CHAPTER II

REVIEW OF LITERATURE
CHAPTER II

REVIEW OF LITERATURE

No research is complete without reviewing the works done by the earlier scientists. The collection of works done by previous researchers is known as literature. A literature review explains and justifies as to how one’s research is related to other researches. This may also help in finding the answers to some of the questions or filling in the gaps in the research area. As University of Wisconsin Writing Center (2014) describes, a literature review is a “critical analysis of a segment of a published body of knowledge through summary, classification, and comparison of prior research studies, reviews of literature, and theoretical articles”

Importance of the Review

A literature review demonstrates and assists an investigator to:

1. **Understand and critically analyze the background research** - A thorough review of literature facilitates the researcher in collecting and amalgamating former studies related to the present one. This no doubt, assists the researcher to create a better perspective for the research. A well-integrated review also helps the researcher to check redundancies, if any.

2. **Select and source the information that is necessary to develop a context for present research** - it also helps in finding the concrete sources for the present study. A base is always required to do any work and the review provides the same. The researcher once gets into the flow of things, can work miracles using the same.
3. *Shows how the investigation relates to previous research* - the review points out the relation between prior researches and the present study. The discovery of important variables, their relationship and the incorporation of these variables into hypotheses, all can be done only if the review is done properly. The overlaps and the gaps that are found can be omitted and fulfilled once the researcher has the knowledge of the same. It also reveals the contribution of the investigation made to the chosen field.

4. *Provides evidence that may help explain the findings later* - a careful review of the literature enables the investigator in selecting his variables, methodology, hypotheses and other practically important concepts. This again helps the researcher in building a strong foundation of the research.

Therefore, a thorough review of the topic points out what methods, findings and conclusions the earlier researchers reached to. It identifies the gaps in existing knowledge in what is required and has not been touched. It becomes imperative to compare and contrasts the research design, methodologies, sample and statistical tools that are used in the studies. Hence, a comprehensive approach will be to choose the right method and sample for the study. The review not only suggested gaps in past studies but also enabled the researcher to select appropriate methods and sample to achieve results that are concrete, reliable and sustainable rather than a hit and trial one. It can thus be stated that the review of literature is an inseparable entity to the present research.
The present chapter reviews the historical perspective, roles of administrative officers and a detailed review of competency studies under four sections:

1. Review of international competency studies (private sector)
2. Review of Indian competency studies (private sector)
3. Review of international competency studies (public sector)
4. Review of Indian competency studies (public sector)

Each study discusses in detail the place of study, sample used, methodology, statistical tools used by the researcher(s) and the findings of the research. The concluding part of the chapter concise the methodologies, criterion used, areas included and the competencies identified in previous competency mapping research studies as well as the present study.

Historical Perspective

Furnham (1990) pointed out that, “the term competence is new and fashionable, but the concept is old.” This is clearly observable in Taylor (1911) of scientific management’s words where he argued that the task of the management scientists was to break down the subject into its component parts- into competencies. During World War II, Flanagan (1954) developed the critical incident interview which tried to identify the crucial traits and skills that are required for successful performance. This was done by gathering data on behavior and observations of people in job events, crisis, key problem and the like.

McClelland’s behavioral approach (1973) became the key step in the process of competency model development. This expanded the focus to include individual’s experiences and also the perceptions of events. The paper- “Testing for competence rather than intelligence”
(McClelland, 1973) proved to be the major milestone in the movement. This paper was first published in *American Psychologist* and thus is credited for launching the competency movement. The story about Mc Clelland’s research began when his company named McBer and Company was approached by the U.S. state department for their very specific problem- “the performance in the Foreign Service Information Officer (FSIO) Examination and the scores on the FSIO, general aptitude test battery did not predict success as a FSIO, as observed later from actual on-the-job performance.” This was the intriguing question, the answer to which brought about a revolution in the world and created interest of thousands in the world of psychology. Mc Clelland developed a technique- Behavior Event Interviews (B.E.I.) in order to find out as to what differentiates superior from average performance. These included- cross-cultural interpersonal sensitivity, positive expectations of others and speed in learning political networks.

These three competencies and non academic skills like ability to generate a number of promotional ideas occurred more frequently in the thoughts and actions of superior FSIOs. This paper upon hiring practices for civil services emphasized that behavioral traits and characteristics were far more effective than the age-old aptitude tests in determining ‘who is and is not’ successful in job performance.

The article shook the world of researches and led to hundreds of research studies. Almost everyone tried to find out the factors that lead to superior job performance. If only they could figure out as to what traits and skill led to better job performance, they could hire a better quality of employees, assess and appraise the employees on particular measures. Not only this but also help them train their employees for better performance in near and far future.
To sum up, Mc Clelland’s methodology it can be stated that two factors were used majorly-

1. *Criterion Samples*- comparing people with a successful work-life with those who were unsuccessful.

2. *Identification of specific thought and behaviours*- identifying those specific thought and behaviors that are causally related to successful outcomes.

The notion ‘competence’ was around for a long time but the concreteness of the word as known in today’s world was explained by Boyatzis (1982) in his book- “The Competent Manager: A Model for Effective Performance” (1982) that focused on competence as applied to managerial work. The sample size of Boyatzis was 2000 managers in 41 management jobs from 12 organisations. The study proposed by Boyatzis (1982) suggested that there were 21 key managerial competencies that were linked to success.

It was also noted that the early Romans practiced a form of competency profiling in attempts to find out the attributes of a “good roman soldier”. The icing on the cake was Raven’s work on “Competence in the modern society in the U.K.” in the year 1984. Later McClelland’s (1996) meta-analysis of executives assessed competencies.

Roles of an Administrative Officer

A ‘role’ in general terms is a set of connected behaviours, rights, obligations, beliefs and norms. The division of labor in the society takes the form of the interaction among heterogeneous specialized positions that are commonly known as roles. These roles can be stable or keep changing depending upon the nature of tasks assigned to an individual. The
Concerns of the government keep changing and so does the roles of a civil servant. The roles of a civil servant have continually evolved and transformed as technology has enabled modifications in the manner of governance and administration.

The introduction of five year plans has made the district administration the hub of activity for development, welfares and provision of services to the people. The central and state governments launched various schemes continuously and this makes the administration responsible for monitoring and coordinating roles. Jain (2010), a serving collector has reported that the responsibilities of a collector are superseding his authority day by day. An administrative officer has to remain in direct touch with the secretariat, making frequent field visits simultaneously. Not only this but also striving to achieve public peace and order, promote sustainable development and efficient provision of public services in the state. An administrative officer has to see to proper management of land and land records, provision of civil supplies, maintenance and provision of civic amenities, and also to the regulation of trade, industry, business and building of law or policy formulation. If in case, an administrative officer doesn’t prove to be up-to-the-mark of expectations then, he/she might have to face protests and civil unrest. It is thus, observed over the years that the two basic functions of an administrative body i.e. regulatory and the developmental, need to be well-coordinated or else the consequences follow. Looking at the hierarchy of district administrative officers, it can be assumed that the district collector is the head of the family. The collector has to manage the district with the help of state administrative officers.

The Second Administrative Reforms Commission (2009) identified the roles of the state administrative officers as- “issue of ration or electoral identity cards, procurement of food grains, implementation of employment guarantee schemes, supply of drinking water, mutation
of land records, functioning of primary schools and healthcare centers or control of epidemics in the countryside.” The Commission believes, “India needs a fundamental transformation in governance and that empowered citizen-centric and accountable local governments are the core around which this transformation will take place.”

The Commission suggested following primary functions of the Secretariat:

1. assisting the ministers in making policies for the socio economic development of the state;
2. carrying out regulatory work;
3. drafting legislations, rules and regulations;
4. coordinating various policies and programmes, monitoring progress of work and analyzing results;
5. preparing budget and maintaining control over expenditure;
6. maintaining liaison with various departments of the union government;
7. monitoring the administrative system and taking steps to enhance its efficacy, competence and responsiveness.

