managers to encourage employees to work in a self-motivated way, organise work around teams providing enthusiastic learning of new skills enabling members to handle undefined responsibilities. Functional expertise in short applies to the expertise of managers to develop an empowered group of employees through guiding and coordinating.

3.4.10 Creativity

Creativity is a technique of inventing new and better way of applying techniques and methods. It is also the ability to go beyond the conventional solutions, to think new and better ways of doing things that result in introduction of new ideas or improvement of the systems and operations.

3.4.11 Job Suitability

Job suitability is a technique used to understand and capitalise on each person’s individuality. It is essential to measure the unique profile of each individual and a job can be matched optimally within the constraints set by available jobs and available people. If the number of individuals is more in relation to available jobs, only the best qualified persons can be selected and placed.

3.5 Profile of IT and ITES Industry

3.5.1 Introduction

Information Technology (IT) is defined as the design, development, implementation and management of computer-based information systems, particularly software applications and computer hardware. Some of the largest firms worldwide include Microsoft, HP, IBM and Dell.
The Information Technology-Enabled Services (ITES) industry provides services to a range of non-core business areas that are delivered over telecom or data network. Examples of such business process outsourcing (BPO) include back office management, customer service, network consultancy, web-content development etc. The total number of computers in India by 2007 was reported to be 27.4 million up from just about 1000 computers in 1977. Likewise the software exports from India were only $30 million in 1981. By March 2008, it has risen to $23.8 billion. Unprecedented transformation has been witnessed in this sector. The government has played a pivotal role in nurturing and developing this industry.

The role out of Software Technology Parks (STP) was instrumental in the exponential growth of software exports. The Software Technology Parks brought the Indian IT companies and their customers in US and other countries closer through improved communication links and video conferencing. These STPs helped the IT companies in bypassing the ports and customs clearance for exports. These also provided financial incentives in the form of tax holidays. The software export was the first in export industry which did not rely on roads, sea ports and airports. Information was exported to computers in other countries through satellite data links. STPs became the most successful export promotion scheme designed by the government of India.

The emergence of internet as a communication tool has helped the Indian IT & ITES companies bring down its cost and also secure contracts for software and services from other countries.

3.5.2 Sustaining the Growth

Cost advantage in employing skilled personnel was a key factor in the high growth of the Indian IT & ITES industry. However due to rising salaries and attrition, this advantage is slowly disappearing. In order to increase revenue per employee, Indian companies need to focus on product development and consulting. The Indian companies can also take full advantage of new business models transaction-based payment and licensing of software.
At present Indian IT companies are not only developing software applications for their customers, but they are also procuring contracts for managing their entire IT infrastructure. Western companies have an upper hand as of today. They have obtained major deals in India like IBM-Bharti ($1.6 billion), IBM-Idea ($800 million) and Accenture-Dabur ($150 million). Indian companies have come under radar since the $2.2 billion contract awarded by ABN Amro, in 2005, for managing its IT infrastructure. IBM got the major chunk and rest was shared amongst Infosys TCS and Patni.

Indian IT companies need to focus on product development. Only a handful of software products released by Indian companies are successful. Tally by Tally, Finacle by Infosys, Flexcube by I-Flex (acquired by Oracle) are notable examples. The Indian IT industry accounts for only 0.2 percent of global software products markets.

The IT & ITES sector includes IT services, BPO, engineering design and R&D services and hardware. Today the economic growth in terms of employment, revenue generation, export promotion and standards of living are led by the IT and ITES sectors. As per NASSCOM estimates, IT/ITES sector (excluding hardware) revenues are estimated at USD 108 billion in FY 2012-13; and the industry is expected to grow by 12-13 per cent during FY 2013-14.

IT & ITES sector's contribution to the national GDP is 7.5 per cent in 2011-12 vis-a-vis 1.2 per cent in 1997-98. Hence it is evident that IT/ITES industry has led economic growth of India. IT/ITES industries are highly concentrated in seven cities as of today. These are Bangalore, Chennai, Hyderabad, New Delhi, Gurgaon, Noida, Mumbai, Kolkata and Pune. Due to scarcity of land, proper infrastructure and cost of operations the industry is expanding to newer places like Chandigarh, Coimbatore, Ahmedabad, Bhubaneswar, Jaipur, Kochi, Mangalore, Mysore, Madurai and Trivandrum.

