The rapid political, economical, legal, technological & competitive changes in the business environment necessitated the importance of the teamwork as a cornerstone for any organisation aims to remain in market & compete for the future. Because of the important role it plays as the first line of contact with clients in the construction industry, design firms have to strive on building effective architectural teams. Building such teams begins with choosing the right people who perceive that working together is the best way to achieve the client's & organisation's objectives. This could be accomplished through the accurate planning, recruitment & selection of the team members needed. Training programmes & motivation techniques are essential for improving team members' skills, enhancing their abilities & increasing their productivity towards delivering successful projects. Besides establishing the principles of the team building process, this book presents results of a field study carried out on a sample of design firms in the United Arab Emirates to investigate the perception & application of the team building process in design firms.

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Ayman Ahmed Ezzat Othman

Managing Human Resources In Construction

The Complete Guide For Building The Effective Architectural Team In Design Firms

Managing Human Resources In Construction

Ayman Ahmed Ezzat Othman

IN THE NAME OF ALLAH

MOST GRACIOUS, MOST MERCIFUL

عن أبى هريرة رضي الله عنه أن رسول الله صلى الله عليه و سلم قال:

((من سلك طريقاً يلتمس فيه علماً سهل الله له به طريقاً إلى الجنة))
رواه مسلم

On the authority of Abu Huraira (May Allah be pleased with him) that Allah's messenger (may the blessing and peace of Allah be upon him) said:

Whosoever follows a path to seek knowledge therein, Allah will make easy for him a path to paradise.

It was related by Muslim

Last decades witnessed tremendous political, economical, legal, technological, and competitive changes. In order to take advantage of these changes and to avoid their threats to the organisation future, many organisations changed their policies, strategies, structures and methods of performing works. Team work becomes the cornerstone of any organisation wishing to compete for the future.

Building an effective team commences with the perception of the organisation of the importance of working in teams. When the organisation is convinced that the team work is the best way to increase its productivity and enhance its performance, then the precise selection of the right people for the right place at the proper time will be made. After the team members are selected, the team leader with the collaboration of the team members has to agree consensus objectives and have to co-operate between each other to achieve these objectives.

Training programmes for managerial and non-managerial team members, when well planned and evaluated, have a positive impact on two axis: achieving organisation objectives and helping team members to adapt to rapid changes in every field. In addition, organisations have to choose the suitable motivation techniques which will encourage the team members to complete projects on time, within budget, and as specified.

Due to the significant changes in the construction industry, many design firms and construction companies adopted the team building concept as an effective approach to achieve their objectives. Because of the unique role it plays in the construction industry, great attention and care should be paid in building effective architectural team in design firms.

This research will explain the team building concepts, the recruitment and selection of team members, training programmes and motivation techniques, In addition, the research will make a comprehensive application of this information to build the architectural team in design firms.

To My Parents,

My Father and Mother-In-Law,

My Beloved Wife Asmaa, And Our Children

Anas, Youssef And Basma.

I Owe So Much, For Their Infinite Love, Care, Support, Encouragement,

And Patience.

May Allah Reward Them For Their Good Deed, Amen.

The Author

T he man who does not thank people, never thanks God. First and foremost, praise be to God, for granting me prosperity and an incredible amount of ability and patience to complete this research. I hope that it will add a great value and development to the construction industry and design firms.

I owe a great deal of gratitude to my supervisor **Dr. Bill Wallace** for his kind supervision, encouragement, and objective criticism to my work. His considerable experience in the subject facilitated and assisted me towards the satisfactory completion of this research.

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CHAPTER 1

INTRODUCTION

1.1   Introduction

The significant changes in policy, economy, law, technology, and competition have a tremendous impact on today's organisations. As an approach to achieve the organisations objectives and to cope with these changes, many organisations changed their policies, strategies, structures and methods of performing works.

The construction industry is one of the important industries that are affected by these changes. According to the complexity of construction projects coupled with the rapid innovations in construction materials, tools, equipment, methods, and technologies, as well as the use of computers in planning, controlling and monitoring projects, most design firms and construction companies are forced to adopt the team work as a key element to cope with these changes, increase and enhance their productivity and performance.

The strong competition between the large numbers of design firms gave the clients the opportunity to select the professional design firm based on its resources availability, experience, management ability, compatibility, problem-solving approach, cost and value services, and strength of ideas. So that, every design firm wishes to remain in the market and compete for the future should put in its priorities achieving the clients' goals and fulfilling their objectives.

Achieving these goals and objectives could only be accomplished by building effective and competent teams. Due to its unique role, as the first line of contact with clients in the construction industry, particular attention should be paid to build the architectural team in design firms.

Team building process is concerned with assembling the right people who have consensus goals and objectives and perceive that working together is the best way to achieve both the client and the organisation objectives.

Building the effective team begins with the right choice of its members. The first step is the accurate planning for the human resources needed. This enables the organisation to forecast how many employees and what kind of skills and expertise will be required in the future and to what extent this demand is likely to be met. The second step is the attraction of the candidates to apply for the vacant posts in order to make sure that there is an adequate supply of applicants. Finally, the selection of the suitable applicants among other candidates recruited by the organisation will be carried out.

Training programmes for team members are playing an important role in improving their skills and enhancing their abilities in order to adapt to the rapid changes and to achieve the organisation objectives. In addition, every design firm should select and apply the most suitable motivation

techniques that encourage its team members to devote their efforts to increase the organisation productivity and enhance its performance.

To recap, recent years witnessed great interest in applying the team building concept in construction industry. Successful completion of projects on time, within budget, and as specified requires co-ordination, commitment, and co-operation between all team members involved in the design and construction process.

The dissertation is divided into eight chapters:

Chapter 1:   Introduction

Chapter 2:   The Team Building Concepts

Chapter 3:   Recruitment and Selection of Team Members

Chapter 4:   Training and Motivation of Team Members

Chapter 5:   Building the Architectural Team in Design Firms

Chapter 6:   Research Methodology

Chapter 7:   Data Analysis

Chapter 8:   Results and Recommendations

1.2   Research Aims and Objectives

The research has two main aims. The first one is establishing the fundamentals and stating the roles of the team building process. The second aim is applying these fundamentals and roles to build the effective architectural team in design firms. In order to achieve these aims, the following objectives have to be accomplished.

The First Objective

The first objective could be summarised as follows:

1) Studying the different aspects of the team building process as an approach to increase the organisation productivity and enhance its performance.

2) Establishing the recommended steps which organisations should follow in recruiting and selecting new team members.

3) Assessing training programmes, which have to be applied in order to improve and enhance the skill and abilities of team members as well as achieving organisation objectives.

4) Explaining the importance of the motivation process and illustrating the different techniques that the organisation manager could adopt in order to encourage team members to complete project on time, within budget and as specified.

The Second Objective

It is intended to apply the above information to build the architectural team in design firms. The second objective could be summarised as follows:

1) Explaining the unique role, and the importance of studying the architectural team and team work in design firms and construction industry.

2) Giving an elaborated background about architecture, the historical role of the architect, an introduction to design theories and process as well as the RIBA plan of work.

3) Studying the different organisational frameworks in design firms.

4) Recruiting and selecting the architectural team members in design firms.

5) Selecting the appropriate training programmes and motivation techniques in order to train and stimulate the architectural team members.

The Third Objective

It is concerned with the analysis of the collected data from design firms. The third objective could be summarised as:

1) Analysing the collected data in order to know how design firms perceive the team building process and do they adopt it as an effective approach to achieve their objectives.

2) Making use of new suggestions, ideas, and try to set steps to achieve hopes and dreams of architectural team members to build an effective team.

3) Admonishing design firms about any wrong practices that may hinder the team effectiveness.

4) Suggesting new areas of study in the architectural field in order to ameliorate the architectural work, and improve the architectural management.

1.3   Research Methodology

The research is divided to two main parties: the literature review and the survey analysis. The first part is covered in four chapters. Chapter two discusses the team building concepts, chapter three spots the lights on the recruitment and selection of team members, chapter four is about training and motivation of team members, and chapter five which is devoted to apply the above information in building the architectural team in design firms.

The second part of the research adopted three methods to collect data from design firms. They are the questionnaire, the interview and the observation. The questionnaire is designed to be answered by the architectural team members. The interview is prepared to be conducted with principals, partners, and human resources/personnel officers. The third method used in data collection is the observation of the researcher and other experienced team leaders and project leaders.

The objective of data collection is to collect information from design firms to examine their perception of the team building approach, and to analyse the recruitment and selection process of architectural team members. In addition, it aims to know what are the training programmes and motivation techniques applied in design firms. This analysis will lead to the results and recommendations of the research for organisations in general and design firms in particular.

1.4   Need For The Research

Delivering project on time, within budget, and as specified should be the first priority of design firms and construction companies. Achieving client objectives cannot be accomplished by individuals working alone, rather by adopting the team work approach. According to the unique and important role of the architectural team in the construction industry, design firms should spare no effort to build an effective architectural team who will achieve these objectives, increase the design firm productivity and enhance its performance. We will not be exaggerated if we stated that the success of construction projects depend on the success of the architectural team.

The research is needed because it establishes the bases and setting the roles of recruitment and selection as well as training programmes and motivation techniques of architectural team members, which will facilitate the adoption of the team building approach in design firms. From here we realise the importance and the need of the research in design firms and construction industry.

The research is important for and required by organisations in general, design firms and construction companies in particular. In addition, it is imperative for managers, human resources/personnel officers, team leaders, project leaders, architect, and architectural technicians.

1.5   Conclusions

The rapid changes in all fields forced many organisations to adopt the team work as an approach to achieve their goals. Many design firms and construction companies changed their strategies and structures as well as their way of performing work in order to cope with these changes. Because of the important role of the architectural team in the construction industry, design firms have to devote their efforts to build effective and efficient architectural teams in their organisations.

There are two main aims of this research: the first one is studying the team building process, recruitment and selection of team members, as well as training and motivation of team members, where the second aim is applying these concepts, principals and roles to build the architectural teams in design firms.

As a research methodology, the research is divided to two main parties: the literature review and the survey. The first part is covered in chapters two, three, four, and five. The second part is covered in chapters six, seven, and eight.

The need of the research emerges from the importance of the team work in completing projects on time, within budget, and as specified. The research facilitates the perception of the team building concepts, the recruitment and selection process, as well as training and motivation of team members. The research could be used as an example to apply these concepts and principals to build other teams.

The next chapter will begin the team building process by establishing and explaining the team building concepts.

CHAPTER 2

THE TEAM BUILDING CONCEPTS

2.1   Introduction

t is generally recognised by management at all levels that team building is essential to corporate success. Team building is considered to be a major component of organisational effectiveness and directly related to the competitive calibre of organisation staff and national economics.

Organisations have been quick to realise that employees working in teams can increase their response time to customers, facilitate rapid changes in technology, and significantly improve their product quality. In addition, teams have the potential to highlight employees' awareness and involvement. Both are essential ingredients for an organisation's long-term success in today's market place (Dorio, 1994, 251).

Chapter one introduced the research and defined its aims and objectives. In addition, it explained the research methodology and the need for the research. This chapter will explain the meaning of the team, the historical evolution of the team concept, and the team life cycle. In order to perceive the importance of the team building and the different uses of teams, this chapter will discuss the team building objectives and cycle, work teams typology, quality circle, and self-managed team. In addition, the team behaviour and commitment will be examined through the study of the team roles, the characteristics of the effective team, the team contract, the team norms and the team cohesiveness. It is of prime importance to understand the meaning, the roles and the styles of the effective team leader. Furthermore, this chapter will spotlight on the team size, the team communications, and how can the team leader manage and resolve the team conflicts in order to concentrate the team effort on the achievement of the organisational goals and objectives. Finally this chapter will explain the team performance appraisal and will assess the performance cycle and the appraisal basis and forms.

2.2   Understanding Teams

The word "Team" can be traced back to the Indo-European word "duck "(to pull); it has always included a meaning of "pulling together" (Senge et al, 1997, 354). By referring to Oxford Dictionary, a team is defined as "two or more drought animals harnessed together; a set of players forming one side in a game such as cricket or golf; and a set of persons working together".

Tom Taylor considers a team as "a group of people that needs each other to achieve a result. It can be developed by using individuals who have specific skills, that are valuable to the objective of the team" (Al–Jamal, 1997, 5). In addition, Galbraith (1977) sees a team as "a structural component that has the facility of lateral communication across functional lines". Simon and Farrel (1979) defined a team as "a group in which the individual have a common aim and in which the jobs and skills of each member fit in with those of others" (Ghaoui, 1996, 23).

Furthermore, a team could be defined as "a group of people with a high degree of interdependence geared towards the achievement of goal or completion of a task, they agree on a goal and agree that the only way to achieve the goal is to work together" (Parker, 1990, 16).

From the previous definitions and explanations of the meaning and implications of the word "team" we have to state that:

(1)   A group cannot be considered as a team unless there is a common goal or shared objective between its members.

(2)   Team members have to contribute their efforts and skills, and strive to achieve both the organisational and personal goals.

2.3   Historical Overview About The Evolution Of The Team Concept

"The most important thing in the Olympic games is not winning but taking a part. The essential thing in life is not conquering but fighting well", Pierre de coubertain in speech to the Olympic games 1908 (Spencer and Pruss, 1992, 11).

In prehistoric times primeval human being used his preliminary tools to hunt animals in order to eat and survive. Unfortunately, many individuals were killed when they confronted with wild animals alone. People found it is of prime importance to build teams and to live together in caves for added security and strength.