Basically, a district collector’s office performs the following roles:

1. revenue administration
2. executive magistracy and maintenance of law and order
3. licensing and regulatory authority
4. disaster management
5. elections
6. food and civil supplies
7. welfare
8. census
ix. coordination
x. economic development
  (agriculture, irrigation, industry, etc.)
xi. human resource development
xii. rural development
xiii. local self government
xiv. preparation of development plan
xv. information technology

The commission also concluded by stating that the main functions of the collector may now include:

(i) land and revenue administration, land acquisition, custodian of government lands and properties, registration, recovery of public demand
(ii) executive magistracy and maintenance of law and order, internal security, prisons, remand/juvenile homes
(iii) licensing and regulatory functions with respect to various special laws pertaining to arms, explosives, cinemas etc.
(iv) disaster management
(v) civil supplies, public distribution and social welfare
(vi) excise
(vii) transport
(viii) mining
(ix) labor laws
(x) elections
(xi) legal affairs
(xii) census
(xiii) protocol, general administration,
(xiv) treasury management / district accounts office related work
(xv) public relations department, NIC and other miscellaneous functions assigned by the state government, coordination with civil society

(xvi) coordination with line departments / other agencies of the state and union governments

(xvii) In the interim period – till the local institutions obtain adequate maturity – as chief officer of the proposed district government

Many researchers (e.g. Mishra, 2006; Hooja, 2007) have identified the roles of a district collector. As Khandwalla (2010) puts it, “New Public Management over the past two decades has emerged as the reigning paradigm of Public Administration.” In other words, the government now has to look towards the system with which it runs. There is no other choice but assimilating newer management practices and implementing emergent management philosophy denoting efficiency, economy, effectiveness and a desire for excellence. There is a felt need for the government systems to be transformed via accepting the goals and paradigm of private sector. New Public Management by Khandwalla (2010) has focused on performance-orientation, stakeholders’ participation, sound delivery system, citizen-orientation, professionalism, improved government services, excellence in governmental operations, morality, efficiency, curbing wastage and on improving the image of public administrative systems.
The present study thus, kept in view the above mentioned roles and paradigms; and sought to find out the actual roles that were implemented by a state administrative officer and which were the ones that were played by them the most.

Review of Competency Studies

Reviewing the literature on the vast pool of researches and reforms in competency identification and assessment of the corporate and the public services at the international level reveal that the interest in the competence researches is not a new thrust. It is observed that competency studies are initiated for certain types of jobs- especially for the ones that add value to the strategy of an organization. Competency studies have been carried out earnestly in both sectors- private and public. In India, till 2004 the competencies were lagging behind both in public and private sectors. Khandwalla (2004) opened the eyes of the countrymen in the field of competencies through his rigorous efforts. The private organizations have a more concrete data now as compared to the public ones. Although the framework is approved the civil servants (GoI-UNDP, 2012), the public services still lag behind if we look at a concrete data regarding competencies of the state administrative officers. The literature survey has tried to summarize the study samples, sample size, methodologies used, statistical analyses and the findings of studies that were conducted both- internationally and in the country.

Review of international competency studies (private sector)

Maes, Weldy and Icenogle (1997) in their study on college graduates concluded that oral communication is the most required competency for business students when managers look for placements. The three main components most sought after are- following the instructions,
listening, conversing and giving feedback. The researchers used interview techniques with the managers in the Greater Gulf area including coastal areas of Mississippi, Alabama and Florida. A pilot study with 221 managers was then conducted using the questionnaires with seven competencies and three personal characteristics. This was later expanded to 13 competencies and 3 characteristics. The first study asked the managers to check top ten competencies whereas; the second study intended to collect the demographic data. The statistical tools used were ranking and analysis of ranking.

Johnson’s (2000) research on effectiveness assessment at the program level used feedback mechanisms, curriculum-competency mapping and experiences for his study. The investigator tried to link the feedback mechanisms to the program’s curriculum. The feedback mechanisms suggested by the researcher were: surveys, case, project and portfolio evaluations, and exit examinations.

Looking at the attrition rate of postgraduates from medicine Patterson, Ferguson, Lane et.al (2000) aimed to describe an inclusive competency model for the job responsibility of a General Practitioner. Three methods were implied on three different groups to figure out the competencies of general practitioners- (1) critical incidents focus groups with 35 General Practitioners from the Trent region, (2) 33 General Practitioner-patient consultations were behaviorally coded (3) critical incidents interviews were conducted on 21 patients from Midlands. The three studies were combined and the results gave a strong evidence for competency model comprising 11 categories of associated behavioural descriptions. The triangulation of the studies concluded that the personal attributes, need to be considered while recruitment and training along with the academic and clinical competency.
Rogers (2001) conducted a 360-degree peer evaluation of leadership competencies for Fire Apparatus Operator (FAO) and lieutenant and concluded that “communication”, “teamwork”, “ethics”, “technical skills”, “ability to lead” and “self-confidence” proved to be relevant leadership traits. The 360-degree survey consists of 57 questions. These were correlated with scores on the written promotional examination, years of service and years of formal education. The data that was correlated found that written promotional examination served to be the best predictor of effective leadership. It was however justified that neither the number of years in service nor the formal education were measures of effective leadership.

Agut and Grau (2002) developed a construct for analyzing competency needs of managers working in hotel industry. An operative method was provided by the researchers to analyze the competency needs in terms of gaps. Çizel, Anafarta and Sarvan (2007) worked on similar lines. The study was conducted on middle-level managers and current state of managerial competencies in the tourism sector. Data collection was done in hospitality sector in Antalaya, Mediterranean coast of Turkey via questionnaire survey. Gaps were found out through the questionnaire survey method which asked the respondents about the importance and present levels of competencies related to the managers that were required for effective job performance. The case of Turkey (Çizel, Anafarta and Sarvan, 2007) reports a replication of Agut and Grau’s (2002) study in Turkey and seeks a comparison of the major findings. The study draws conclusions that consider the findings of both the studies as well as focuses on cultural variation and the implications for hotel management recruitment, education and training. The comparative analysis points towards internationally transferrable core curriculum for degree-equivalent hotel management programs. Competency needs analysis found out that the middle-level managers in accommodation sector in Antalaya considered the possession of
all competencies to be quite important. It also indicates a deficit in knowledge and skills in many topics that are relevant to efficient managerial performance.

Harrison (2002) found out that human beings have a tendency to do the tasks they like and avoid the ones they dislike. Harrison also figured out that if an important task from an organizational perspective is delegated to a person who dislikes it then it gives a negative impact. Thus, began Harrison’s quest and the researcher identified an individual’s traits through a web-based questionnaire. The investigator based the questionnaire on two leading-edge performance theories- enjoyment-performance theory and paradox theory. The research confirms 85 percent accuracy in identifying the traits that predict the performance of an individual. The reliability is found to be above 90 percent when customized and combined with eligibility testing and behavioral interviews. Harrison through his work with paradox theory has identified the key paradoxes that relate to organizational performance in such critical areas of performance as interpersonal relatedness, decisions, innovation, communication, authority-power, motivation, strategic clarity, organization and leadership. The researcher also developed a job suitability graph that lists the traits that are necessary for success in the job graph also depicts graphically as to how ideal, sufficient, a little lacking or severely lacking an individual is for that particular job for which he’s been rated. The Harrison methodology not only gives the job suitability graph but also, informs the decision-makers about the individual’s motivations and balanced versatility regarding the key performance paradoxes relative to the particular job.

In the year 2003, the manufacturing operations and jobs rapidly declined in the US and other European Countries but on the other hand North East Italian manufacturing employment reached its peak. This happened due to skill shortage. In such a scenario Camuffo and Gerli (2005) applied non-parametric statistical analysis on records from 212 BEIs. The same was
done for the 44 repertory grid interviews. 23 plants of 23 North East Italian manufacturing firms were analyzed using the behavioral event interviews (BEIs). The researchers developed a competency model for production supervisors in the North East Italian firms where four threshold and nine distinctive competencies were identified. The analysis was done on the competencies of the production supervisors who directly manage the workers at the grass-root level. The study proved that the best performers possessed more competencies as compared to the average performers. It was thus implied that in order to perform their jobs the Italian production supervisors from North East must have “goal and action” as well as “people management” competencies. “Empathy” and “group management abilities” are a must alongwith “being practical” and “efficiency oriented”. The North East Italian firms had both “efficiency orientation” and “entrepreneurship” that fostered plant effectiveness and performance improvement; as well as, the “empathy”, “willingness to share knowledge” and “social orientation” made the organizational communication more efficient, motivated workers, reduced conflicts, and drove skill development and diffussion. Although the employees lacked proper training, the context in which these firms operated developed these competencies. Other factors that facilitate the development of competencies are: low social mobility, seniority, job stability and attachment to a single firm.

