A detailed examination of the related literature in the form of textbooks, journals and official documents was performed; to study the pattern of migration and retention of engineer’s in the construction industry. Additionally, an evaluation of books prepared for business professionals was also conducted to ascertain how the corporate world views this issue. Several works related to this research are reviewed in the following sections.

Several studies were conducted regarding the migration of employees, and the different strategies for their retention.

Eisenberger (1990) stated that, the relationship between a worker and a supervisor makes an impact on retention. Supervisors are the “human face” of an organization. The supervisor’s support is so essential for the employee’s retention, that it can be said that employees leave bosses and not jobs. If the supervisors focus on the employee’s progress, other than the formal evaluation process, the employee’s retention and his commitment towards the organization gets improved.

McCormmick (1992) conducted a survey at US West, and indicated that 80% of their employees dealt with family issues while on duty, while
70% said that balancing home and work was stressful, and one-third of all the employees had taken a day off in the previous due to some family issue.

Debrah (1993) noted that an inflexible supervisor with poor interpersonal skills drives the employees away very quickly.

Grover and Crooker (1995) observed the benefits of a perfect balance between work and family, which comprises of flexible schedules, childcare assistance, parental leave, and childcare information, on the organization’s commitment. The study proved that there was greater organizational commitment, if employees had access to work life policies, and also these employees articulated considerably with lower intent to renounce their profession.

Magner et al (1996) point out that a high labour turnover may mean poor personnel policies, recruitment policies, supervisory practices, and grievance redressed procedures, or lack of motivation. The organizational environment in general, and cultural environment in particular, e.g. team, respect for people, orientation etc, have a substantial positive influence on the employee retention.

Labov (1997) stated that organizations with strong communication systems enjoy lower turnover of staff. Employees feel comfortable to stay longer, in positions where they are involved in some level of the decision-making process; that is, employees should fully understand about issues that affect their working atmosphere.

Agarwal (1998) stated that the term ‘reward’ refers to the recognition given by an organization to its employee, in response to his / her performance at various levels. It is very important that the rewards have a
lasting impression on the employees, and continue to substantiate the employees’ perception that they are valued.

Retaining the employees becomes another essential action point for the organization to combat the consequences of migration. The first step will be to convert the ‘herd’ mentality to that of a tribe, where the feeling of pride and belonging arises. There are strong bonds existing and celebrated.

The authors produced a list of the top ten issues. They are:

1. Upward movement in job positions
2. Stability of company's management
3. Company's financial strength
4. Major medical plans
5. Company's paid health care benefits
6. Company's commitment to professionalism
7. Company's reputation within the industry
8. Turnover rate of company's key management personnel
9. Company matching 401k retirement package
10. Area of the country you will most likely live in.

Steve Alexander (1998) listed out the following low cost strategies that can keep employees from migration.

1. Flexible hours
2. Telecommuting
3. Praise
4. Employees training employees
5. Clear career paths
6. Working with cutting edge technology
7. Shielding IT from some users
8. Emphasizing the value of benefits package
9. Supportive culture
10. Small gifts and cash prizes

Davenport and Prusak (1998) stated that, experienced aerospace engineers encouraged to leave during downsizing periods, took valuable knowledge out the door with them, and in some cases, had to be rehired so that essential work could continue. The expendable middle managers have been the key knowledge coordinates and synthesizes and this has been realized and proved to the organization during their absence for which they had been working.

Drucker and Peter (1999) observed that, the most valuable assets of a 20th century company are its production equipment. The most valuable assets of a 21st century institution, whether business or non-business, will be its skilled workers and their productivity.

Rivera (1999) conducted a research on the El Paso Fire Department in Texas, regarding migration. The purpose of this research was to discover the reasons for migration and its impact. Some suggestions were also provided for employee retention. From the analysis it was concluded that proper recruitment, selection, rewards, motivational programs, open communication in organization, development opportunities and training, prevent migration.
Eskildsen and Dahlgaard (2000) stated that employees who are satisfied with their jobs are more productive, creative and are more likely to be retained by the company. Hence, job satisfaction has been recognized as a factor, that is as strongly related to quality, morale and productivity as it is to commitment.