As society developed, many of those threats were overcome and people were able to work individually, and to build individual dwellings, but they still live near each other in order to protect themselves and to co-operate between each other.

Medieval times were characterised by the creation of the first business teams "the guilds", which formed for the self-protection of the various trades. These guilds are considered as the basis of the modern business structures such as associations, unions, syndicates and organisations.

Last decades witnessed augmenting adoption of the team concept as an approach to achieve the organisation objectives. Huge projects such as building dams, digging canals, constructing high rise buildings, as well as the significant scientific explorations, improvements and innovations in many fields such as medicine, surgery, physics, chemistry, astronomy and information technology are clear reflections of the team work in these fields.

2.4   Team Life Cycle

A number of individuals begin to work at interdependent job often pass through several stages as they learn to work together as a team, see figure (2.1). These stages are not rigidly followed, but they do represent a broad pattern that may be observed and predicted in many settings across the team's time together. The stages are the result of variety of questions and issues that the team faces, such as "Who should be included?", "Whom can I trust?", "Who will perform which function?" and "How do we resolve conflicts?". In addition, members want to know which rules to follow and what each person contribute. The typical stages in a team's evolution can be described as follows:

2.4.1   Forming

Members share personal information, start to get to know and accept one another, and begin turning their attention towards the group's tasks. An aura of courtesy prevails, and interactions are often cautious.

2.4.2   Storming

Members compete for status, jockey for positions of relative control, and argue about appropriate direction for the group. External pressures interfere with the group, and tensions rise between individuals as they assert themselves.

2.4.3   Norming

The group begins moving together in a co-operation fashion, and a tentative balance among competing forces is struck. Group norms emerge to guide individual behaviour, and co-operative feelings are increasingly evident.

2.4.4   Performing

The group matures and learns to handle complex challenges. Functional roles are performed and fluidly exchanged as needs, and tasks are efficiently accomplished.

2.4.5   Adjourning

The most successful groups, committees, and project teams disband sooner or later. Their break up is called adjournment, which requires dissolving intense social relations and returning to permanent assignments. The adjournment stage is becoming even more frequent with the advent of flexible organisations, which feature temporary groups.
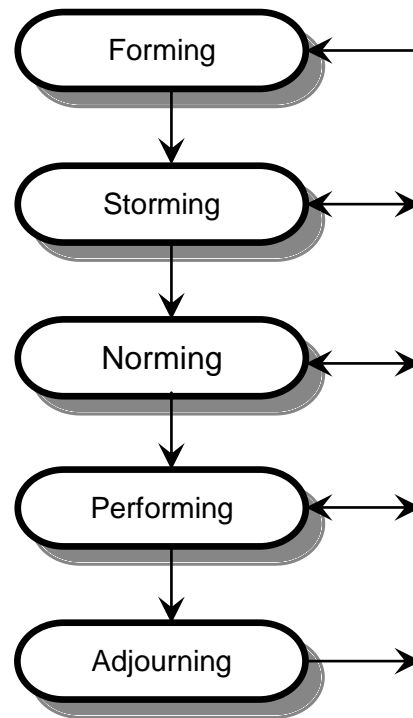
Figure 2.1 Life Cycle of A Team

Advising teams of these likely stages can be helpful to group members and their leaders. Awareness by all team members can help them better understand what is happening and work through the issues involved (Newstrom and Davis, 1997, 380-382).

Referring to the "Managing Teams" workshop which was held at the Institutes of Advanced Architectural Studies on January 1995. The idea of the workshop was to draw together experience from both professional clients and design team co-ordinator about managing the relationship between all parties involved in the design process. Vincent Wang, one of the participants, said that one particular problem in the construction industry is that teams break up after the completion of one project, just when its members have got to know one another. Teams can only be successful if they extend beyond the single project. He suggested that, rather than disbanding the entire team when a new project comes along, only one or two of its members should be changed. The repetitive or perspective team members are likely to be the ones that are retained, while the members who are likely to be innovative should be changed (Blyth, 1995).

2.5   Understanding The Team Building Process
The team building process begins with the following key concepts:
     (1) We are all parts of the team.
     (2) We are all individuals.
     (3) We all want to succeed to varying degrees.
     (4) We all have different skills.

Accepting these key concepts enable team members to recognise that they work at a different pace, they see things differently and they react in different ways to different situations. Bringing together all the qualities and skills of the workforce require a common aim, usually a high quality product or service linked to achieve profitability.

By encouraging teams to plan together they are bounded by an agreed and common purpose, one in which they can all participate. Achieving their individual goals becomes paramount to the success of the entire project and they will feel a sense of self-esteem in being a valued part of the operation. The sense of being a part of a team encourages people to develop their talents, to contribute their ideas and to pass the sense of teamwork to others in their organisation (Macadam, 1996).

Team building could be defined as "a catchall term for a whole host of techniques aimed at improving the internal functioning of work groups. Whether conducted by company trainers or outside consultant" (Kreitner and Kinicki, 1992,421). The Association of Project Managers (APM) defined team building as "the ability to assemble the right people to join the project and to get everybody working together for the benefit of the project. This can be achieved both in a formal manner, by use project start-up meetings, seminars and workshops, and in a more informal manner by getting people to work well together and gradually build a tempo in the early stages of a project. Motivating and resolving conflicts between individual members are important elements of team building". In addition, team building is seen by Harold Kerzner as "an ongoing process". While proper attention to team is critical during the early phases of a project, it is never ending process.

During the early stages of a project, team building is about managing two major problems that arise while handing a new formed team.

(1)   Managing anxieties that usually develop when a new team is formed.

(2)   Managing the distribution of workload among the team members.

In order to solve the above problems, defined steps have to be taken, in addition, an open and frank talk between the team leader and the team members is a necessary and important approach to overcome any arising conflicts. These steps are:

- Identification of the project objectives.
- Identification of roles, responsibilities, and the reasons behind selection of each member.
- Identification of the rules to be followed in managing the project.
- Illustration of the importance of the team concept to project success (Al–Jamal, 1997, 5-6).

2.6   The Team Building Objectives

When the team leader and members follow the previous steps, the team building process can achieve its objectives, which can be summarised as:

(1)   Achieving consensus on objectives and goals of the team. This may include adding, dropping, or redefining goals.

(2)   Identifying problems preventing the achievement of these goals.

(3)   Developing team planning, goal-setting, problem-solving, and decision making skills and improving the work habits of the team such as the use of time.

(4)   Diagnosing the present team style and determining what would be their preferred style of operating. This means looking at the system of norms and values that determine the team's manner of interacting and try to change or improve them towards the desired manner in order to achieve the organisation goals and objectives.

(5)   Utilising fully the individual resources of team members. Some members have strengths, expertise, and ideas they do not think are integrated into the group activities. They may have hang-up about this that should be worked.

(6)   Developing action agenda, assigning responsibilities, and setting specific dates for following up and controlling (Lau and Shani, 1992, 486).

(7)   Examining the relationships among the people doing the work and reducing the initial anxiety.

(8)   Helping the team members to perform the work entrusted to them, to be delivered on time, within budget and as specified, which cannot be done individually.

(9)   Developing more effective project control procedure which can be of quantitative type (PERT, CPM, NETWORKING, WBS) and establishing feedback procedures regarding performance of each team member in order to evaluate the team efficiency.

2.7   The Team Building Cycle

Ordinarily a team building programme follows a cycle similar to that depicted in figure (2.2). The programme begins because someone recognises a problem or problems. Either before or during the team building effort, data is gathered to determine the causes of the problem. The data is then analysed, and a diagnosis is made of what is wrong and what is causing the problem. After the diagnosis, the work unit engages in appropriate planning and problem solving. Actions are planned and assignments are made. The plans are then put into action and the result objectively evaluated. Sometimes there is no clear, obvious problem that dictates the action. The concern is then to identify or find the problem that is present but hidden. One still gathers and analyses the data,

identifies the problems and the causes, and then moves to action planning (Dyer, 1994, 88). The six steps which compose the team building cycle are:

    (1)   Recognition of a current problem.

    (2)   Data gathering via interviews and / or discussion sessions.

    (3)   Data analysis by the team members.

    (4)   Planning and problem-solving.

    (5)   Implementation.

    (6)   Evaluation (Kreitner and Kinicki, 1992, 422).
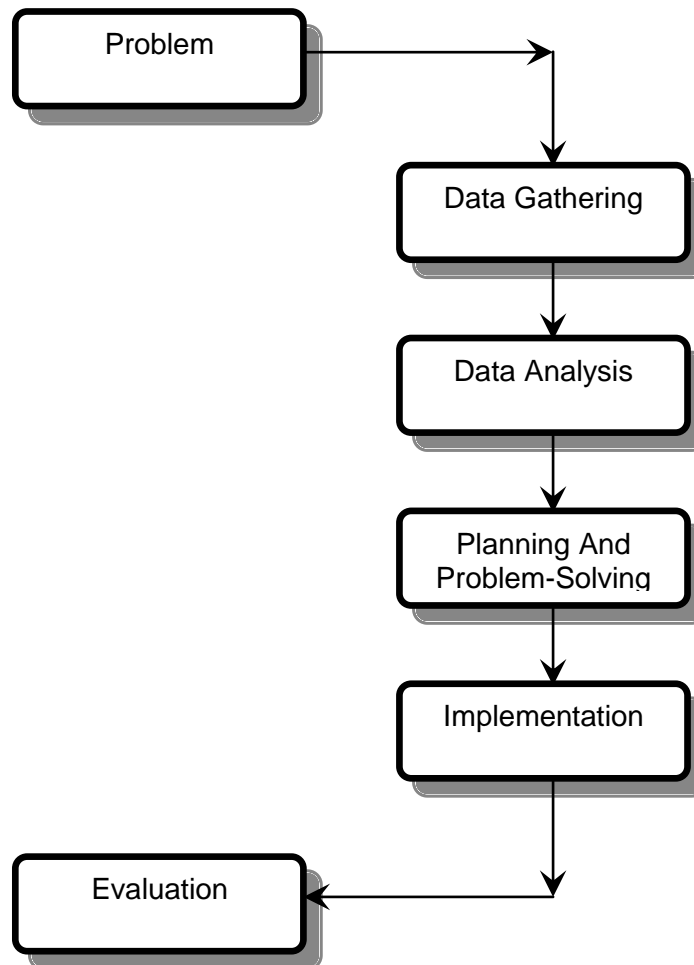
Figure 2.2 Team Building Cycle

2.8   **General Typology Of Work Teams**

Work teams are created for various purposes and thus face different challenges. Managers can deal more effectively with those challenges when they understand how teams differ. A helpful way of sorting things out is to consider a typology of work developed by Eric Sundstrom and his colleagues. The four general teams of works are (1) advice, (2) production, (3) project, and (4) action.

2.8.1 Advice Team

Advice team is created to broaden the information base for managerial decision. Quality circles are prime example because they facilitate suggestions for improvement from volunteer production or service workers. Advice teams tend to have a low degree of technical specialisation. Co-ordination also is low because advice teams work pretty much on their own. Advice team characteristics are shown in table (2.1).

Examples	Committees, review panels, boards, quality circles employee involvement groups, and advisory council
Degree Of Technical Specification	Low
Degree Of Co-Ordination With Other Work Units	Low
Work Cycle	Work-cycle can be brief or long, one cycle can be team life span.
Typical Output	Decisions, selections, suggestions, proposals and Recommendations

Table 2.1   Advice Team Characteristics

2.8.2 Production Team

This second type of team is responsible for performing day-to-day operations. Minimal training for routine tasks accounts for the low degree of technical specialisation, but co-ordination is high because work flows from one team to another. For example, railroad maintenance crews require information about needed repairs from train crews. Table (2.2) shows the characteristics of the Production team.

Examples	Assembly teams, manufacturing crews, mining teams, flight attendant group, data processing groups, maintenance crews, and task force
Degree Of Technical Specification	Low
Degree Of Co-Ordination With Other Work Units	High
Work Cycle	Work-cycle typically repeated or continues process, cycles often shorter than team life span.
Typical Output	Food, chemicals components, Assemblies, Retail sail, customer service, and equipment repair

Table 2.2   Production Team Characteristics.

2.8.3   Project Team

These teams are involved in identifying, researching, and developing effective solutions to work-related problems. The team requires high degree of technical specialisation in order to be able to solve problems. In addition, the team requires a high degree of co-ordination in case of cross-functional units, and low degree of co-ordination in case of traditional units. Project team characteristics are described in table (2.3).

Examples	Research group, planning group, architectural teams engineering teams, development teams, and task force
Degree Of Technical Specification	High
Degree Of Co-Ordination With Other Work Units	Low (for traditional units) Or High (for cross-functional units)
Work Cycle	Work cycle typically differ for each new project, one cycle can be team life span.
Typical Output	Plans, designs, investigation, presentation, prototypes, reports, and findings

Table 2.3   Project Team Characteristics.

2.8.4   Action Team

The main character of this team is high specialisation combined with high co-ordination. A unique challenge for action team is to exhibit peak performance on demand. Action team is best exemplified by a major league baseball club. Nine highly trained athletes play specialised defence position, but good defensive play is not enough because effective hitting is necessary. Moreover, co-ordination between the manager, base runners, base coaches, and all the bullpen needs to be precious. Other examples of the action teams are airline cockpit crews, hospital surgery teams, mountain-climbing expeditions, rock music groups, and labour contract negotiating teams. The action team characteristics are shown in table (2.4).