The Lawrence Behr Associates (LBA) group conducted a study in 1990’s which examined both types of organizations- the ones that survived and prospered and the ones that did not over a period of 25 years. The factors which they found led to organizational excellence were six human resource conditions viz. a performance-oriented culture, low turnover, high employee satisfaction, a squad of competent successors, valuable investment in employee reimbursement and trainings, and the efficient use of institutional competencies or the success
factors in the selection of the employees along with performance evaluation processes (Berger & Berger, 2004).

50 Quantity Surveyors firms registered with The Board of Quantity Surveyors, Malaysia were chosen randomly by Said, Shafiei and Omran (2010) because as a profession, Quantity Surveyors were facing criticality. A survey was done on the sample using postal questionnaires in 2005. The response rate was observed to be 24 percent. 13 competency standards were tested through this study. The findings concluded that the ‘traditional’ core competencies were still followed rather than the newer ones. The Malaysian quantity surveyors however, were not only keen on developing their own systems for competencies standards but were also very much receptive to the idea of adhering to them.

A gap was found in theory and practice of competency development by Vos, Hauw and Willemse (2011). As a result, the researchers set out to fill this gap by resolving the process of competency development in organizations. For this purpose a longitudinal multiple case study was designed in which 22 Belgian organizations were identified as target. The techniques used for data collection were: organizational records, semi-structured interviews with HR managers and focus groups. Grounded theory approach (Locke, 2001; Isabella, 1990) was used as a tool for the study leading way to different steps of competency development in organizations. The study was significant in closing the existing gap between practice and theory from the point of view of competency development in organizations.

A sample of 48 employees from the emergency team call centre of a large global energy provider was selected as participants for the research conducted by Lewis, Feilder and Tharani (2011). The participants were divided into two equal groups of 23 each- i) the ones who do not have any management responsibility and ii) the ones who had management responsibilities.
Semi-structured, one-to-one telephone interviews, using the critical incident technique were conducted on each participant. The recorded interviews were transcribed and uploaded into NVivo, a code and retrieve data management system. Content analysis served the main tool to find out the behavioural indicators from the transcripts. Inter-rater agreement was done with the help of two raters showing an acceptable 72% agreement. The method used is commonly known as critical incident interviews and content analysis. The research findings identified 11 engaging management competencies with both positive and negative behavioural indicators. These were then clubbed into three themes: “supporting employee growth”, “interpersonal style and integrity”, and “monitoring direction”.

Another study was undertaken by Olan, Sainger, Sentosa and Ming (2012) to identity the core managerial competencies of middle-level managers in Sichuan, China. 120 respondents who were employers as well those who worked at top-level positions were selected from 7 industries based at Sichuan province for the purpose of the study. The research model given by Hellriegel et al. (2008) was chosen by the researchers. The questionnaire survey consisted of the competency factors which were identified by Krapohl (2007) and Qiao and Wang (2009). The research is exploratory, descriptive, analytical and predictive. The six hypotheses put forward by the researchers tried to find out whether the competencies such as “communication”, “teamwork”, “self-management”, “strategic action”, “planning and administration”, “multicultural” as independent variables have positive effect on the dependent variable i.e. managerial effectiveness of the managers working in middle-level. Likert’s 5-point rating scale was used for the surveys. The statistical tools used with the help of SPSS were correlation analysis, linear regression analysis etc. Cronbach’s α was used to test the internal consistency. The study supports Hellriegel et al (2008) "a managerial competency model" i.e. the six
managerial competencies definitely impact the productivity of the mid-level managers in Sichuan, China.

Shehu and Egbu (2012) compared the skills and competencies of the programme managers along with those of the project manager. The study concluded that both the programme manager and the project manager possess the similar skills and competencies but the skills and competencies of the programme manager needs to be deeper ones alongwith the strategic orientation so that he/she could align a series of projects. A project manager’s skills and competencies on the other hand, ought to be more towards achieving a single project.

A study on engineers of Madura Coats Private Limited was organized by PonRekha and Karpagavalli (2013). The investigators tried to figure out the gaps that exist in the employees. 30 employees were selected as sample for the study. In order to assess the competencies of the employees 16 dimensions were identified which were “stress tolerance”, “self starting and proactive”, “detail consciousness”, “high energy level”, “operational knowledge”, “numerical interpretation”, “identifying bottlenecks and rectifying them”, “knowledge on production concept”, “information collection”, “analytical skill”, “creativity”, “technical expertise”, “precision in communication”, “motivation”, “appraising and developing” and “organizing”. T-test was used to compare the results. The gaps were identified in “high energy level”, “numerical interpretation”, “analytical skill” and “creativity”. It was thus suggested that the employees should work upon these dimensions so that their performance gets enhanced.

Takey and Carvalho (2013) set out to propose a competency map for the scheduling and financial planning project support areas at an engineering company. The current proficiencies were spotted and competency gaps were recognized. The study was both qualitative and quantitative that includes literature review, documentation analysis, behavioral events
Competencies for state administrative services

interviews, self-assessment survey and statistical analysis. The competency map given by the researchers proves to be an efficient managerial tool that also develops an insight for managers.

Review of Indian competency studies (private sector)

Khandwalla (2004) carried out a research on competencies for senior manager roles to ascertain the competencies leading to role effectiveness of senior managers, thus focusing on the relationship between the two. The study categorizes the roles performed by senior managers into 9 strategic, 9 operations-related and 9 leadership roles respectively. 45 senior manager-level competencies had been categorized into 6 groups as well. The data was gathered from 73 managers and their associates attending a conference at IIM, Ahmedabad. Averaging was done for the ratings of each participant and his/her associates for two things- participant’s role effectiveness and his/her competencies. This was done for each participant. Correlation analysis was used to figure out the relationships between perceived role effectiveness and competencies with the focus on strong relationships only; a cut-off of 0.50 correlations was kept. Results found were as follows – higher proficiency in playing two managerial roles viz. strategic plus operations-related roles. Main Strengths of senior managers were in areas of task execution and contextual sensitivity. Relative deficiencies were seen in playing leadership roles and interpersonal competencies. Initiatives management and introduction of innovations were found to be two weak competency groups.

In his study on human resource (HR) professionals Ramlall (2006) tried to see whether competencies can predict success in HR profession, if competencies vary with position within HR. Ramlall also studied the relationship between specific competencies and specified responsibilities of HR experts; along with the relationship amongst education, years of HR service, competencies, and compensation. For this study 224 HR professionals from 66 different
Competencies for state administrative services

organizations were identified using stratified random sampling technique. The sample belonged to United States’ upper Midwest region. The surveys were sent to the identified professionals from Fortune 500 companies and other companies under retail sector, banking and finance sector; state and local public bureaus; agricultural, educational, manufacturing, as well as the transportation industries. Correlation and causal-comparative research was used among other statistical tools. It was observed that nearly half of the participants belonged to management cadre holding at least a bachelor’s degree. The HR professionals had 10.45 years of average experience. It was also observed that the key strategic contributors to strategy were the subjects like accounting and marketing. Technical competence in strategic contribution was seen in high level HR. Strong correlation was found between HR technical competence and strategic contribution. it was hence suggested that the HR professionals who are lacking the technical competence need to develop the same for better strategic contributions.