The Indian IT and ITES sectors have played a key role in placing India on the global map. Abundant talent and cost are the fundamental advantages for India and these are sustainable over the long term. Indian IT/ITES industry have grown at 24% CAGR over the last decade. According to Nasscom, by 2020, the industry is expected to provide direct employment to 10 million people and indirect employment to 20 million people.
3.5.3 Growth factors in the IT/ITES sector are

- Tax advantage and low operating costs.
- Availability of technically qualified personnel.
- Governmental policies favouring the industry.
- Major sectors as Telecom, Manufacturing and BFSI have rapidly adopted the IT technologies.
- New verticals and non-traditional sectors as public sector, utilities and media in export market have shown strong demand.
- Adoption of new and emerging technologies such as cloud computing.
- SEZ acts as strategic growth driver. More SEZs are now being set up in Tier II cities.

All these factors have given IT/ITES industry in India a strong competitive position with high market share.

3.5.4 Size of the Market

The Indian IT & ITES industry has consistently led the economic development of the country. The three main contributors within the sector are Service, software exports and business process outsourcing (BPO). The IT & ITES industry’s growth over the last five years is remarkable. Majority of the Fortune 500 and Global 2000 corporations are sourcing IT/ITES from India. IT & ITES industry has global market share of 55 per cent in offshore IT services and 35 per cent of the ITES/BPO market. India is regarded as one of the top destinations for the global sourcing.

India has become one of the fastest growing IT markets in Asia. Under the ITES industry there will be a huge growth opportunity in higher value services like business analytics, knowledge processing outsourcing including legal services etc. System Integration and Custom Application Development have also contributed to the growth of the IT services sector.
Telecom, Manufacturing and BFSI are key domestic sectors that are currently contributing to the growth of IT software products segments. Over the next five years additional growth will be fueled by emerging sectors like Media, Retail and Healthcare.

According to Nasscom, India's IT and BPO sector exports are expected to grow by 12-14 per cent in FY14. McKinsey and Co. released a report titled, 'Online and Upcoming: The internet's Impact on India' where it stated that US$ 100 billion is expected to be contributed by the Internet industry of India to the country's gross domestic product (GDP) and generate about 22 million jobs by 2015. As per a report by Gartner, IT spending in India is projected to reach US$ 71.5 billion in 2013, as compared to US$ 66.4 billion projected for 2012.

3.5.5 Trends in Employment

The IT/ITES sector has created direct employment opportunities of nearly 2.8 million and indirect employment opportunities of around 8.9 million. This growth in employment opportunity is expected to touch 14 million (direct and indirect) by 2015 and 30 million by 2030. Taking into account of India's competitive position, growing demand for exports, Government policy support, and increasing global footprint, by 2020 the market size of the industry is expected to rise to USD 225 billion.

The IT/ITES industry has created an addition of 7.96 lakh jobs in one year as per the Economic Survey 2011-12. Employee base in the rural areas is expected to increase by over 10 times by 2013-14 as per NASSCOM.

India came out as the most preferred destination for engineering offshoring according to a customer poll conducted by Booz and Co. Naturally foreign companies offshore complete product responsibility to Indian ITES companies.

3.5.6 Trends in Internet

Rapid growth in the IT industry is led by online retailing, cloud computing and e-commerce. With the rise of internet retailing and e-commerce, online shopping is becoming popular.
According to the Internet and Mobile Association of India (IAMAI) 17 million are online shoppers in the country and the number of Internet users is more than 121 million. These figures are expected to triple by 2015 as internet penetration is increasing and personal computers are getting more and more affordable.

As per IAMAI, online sales of branded apparel touched 4.99 million pieces during April 2012 which is close to double the sales when compared to the previous year. Similarly, E-ticketing with irctc.com recorded 5.56 million bookings in April, 2012 vis-a-vis 2.26 million bookings in April 2011.

### 3.5.7 Initiatives by Government

The Department of Information Technology, in the twelfth Five Year Plan (2012-17), proposes to fortify and encompass the existing core infrastructure projects. It plans to build redundancy connectivity, provide more horizontal connectivity, undertake energy audits of State Data Centers (SDCs) etc. In order to create the right Governance and service delivery ecosystem at the Panchayats additional 150,000 Common Service Centres (CSCs) will be setup and also the existing core infrastructure including fibre optic based connectivity will be leveraged.