Examples	Sport team, entertainment groups, expeditors Negotiating teams, surgery teams, cockpit crews Military platoons, and squads
Degree Of Technical Specification	High
Degree Of Co-Ordination With Other Work Units	High
Work Cycle	Brief–performance events, often repeated under new conditions, requiring extended training and / or preparation
Typical Output	Combat missions, expeditions, contracts, lawsuits Surgical operations, and competitive events

Table 2.4   Action Team Characteristics

2.9   Quality Circle

Quality circle is a small group of people, from the same work area, who voluntarily get together to identify, analyse, and recommend solutions for problems related to quality, productivity, and cost reduction. Some prefer the term quality control circle. With an ideal 10 to 12 members, they typically meet for about 60 to 90 minutes on a regular basis. Some companies allow meeting during work hours, others encourage quality circles to meet after work on employee's time. Once a week or twice a month is common schedules. Management facilities the quality circle programme through skills training and listening to periodical presentations of recommendations (Kreitner and Kinicki, 1992, 397-411).

2.10   Self-Managed Teams

Self-Managed teams are defined as "groups of workers who are given administrative oversight for their task domains". Such teams are responsible for managing their work on a daily basis, this includes:

(1)   Team goal setting, based upon organisation goals, or having considerable input to team goals.

(2)   Planning how goals will be accomplished.

(3)   Allocating resources to accomplish goals.

(4)   Identifying and solving problems within the work area.

(5)   Making daily operating decisions within their defined level of authority.

(6)   Recommending solutions to external problems. These problems are caused by factors of influences outside the team control and affecting the team performance.

(7)   Work scheduling.

(8)   Hiring team members.

(9)   Monitoring work progress.

(10)   Quality control.

Employees in these unique work group act as their own supervisor. Self-Managed teams are variously referred to as semiautonomous work groups, autonomous work groups, and suppertimes. A common feature of self-managed teams are cross-functional, in other words, specialists from different areas are put together in the same team (shonk, 1992, 29).

2.11   The Team Roles

In many organisations, employees are frequently in the position of reacting to decisions and plans. Being a member of a team provide opportunities to be more effectively involved in decision making and planning, which in turn creates a willingness to be committed to the mutually agreed-upon actions. It is vitally important to identify and separate the functions that the team requires to complete from any human personalities as far as possible. The role of team leader is then to identify which people in which situation exhibit the particular balance of characteristics needed to take on the particular roles in question. There are ten roles defined as follows:

2.11.1   Visionary

There should be one or more people in the team able to see beyond the team's own requirements. They must have the overall vision of the team, as well as, a perspective of where that mission fits into the wider organisation objectives. Inevitably, as the name implies, the visionary may not always have his feet firmly 'on the ground'. Part of his duties is to 'soar above the clouds' and 'reach for the stars'. There are others whose function is to bring such visionaries back to earth and it is the balance between the two, which is the practical and creative force within the team.

Typical characteristics of visionaries are:

- They use 'pull style' of influence.
- They are positively optimistic.
- They express openness in an assertive manner, thereby recognising the rights and needs of all parties.
- They are disinterested in detail in this role, preferring the big picture (blue sky, no clouds on the horizon), rather than the components.

- They express impatience, which is reflected in a need to get on with the big picture rather than tinker about with what they regard as pointless detail.

- They are often frustrated leaders. If there is a team leader then a 'natural' leader will need to find an alternative role and that alternative role will often become that of the team's visionary.

- They do not get a lot done, because others do all the work while they interpret that vision for them.

- They will often have artistic tendencies.

2.11.2   Pragmatist

The pragmatist who acts as foil to the visionary and his or her supporters. When the visionary suggests a particular solution to a problem it is usually the pragmatist who reminds the team of budget constraints or other such practicalities. The pragmatist shows the team how to make the impossible possible, and suggest alternatives based on the visionary ideas. Typical characteristics of pragmatists are:

- They are realistic.

- They favour a push style of influences, which is acceptable in the short term, but since it does not enlighten members of the team it is unlikely to succeed in the long term.

- Pragmatists are team players, putting the team before the individual.

- They are disillusioned visionaries and can be summed up in the expression 'I have heard it all before'.

- They tend towards cynicism and scepticism.

- They will often come from a scientific or mathematical background.

2.11.3   Explorer

The explorer role is to seek information, material, and support from outside the team environment. The explorers will build bridges between the team and other teams, or the wider business environment. More than anyone they will form relationships that go beyond the inter-personal relationships of the team itself. Typical characteristics of explorers are:

- Sociable, gregarious and forming friendships easily. These are of course necessary in forming the relationships in the world beyond the team.

- Sense of adventure and curiosity. Explorers are not content with the world within the team but need to look into the world beyond.

- Competitive.

- Self-Starter and self-achievers.

- They are self-made and probably not from an academic background.
- They are good communicators and this provides information flow at the technical level and provides friendships and connections at the social level.

2.11.4   Challenger

There will always be somebody who challenges the accepted positions. The challenger may occasionally request that the team review its own definitions, objectives and progress and so on. The challenger may also challenge suggestions or proposals made by team members, a further foil to the interaction between the visionary and pragmatists. Typical characteristics of challengers are:

- They tend to be defeated visionaries, disillusioned leaders who have seen their own ideals fail.
- They can be prone to cynicism through remaining optimistic.
- They will be generalists rather than specialists, but able to challenge other team members at every level.
- They will tend to be mavericks or have a rebellious nature.
- They will tend to have business or other failures in their background, but will have learned lessons from these.

2.11.5   Referee

The referee is that person who takes an independent view of team progress and decisions. Referees can be outsiders, usually consultants, brought in to act as agent provocateurs coming to energise the team, where perhaps it is losing sight of its mission statement. Typical characteristics of referees are:

- Flexible in style and approach.
- Neutral, not taking sides and usually able to see both sides of any argument.
- Optimistic and enthusiastic.
- Daring and courageous.
- Demonstrating a commitment to people and to the task in hand.
- Will tend to have a sense of humour.
- Have a reputation for authenticity.

2.11.6   Peacemaker

The team will have friction between its members from time to time. The peacemaker is the one who seeks to see fair play is done, and tries to redress perceived injustices to harmonise between conflicting views. The peacemaker has the duty to identify, and predict areas of conflict and head them off before they arise. Typical characteristics of peacemakers are:

- They will be good communicators.
- They will be 'people oriented' but not 'task oriented'.
- They tend to have an assertive character.
- They are able to be objective about most matters.
- They have a logical mind.
- They will not allow themselves to demonstrate commitments.
- There will be strength of character based on an inner belief in self.

2.11.7   Beaver

He is the person who does all the work, the beaver is the work bee, the solider ant or more directly the company worker. Typical characteristics of beavers are:

- 'Task oriented' rather than ' people oriented'.
- Needing recognition, usually through the achievement of task in hand.
- Bedrock, salt of the earth, not creative in their work environment, and a typically honest character.
- Will tend to confuse efficiency with effectiveness (concentrating on doing things right rather than doing the right things).
- Will be obsessed with rules and regulations.
- Can be oppressively negative.
- Will usually tend to be creative outside the work environment.
- Not competitive.
- Need to work in groups and teams in order to feel any sense of achievement.
- Conservative, doubtful and predictable.

2.11.8   Coach

Morale is not always going to be high in a team, even in the best led groups, and there will be times when the team loses its direction or loses focus of its mission. It is the coach who is there to boost morals, when the need arises and to remind people why we are here and what the game plan is. This is one of the driving force functions within the team, he or she shouts when the need arises, or praise and thanks at other times. Typical characteristics of coaches are:

- Tactician and interpreter of the corporate or team vision.

- Retired visionary.
- Has 'street credibility'.
- Will tend to have a mature personality and indeed will often be an old person.
- Has a depth experience, probably several jobs and will tend to be a well travelled.
- Coach is not a role that develops but tends to be an adopted one, they need flexibility to adopt what can be an unenviable position.
- They are not concerned with personal popularity.
- Coaches' visions are quite simply that the team must win at all costs.
- Will tend to be teachers.

2.11.9   Librarian

There are important requirements for someone to record, for posterity, the activities of the team, which include deliberations, decisions, actions, evaluations, and so on. The librarian is the repository to which team members can go for historical information about what the team has been doing. As the name implies, it is also a role with the responsibility for being the depository for information available to the team. Typical characteristics of librarians are:

- They are normally reticent, not interested in small talk.
- Their sense of details is probably almost out of control, they will be structural. Everything having to be organised and nothing being left to chance.
- Hardworking and diligent.
- Commitment to the team ideals.
- Intolerant and excitable.
- They have crusader instincts developed only through practical research and not through vision.
- They will be good interpreters of facts.
- They tend to be anachronisms, even in their circle of friends.

2.11.10   Confessor

Team dynamics invariably means that there is a need for someone to whom members can tell all their troubles, a shoulder to cry on. This is the least recognised role and yet practical teambuilding has shown that it is a much valued role. The important requirement of the confessor is of course that stories confided to him or her remains confidential. If such role is successfully established within the team, many great difficulties can be headed off, but if the person who adopt the role did

not keep these information secretly and spoke with other team members about it, then the team became very disharmonious. Typical characteristics of confessors are:

- Gregarious and honest.

- Shallow personalities, unable to get too involved and therefore not committed either to tasks or to people.

- They are normally people of professional status.

- They have a low sense of disclosure attracting high disclosure to them for members of the team in the reasonably certain knowledge that they will not pass on confidential information.

- They tend to be 'in transit', part of strength of their position is that they are mobile character who are not around for the long term and are not able to use or manipulate the information they gain (Spencer and Pruss, 1992, 38-50).

2.12   Characteristics Of An Effective Team

The effective team should have the following characteristics:

(1)   Clear Purpose

The vision, mission, goals, or task of the team has been defined and is accepted by everyone. There is an action plan.

(2)   Informality

The climate tends to be informal, comfortable, and relaxed. There are no obvious tensions or signs of boredom.

(3)   Participation

There is much discussion and everyone is encouraged to participate.

(4)   Listening

The members use effective listening techniques such as questioning, paraphrasing, and summarising to get out ideas.

(5)   Civilised Disagreement

There is disagreement, but the team is comfortable with this and shows no signs of avoiding, smoothing over, or suppressing conflict.

(6)   Consensus Decisions

For important decisions, the goal is substantial but not necessarily unanimous. Agreement through open discussion of everyone's ideas, avoidance of formal voting, or easy compromises.

(7)   Open Communications

Team members feel free to express their feelings on the tasks as well as on the group operation. There are few hidden agendas. Communication takes place outside the meetings.

(8)   Clear Roles And Work Assignments

There are clear expectations about the roles played by each team member. When action is taken, clear assignment is made, accepted and carried out. Work is fairly distributed among team members.

(9)   Shared Leadership

While the team has a formal leader, leadership functions shift from time to time depending upon the circumstance, the needs of group, and the skills of the members. The formal leader model is the appropriate behaviour and helps establish positive norms.

(10)   External Relations

The team spends time developing key outside relationship, mobilising resources, and building credibility with important players in other parts of the organisation.

(11)   Style Diversity

The team has broad spectrum of team-player types including members who emphasise attention to task, goal setting, focus on process, questions about how the team is functioning.

(12)   Self-Assignment.

Periodically, the team stops to examine how well it is functioning and what may be interfering with effectiveness (Parker, 1990, 33).

2.13   The Team Contract

The team contract is not a formal document, indeed it is not a document at all. The team contract is a commitment between the team and the people who brought it into existence. It gives the team the authority to act. There are many types of contracts existing between the team and the business system, internal and external, within which the team has to operate effectively. In order to build an effective team, the contractual relationships must be established at the outset. Although the contractual relationships can change over a period, if there is not some existing structure from the beginning, then there is a clear sign that the team has not been brought into being on a well thought-out basis and that almost certainly it will lack clear objectives. Indeed, such contracts are not written in stone and should change over time as the team moves through the learning process, but they must evolve from a solid foundation, the foundations are the goals and objectives of the team and sight of them should not be lost.

2.13.1   The Inside Contract

It is composed of two contracts: the first one is the contract between the team leader and the team members, where the second one is the contract between the team members with respect to each other

2.13.1.1   The Contract Conditions

(a)   Openness

It is essential that the team leader, with the team members, are as open and honest as they can when they are discussing their thoughts and feelings concerning the tasks on hand. In fact, team building insists on honesty and openness, and allowing team members to disregard the policies, rivalries and other hindrances to team work.

(b)   Eliminate Fantasy

It is of prime importance that fantasy is confined to constructive brainstorming in team work. Fantasy must be eliminated by discussing accepted facts and not making assumptions and presenting them as facts.

(c)   Respect Other's Opinions

In order that mutual respect of other's opinions can exist, it is necessary that team members understand their own values and prejudices. The overriding concept must be the maxim that "we may not like what people feel or say, but we respect their right to communicate it".

(d)   Be In The 'Here And Now'

History can teach us a great deal of what other people did in particular situations, with the information at their disposal. The team contracts must look to the future. Team learning is about acknowledging the past, but using those acknowledge in the present and perceive future situations. Therefore, one of the ground rules is that the team, with the team leader, must always live in the present with an eye on the future.