Maheshwari, Bhat and Saha (2008) studied people working in health sector to observe how their commitment, competencies and skills, significantly influence their performance along with the reform process. The method used was a self-administered questionnaire. OC scale was used to measure organizational commitment (OC) of the employee while PC scale was used to check employee's professional commitment (PC). A sample of fifty five medical officers from Gujarat was selected for the study. The findings of the study showed that the professional commitment of the doctors was higher than their commitment to the organization. Fairness in the system of promotions was not perceived by the doctors. They still agreed that seniority based promotions were still followed. It was thus concluded that in order to bring about a reform in the health sector, a high level of involvement of the medical officers is required alongwith a proper reward system and autonomy.
Velayudhan and Maran (2009) studied the employees of HCL Technologies in Chennai to find out the gaps between present competencies and the expected ones. A questionnaire consisting of 109 sub categories of competencies divided under 15 broad categories was circulated amongst the employees. These were then rated on a 5-point rating scale. One way analysis of variance (ANOVA) and independent sample t-test were employed for statistical analyses. The findings of the study reveal that both males and females had a positive relation in all the fifteen heads. They also showed a positive relationship between the qualifications of the three groups. A significant difference was found between the two groups of employees on personal effectiveness as well as between married and unmarried group of employees in HCL on competencies like “functional expertise”, “innovation”, “customer service”, “analytical thinking” and “motivation”. The findings also indicated that the income groups of employees in HCL defer in “customer service” and “communication”. A significance difference was found between the employees working for <5yrs and 5-10 yrs for HCL in “functional expertise”, “innovation”, “customer service”, “analytical thinking” and “motivation”. Training and personal development classes are suggested to the employees in order to bridge the gap.

Velayudhan (2011) aimed to explore the competency gap existing between the employee’s current performance and the expected level. It was emphasized that people with outstanding performance will always be in demand in software industry. The researcher selected 145 employees from Cognizant Technology Solutions (CTS) and 150 employees from Hindustan Technology Limited (HCL). The competencies of these 195 employees were studied thoroughly. The performance level of the employees was assessed on 20 dimensions and gaps were identified. The results showed that CTS employees were more competent as compared to
HCL employees. The HCL employees have gaps in almost all of the dimensions. The gaps could be bridged if training and personality development classes are provided to the employees. The study was conducted in Chennai.

Yuvaraj (2011) aimed to analyze the skill level of workmen to identify the training requirements of the employees, to develop an insight into multi-skill levels of the employees and to simulate the study in other divisions and units. A descriptive study with sample size 1400 workmen at different units and departments suggested that competency mapping should be done for all categories of employees- confirmed, probation, and contract workers as well as for those who are seeking employment. Data collection for the study was done through questionnaires and discussions that were held with the immediate supervisors and the managers of each department.

Even in recession special and unique competencies are required contrary to the notion that during recession the companies would not look for competencies (Jain, Bhatia & Mathur, 2012). The researchers suggested that only those competencies that are not core competencies to the organization should be outsourced.

Not even the hotel industry was left behind in terms of competency mapping. A study was conducted by Ali (2012) to scrutinize employees of Ambassador’s Sky Chef, Mumbai in order to identify the competencies for individual roles and responsibilities. The researcher also intended to identify the competency gaps and suggest competency based training and development programs. Interviews, observation survey, employee records, performance and potential review form, reference books and internet were used for data collection from a sample of 30 employees working in various departments of Ambassador’s Sky Chef, Mumbai. The sample was selected through probability sampling under simple random method. The findings
illustrated that 70 percent employees were competent. Remaining 30 percent needed training for skill development. The method- 360 degree appraisal was substantially acceptable in the organization. The employees of the organization were in favor of competency mapping process that assisted them in role clarification and career enhancement as well as facilitates company’s growth.

A descriptive study was undertaken in India by Balaji and Vimala (2012) to map the competencies of ADECCO service organizations at Chennai. The study had two objectives- 1). to identify the difference between the performance of Employee of ADECCO service organization at Chennai and 2). to identify the competency gap of employee based on the 11 dimensions taken for competency mapping. For this purpose a sample of 50 was randomly selected and each was given a questionnaire that was prepared by the researchers. The questionnaire had 11 dimensions. T-test and radar chart were used as statistical tools for analyzing the difference between the performances of the employees and to identify the competency gap of employee in each dimension of competency mapping. The findings indicate difference in the competency levels of the company. Gaps in competencies were found higher in job-related skills, performance and meta-qualities of employees. The investigators suggest trainings for job-related skills and meta-qualities so that the performance of the employees gets enhanced.

Sawant and Dhavan (2012) aimed to study the process of competency mapping and to analyze the gap between the present and desired competencies on a random sample of the employees of Central India Machinery Manufacturing Company Limited (CIMMCO) Spinning Mill, Solapur. Data collection was done using questionnaire survey, interview and observation and employee records. The study concluded that the employee’s were highly satisfied with the
competency mapping of the organization. It was hence, suggested that the competencies of the employees could be enhanced with more training modules.

Ahuja (2012) administered questionnaires consisting of core and functional competencies to eight managers from each department of Hotel Clerks Amer, Jaipur with the intention to identify the gaps in competencies and indicate training and development needs for the target group. The investigator also used discussions and records for organizational hierarchy chart, job description and job specification along with the interviews obtaining critical incidents from the head of the departments (HODs). Chi square ($\chi^2$) was used for quantitative analysis. The study not only identified the gaps and training and development needs but also suggested incentive plans for the employees.

Kaur and Kumar (2013) analyzed gaps in competencies of managers from three different levels and concluded that the higher level managers lacked technical skills while leadership skill was missing in middle and first level managers.

An opinion survey was conducted by Jagtap (2013) on 20 employees in management grades. The sample was selected by purposive and random sampling. The researcher collected the secondary data through the documents stating competency mapping of job incumbents for the previous year as well as the organization chart. The study states that competency mapping should include profiles like those on contractual basis or freelancers also the job seekers. This shall not only indicate the specific skill of the potential employee but also make the potential employer value the potential employee.

The study by Krishnaveni (2013) aimed to assess the competencies of the job incumbents at Meenakshi Mission Hospital and Research Centre (MMHRC), Madurai, India. The research is descriptive in nature. It however uses structured questionnaire to collect the data
from 84 employees of MMHRC. The sample was selected via convenient sampling method. The researcher used mean score and analysis of variance for statistical analysis. A satisfactory level was found on competencies like “ability to maintain relationship with others”, “communication”, “task proficiency”, “leadership” and “adaptability”.

Sen (2013) studied the competencies in context to retail sector. The present day challenges of retail sector as far as front line staff is concerned are hiring, training and retention. The crucial task of the HR is to retain the “knowledge workers” and “knowledgeable workers”. The study was both exploratory cum conclusive research. Experience survey along with depth interviews were used to develop an insight on the topic. A sample of 100 was identified by simple random sampling from the employees of Big Bazaar and West Side. A number of books, newspaper articles and websites were used for collecting secondary data. The primary data collection techniques consisted of questionnaires, discussion guidelines and interviews. It was observed that organizations that identified the competencies once used it in all the phases of the organization. Thus, it is concluded that competencies especially in retail is the need of the hour.

Even the traditional oil companies of Madhya Pradesh are not lagging behind in the race for competency mapping and analyzing the skill gaps. Sharma and Jain (2013) spotted 26 employees from three traditional oil companies of Madhya Pradesh region of the country as the sample for the study. Direct interviews, questionnaires and discussions were held with the sample and it was found that the employees lack required skills in certain areas. These were-ISO process, transport management, logistics procedures, weighbridge, and communication.

Competencies are not new in India. Chouhan and Srivastava (2013) tried to develop a competency model for IT professional in the country for training need assessment. The researchers identified the top five roles through which the model can be viewed: strategic
partners, administrative experts, employee champions, change agents and HR experts. The model is divided into 5 Competency Clusters: analytical, leadership, technical, business and interpersonal.

Chouhan and Srivastava (2013) did another study on competencies wherein the investigators tried to find out the competencies for HR Professionals in India. It was again suggested that the HR model could be viewed from 5 perspectives- strategic partners, administrative experts, employee champions, change agents and HR experts. The methodology used was questionnaire, use of job descriptions, performance appraisal formats etc.

“Assessment on competency of employees in pharmaceutical industry in Chennai” was done by Sreedevi (2013). The research briefly describes employee's competencies attributes, interdepartmental competencies and suggestions to enhance their competency level. Six behavioral segments- “action oriented”, “adaptability”, “building trust”, “client focus”, “innovation” and “quality orientation” have been studied by the researcher. 100 employees were selected as the sample of the study based upon convenient sampling. Analysis of the data was done by chi-square (χ²) test. The study has revealed gaps in the competencies of the employees from the standard to the actual competencies. The investigator also suggested some mechanisms to rectify the gap.