Towers Perrin (2000) conducted a survey among 6000 employees and revealed that the top ten organizational competencies for effective employee retention, in the order of importance are:

1. Developing the skills of employees
2. Understanding the unique needs of high performers
3. Providing competitive basic pay
4. Aligning human resource programs with business objectives
5. Clarifying what the organization expects from employees and what employees can expect in return
6. Providing real opportunities for leadership development
7. Advancing talented employees
8. Having effective senior leadership
9. Fully utilizing employees’ abilities and skills and
10. Supporting teamwork.

Retention can be linked to four themes, namely, enrichment, home life, structural, and interpersonal factors. The organization can take steps to enhance enrichment factors by rewards and recognition programs, skill development and advancement, and motivational workshops; enhance home life factors by providing time management skills, flexi time, and telecommuting options where applicable; structural factors by providing the
right ambience in the environment, ergonomics, and right employment conditions, salary, monetary rewards, and job security; and interpersonal factors by improving self-esteem, respectability, involvement and belonging.

Griffeth et al (2000) noted that pay and pay-related variables have a modest effect on the turnover. The analysis also included studies that examined the relationship between the pay, a person’s performance, and turnover. It concluded that when high performers were insufficiently rewarded, they quit immediately. If the jobs provided adequate financial incentives, it was more likely that the employees remained with the organization and vice versa.

Musser (2001) conducted a study to obtain an effective retention strategy for diverse employees. The literature review and exit surveys were conducted, and the data was analyzed. From the results it was concluded that a good working climate, professional autonomy, support and time for research, proper performance evaluation, mentoring, networking, career and learning opportunities, interesting work, good benefits, balance between work and home life are the effective retention strategies.

Gooley (2001) derived a retention wheel for a generic solution to retain good people. This approach satisfied the logistic employees, who were interviewed in the study, to identify why they stayed in the organisation.
Kaye and Jordan-Evans (2002) stated that the home-work balance is one of the personal factors for employee retention. Employees generally opt for a workplace that helps them balance the demands of their work and family lives, rather than forcing them to choose one over the other.

Jamrog (2003) stated that employees are not motivated by money alone, but they also take up work as a challenge to reach the state of perfection in their respective works/jobs.

Price and Newson (2003) stated that, intended strategies emerge during the strategic planning process, and realized strategies emerge from these over a period of time. An organization's strategy to retain its civil engineers may not possess the same criteria as that for retaining their doctors, because the two professions have different views on retention needs for their
respective positions. Many organizations face the task of downsizing during lean economic conditions.

Buffe and Murphy (2004) stated that a reward can be extrinsic or intrinsic; it can be a cash reward such as bonus, or recognition such as naming a worker as the employee of the month, and at other times a reward can refer to a tangible incentive.

Cunning (2004) stated that every individual takes up a job influenced by culture, family, experience, and biases.

Messmer (2004) observed that underestimation of the importance of compensation in retaining the staff, will always be a leading factor for employees leaving, as it often plays a role in decision making. Competitive pay is effective in retaining top performers. Pay issues were cited by the respondents, far exceeding other concerns, such as dissatisfaction and promotional opportunities.

Smith (2004) stated that effective performance appraisals help align individual behaviour and performance with the organisation’s goals. Stimulating and reinforcing behaviours that align with the company’s meaning and purpose creates a sense of belonging, along with higher productivity and more effective employees.

Daniel (2005) revealed that, it is common to see more employees leaving their jobs in order to seek better ones, or in periods of downturn redundancies may increase. From the perspective of the employee, job separations can either be voluntary, when an employee leaves a job of his own accord, or involuntary, when the employer initiates the separation. These two categories showed clear seasonal movement.
Zeytinoglu and Denton (2005) stated that the work environment is one of the factors, that determines or influences the employee’s decision to remain with the organization. All factors, like pay and benefits, being equal, employees will seek work environments that fit their needs. Workspace designs have a profound impact on employees, who tend to continue with the same job as long as they are satisfied. So it is very important to recognize the emerging needs of individuals to keep them committed, and provide the work environment as necessitated by them.

Deckop et al (2006) stated that advancement opportunities not only reduce absenteeism, but also increase the employee’s commitment and satisfaction, which help in reducing turnover. The opportunities created towards the development of the employees of the organization, enhance the probability to remain in their present occupation. Therefore, a company that wants to strengthen its bond with its employees must invest in the development of its employees.