(e)   Be Constructive With Your Feedback

In any team situation it is very easy to "knock" the idea of team members either individually or collectively. This is not a helpful for the development of the group. Constructive criticism is descriptive, it relates back to the individual exactly how you have interpreted what they have said and suggests possible consequence that might arise. For instance, if somebody suggests something, look for three positive outcomes before describing a negative consequence and discuss with them their view of the positive elements before discussing those negative possibilities. This shows a desire to reach a consensus without sacrificing principles or major issue.

(f)   Be Willing To Take Risk

We learn very little from success (except how to repeat it), but we learn a great deal more from so called failure. Teams are formed to solve problems, identify issues,

formulate plans, and so on. For this reason we can not always predict success of failure, but every team must be given the opportunity to work towards success without being castigated for the partial success, which in business we unfortunately call failure.

(g) Participate

Team members are not spectators, in fact they are participants in the game. For this reason it is the team leader responsibility to demand hands on participation from all the team members. This participation is of prime importance to discover the hidden abilities of each member of the team and also help in creating an agreement and comfortable environment. Through participation problems could be discussed widely, analysed perfectly, new ideas for solutions and alternatives could be reached fast and in an easy way.

(h) Communicate Facts And Opinions

Make sure that you perceive the difference between the facts and the opinions, and that the people that you are communicating with can also appreciate and understand the difference. They can respond with their own opinion on facts, and understand your viewpoints from your opinions. If you state opinions as if they were facts, people will make wrong decisions, believing options to be closed which are in fact open, the truth being that they are only closed to your mind.

(i) Be Responsible Towards The Goals

The team leader and the team members are responsible for the achievement of the tasks, objectives and goals as set and agreed. This means not only allocation expertise, professionalism and energy, but also participation at the functional levels.

(j) Be Receptive

Receptiveness is not only the ability to listen, but also to accept criticism and challenge. Active listening and recognising what people say is more important than passive acceptance of the team view.

2.13.2 The Contract With Management

In order to motivate team members effectively, they must know from the outset that they have the authority to implement their decisions. Management has a duty to ensure that the team members have sufficient authority and not excessive authority, in this regard. There are many aspects that must be considered in negotiating an effective team contract:

First, there must be disclosure of the boundary rules on the part of both management and the team members. The definition of the boundary rules would include:

- What management expects of them, and why they expect it.
- What the team honestly believes it can do.
- Areas that the team potentially feels uncomfortable with.

- Areas that management does not want the team to look at, in other words the areas that management are uncomfortable with.
- Areas that the team and management feel acceptable, but which will challenge existing work practices or agreements, perhaps unions or health and safety issues.

Secondly, assumption on both parts must be replaced with certain knowledge on a need-to-know basis rather than a nice-to know basis. In other words, both the management and the team members must agree on a set of clearly defined objectives based on the requirements, which brought the team into being in the first place.

Thirdly, there must be a commitment by management to respond to the team's input. This must be true commitment and not simply a commitment in words. The team must ensure that its work is implemented, or understand fully why it cannot be.

Fourthly, there must be free communication within the company on both a horizontal and vertical basis. In other words the team must have access to a flow of information on a hierarchical basis. These communications must be guaranteed for both input and output of information.
Fifthly, the team must be empowered to seek and find information across the existing management structure. The communication aspect of empowerment means that the team must be clearly shown where their work results and where their work fits in with the company objectives.

Finally, management must communicate the organisation's core value openly. These could sum up as follows:

(a) **Corporate Vision**

All team members must understand the corporate vision and have to make sure that their work is conducted within the organisation statement and is directed towards the achievement of the corporate goals.

(b) **Honestly**

Integrity, trusts and respect. The team must be created for genuine and not cynical or manipulative purposes.

(c) **Recognise Contribution And Give Reward**

The team must know what the corporate goals are in respect of performance and must know what its rewards will be for maintaining or exceeding performance. These rewards to the team must be stated beforehand to avoid undue expectations. The team may receive vary practical rewards in financial forms or may receive recognition by the advancement of team members.

(d)   Walk As You Talk

The management must be seen to act as it claims it will act. If it makes certain claims verbally, or on paper, but continually fails to live up to those by not implementing the team decisions then the team will see its efforts are meaningless.

(e)   Professionalism

The organisation and therefore, the team must demonstrate a duty of care to its stakeholders, a duty of care to the job in hand, and there must be recognition and resolving of conflicts of interest.

(f)   Reliability Of Information System

Teams require information and they must know that the organisation's information flow is operating effectively. Furthermore, and perhaps most importantly, the team must be able either to circumvent or change bad systems where it discovers them, or it will hit brick walls and nothing will happen.

(g)   Loyalty And Commitment

The organisation must be supportive of the team and committed to it if the management expects the team to show equal loyalty and commitment back to the organisation.

(h)   Openness

There should not be hidden agendas and there must be an open door policy. The team must have sufficient access to higher managerial levels in order to do the job and must in turn allow access to itself from subordinate levels and other interested parties, such as suppliers, customers and so on.

2.13.3   The Contract With The Outside World

This contract exists between the organisation and the outside world and not specifically with one individual team within the organisation, but the team has a duty to act in accordance with wider contract. All organisations have a duty of care to the environment, and indeed there is enormous pressure on organisations to respond favourably to the environment, to the point where there may be financial advantages for those who are and financial penalties for those who are not environment friendly. The organisation in general and the team in particular should interact positively with the environment by taking advantages from the arising opportunities and avoiding the threats. Positive interaction with the outside world could be achieved by inviting external people to participate the team meetings, by visiting the organisation customers in order to understand how our goods or services are used in their companies, by visiting the organisation suppliers to see if what they deliver to us fits into our work process, by achieving the necessary permissions and authorisations with the minimum of fuss, by rectifying our mistakes, by obeying and respecting the rules and regulation of the industry and the community, by sharing in the charity work to the community (Spencer and Pruss, 1992, 19-37).

2.14   The Team Norms

Team norms are the values that team members hold concerning acceptable behaviour in specific situation. The team norms are the ideal behaviours expected of team members. Norms are significant products of the interaction among individuals Working together to achieve common objectives. As norms develop, they specify the expected behaviour in performing tasks, the group is involved in, and the expected Behaviour in interpersonal relations. They cover the people, physical objectives, and situations. Norms also include the value judgements of the group, what is good and bad and what is right and wrong.

The norms of a team usually provide guides for three general types of behaviour: the things you should not do, the things you should do, and the things you may do. Examples of "should not do" norms include: you should not swear in the team and you should not criticise team members outside the group. Examples of "should do" norms include: you should tell team members any proposed changes in the work roles and you should lend tools to team members. Examples of "may do" norms include: you may help team members when they have personal problems, but you are not expected to and you may make suggestions to management on how to improve production, But you are not expected to do (Costley and Todd, 1991, 260).

Team norms may be written (as in a code of professional ethics) or unwritten. Deviation from norms is frequently punished by ostracism and verbal attacks. Other more formal sanctions may also be used, as when an unethical lawyer is disbarred. Team norms have two primary purposes:

(1)   They give the team members a useful framework of references for explaining and comprehending their group.

(2)   They identify the appropriate and inappropriate conduct. In addition, Norms ensure that team members will focus their efforts in common direction.

As is true of many social phenomena in isolation, team norms are neither good nor bad. Their value to an organisation depends on whether they are directed to enhancing, rather than restricting, productivity. If norms lead a work group to produce a high-quality product or to be the best in its industry, they are highly desirable, but norms that encourage workers to reduce productivity are clearly undesirable because they undercut Management goals (Vecchio, 1995, 452).

2.15   The Team Cohesiveness

Cohesiveness is the extent to which members are attracted to a group and desire to remain in it. Cohesiveness is sometimes described as the sum of all factors acting on individuals to remain in the group. When group members share common values, believes and objectives this promotes sharing of similar ideas and mutual acceptance, so advancing group cohesiveness. Members of a cohesive group agree among themselves how best to achieve group objectives, emphasis the

need for close co-operation in order to complete various tasks effectively, and create conditions for satisfying members' personal needs. The more members derive benefit from group membership, the greater will be cohesiveness (Glendon and McKenna, 1995, 173).

Team cohesiveness is reflected in the attitudes and actions of the members. The following factors are often used as cohesiveness indicators: loyalty to the team, defence of the team, responsibility of team activities, identification with the group, acceptance of the team decisions, conformity to group norms, and agree with team goals, see figure (2.3).

In addition, the members of cohesive teams are generally much more satisfied than members of less cohesive teams. Furthermore, some researchers have found cohesive groups to be very productive, and their members are more resistant to change than are less cohesive groups. Add to that the communication among team
members are significantly greater in highly cohesive teams than in less cohesive groups. Because members of cohesive groups are likely to share common values and goals and to find their own company satisfying, they are inclined to greater communications. This communication in turn tends to foster greater personal revelation and depth of understanding, which cements positive social relations (Vecchio, 1995, 453-455).
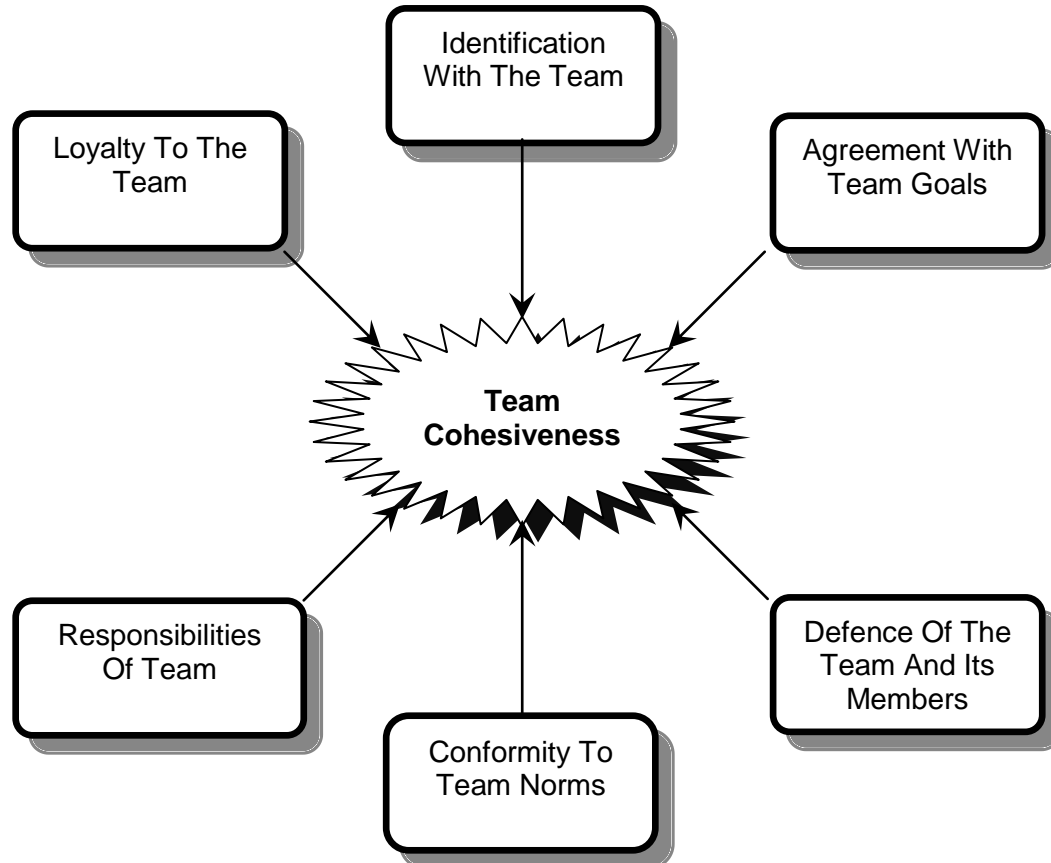
Figure 2.3   Team Cohesiveness Indicators

2.16   The Team Leader

Leadership is hard to define. Many writers and team building specialists have attempted to define leadership but most of their definitions are incomplete. The difficulty in defining leadership is due to the complex nature of leadership process. Leadership is defined as "a social influence process in which the leader seeks the voluntary participation of subordinates in an effort to reach organisational objectives" (Kreitner and Kinicki, 1992, 516).

Fielder defined a leader as a "the individual in the group given the task of directing and co-ordinating task-relevant group activities or who in the absence of a designated leader, carries the primary responsibility for performing these functioning in the group". Keith Davis defined leadership as "the ability to persuade others to seek defined objectives enthusiastically. It is the human factor that binds a group together and motivates it toward goals. It is the ultimate act that brings to success all the potential that is in an organisation and its people" (Al-Jamal, 1997, 22).

Leaders can be defined as "those individuals who have the loyalty of others who are willing to follow them". No matter how the leadership is defined, the essential ingredients in leadership are followers. The ability to obtain followers is what makes a person a leader. Individuals who are perceived as providing methods to achieve objectives and satisfy personal needs tends to attract followers. Leader who do not facilitate satisfaction of the needs of followers are usually are not leaders for long (Costley and Todd, 1991, 231).

2.16.1   The Effective Team Leader Roles

- The effective team leader is a figurehead, representing the team both in the organisation and outwardly to customers, suppliers and others.

- The effective team leader is a motivator, a coach of the team, installing morals, identifying and working on the natural motivation flow of the group and of the individuals within the group.

- The team leader is the liaison officer for the team with outside contacts, particularly when there a partnership between the company and other companies or suppliers.

- The effective team leader is a monitor of information technology (IT). Communication flows are getting increasingly more complex and the new team leader has to monitor IT from all other departments, as well as making decisions as to what information to accept on behave of the team, and what information the team has to transmit to the outside world.