A recent survey report on Management Capability Index (MCI) by AIMA and KPMG (2014) suggested top areas of concern in Indian context- “external relationships”, “application of technology and knowledge”, “people leadership” and “organisation results and comparative performance”. The MCI India 2014 has following dimensions (competencies) along with their weightage proportions-
1. visionary and strategic leadership- 15%
2. performance leadership- 10%
3. people leadership- 10%
4. financial management- 10%
5. innovation in products and services- 10%
6. organisation capability- 5%
7. application of technology and knowledge- 5%
8. external relationships- 5%
9. integrity and corporate governance- 5%
10. organisation results and comparative performance- 25%

The survey report is applicable for almost all industry types and organisation types. The survey was conducted on 500 respondents out of which 302 respondents were considered for the survey analysis. The selected respondents were into senior positions. A 6-point likert scale was used for the survey. The survey analysis also indicated that foreign multi-national companies (MNCs) are faster in adapting as compared to the Indian MNCs. The foreign MNCs are found to be way ahead as compared to the Indian MCI 2014 in all the categories. The report also indicates that leaders from government establishments believe that there is a scope of improvement on almost all dimensions especially dimensions like- “performance leadership”, “organisational capability”, “organisation results and comparative performance”.
Review of international competency studies (public sector)

Kamoche (1997) reported that the public sector is under the pressure to formulate its own competency model if it needs to justify its very existence through calls for financial accountability, operational efficiency, improvements in product and service quality, and so forth. The researcher proposed a need to work on human resource management in the public sector of Africa by identifying the required competencies of its workforce. This would also avoid the inappropriate methods of recruitment and training.

Bhatta (2000) emphasized the “value for money” perspective and concluded that although the government of Singapore is committed to enhance the public sector capacities, there is more scope for measuring the incidence of learning in the organizations.

According to Butler and Fleming (2002) recruitment and selection is the area where most developments of competency-based human resource management (HRM) in the Irish civil service has taken place. In the Irish civil services competencies are playing a major role in recruitments of various positions including the local governments, competitions for promotions as well as in some internal promotions. It is observed that people involved in process of competencies whether as interviewers or as interviewee are both satisfied with the approach. Other than the predictive value, the approach also adds greater transparency and objectivity to the system!

Dublin City Council and The Equal at Work Initiative (2004) carried out a job analysis of the General Operative role within Dublin City Council. This was done in order to get the views of the roles. Even the Line Managers were interviewed so that their perspective on the role was determined. Interviews were also conducted with middle and senior management in order to predict any future changes in the role during the period of 3-5 years. To draw a competency model out of these interviews was another focus of the project. The project also
intended to give an outline of potential issues around current recruitment practices. The potential barriers to two entry-level positions with Dublin City Council i.e. the Clerical Officer grade and the General Operative role were analysed and competencies for the same were identified. 42 General Operatives were consulted during the project tenure along with 10 Line Managers. Six individual competencies were recognised for the General Operatives that are- “awareness of health & safety”, “motivation and interest”, “teamwork”, “dealing with customers”, “initiative & problem solving” and “openness to learning”. The project also differentiated two broad categories of General Operatives-1). General Operative’s roles that require physical activity/mobility and 2). Non-physical General Operative roles.

The Malaysian government implemented the competency-based remuneration in public sector (Putra & Hizatul, 2004) as the Public Complaints Bureau (PCB) was full of complaints by the public about delays in actions taken and services by the public organizations from 1999 to 2006. The three ministries of Malaysia- the Ministry of Home Affairs, the Ministry of Finance, and the Prime Minister’s Office as well as the three states in Malaysia- Selangor, Johor and Perak obtained most of the complaints (Public Complaints Bureau, 1999–2006). Since the competency-based method was not implemented anywhere else Azmi, Ahmad and Zainuddin (2009) tried to examine the association between the extent of competency-based pay practices and the quality of service. The research gave an evidence for positive correlation between competency-based pay and customer service provision. Thus, it was rationalized that the public reform of competency-based pay is effective as it does provides high-quality service to the public. But to their dismay, the researchers found that the competency-based pay method is moderately practiced in the Malaysian public organizations. It was hence suggested that the
public organizations must practice the competency-based pay system more frequently so that the customer loyalty remains with the government.

As mentioned in the report- Asking the Wrong Questions- A Look at How the Federal Government Assesses and Selects Its Workforce (2004), the hiring system in Washington, DC takes almost six months to more than a year. The federal government is keener on hiring the right people by accurately assessing the skills and competencies of potential workers. The report analyzed that the hiring practices of the federal government are obsolete and need reform. The findings of the study were- the primary method of the federal government to assess the new hires was least effective predictor of effective job performance. The survey reports state that only 39 percent of the federal employees accept that people with right skills are getting hired. Other assessment tools were found five times more effective than the federal tools. Agencies like the Internal Revenue Service and the Transportation security Administration have devised better assessment practices.

Vathanophas and Thai-ngam (2007) from Mahidol University performed their study in the department of agriculture of the Thai Public Sector and tried to find out the required competencies to perform their jobs better and make a competency model from the same. The study was conducted at the Chief of the General Administrative Sub-Division position level in the Thai Department of Agriculture using the Behavioral Event Interview (B.E.I.) technique. Twenty-three competencies were found for superior job performance. The researchers also recommended nine competencies for the competency model using the current level of importance of the competencies.
Al-Yahya (2008) did a comparative study on Saudi Arabia and Oman's 540 civil servants from 10 public organizations that were selected via random sampling. The standardized instrument that was distributed to the sample exposed that skills and abilities of public administrative officers were underutilized invariably! The study also suggested a more effective approach through participatory-flexible structures and work redesign.

The United Nations competencies were decided on the basis of interviews that were conducted on the focus group which consisted of Deputy Secretary-General, twenty-four Under-Secretaries-General as well as Assistant Secretaries-General heading the departments and offices all through the secretariat. A day-long brainstorming session was conducted on the focus group and conclusions were made regarding the values and competencies. The analysis and grouping of the competencies developed the final model of competencies. In this way, a model was developed wherein eight core competencies and six managerial competencies were present. “Communication”, “teamwork”, “planning & organizing”, “accountability”, “creativity”, “client orientation”, “commitment to continuous learning” and “technological awareness” came out to be core competencies whereas, the managerial competencies were- “leadership”, “vision”, “empowering others”, “building trust”, “managing performance” and “judgment/decision-making”.

A project on comparative study for the Organisation for Economic Co-operation and Development (OECD) countries competency management system (OECD, 2010) was led by Pilichowski and Melchor (OECD Secretariat), under the able guidance of Anderson (OECD Secretariat). The countries examined were: Australia, Austria, Belgium, Canada, Denmark, France, Japan, Korea, the Netherlands, the United Kingdom, and the United States. The selection of the countries was done keeping in mind that the competency management system in
these countries is a matured one! Various written sources from academics, practitioners, and official documents have been scrutinized in this report to reach conclusions. The basic three aims of this scrutiny were:

1). finding out how governments are managing their competencies in core administrations,

2). analyzing the new tools and practices in the most advanced OECD countries, and

3). forecasting on the competencies governments will need in the future.

It was observed that the US and the UK were the pioneers in competency mapping in the public sector. They did it in the 1980s itself! As mentioned in the report, the competency model is centrally developed in all the selected OCED countries except France. The competency mapping is done for senior positions. The model majorly consists of behavioural competencies. Values like “commitment” and “integrity” are the core competencies in public services thus; a special attention needs to be given to these values. It was also observed that trial and error method was used in developing the competency frameworks. The competency frameworks are concentrated in the areas such as: recruitment and selection, training and development, succession planning, and career guidance. The performance appraisal and competency-based pay still needs to be worked upon. The OECD countries are trying their level best to integrate the three dimensions of implementation of competency management system (i.e. vertical integration-alignment with the strategy, horizontal integration-integration of the various HR processes, and the implementation throughout the organisation) but, a holistic approach to competency management shall take some more time. The competencies required to meet the challenges of 21st century were also analyzed and eight key competencies were identified. These were then clubbed into four meta-competencies: “creative thinking”, “flexibility”,

“cooperation”, and “strategic thinking”. It was concluded that although at an evolving stage, competency management is fairly integrated in the government services. The main issue with the integration of competency based management lie with the third dimension- implementation of competency management throughout the organisation. The variation in the competencies of the agencies occurs because of the difficulties that are faced by the OECD countries during implementation. The future of CBM in government HR system is guaranteed. A deeper commitment for future directions is however suggested.