### 3.5.8 Investments in the Sector

Investments from major countries were attracted due to the core competencies and strengths of Indian IT companies. According to the Department of Industrial Policy and Promotion (DIPP), the computer software and hardware sector had attracted cumulative foreign direct investment (FDI) of Rs 52,377.08 crore (US$ 9.63 billion), between April 2000 and December 2012. The rapidly increasing growth in the IT industry is driven by online retailing, cloud computing and e-commerce.

Some of the major initiatives in Indian IT and ITES sector

- Tata Consultancy Services (TCS) expanded its operations in the UK, by setting up a new delivery centre in Liverpool. The new facility will act as a secure applications development and maintenance centre for business applications.
• Wipro, InfoTech has entered into a 10 year contract with Mumbai International Airport Ltd (MIAL) for the new integrated terminal T2. Managed services across the entire IT landscape to be provided by Wipro as per contract.

• Mahindra Satyam has acquired controlling stake of 51% in a SAP consulting provider in Brazil named Complex IT. This acquisition enable Mahindra Satyam to capture enterprise solutions market within Brazil

• Wipro has entered into new areas such as artificial intelligence and data mining by partnering with Pingar, a New Zealand-based firm.

• Multi-million dollar engineering services order with UK-based Cobham was bagged by HCL Technologies.

3.5.9 Economic Survey on Indian IT and ITES Sector

Many developing countries have started to compete with Indian IT and ITES companies. Currently the highest market share in computer and information services exports is held by European Union, followed by India and the USA. However in the recent years many new competitors like China, the Philippines and Israel have emerged. During 2005 to 2011, the annual average growth of computer services was 69%, 59%, 28%, 37%, 27%, and 35% for the Philippines, Ukraine, Sri Lanka, Argentina, the Russian Federation and Costa Rica respectively. The growth rates in the above mentioned countries, though the export values are relatively low in some of the cases, are greater than the average annual growth of computer services from top exporters. In the BPO sector, Countries like the Philippines, China, Malaysia, Morocco, Mexico, Brazil, Mexico, Columbia and Ireland are emerging as serious competitors for Indian companies in the BPO space, especially in voice processes. Over the last five years, about 10 per cent market share is lost to the rest of the world in the BPO sector, according to NASSCOM.

As China is investing heavily on English language proficiency, it is bound to emerge as a threat to India in due course of time. The Philippines, having expertise in both the hardware and software segments, is a serious competitor for Indian IT companies. Also anti-outsourcing outcry in several developed countries, like the USA and the UK, pose a potential threat to the current Indian IT &ITES business.
model. The Indian BPO industry should conduct information campaigns in the
developed countries to alleviate the fears and myths about outsourcing. In software
services, India should also move up the value chain. There is a huge opportunity in
the large domestic sector and the industry needs to focus on the same. In order to
combat the rising wages in the urban BPO sector, the industry needs to move more
towards rural areas. So training on skill development and English language is
necessary.

3.5.10 Growth in IT-ITES industry & IT spending in North America and
Europe

The global economic scenario and spending on information technology in
North America and Europe will play a major role in the growth of the growth of
Indian IT-ITES industry this year. India's IT-Information Technology Enabled
Services (IT-ITES) exports clocked USD 75.8 billion in 2012-13 fiscal up from USD
68.7 billion in 2011-12 fiscal, as per Nasscom. IT-ITES exports have touched Rs
4.11 lakh crore in the current fiscal up from Rs 3.32 lakh crore in the 2011-12 fiscal
which is 23.4 percent growth over previous year, as per government data.

3.5.11 Future of Indian IT & ITES sector

According to India Information Technology Report, growth is expected to
consolidate in the Indian market for IT products and services. The market is
expected to touch US$ 41.2 billion by 2015 up from US$ 19.7 billion in 2010. It
also estimates that the IT services market will expand to US$ 16.9 billion by 2015
up from around US$ 7.5 billion in 2011. The report estimates that over the span of
2011-2015 the Indian software market is expected to grow at a compounded annual
growth rate (CAGR) of 18 per cent.

3.6 Summary

The concepts discussed in this chapter would help in understanding the
objectives of this research work. The factors influencing competency mapping have
been identified and explained. This chapter presents the theoretical basis for the
research model framed, which has developed as a result of the gaps identified from
the review of literature, discussed in the previous chapter.