- The effective team leader has to be the team spokesman on behaves of the team. For this reason the team leader need sufficient depth of

knowledge of the abilities and potentials of the team in order to express the best interests of the team to be presented outside.

- The team leader is a resources allocator for the team, along with the sub-leaders, the leader has to allocate money, people, and authorities within the team.

- The team leader has to be a negotiator to internal and external contracts (Spencer and Pruss, 1992, 64-65).

- The effective team leader requires the articulation of a vision, the creation of a clear mission, and the development of goals, objectives and action plans.

- The effective team leader ensures the completion of immediate tasks and work assignments in high quality and timely fashion and provide excellent customer services.

- The effective team leader must have excellent skills in listening, conflict resolution and consensus building.

- The effective leader has to succeed in creating and developing an open environment in which members feel free to express their view with candour and integrity.

2.16.2   The Team Leader Styles

The team leader may exhibits more than one leadership style, the four leadership styles are:

(1)   Directive Leadership

Providing guidelines to employees about what should be done and how to do it, scheduling work, maintaining standards and performance.

(2)   Supportive Leadership

Showing concern for the needs of employees, being friendly and approachable, and treating workers as equals.

(3)   Participative Leadership

Consulting with employees and seriously considering their ideas when making decisions.

(4)   Achievement-Oriented Leadership

Encouraging employees to perform at their highest level by setting challenging goals, emphasising excellence and demonstrating confidence in employee abilities (Kreitner and Kinicki, 1992, 527-528).

2.17   The Team Size

What is the optimal size of an effective team? There is no clear answer to that question. A team may be two people playing doubles in tennis, or a team may be players functioning alone, such as golf teams. Folk wisdom says, "two heads are better than one" But that "too many cooks spoil the broth." So where should a manager draw the line when building a team? At 3? At 5 or 6? At 10 or more? Researchers have taken two different approaches to pinpointing optimum team size: the mathematical modelling and the laboratory simulations.

2.17.1   The Mathematical Modelling Approach

This approach involves building a mathematical model around certain desired outcomes of team action such as decision quality. Due to different assumptions and statistical techniques, the results of this research are inconclusive. Statistical estimates of optimum team size have ranged from 3 to 13.

2.17.2   The Laboratory Simulation Approach

This stream of research is based on the assumption that group behaviour needs to be observed firsthand in controlled laboratory setting. A laboratory study by respected Australian researcher Philip Yetton and his colleague, Preston Bottger, provides useful insights about team size. Five hundred fifty-five subjects (330 managers and 225 graduate management students, of whom 20 percent were female) were assigned to task teams ranging from 2 to 6. The teams worked on the national Aeronautics and space administration moon survival exercise.

After analysing the relationships between the team size and team performance, Yetton and Bottger concluded that it would be difficult, at least with respect to decision quality, to justify teams larger than five members. Of course, to meet other needs other than high decision quality, organisations may employ teams significantly larger than four or five members.

To recap, there is no hard and fast rule about team size. It depends on the manager's objective for the team. If the high quality decisions were the main objective, then three-to five members would be appropriate. However, if the objective is to generate creative ideas, encourage participation, socialise new members, engage in training, or communicate policies, then groups much larger than five could be justified (Kreitner and Kinicki, 1992, 331-332).

Some organisational behaviour specialists stated that as group increases in size, problems arise with communications and co-ordination. Large groups are more difficult to handle and require a higher level of supervision. Absenteeism also tends to be higher in larger groups. When a group becomes large it may split into smaller units (Mullins, 1996, 188).

2.18   The Team Communication

Communication is defined as "the exchange of information between a sender and a receiver and the inference (perception) of meaning between the individuals involved" (Bowditch and Buono, 1994,132). Others defined communication as "the transfer of information from one person to another person. It is a way of reaching others by transmitting ideas, facts, thoughts, feelings, and values". Its goal is to have the receiver understand the message as it was intended. When communication is effective, it provides a bridge of meaning between the two people so that they can share what they feel and know. By using this bridge, both parties can safely cross the river of misunderstanding that sometimes separates people (Newstrom and Davis, 1997, 48). Communication contains three elements: Feedback, Communication channels, and Symbols.

2.18.1   Communication Planning

A method of planning and executing any type of organisational communication is presented in the following sequential approach:

P   **The Purpose**

It is the objectives, which the sender is trying to achieve. There will be a communication failure if the exact purpose of communication is unknown.

R   **The Receiver**

To whom the communication is directed.

I   **The Impact**

How the communication must affect the receiver if you are to achieve your purpose and influence that individual.

D   **The Design**

How the communication should be organised and developed to achieve the desire impact.

E   **The Execution**

The actual carrying out of the planned, based on the other four preceding elements (Stocks, 1996, 2).

In order for the team to function effectively it must receive fast and accurate information and take action upon. In many organisations, we are castrating the management by information overload. The more information, the less likelihood of a quick decision. If we consider this information

overload, in terms of team work, we can easily see that if we give the team too much information to digest then the following can happen:

(1)   The team will spend most of its useful time in sifting through the information, asking for clarification and supporting facts, evidence and calling for rechecking of information. It means that the team effort will be put into the interpretation, filtration and reporting of the data.

(2)   The team will defuse the very synergy and radical thinking that it was formed for in the first place. The team members will be crushed by the information and will become super-careful in decision making process.

Successful organisations need successful communication, and they in turn need a culture to nurture and build on the present system. There are some aspects of behaviour must be visible in order to achieve the degree of maturity of communication.

- The team leader must have a reputation for honesty and integrity in his or her dealing with the team and third party.

- The management must give the team leader a clear and easily communicable statement of requirements concerning the task, as well as the reason why.

- The team must understand the present system in the organisation and the degree of reliability that they can place on them, so that they can monitor information flows around the shortfalls.

- The team with its team leader must establish respect and trust with the other teams in the organisation, so that energies are concentrated on problems and not on scoring points off each other.

- The team at all times has to practice professionalism, and the high duty of care that is needed when dealing within other teams in the organisation (Spencer and Pruss, 1992, 128).

- The organisation management must treat staff and workforce as mature and responsible, and it has to train and encourage teams to handle and access communication, and empower them to seek and find information necessary to do the job. The team must dictate the manner of communication to which it will respond positively. And must also determine the quantity and quality of information required to perform the job perfectly.

2.18.2   Patterns Of Communication

The level of interaction among members of a team is influenced by the structuring of channels of communication. The following are the main types of communication networks, see figure (2.4).

(1)   The Wheel Network

It is the most centralised and efficient network for simple tasks. Problems are solved more quickly with fewer mistakes and with fewer information flows. When the team becomes more complex and demands on the link person, who is the team leader, increase the team effectiveness will be affected.

(2)   The Circle Network

It is a more decentralised and less efficient network. The team is unorganised, with less leadership predictability. Performance tends to be slow and erratic. However, the circle network is quicker than the wheel network in solving complex problems, and also copes with changes or new tasks more efficiently. The circle network is most satisfying all members. Decision-making involves some degree of participation.

(3)   The All-Channel Network

It is a decentralised network that involves full discussion and participation. This network works best where a high level of interaction is required among all members of the team in order to solve complex problems. Leadership predictability is very low. There is a fairly high level of satisfaction for members. The all-channel network may not stand up well under pressure, in which case it will either designate or reform into a wheel network.

(4)   A "Y" Network

Might be appropriate for more simple problem-solving tasks, requiring little interaction among members of the team. These networks are more centralised, with information flows along a predetermined channel. The leadership predictability is high to moderate. There is a low to moderate level of satisfaction for members (Mullins, 1996, 219-220).

(5)   The Chain Network

This is the lowest and least effective network, the person in the middle emerging as leader. It has moderate level of centralisation and group satisfaction.

Wheel Network

"Y" Network

Circle Network

All – Channels Network

Chain Network
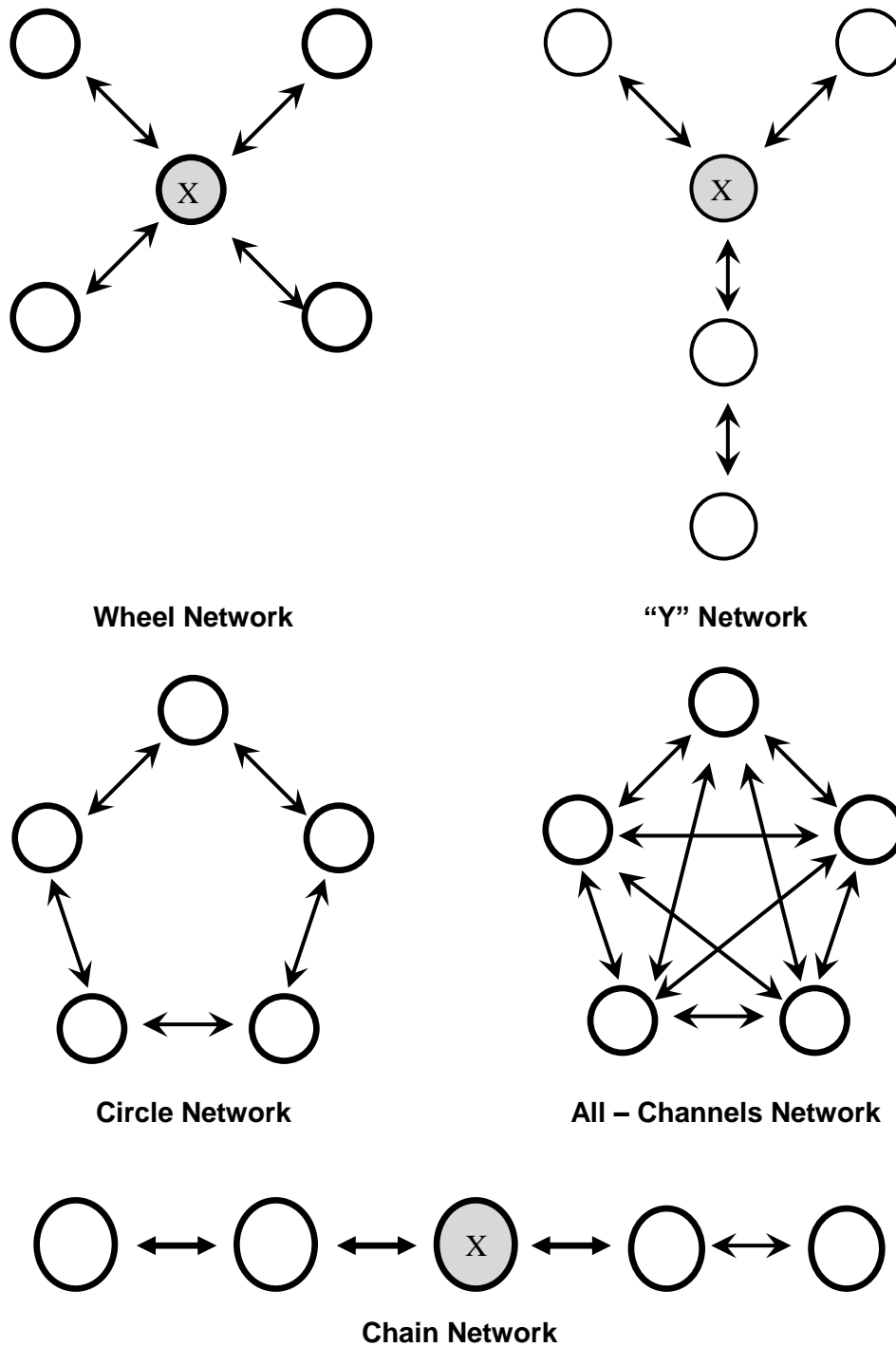
Figure 2.4   Communication Networks

2.18.3   Effective Communication

Ten points has to be taken care by the team members in order to achieve effective communication:

- Clarify ideas systematically before communication.

- Examine the true purpose of each communication.

- Consider the total physical and human setting within which the communications are to be made.

- Consult with others where appropriate in the planning of communications.

- Overtones, as well as the basic content of a message, should be remembered.

- Consider the receiver's point of view, interests and needs.

- Follow-up the communication by asking for reactions from the receiver.

- Communication must be consistent with long - range goals as well as with current interests.

- Actions must support communications.

- Understand by being a good listener (Stocks, 1996, 3).

2.19   Managing Team Conflicts

Conflicts within organisations are caused by an incompatibility of goals, interests and ideas, which leads to mental strive between participants. Occasionally, This conflict takes the form of physical activity, such as shouting and hand-waving, but most of the time it is passive, such as avoidance of each other company or over-politeness. Conflicts can occur between groups, such as teams or departments. Often this is caused by competition, job insecurity, and workload as well as in appraisal or counselling situations between the manager and subordinates. Many managers believe that conflict is disruptive and must be prevented at any cost. However, conflict must be accepted as a fact of life within an organisation. It is part of the process of change, both personal and organisational. It can often be very useful in generating new ideas, forming a bond between the participants, and source of excellence and quality.

Conflicts are usually resolved between parties in the following ways which are chosen depending on the characteristics of the people involved, see figure (2.5).

(1) **Avoidance**

In this way, the two parties recognise that conflicts are about to occur and pull away from the brink. It is clearly important that both parties act together, since if one party seeks to avoid conflict while the other actively pursues it, hoping to gain advantage, then conflict will occur.

(2) **Negotiation**

In this way of conflict resolving, both parties look for compromise. They aim to reduce the difference that separates them and to build on the areas of agreement. Again this method will only work if both parties follow the same plan.