Bashir (2007) stated that, stress is a universal experience in the life of each and every employee, at all levels. It is estimated that about 100 million workdays are being lost due to stress, and nearly 50% to 75% diseases are related to stress. Stress results in a high proportion of absence and loss of employment. The number of employees affected by stress in the organization is increasing at an alarming rate, and this affects both the employee’s performance and goal achievement.

Ongori (2007) studied the sources of employee turnover, and forwards some strategies, on how to minimize employee turnover in organizations. The author concluded that employees are the backbone of any business success, and therefore, they need to be motivated and maintained in an organization at all costs, to aid the organization to be globally competitive in terms of providing quality products and services to the society. To retain
the employees, managements should encourage job redesign-task autonomy, task significance and task identity. Finally, proper recruitment and selection, challenging work, chance for advancement, open communication, proper management policies, good work environment, competitive pay, and proper compensation, are suggested as efficient strategies for retention.

Aaron (2008) conducted an investigation on the effectiveness of an intended retention strategy for a mid-western state transportation organization, to retain its civil engineering professionals. A majority of the civil engineers indicated that monetary issues would influence their decision to render their long term service/extend their association with the organization. Further, the study indicated, that the civil engineers were not satisfied, as they were not duly recognized for their efforts. The participants revealed that they were not even aware of the retention policy followed in their organization.

Sahinidis (2008) stated that training and development give people greater control and ownership of their jobs, and contribute to increased loyalty and retention. Training is defined “as the planned intervention that is designed to enhance the determinants of individual job performance” and development is the process of preparing for future jobs. The survival of a company can be achieved through the training and development of its employees. It can be said that training and development are the two wings of any company’s success. This is because without training and development, the company cannot maintain quality or standards.

Gberevbie (2008) stated that, the following employee retention strategies are recommended for the motivation and retention of a competent workforce for organizational performance: humane treatment of staff through words of encouragement from the management; informing staff on a regular basis on why certain actions are taken, and the likely results from those
actions; implementation of policies that show the management's confidence in the staff in their day-to-day activities; organizational policies and practice that view the staff as friends and partners in progress; policies on staff recognition and promotion, that emphasize hard work, honesty and integrity rather than undue favoritism of staff arising from sentiment on the part of the management.

“In addition, rewards that bother on staff and their family members would go a long way to retain the staff for their performance. These rewards may include: contribution towards the educational training of the staff’s children; provision of interest-free loans for the acquisition of landed property to staff members; robust housing allowance or highly subsidized staff quarters; regular annual increment of salaries and promotion; and assisting staff with interest-free loans to acquire shares in the capital market. These rewards are likely to give hope to the staff in terms of post-retirement conditions of living”.

Heilmann et al (2008) conducted a study to find the impact of a career plateau on the employee turnover. It concluded that a career plateau influenced turnover intentions, than job satisfaction and commitment in particular, and the plateau directly influenced the intentions rather than being mediated through job search behaviours.

Samuel and Chipunza (2009) studied the impact of key intrinsic and extrinsic motivational variables being used by selected public and private sector organizations in retaining their employees; and also conducted research to determine the extent to which the identified intrinsic and extrinsic motivational variables influence the employees’ retention and turnover in the selected organizations. The study adopted the cross-sectional survey research design, investigating the extent to which selected motivational variables influence the employees’ decision, to either remain in or quit an organization.
The quantitative research design was used for analysis. The author concludes that employees in both public and private sector organizations were, to a very large extent, influenced to stay in their respective organizations by a combination of intrinsic and extrinsic motivational factors. Training and development, challenging/interesting work, freedom for innovative thinking, and job security are identified as the motivational variables that significantly influence the retention of employees in both the public and private sectors.

Moncarz et al (2009) stated that compensation is a very valuable tool for retention and turnover. It is also an important motivating factor for an employee to be committed towards the organization.

Imtiaz and Ahamed (2009) studied the effect of stress on employees’ performance, managerial responsibility and consequences. It was identified that the various factors affecting stress are personal issues, lack of administrator support, lack of acceptance for work done, low span over the work environment, unpredictability in the work environment, and inadequate monetary reward. Descriptive statistics was used to predict the independent variables of stress, and inferential statistics was used for the prediction of the dependent variables of stress. The authors found that there is a negative relationship between stress and job performance. Finally, it was concluded that stress management issues like counselling, monetary, non-monetary and structural reforms, effectively manage the stress, and retain the high performance of the employees by lowering their turnover and dissatisfaction.