The competency management in Korean National Government by Kim and Jung (2010) elaborates that the Korean government is way ahead all other public sectors which are on just level one in the race of competencies. The Korean government has not only identified the core competencies but also has implemented them in a number of fields like workforce planning, selection, promotion, education and training, and career guidance fruitfully. The focus group in the study consisted of senior officials, experts from the Korean Society for Industrial and Organizational Psychology and the Korean Society for Public Personnel Administration, consultants, human resources (HR) officials in central ministries and agencies, the department staff responsible for the Senior Civil Service (SCS), and the internal experts in the Civil Service Commission (CSC). The methodologies used were: extensive discussions and an in-depth literature review of competency management in general and of competency models in particular, consensus and knowledge sharing on the competency model were achieved among the HR officials, the department staff responsible for the SCS, and the internal experts, job analysis, in-depth interviews, questionnaire surveys and benchmarking. There were also a number of external experts and consultants for their healthy advice. Other than all this, pilot tests, workshops, experts’ meetings, symposiums were conducted continuously with the senior
Competencies for state administrative services

civil servants. Even the public hearings were held inviting external experts, nongovernmental organizations, and mass media; international conferences inviting foreign experts; and forums inviting the staff working at HR departments in central ministries and agencies. All this was done in order to develop a refined model which was reliable and valid. Initially nine competencies were recognized but later in 2009 these were simplified to six competencies only: “recognizing and understanding of potential problems”, “strategic thinking and presentation of vision”, “results orientation”, “innovative leadership”, “customer satisfaction measure” and “coordination and integration”. The mentioned competencies are used in the process of recruitment and selection examination- Public Service Aptitude Test (PSAT). During interviews BEI and AC tactics are used. In promotions competency assessments are used since 2006. Since 2009, individual presentation and interview with 1:1 role-play, group discussion, in-basket exercises and role play (1:1 and 1:2) are commonly applied for the purpose of appraisals. Competency-based education is used for training and development since 2006. The central ministries and agencies are having their own career development programs as far as career guidance is concerned. It can thus be concluded that the Korean government has integrated the competency approach both horizontally and vertically!

A report prepared by Horton from the University of Portsmouth for K.U.Leuven, Public Management Institute (2010) brings to light the British civil service is the first civil service which has embarked upon a competency approach much before than the others even could think of- the 1980s. The government used New Public Management (NPM) as a strong tool for performance management as well as for measure to obtain economy, efficiency and effectiveness. An active collaboration of the government with the consultants led to the identification of core competencies of the senior civil servants which later expanded its aura to
almost all levels. The identified core competencies played a great role in training and almost all colleges aligned their courses to them (Farnham & Horton, 2002). As Farnham & Horton (2002) states that 80 percent of the competency frameworks for the civil service departments and agencies were ready in the year 2000 and the remaining 20 percent were in the process of developing. The Cabinet Office (1999) gives evidence that the competency frameworks are continually revised with rapid change and a commitment to modernizing government. The competency frameworks of the British Civil services is made up of core and specialist competencies which are identified using a number of methods like repertory grids, critical incident techniques, focus groups, brainstorming techniques together with benchmarking.

Public service competency framework of Republic of Kenya (2011) on the other hand consists of technical, core and general competencies that are suitable to all roles and responsibilities. The core competencies that were identified for all the civil servants are: “professionalism”, “technical competency”, “communication”, “team work”, “time management” and “continuous learning and performance improvement”. Apart from core competencies the General Competencies Description Form (GCDF) was also put forward where expected competencies for specific roles were elaborated:

a). The top management staff is supposed to have the following competencies: “political savvy”, “visioning”, “policy development”, “analytical”, “problem solving and decision making”, “performance management”, “influencing”, “persuasion and negotiation”, “human resource management and development”, “adhering to organisation principles”, “values and diversity”, “resource management”, “protocol and diplomacy”, “use of information and communication technology (ICT)”, “risk management”.
b). Professional management and administrative staff ought to possess- “strategic leadership”, “adhering to organisation principles”, “values and diversity”, “performance management”, “influencing”, “persuasive and negotiation”, “continuous improvement and strategic thinking”, “HR management and development”, “project planning and management”, “resources management”, “protocol and diplomacy”, “analytical problem solving and decision making”, “creativity and innovation”, “team work and interpersonal relations”, “use of ICT”, “risk management”.

c). The middle management staff must have competencies such as- “leadership”, “communication and report writing”, “project planning and management”, “analytical problem solving and decision making”, “training and development”, “teamwork and interpersonal relations”, “creativity and innovation”, “risk management”, “use of ICT”, “continuous improvement and strategic thinking”, “resources management”, “management and adaptation to change”, “coping with pressure and setbacks”.

d). Competencies for Operation staff were identified as- “management and adaptation to change”, “use of ICT”, “client service support and public relations”, “coping with pressure and setbacks”, “time management”, “discipline”, “etiquette and personal grooming”, “disaster management (emergency skills)”, “communication and report writing”, “planning organizing and delivery of work”.

e). Support staff must possess- “client service support and public relations”, “discipline”, “etiquette and personal grooming”, “disaster management (emergency skills)”, “communication and report writing” and “time management”.
Nassor (2010), the CEO of Tanzania Public Service College, mentions that the Government of Tanzania has recognized the fact that a decade of sustained reforms is required in order to fully realize an effective and efficient public service. The responsibility was thus, delegated to Tanzania Public Service College to develop a homegrown Leadership Competency Framework. One learning which Nassor reported he had during this study was that in the absence of full-time Senior Executive in service, the perspectives of the senior executives depended upon a small circle of permanent secretaries and their deputies, making the researcher unsure about the proposals.

The office of Migration Agents Registration Authority (MARA, 2011) identified seven competency standards for migration agents using the following methods:

1. Two practitioner workshops (Melbourne and Sydney)
2. Two focus groups (Brisbane and Sydney)
3. Critical incident interviews with practitioners (12 in total)
4. Review of the draft competency standards by workshop, focus group and critical incident interview participants
5. Review of the draft competency standards by current graduate certificate in Australian migration law and practice providers
6. Profession-wide review of the draft competency standards

The project team continuously refined the standards whenever they received the feedback reviews. The model is also implied for a number of other jobs like Nursing, Optometry, Dietetics, Osteopathy, Podiatry, Medical Science, and Law.

In a quest to find out the superior performers, the Prime Minister’s office in Lithuania developed a “One size fits all” model for required competencies. The investigators- Sudnickas
Competencies for state administrative services

and Ališauskienė (2011) found it a herculean task and as a result there remained many limitations to the model. This also affected the 360 degree appraisals feedback questionnaire responses. Nevertheless, Lithuania is one amongst the countries that are making an effort to implement competency model in public enterprises. If continued efforts are made in evaluating and developing the model further, then a strong model will emerge and provide better results in the coming years.

McCarthy, Grady and Dooley (2011) in their project focused the senior management leadership capability wherein the researchers involved 146 managers; working in top three senior manager grades for 360 degree leadership assessment process. These 146 senior managers were rated by 1054 raters online. The study took two years to assess and culminate the work for leadership in the Irish Civil Service. A multi-source assessment methodology was applied to reach the findings and conclusions. The research findings stated that there was a need for change. The senior civil service leaders were high in personal proficiency which includes competencies like: “learning agility and responsiveness”, “balance work and non-work needs including delegation”, “stress tolerance and resilience”, “self awareness and knowledge of leadership strengths and weaknesses”, and the “ability to focus personal time and energy on the most important issues to get things done”. A low score was obtained on competencies like human capital developer domain suggesting that the senior managers lack long term strategic orientation. The study gives evidence that the senior managers ought to focus on the importance of workforce which can deliver concrete results. The project report also describes the Irish civil context that hinders senior management leadership capabilities and effectiveness. Nevertheless, some recommendations to improve the situation were also suggested.
In a study on 220 public sector managers of Singapore and UK, Chong (2013) found that managerial competencies are broadly similar across nationalities! The specific competencies however differ due to the requirements of the workplace. Superior managers of both the countries possess the competencies associated with “planning”, “organizing” and “motivating others”. The minute difference due to culture does not suggest a huge difference in the competencies.