(3) **Confrontation**

In this way, the two parties tackling each other head-on. It is important that this is only done if the two parties are equally matched. In nature two bull stags will walk up and

down sizing each other up before a fight. Confrontation cannot succeed if one of the combatants is much stronger than the other. For equally matched parties confrontation helps to define the problem and the difference sharply. Following the confrontation the two parties can adopt either avoidance or negotiation mode.

Alternatively, if both parties share the same goals and have the same objectives, they will collaborate to come up with joint solution. This is the best solution of conflict (Mazda, 1997, 590).
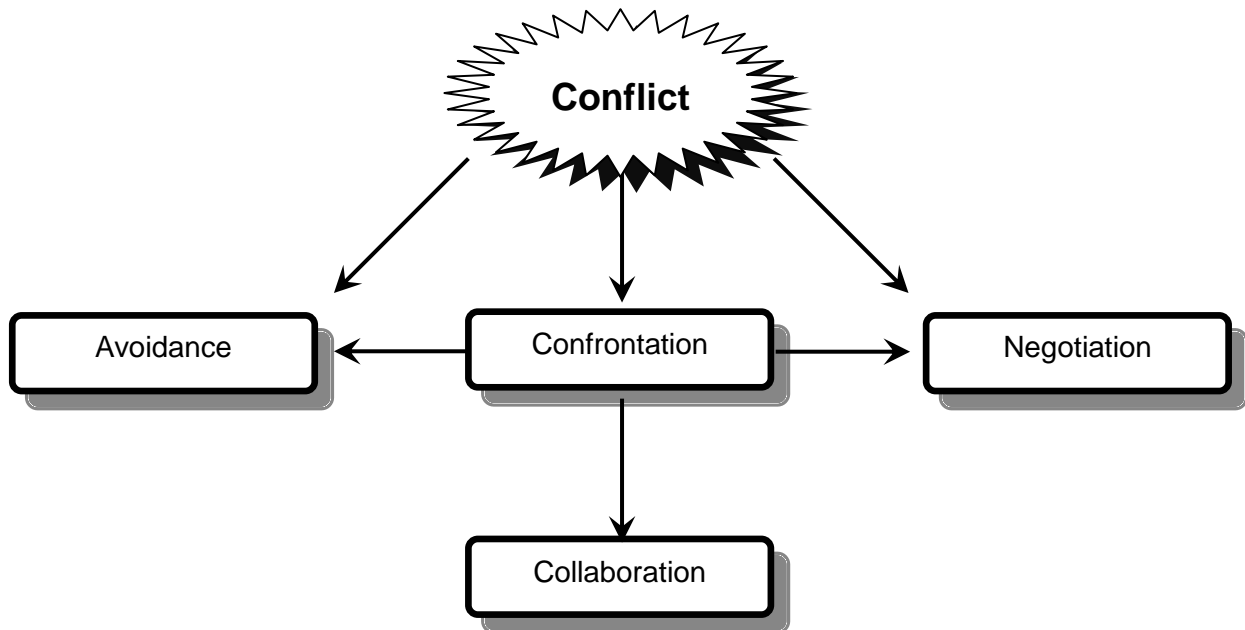
Figure 2.5 Ways Of Resolving Team Conflicts.

2.20   Team Performance Appraisal

Performance appraisal is defined as "a formal, structured system of measuring, evaluating, and influencing an employee's job-related attributes, behaviours, and Outcomes, as well as of absenteeism, to discover how productive the employee is and whether he Or she can perform as more effectively in the future so that the employee, the organisation and the society all benefit" (Schuler, 1987, 212).

2.20.1   The Performance Cycle

The performance cycle identifies three key aspects of effectiveness performance. These aspects can be used as stepping stone in managing employees and team performance.

(1)   Planning Performance

This step recognises the importance of shared views of expected performance between managers and employees. The shared view can be expressed in variety of ways, such as job description, key accountabilities, performance standards, specific objectives and targets and essential competencies. There is a very clear trend to use

specific objectives with a timescale for completion in addition to the generic tasks that tend to appear on job descriptions. Such objectives give team members a much clearer idea of performance expectations and enable them to focus on the priorities when they have to make choices about what they do.

(2)   Supporting Performance

While the team members are working to achieve the performance agreed, the team leader retains a key-enabling role. He or she has to organise and allocate the resources and off-job training and any information, which will affect the team members, performance. In addition, the team leader can guide team members through discussion and by giving constructive feedback, identifying potential role models to team members and explaining how to achieve high performance levels.

(3)   Ongoing Review

Ongoing review is an important activity for team members to carry out in order to plan their work and priorities and also highlight to the team leader well in advance if the agreed performance will not be delivered by the agreed dates. The team leader needs to be kept up date on the team progress while the team members need to be up to date on organisational change which have an impact on their agreed objectives. These review are normally informal in nature, although a few notes may be taken of progress made and actions agreed. The purpose of the review is to facilities future employee performance and provide an opportunity for the team leader to confirm that the team on the right track, or redirect it if necessary (Torrington and Hall, 1995, 316-318).

Team appraisal can be conducted on the basis of ability, or on the performance against specific target, or a combination of the two. Whichever method is used, it is important that the results of the appraisal are recorded. Most large organisations have a formal form, which needs to be completed at the appraisal interview. Figure (2.6) shows part of a typical appraisal form, which use ability as the basis of assessment. The team leader records the aptitude shown by the team member in each of these categories over the past years.

Name   :   _____

Department   :   _____

Date   :   _____

Tick one of the boxes below(1 indicates lowest performance and 5 indicates

highest performance).

Communications, oral | 1 | | 2 | | 3 | | 4 | | 5 |

Communications, written | 1 | | 2 | | 3 | | 4 | | 5 |

Time-keeping | 1 | | 2 | | 3 | | 4 | | 5 |

Attitude to work | 1 | | 2 | | 3 | | 4 | | 5 |

Judgment | 1 | | 2 | | 3 | | 4 | | 5 |

Leadership | 1 | | 2 | | 3 | | 4 | | 5 |

Figure 2.6 Typical Appraisal From

The problem with this is the assessment is very subjective and may not be directly related to what was done. It is difficult to measure and can be vague and open to interpretation. Terms such as judgement and attitude to work represent different things to different people and on person's views regarding what is good or bad in these may be different to another's. The advantage of an appraisal measure based on ability is that it is quick to compete and provides a direct comparison between others. Figure (2.7) shows part on an alternative appraisal form in which targets are used as the basis of assessment. In this the bulk of the appraisal meeting is spent in discussing the subordinate's performance against each of the agreed targets. The problem the manager faces, however, is how to allocate the final number, since is it is an accumulation of the performance against individual targets, and these will need to be weighted. Because everyone within the organisation, especially in different functions will have had very different targets, direct comparison between employees, using the target method of assessment is difficult. Even if the target is the same, circumstances may result in unequal comparison. For example, two ice-cream salespeople may have had a target to sell a certain amount of ice cream in a period. Freak hot weather in the first salesperson's area and unexpected cools spell in the second's might distort the amount of ice-cream sold by the two, even if the second person is a better salesperson (Mazda, 1997, 584-587).

Name   :   _____

Department   :   _____

Date   :   _____

Target	Action Required	Comments on Performance

Overall rating:
(5=Highest)   [1]   [2]   [3]   [4]   [5]

Figure 2.7 Alternative Appraisal Form.

Illustration of the main activities at the appraisal meeting is depicted in figure (2.8). Both the team leader and the team members usually receive notice of the meeting and can prepare for it. One of the main activities is to note all the tasks that were done by the team members during the appraisal period, which is usually the past period.

Agreed Tasks   →   **Record Activities For Past Period**   ←   Other Tasks

Standards   →   **Assess Performance**   ←   Measurement Techniques

Rewards And Coaching   →   **Agree Opportunities**   ←   Training

Organisation Team Goals   →   **Agree Targets for Next Periods**   ←   Personal Ambitions
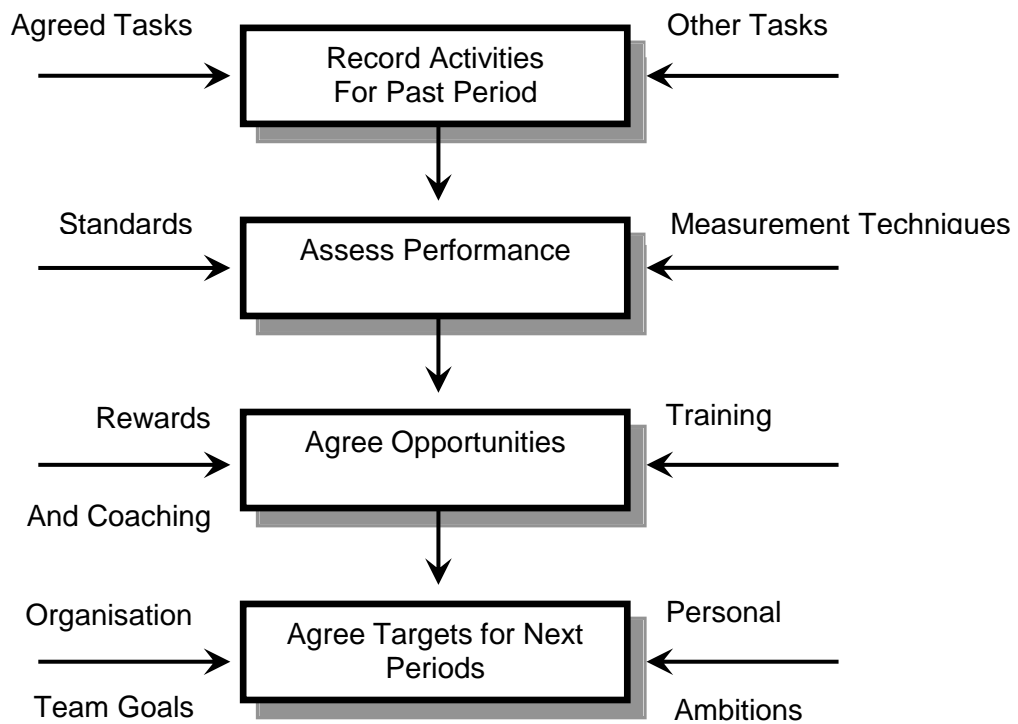
Figure 2.8 The Main Activities At The Appraisal Meeting.

During the appraisal meeting these tasks are recorded on the appraisal form. The input for this is the targets that were agreed with the team members at the previous appraisal meeting, but they should also include any other major tasks that were done.

The next stage is to assess the members' performance against these tasks. How well were they done? Did they meet or exceed the standards set? If the targets were clearly defined and helped team members to solve the problems, to what extent the team achieve the agreed goals and their personal targets?

Following performance assessment the opportunities open for the team members are discussed. These include training, coaching and assignments to widen the members' experience. Rewards such as promotion or salary increases will be implied depending on the performance assessment. The final stage of the performance meeting is for the team leader and team members to agree for the targets for the next period. In doing this the goals of the organisation and of the team need to be considered, as well as the personal aspiration of the team members.

2.21   Conclusions

There are many definitions of the word "team", but they all agree and state that there must be a common goal or a shared objectives between a group of people in order to consider them as a team. In addition, team members have to contribute their efforts and skills to achieve the organisational and personal objectives. In prehistoric times people found it is essential to be grouped in teams and to live together in caves in order to help each other and to protect themselves from dangerous and wild animals. Medieval times saw the creation of the first business teams, the guilds, which formed for the self-protection of the various trades. As societies are developed, this concept also developed and improved. The associations, unions, syndicates and organisations are reflection of the team concept. Last decades witnessed increasing adoption of the team concept as an approach to achieve the organisation objectives. Titanic construction projects as well as the significant scientific explorations, improvements and innovations in many fields such as medicine, surgery, physics, chemistry, astronomy and information technology are obvious reflections of the team work in these fields. Team building specialists put several stages the team members have to pass in order to build a competent and effective team, these stages are: forming, storming, norming, performing and adjourning.

Team building is about forming, growing, and improving the knowledge, skills and attitudes of those individuals in the team and of those supporting the team. The team building is an ongoing process. In the early stages of the project it is concerned with managing anxieties that usually develop when a new team is formed and managing the distribution of workload among team members.

The team building process aims to employ and organise all the resources, abilities and skills in order to achieve the organisational and personal objectives and try to resolve all the problems that hinder the progress of achieving these objectives. There are six steps compose the team building cycle, these steps are: (1) recognition of a current problem, (2) data gathering, (3) data analysis, (4) planning and problem-solving, (5) implementation, and (6) evaluation.

Different work teams are created for various purposes and thus face different challenges. Managers should know how teams differ in order to deal with them effectively. The general typology of work teams are: advice team, production team, project team and action team. In addition, this chapter spotted the lights on the quality circle and the self-managed teams. Being a member of a team provide opportunities to be more effectively involved in decision making and planning. It is of prime importance to identify the Functions and roles to be performed and played by team members. There are ten roles defined as: (1) visionary, (2) pragmatist, (3) explorer, (4) challenger, (5) referee, (6) peacemaker, (7) beaver, (8) coach, (9) librarian, and (10) confessor.

After we have defined the team roles, it is essential to state and assess the characteristics of the effective team. They are (1) clear purpose, (2) informality, (3) participation, (4) listening, (5) civilised disagreement, (6) consensus decisions, (7) open communications, (8) clear roles and work assignments, (9) shared leadership, (10) external relations, (11) style diversity, and (12) self-assignment.