Jose Luis Chavez and Veronica Lobo (2010) in their article on ITR’s six sigma approach to reduce its employee turnover rate, have defined a retention model that revolves around the core ‘work stability’.
As a rule, even in corporate settings, employees detest anything thrust on them. So, it is important to weave even the best of practices as part of the corporate cultural fabric.

Gberevbie (2010) has empirically examined the strategies for employee recruitment, retention and performance. The Chi square analytical technique is used to analyze the variables. The author recommends the federal character principle and political considerations as a necessary strategy for employee recruitment, because of multicultural, ethnic and religious diversity, but its application should however be carried out to reflect merit within the principle, in terms of appropriate educational qualifications, skills and experience. It is suggested that appropriate incentives should be provided to retain competent employees for performance. The appropriate incentives could be, good and regular monthly salaries, outstanding performance awards to employees, provision of children’s educational scholarship scheme to the employees’ children, proper working environment, good condition of service,
prompt payment of gratuity and pension to disengaged employees, and reasonable housing. It is also found that there is no significant relationship between the respondents’ annual income category and their views on strategies for employee recruitment and performance, and there is no significant relationship between the respondents’ job status and their views on strategies for employee retention and performance.

Weibo and Sharan (2010) presented a report on the complex relationship between the individual performance characters and the withdrawal tendency, based on the Social Capital Theory. Finally, an integrated model of the relationship was proposed. In the model, job coupling is a mediator between performance character and movement desirability, which argues that performance character may lead to withdraw tendency even turnover behavior through four different routes with the introduction of the Job-Coupling variable.

Figure 2.3 Performance-Withdraw tendency model

Kennedy and Daim (2010) developed a unique approach to assist the management in simplifying and interpreting the data collected, and
used it for gauging employees’ attitudes and opinions in relation to employee engagement and retention. The author conducted a comparative study, based on the literature review and an old questionnaire survey already conducted. A new survey was formalized and used for a pair wise comparison. Finally, a HRM model was developed, and it is useful in the decision making process.

![Engagement and retention HRM model](image)

**Figure 2.4 Engagement and retention HRM model**

Anis et al (2011) conducted research on employee attrition, using compensation as a mediating variable between the training and retention of employees. It is found that training and compensation are positively related to each other, and this means that when training is provided to the employees, it has a positive effect on employees’ compensation packages, and results in employee retention for a longer period. The authors found that retaining employees for a long term after their training and development has been completed, without increasing their compensations is not favorable, because of the increase in his abilities and perfection in the field.
Figure 2.5 Research model for employee retention

In the following sections the study presents the migration and retention factors, having more influence on the engineers.

2.3 INFERECE FROM LITERATURE

The various works related to employee migration and retention were studied. The various factors that cause migration are identified, and the factors which are appropriate, are used for the questionnaire formation. The following are the inferences made from the literature study.

- There are more than fifty factors related to migration, that are extracted from literature, and the same are classified under any one of the following six groups; viz., personnel factors, work environment, leadership or superiors, job satisfaction, growth prospects, awards, recognition, and facility management.

- From the study it is clear, that the organizations do not follow any effective retention strategies to retain their employees.

- Most of the retention studies are carried out for a single organization only.
The retention studies are carried out mostly in foreign countries, which show the importance of a retention study in India.

The reasons of migration vary according to the personal, environmental and organizational factors.

A retention strategy should be formulated and implemented efficiently to avoid migration.

Migration causes severe losses to the organization in terms of money, time, resources etc.

2.4 SUMMARY

The literature from various sources has been collected and studied, the critical factors for employee turnover/migration and retention are identified, and those factors are used for the preparation of a questionnaire survey. From the literature review it is identified, that efficient retention strategies are not followed in many organizations, and also most research works are carried out in foreign countries and are concentrated in one particular organization only. To overcome these limitations this research work is essential. Retention strategy evolution in the construction industry is necessary to effectively arrest migration, and generate a magnetic ambience that will retain employees, whether the environment is supportive or suffering from downturns. In this study, the data collection has been done from several construction organizations very different in nature.