Wu (2013) made an attempt to examine competency-based training and strategies in Taiwan’s public sector. The researcher used critical success factors in competency-based training and suggested certain practices for training practitioners in the public sector. The investigator concluded with a suggestion that however, competency-based trainings were not in fashion although public sector in Taiwan emphasizes on the same. Such trainings should be implemented in both public and private sector.

A study was conducted by Solomon (2013) to find out the level of competency prevailing among the executives at a public sector. 308 respondents were selected through stratified proportionate random sampling technique using lottery method. The methodology used was survey questionnaires which contained specific items to assess the “managerial competency”, “HR competency” and “general competency” level as perceived by the executives. The study indicated that nearly half of the respondents have moderate levels of all three competencies. The suggestion after the findings are to conduct more capacity building programmes in order to improve the competencies of the employees.
The High Objectives of National Organizational Reform (HONOR) project on Framework of Competency for Kyrgyz Civil Service (2013) describes that constant improvements in the training and retraining system for high level civil servants shall improve the civil service of the republic of Kyrgyzstan. The competencies of the top civil servants were mapped by the French National School of Administration (Education Network Association, ENA). This was done to examine the training needs of the civil servants and develop the curricula for training programmes. It is observed that the competencies are defined in various countries suiting to their context and culture. The European Union defines competencies on both levels- supranational level as well as for the national level within each member states like France, Spain and Germany. Questionnaire survey method was used for collecting data from a total of 12 ministries and 161 civil servants working on the top-most positions. A framework of three competencies for the managers and top level civil servants was proposed which consisted of: “Decision Making”, “Leadership” and “Negotiation”. This helped in identifying the competencies of high level civil servants of Kyrgyzstan and also in proposing the training needs for them. Topics like- the technical competencies and soft skills on leadership, decision-making, team-building, negotiation and management were considered for training needs.

Review of Indian competency studies (public sector)

An innovative project was undertaken by Health and Safety Executive (Yarker, Flaxman & Feildner, 2007). The project sought to find out the specific management behaviours which relate with successful stress management at work. The study also aimed to construct a competency framework for inhibiting and diminishing stress at workplace. 216 employees were involved in the qualitative, multi-method approach. The sample was a mix of professions like
line managers and HR practitioners from education, healthcare, finance, local and central governments. 19 competencies were identified which were related to management of stress in employees. After the quantitative analysis of data, the conclusions were discussed considering the inferences for research, policy makers, employers as well as the line managers. Concurrent and predictive validities were determined using scientific methods.

The government of India took an initiative to organize a national conference so that a reform in human resource management in Indian civil services could be brought about. The conference was organized in the year 2011. The conference was arranged by the Department of Personnel and Training (DoPT) / Ministry of Personnel, Public Grievances and Pensions (MoP) and the United Nations Development Programme (UNDP) supported by the Pathways for an Inclusive Indian Administration (PIIA) project. This study is of special relevance to the present study as this identifies the competencies required for civil servants in the whole country. Rajasthan, being a part of the country could be entitled as mini India. Thus, the findings of the present study prove to be valuable for the present study. Executives from private and public enterprises along with the officials from Australia, Canada, Singapore, South Africa, the UK and the Western Balkans were invited in the conference to share their success stories and challenges in implementation of CBM in public sector. The conference proceedings helped the Government of India’s department of personnel and training in identifying 25 generic or core competencies for Indian Civil services. The project is named “Strengthening HRM of Civil Service” (GoI-UNDP, 2012) and was in collaboration with the United Nations Development Programme (UNDP). The project created a Competency Dictionary as well as an Implementation Toolkit (GoI-UNDP, 2013). The competency dictionary was developed through behavior event interviews (BEIs) and in consultation with a number of civil servants working
both at centre and state governments. The four sets which cover these 25 core competencies: *Ethos, Ethics, Equity and Efficiency*. These are also considered as pillars of good governance and citizen centric administration. The competencies which were identified for the civil servants are: “people first”, “strategic thinking”, “organizational awareness”, “commitment to the organisation”, “leading others”, “integrity”, “self confidence”, “attention to detail”, “taking accountability”, “consultation and consensus building”, “decision making”, “empathy”, “delegation”, “results orientation”, “conceptual thinking”, “initiation and drive”, “seeking information”, “planning and coordination”, “desire to knowledge”, “innovative thinking”, “problem solving”, “developing others”, “self awareness and self-control”, “communication skills” and “team working”.

The competencies of the employees in power sector were measured by Celia and Karthick (2012). The study described employees’ competencies attributes, interdepartmental competencies along with some suggestions to augment the competency levels of the employees. 300 employees were selected with the help of random sampling technique. Statistical tools like percentage analysis method, Spearman’s rank correlation, ANOVA were used for data analysis. The findings of the study expose that the competencies of all departments were correlated. Peer group trainings, recognition and rewards leading to a consistent work pattern is suggested for developing better habits.

Sarkar (2013) discussed the process of competency mapping and also clarified as to how this can be used for training need assessment. Sarkar’s study was an empirical study which was undertaken at 17 sample organizations which were both public and private manufacturing units of the country. Data collection was done using a number of techniques like- job analysis questionnaire, psychometric test questionnaire, direct observation, checklist method,
questionnaire for expert opinion and training feedback questionnaire on a variety of sample. The researcher used test-retest method for reliability test, content sampling was done by split-half method and cronbach’s alpha, validity tests were done by content validity, discriminate validity and ANOVA was used for calculating F value. In observation method and questionnaire for expert opinion, correlation coefficient was taken out between the ratings of expert and direct observation rating by the investigator. Same was done with psychometric test questionnaire. Other statistical tools used were: sign test and descriptive statistics. The researcher performed gap analysis to verify the changes in competency gaps on applying need based training. The study justified a significant difference in the level of competencies of employees on providing need based training.

Prasanth and Solomon (2013) aspired to find out the perceived level of leadership competency that prevails among the executives at a public sector. A sample of 150 civil servants was collected from various departments by simple random sampling technique using lottery method. The research design used was a descriptive one. Data was collected by questionnaire survey method. The findings revealed high level of overall “leadership” competency in more than half of the respondents.

Based upon the 25 generic competencies for Indian Civil Services by GoI- UNDP (2012) Chopra, Kakani and Gupta (2014) focused their study upon the training programmes for IAS officers who will be placed as District Magistrates sooner or later. The study used focus group discussions and survey method. The sample of the survey was 218 respondents. 14 competencies were yielded like this. But, after the focus group discussions only 8 core competencies were identified that are most relevant for the job role of a DM: “people first”, “leading others”, “integrity”, “decision-making”, “planning, coordination & implementation”,
“innovative thinking”, “problem solving”, and “self-awareness and self-control”. It was also found out that a higher proficiency was required for: “leading others”, “decision making”, “problem solving”, “self-awareness and self-control” and “people first”. The study also suggested some improvements in the pedagogical techniques during the training periods.

Looking at the vast review of literature on competencies from international and Indian studies both in private and public sector, the researcher identified the methodologies and criterion used along with the areas that were covered in the studies and the competencies that were identified.