There are three team contracts, they are not formal documents , indeed they are not documents at all. They are commitment between the team and the people who brought the team into existence. In addition, it gives the team the authority to work. Team contracts are (a) the inside contract, (b) the contract with management, and (3) the contract with the outside world.

To build an effective team, the team leader has to set and establish the team norms. They are the values that team members hold concerning acceptable behaviour in specific situation. Norms provide guides for three general types of behaviours: the things you should not do, the things that you should do, and the things you may do.

Team cohesiveness is the sum of all factors acting on individuals to remain in the group. The more members derive benefits from group membership, the greater will be cohesiveness.
There are many definitions of leadership, it could be defined as "the ability to persuade others to seek defined objectives enthusiastically. It is the human factor that binds a group together and motivates it toward goals, it is the ultimate act that brings to success all the potential that is in an organisation and its people". The team leader has to perform his or her duties in a correct manner and has to adopt the appropriate leadership style which suites his or her characteristics and

abilities in order to build A competent and effective team, who can deliver the project on time, within budget, and as specified.

How can the team leader assess the optimal size of the team? There is no clear answer to that question. But we can say that the team size depends on the size of the work has to be performed. Researchers have taken two different approaches to pinpointing optimum team size: the mathematical modelling approach and the laboratory simulation approach. The first approach estimates of optimum group size have ranged from 3 to 13, where the second approach suggest decision making teams should be limited to five or fewer members, larger teams are appropriate when creativity, participation, or socialisation are the main objectives. Large teams should be divided into smaller teams in order to avoid communication, co-ordination and absenteeism problems.

Effective communication is one of the most important essentials of the effective team. If team members receive fast, accurate, and necessary information, they will understand, analyse, and make elaborated and quick decisions, which will save time, prevent any confusion, and increase productivity. Teams have to adopt the suitable communication pattern and utilise the effective communication items.

Team conflict is two-edged sword, it could be very useful in generating new ideas and be a source of excellence and quality, on the other hand, it could lead to mental strive between members in form of shouting and hand-waving, which obstruct the work progress. Team leaders have to take advantage from the useful side of conflicts by motivating and encouraging them to increase their productivity and enhance their performance, at the same team leaders have to resolve any conflicts that may hinder the team effectiveness. Conflicts could be resolved by adopting one of three ways. The way chosen is dependent on the characteristics of the people involved. These ways are avoidance, negotiation, or confrontation.

After we have studied the team building concepts, it is important to appraise the team performance after a defined period in order to measure, evaluate and discuss the productivity and efficiency of team members and how can the management increase them in the future. Team appraisal can be conducted on the Basis of ability, or on the performance against specific target, or on combination of the two. There are four activities which have to be followed at the appraisal meeting, (1) record activities for the past period, (2) assess performance, (3) agree opportunities, and (4) agree targets for next period.

In the next chapter we will study and discuss all the aspects and activities included in the human resource planning, recruitment and selection of team members.

CHAPTER 3

RECRUITMENT AND SELECTION OF TEAM MEMBERS

3.1   Introduction

Chapter two was about the team building concepts. It defined the meaning of the word team and gave a historical overview about the evolution of the team concept. In addition, it explained the team life cycle and the objectives of the team building process and the team building cycle.

Furthermore, other concepts of team building, such as, general typology of work team, quality circles, self-managed teams, the team roles, characteristics of the effective team, the team contract, the team norms, and the team cohesiveness were discussed in deep details. As an important aspect of the team building process, chapter two illustrated what is meant by leadership, what are the roles of the effective team leader, and what styles can the team leader adopt. In addition, chapter two discussed the team size, the team communications, managing team conflicts, and team performance appraisal. When these concepts are established, then the organisation has to recruit and select the necessary and suitable employees in order to perform and achieve the organisation objectives. This is the subject of the present chapter.

Chapter three will manipulate three major topics, human resources planning, recruitment, and selection of team members. As we know, people are a key asset in any organisation. Most other assets, particularly the financial ones, are planned and controlled with meticulous care. Often, this is not the case with manpower, even though this may be the organisation most valuable asset. The competitive environment of today business demands a realisation that company plans, for at least five years ahead, must include accurate and systematic manpower plans. Management should have a firm objective of ensuring that inadequate or badly developed manpower does not place a constraint on the achievement of corporate objectives (Coughlin, 1989, 51).

The first topic of this chapter will define the human resources planning and illustrate how can this process help management in taking serious decisions. The reasons for human resources planning, as well as the steps and forecasting techniques that have to be followed in manpower planning will be discussed in detail. The second topic will study the recruitment process. It will explain what recruiting means and what are the recommended steps, which have to be followed when any organisation decides to hire a new employee. These steps will include determining the vacancy, the different recruiting sources, its advantages and limitations. In addition, it will explain the various alternatives to recruiting new employees. Furthermore, job analysis and advertising the vacant posts will be discussed in this topic.

The last topic in chapter three will examine the selection process. A wide range of techniques is available to assist managers carrying out selection including interviews, tests and references

(Cowling and Malier, 1981, 26). This topic will illustrate the steps of the selection process. In addition, the Equal Employment Opportunity Commission (EEOC) requirements, the various sources of information about applicants and how the organisation can use them to reach to a selection decision will be discussed in this topic. Because of the unique requirements when selecting team members, the final part of this chapter will show the managers how to select the appropriate team members.

3.2   Human Resources Planning

Human resources planning (HRP) could be defined as "the process that helps to provide adequate human resources to achieve future organisational objectives. It includes forecasting future needs for employees for various types, comparing these needs with the present work force, and determining the number and types of employees to be recruited or phased out of the organisation's employment group" (Ivancevich and Glueck, 1989, 181). Human resources planning, also referred to as manpower planning or personnel planning, has been defined as " an attempt to forecast how many and what kind of employees will be required in the future, and to what extent this demand is likely to be met". Manpower planning can help management in making decisions in the following areas:

    (1)   Recruitment.
    (2)   Avoidance of redundancies.
    (3)   Training-number and categories.
    (4)   Management development.
    (5)   Estimates the labour cost.
    (6)   Productivity bargaining.
    (7)   Accommodation requirements (Graham, 1989, 149).

3.2.1   Reasons For Human Resources Planning

Many organisations do more taking than actual planning for employment. More and more of them seem to be moving to formal planning systems as they discover that unsystematic approaches are inefficient in meeting their employment needs. The followings are some common reasons for formal human resources planning:

3.2.1.1   More Effective And Efficient Use Of Human Resources

Human resources planning should precede all other human resources/personnel management activities. For example, how could you schedule recruiting if you did not know how many people were needed? How could you select effectively if you did not know the kind of persons needed for job opening? Careful analysis of all personnel and human resources management activities shows

that their effectiveness and efficiency, which result in increased productivity, depend on human resources management.

3.2.1.2   More Satisfied And Better Developed Employees

Employees who work for organisations that use good human resources planning systems have a better chance to participate in planning their own careers and to share in training and developing experiences. Thus, they are likely to feel their talents are important to the employer, and they have a better chance to utilise those talents. This situation often leads to greater satisfaction and its consequences such as lower absenteeism, lower turnover, fewer accidents, and higher quality of work (Ivancevich and Glueck, 1989, 182-184).

3.2.1.3   More Effective Equal Employment Opportunity Planning

Strong Equal Employment Opportunity regulations require effective human resources programme. Employment planning should focus manager's attention on the treatment of minorities and women. Further, data collected routinely during employment planning is required by government reports to ensure compliance with EEOC. Consequently, employment planning should enhance employer's ability to comply with government regulations (Milkovich and Boudreau, 1988, 316).

3.2.2   Steps In The Human Resources Planning Process

Human resources planning process consists of four basic steps:

    (1)   Determining the impact of organisation's objectives on specific organisational unit.

    (2)   Defining the skills, expertise, and total number of employees (demand for human resources) required to achieve the organisation and departmental objectives.

    (3)   Determining the additional (net) human resources requirements in the light of the organisation's current human resources.

    (4)   Developing action plans to meet the anticipated human resources needs.

All managers, and especially operating managers, should view human resources planning as one of their most important job responsibilities. Unfortunately, this is not often the case. Many managers view HRP as something to do only after everything else has been done. Furthermore, managers often think that HRP should be handled solely by the human resources department. But, HRP is not strictly a human resources department function. The role of this department is to assist operating managers in developing their individual plans and integrating these different plans into an overall plan. The individual managers must provide the basic data on which the plan is built. A joint effort is required by the individual manager and the human resources department in each of the four steps of HRP.

3.2.2.1   **Determining Organisational Objectives**

As mentioned above, human resources plans must be based on organisational plans. In actual practice, this means that the objectives of human resources planning must be derived from organisational objectives. Organisational objectives give an organisation and its members direction and purpose and should be stated in terms of expected results. The objective-setting process begins at top of the organisation with a statement of mission, which defines the organisation's current and future business. Long-range objectives and strategies are formulated based on the organisation's statement of mission. These can then be used to establish short-range performance objectives. Short-range performance objectives generally have a time schedule and are expressed quantitatively. Divisional and departmental objectives are then derived from the organisation's short-range performance objectives. Establishing organisational, divisional, and departmental objectives in this manner has been called the cascade approach to objective setting. Figure (3.1) illustrates this approach.
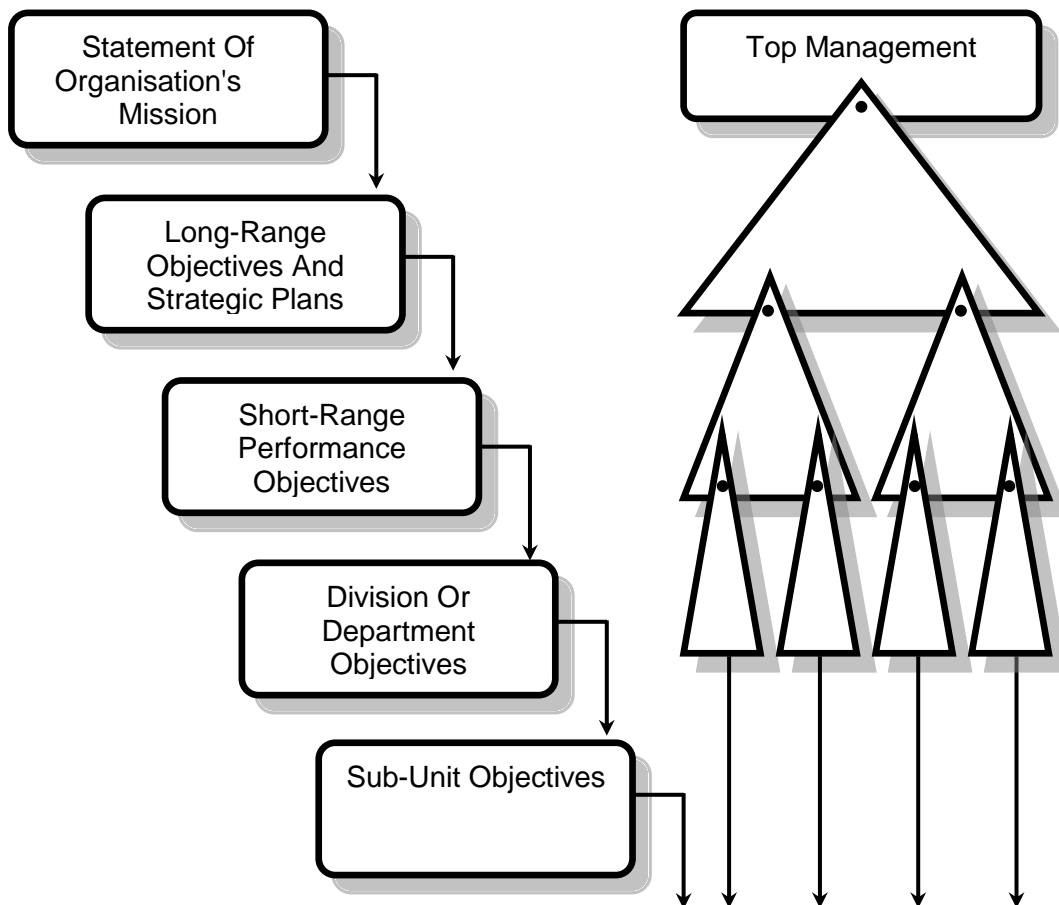
Figure 3.1   Cascade Approach To Objective Setting.

The cascade approach is not a form of "top-down" planning, whereby objectives are passed down to lower levels of the organisation. The idea is to involve all levels of management in the planning process. Such an approach leads to an upward and downward flow of information during planning.

This is also ensures that the objectives are communicated and co-ordinated through all levels of the organisation.

The cascade approach, when properly used, involves both operating managers and human resources department in the overall planning process. During the early stages, the human resources department can influence objective setting by providing information about organisation's human resources. For example, if the human resources department has identified particular strengths and weakness in the organisation's personnel, this information could significantly influence the overall direction of the organisation.

3.2.2.2   Determining The Skills And Expertise Required (Demand)

After organisational, divisional and departmental objectives have been established, operating mangers should determine the skills and expertise required to meet their respective objectives. The key here is not to look at the skills and abilities of present employees but rather to determine the skills and abilities required to meet the objectives. For example, suppose an objective of the production department is to increase total production of a certain item by 10 percent, once this objective has been established the production manager must determine precisely how this translates into human resources needs. A good starting point here is to review current job description. Once this has been accomplished, managers are in a better position to determine the skills and expertise necessary to meet their objectives. The final step in this phase is to translate the needed skills and abilities into types and numbers of employees (Byars and Rue, 1987, 113-116).