Methodologies used in competency mapping researches

Looking at the vast literature it can be concluded that traditionally, Industrial and Organisational Psychologists tried to identify right person for the right job by formally identifying tasks required for the job and constructing tests to measure the skills needed to perform these tasks (job-analysis method). Flanagan (1954) suggested Critical Incident Method to identify task elements of the job. McClelland (1973) used Behaviour Event Interviews (BEI) along with critical incident method and TAT Probes (short stories) and used CAVE (Content Analysis of Verbatim Expression). BEI being race, sex, cultural background and educational experience free is extensively used in research studies (e.g. Bernotavicz et al., 1996; Mansfield, 1996; Wanichtanom, 2005; The Republic of Korea Civil Services Commission, 2006; Vathanophas & Thai-ngam, 2007; The United Nations, 2010; Lewis, Feilder & Tharani, 2011; Sharma & Jain, 2013; Sen, 2013; Takey & Carvalho, 2013). The other common method to identify the competencies used in the studies is the Top-Down approach based upon McClelland’s (Boyatzis, 1982; Spencer & Spencer, 1993; Orr, 1995; Dror, 1997;

The most common methods reported in the researches were: questionnaire survey, gap analysis and behavior event interviews (BEIs). *In the present study the researcher has used CAVE technique with behavior event interviews (BEIs) using TAT probes, survey method in the form of rating scale, and also tried to identify the gaps using comparative studies.*

Criterion used in competency mapping research studies

Most commonly used criterion sample in competency studies are *contrast groups criterion sample (superior and average)* (McClenand, 1973; Boyatzis, 1982; Spencer & Spencer, 1993; The American Compensation Association, 1996; Bernotavicz *et al.*, 1996; Dror, 1997; Carroll, 1997; Harrison, 2002; Srivastava, 2003; Khandwalla, 2004; Martin & Laroche, 2000), *job incumbents* (Czarnecki, 1995; Stoof, Martens, Merrienboer & Bastiaens, 2002; Cizel *et al.*, 2007; “Learning and development survey”, 2007; Georgia’s State Personnel Administration, 2008), *experts* (The American Association, 1996; Bernotavicz *et al.*, 1996;
Tas, 1988) and, *stakeholders* (Austin, Klimoski & Hunt, 1996; Bernotavicz et al., 1996). The American Compensation Association (1996) proposes that senior management, high performers, and functional experts are the top three information sources for developing competencies.

*The present study incorporates most of the criterion for example contrast group study sample along with experts and job incumbents. This makes the study comprehensive.*

Areas covered in competency mapping research studies

The competency studies have focused mostly on roles such as *managerial* (Boyatzis, 1982; Kanungo & Misra, 1992; Burgoyne, 1993; Goleman, 1995; The American Compensation Association, 1996; Stoof et al., 2002; Khandwalla, 2004; Watson, McCracken & Hughes, 2004; Kaur & Kumar, 2013), *business* (Klein, Edge & Kass, 1991; Martin & Laroche, 2000; Stoof et al., 2002; Srivastava, 2003; Çizel, Anafarta & Sarvan, 2007), *insurance* (Czarnecki, 1995; Winter, 1996), *politics* (Burgoyne, 1993; Orr, 1995; Czarnecki, 1995; “Learning and development survey”, 2007), *health care sector* (Patterson, Ferguson, Lane et al., 2000), *hotel management* (Agut & Grau, 2002; Ali, 2012; Ahuja, 2012) and *administration* (McClenand, 1973; North, 1993; Bryson, 1995; Sherwood, 1967; Spencer’s “Federal Hiring Series”, 2004; Georgia’s State Personnel Administration, 2008; Cooper, Lawrence, Kierstead, Lynch & Luce, 1998; Wanichtanom, 2005; The Republic of Korea Civil Services Commission, 2006).

*State administrative officers by rotation have to play a wide variety of administrative roles. Therefore a comprehensive check-list of the roles was included in the present study of state administrative services.*
Competencies identified in competency mapping research studies

Administrative Services

Competency literature reveals that the competencies identified for administrative services were: analytical thinking, conceptual thinking, customer focus, developing people, flexibility, information seeking, listening and understanding and responding, performance excellence, team leadership, and teamwork (Orr, 1995), reconciling differences, achieving agreement, and using legitimate authority to carry agreements into effect (Carroll, 1997), planning of activities, quality at work, administration of activities, work in a team, service to the client, productivity at work, innovation at work, use of technology, conservation of the environment and job security (INTECAP publication, Guatemala- cited in Bhardwaj, 2006), intervening in history, energizing, adjusting social architecture, risk-taking, handling complexity, making harsh tragic choices, and mobilizing support for constructive destruction, super-professionalism, innovation-creativity, merit-elitist but society reflecting, virtuous, autonomous but subordinated, and mission-oriented (Dror, 1997), communication skills, people management, team skills, customer service skills, results-orientation, problem-solving (Learning and development survey, 2007; Rankin, 2004), achievement, service mind, expertise, integrity and team work (Wanichtanom, 2005), linguistic competency, numerical and statistical competency, problem-solving competency, decision-making competency, understanding and being understood by others, logical thinking, expressing their idea clearly and effectively, reasoning etc. (The Republic of Korea Civil Services Commission, 2006), guiding and developing staff, coaching, communication, cultural competence, customer/client focus, decision-making, facilitating change, collaboration, organisational ability, stress tolerance, team leadership, technical/professional knowledge and skills (Bernotavicz et al., 1996),
communication, teamwork, planning & organizing, accountability, creativity, client orientation, commitment to continuous learning and technological awareness as core competencies and leadership, vision, empowering others, building trust, managing performance, judgment/decision-making as managerial competencies (The United Nations, 99-93325—November—18M), creative thinking, flexibility, cooperation, and strategic thinking (OECD project report, 2010), professionalism, technical competency, communication, team work, time management and continuous learning and performance improvement (Republic of Kenya, 2011), people first, strategic thinking, organizational awareness, commitment to the organisation, leading others, integrity, self confidence, attention to detail, taking accountability, consultation and consensus building, decision making, empathy, delegation, results orientation, conceptual thinking, initiation and drive, seeking information, planning and coordination, desire to knowledge, innovative thinking, problem solving, developing others, self awareness and self-control, communication skills and team working (GoI-UNDP, 2012).

Senior Managerial Services

Competencies identified for the senior managerial services were--- hard competencies-job-related knowledge and skills, soft competencies- personality traits, values, and styles (Parry, 1996), motivation, interpersonal skills, and political skills etc. (Boyatzis, 1982), impact and influence, achievement orientation, teamwork and cooperation, analytical thinking, initiative, developing others, self-confidence, directiveness/ assertiveness, information seeking, team leadership and conceptual thinking (Spencer, 1993), communicating valued behaviours and organizational culture, "raising the bar" of performance for all employees and emphasizing people (instead of job) capabilities are the way to achieve competitive benefits, encouraging
cross-functional and team behaviour (The American Compensation Association, 1996), a) the self-awareness cluster- emotional awareness; accurate self-assessment; and self-confidence b) the self-regulation cluster- self-control, trustworthiness, conscientiousness, adaptability, and innovation c) the motivation cluster- achievement drive, commitment, initiative, and optimism d) the empathy cluster- understanding others, developing others, service orientation, leveraging diversity, and political awareness e) the social skills cluster- influence, communication, conflict management, leadership, change catalyst, building bonds, collaboration and cooperation, and team capabilities (Goleman, 1998), managing guest problems, professional appearance and poise, effective communication, positive customer relations, and positive working relationships (Tas, 1988), important current competencies- being enthusiastic and committed, dealing honestly in business, providing a safe and secure environment for visitors. Important future competencies- being creative and innovative, marketing the attraction effectively, managing change in organization, being enthusiastic and committed, dealing honestly in business (Watson, et al., 2004), technical knowledge, seeing and acting local boundaries, learning and innovation, managing change, flexibility, a group orientated view of leadership and transformational leadership (Hay, 1990).

Public and private sectors are two agencies that work parallel in any nation but for different mission, vision and values. They work under different constraints, with different aims and targets. They have different challenges to face and motives to trigger their action. They have different priorities and pressures. They have different roles to play and different responsibilities to bear. Therefore, they may require different sets of competencies. But, at the same time, they are inter-dependent in their planning, functions, and impacts and nevertheless their focuses are different. For example, corporate sector focuses production and monitory profit
whereas; the administrative sector focuses masses and their needs. The end results seem similar (flourishing and happy people and nation). Blunt and Jones (1992) have also identified similarities in managerial styles, administrative abilities and requisite skills in public and private sector management.

The challenges of the new millennium puts across a clear need for the corporate and public sector to work in coordination and with healthy competition, that could complement each other with their differential competencies and support with their similar competencies to achieve synergy in human resources in different sectors. Considering this the present study pioneered a comparison of roles and competencies of state administrative officers (public services) and senior managers (corporate sector).