3.2.2.2.1   Human Resources Forecasting Techniques

There are three organisational approaches to human resources forecasting. The headquarter can forecast the total demand (top-down approach), the units can forecast their own demand (bottom-up approach), or there can be a combination of the two. Two main techniques will be described here. The first one is the top-down technique, which includes the expert-estimate technique, trend projection technique, as well as modelling and multiple-productive technique. The second one is the bottom-up unit forecasting technique.

(a)   **The Expert-Estimate Technique**

This is the least sophisticated approach to employment planning. It is for an "expert" to forecast the employment needs based on her or his own experience, intuition, and guess. The Human Resources Management /Personnel (HRM/P) manager may do this by thinking about past employment level and questioning future needs. This method is an informal system. The expert-estimate technique can be effective if the expert use the Delphi technique. The Delphi technique is a set of procedures originally developed by the Rand Corporation in the late 1940s, its purpose is to obtain the most reliable

consensus of opinion of a group of experts. The Delphi technique consists of intensive questioning of each expert, through a series of questionnaire to obtain data that can be used to make "educated" forecast. The procedure is:

(1)   A person who serves as intermediary in the questioning sends the questionnaire to the experts and asks them to give their best estimates of employment needs for the coming year.

(2)   The intermediary will summarise the results and calculate the average response and the most extreme answers.

(3)   The experts are asked to estimate the number again.

(4)   The average number is then used as the forecast.

(b)   The Trend Projection Technique

The second technique is to develop a forecast based on a past relationship between a factory related employment and employment itself. For example, sales levels are related to employment needs. The planner can develop a table or graph showing past relationships between sales and employment. Trend projection is a frequently used technique, though not as widely used as expert-estimate or unit demand. Trend projections are an inexpensive way to forecast employment needs.

(c)   Modelling And Multiple-Productive Technique

The third top-down approach to predication of demand uses the most sophisticated forecasting and modelling technique. Trend projections are based on relating a single factor (such as sales) to employment. The more advanced approaches relate many factors to employment, such as sales, gross national product, and discretionary income. Or they mathematically model the organisation and use simulations, utilising such methods as Markov models and analytical formulisation such as correlation and regression analysis. These are the most costly approach to employment forecasting because of the cost of computer time and salaries of high paid experts to design the model.

The use of Markov chain analysis involves developing a matrix. This matrix shows the probability of an employee moving from one position to another or leaving the organisation. Markov analysis begins with an analysis of staffing levels in various levels from one period to another time period. Suppose that professional nursing employees have shifted hospital (I), (II) and (III) in the Houston Medical Centre Complex (a complex of 11 hospitals in Houston that employs approximately 30,000 people). A HRM/P specialist in hospital (I) is interested in analysing the human resources shifts that are occurring between her hospital and hospital (II) and (III). The HRM/P

specialists could next calculate transition probabilities for all three hospitals. That is, the probabilities that a hospital will retain its nurses. See table (3.1).

Hospital	Total Nurses Number	Nurses Lost	Nurses Retained	Probability Of Retention
I	200	40	160	160/200=.80
II	500	50	450	450/500=.90
III	300	45	255	255/300=.85

Table 3.1   Nurses Transition Probabilities.

The P/HRP specialist in hospital (I) needs to study further the issues of why her hospital has a lower probability of retention. Markov analysis can help identify the lower retention probability, but it does not suggest any particular solution to the potential problem (Ivancevich and Glueck, 1989, 187-190). Correlation and Regression Analysis is a quantitative approach which can provide a solid basis for making good forecasting for human resources requirements. Correlation measures the relationship between two or more variables, and regression analysis measures the value of one variable in terms of the value of another variable. Because there is a direct relationship between a firm's sales, output, or assets and employment levels, correlation and regression analysis can be used to determine the degree of relationship and forecast the number of employees that will be required at different amounts of sales, output, or assets.

An example will show how these statistical procedures work. Assume that a firm believes its staffing requirements are dependent upon total sale. The first step is to test that assumption to determine whether there is a direct relationship between the dependent variable (number of employees) and the independent variable (sales). This could be done through correlation. The degree of relationship is expressed as a coefficient of correlation (r) in terms of 1.0. A confession of 0 would indicate no relationship whatever exists between the variables while the confession of +1.0 or -1.0 would indicate a perfect relationship- the first is a completely positive one and the second is a completely negative one. Table (3.2) contains all of the data that will be used in this correlation and regression analysis example. In the second and the third columns we see that the firm has compiled data on the number of employees and sales volume for ten periods. The other columns contain calculations that will be used in the correlation and regression formulas.

Periods	Number Of Employees Y	Sales In (00.00) X	XY	X2	Y2
1	10	15	150	225	100
2	16	19	304	361	250
3	20	30	600	900	400
4	28	22	616	484	784
5	32	41	1,312	1,681	1,024
6	42	40	1,680	1,600	1,764
7	42	50	2,100	2,500	1,764
8	47	53	2,491	2,809	2,209
9	49	45	2,205	2,025	2,401
10	61	53	3,233	2,809	3,721
∑	347	368	14,691	15,394	14,423

Table 3.2   Correlation And Regression Data Analysis.

The statistical formula for calculating the confession of correlation is:

$$r = \frac{[n(\sum XY) - (\sum X)(\sum Y)]^2}{[n(\sum X^2) - (\sum X)^2][n(\sum Y^2) - (\sum Y)^2]}$$

By inserting the values from table (3.2) into this equation would result in:

The second step is to calculate a regression line that establishes the linear relationship between changes in sales and employee requirements. To do this a scatter diagram such as the one shown in figure (3.2) is constructed. r = 0.91488. Because of the positive value of confession of correlation, this means that there is an extremely strong positive relationship between sales and number of employees, in other words the number of employees the firm needs is linked closely to variations in sales volume.
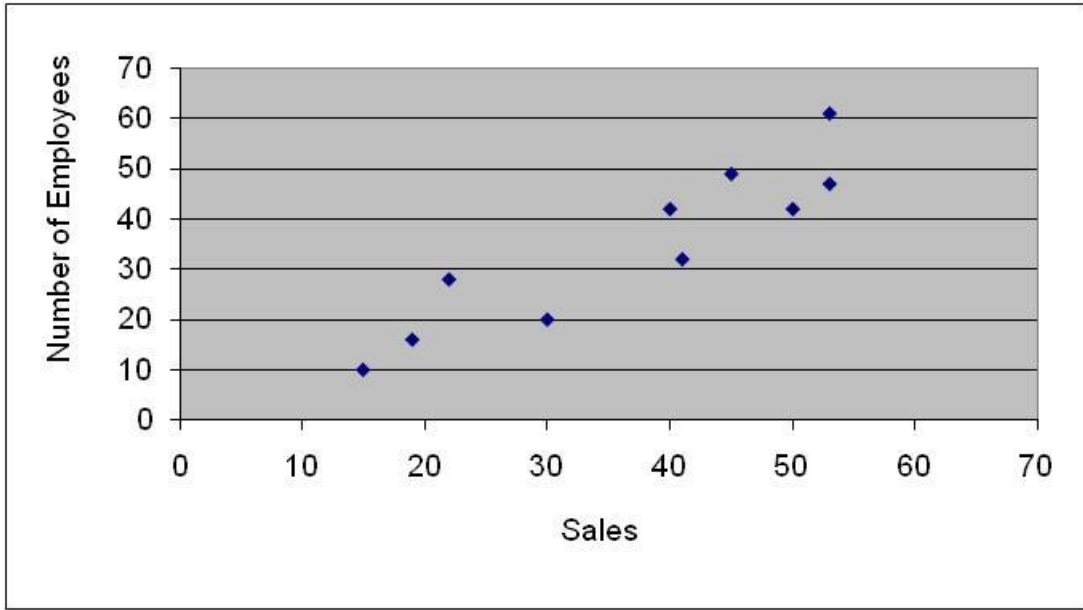
Figure 3.2 Scatter Diagram

Then a line of "best fit" is completed to show graphically the relationship of employees to sales. The most frequently used method for determining this line is the "least squares" method, which attempts to minimise the sum of the squares of the distance between each unit of data and its corresponding point on the assumed line. The basic formula for a straight line is:

$$\textbf{Y} \quad = \quad \textbf{a + bX}$$

Where,   Y = number of employees.

a = the point of the origin of the line.

b = the rate of change.

X = sales.

n= number of periods.

To solve for a and b the following formulas are used:

$$a = \frac{\sum Y - b\sum X}{n} \qquad\qquad b = \frac{n(\sum XY) - (\sum X)(\sum Y)}{n(\sum X2) - (\sum X)2}$$

Using the data in table (3.2) to solve these equations, we would find that:

a   =   -3.48725   b   =   1.037697

A line can now be drawn through the data as shown in figure (3.3).
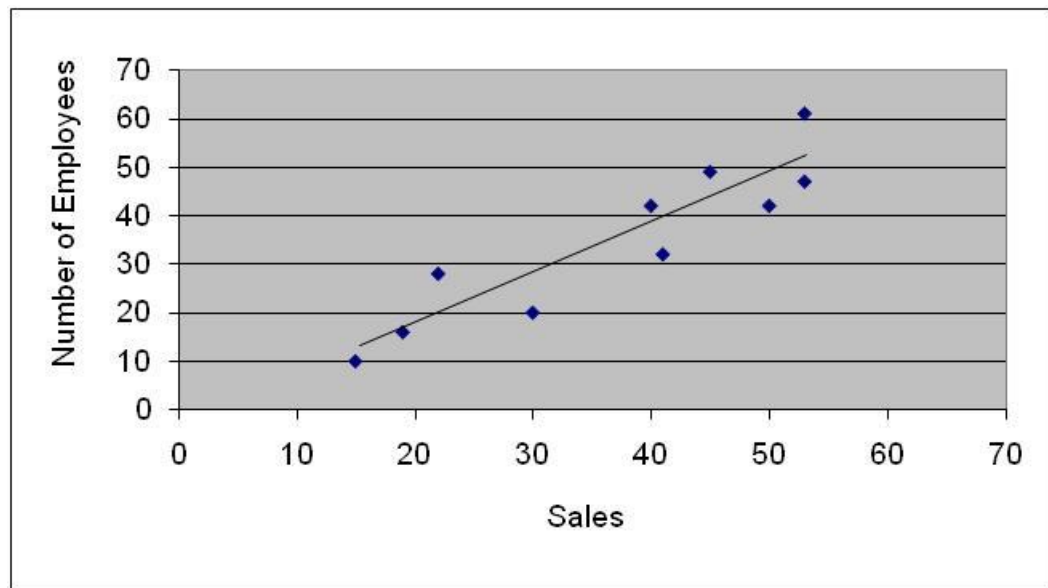
Figure 3.3   Scatter Diagram With Regression Line

The usefulness of the regression line in forecasting human resources requirements is that once the line has been statically fitted to historical data it can then be extrapolated into the future to show potential staffing needs at different levels of sales. Although the calculations involved in correlation and regression analysis seems laborious when they are done manually, software packages for personal computers put this approach to forecasting human resources requirements within the reach of organisation of any size (Caruth, Noe III and Mondy, 1990, 112-116)

(d)   The Unit Demand Forecasting Technique
The unit forecast is a bottom-up approach to forecast the demand. The unit manager analyses the person-by-person, job-by-job needs in the present as well as the future. There are some steps followed in the unit demand forecast:
    (1)   The manager will start with a list of the jobs in the job by name.
    (2)   Record the number of jobholders for each job.
    (3)   Evaluate both the number and skills of the present personnel.

Consideration is given to the effect of expected losses through retirement, promotion, or other reasons. Whether the losses require replacement and what the projected growth needs will be questions the manager must answer and project into his or her calculations in determining net employment needs. A manager evaluation that is based on the present number of employees has two assumptions built into it:
(1)   That the best use has been made of the available personnel.

(2)   That demand for the product or service of the unit will be the same for next year as for this. With regard to the first assumption, the manager can examine the job design and workload of each employee.

The manager may also attempt to judge the productivity of the employees in the unit by comparing the cost per product or service produced with those of similar units in the organisation and others. Past productivity rates can be compared with present ones, or subjective evaluation can be made of the productivity of certain employees compared to others. In addition, it may be necessary to base employment needs on work force analysis, with adjustments for current data on absenteeism and turnover (Ivancevich and Glueck, 1989, 190-192).

3.2.2.3   Determining Additional (Net) Human Resources Requirements

Once a manager has determined the types and numbers of employees required these estimates must be analysed in the light of current and anticipated human resources of the organisation. This process involves a thorough analysis of presently employed personnel and forecast of expected changes. There are two analyses: the skills inventory and the management inventory.

(a)   Skills Inventory

The purpose of skills inventory is to consolidate information about the organisation's human resources. It provides basic information on all employees, including their name, characteristics and skills. Because the information from skills inventory is used as input into promotion and transfer decisions, it should contain information about each employee portfolio of skills and not just those relevant to employee's current job. Thomas H. Patten has outlined seven broad categories of information that should be included in a skill inventory.

(1)   Personal Data   :   age, sex, and marital status.

(2)   Skills   :   education, job experience, and training.

(3)   Special Qualifications :   membership in professional groups, special achievements.

(4)   Salary and Job History :   present and past salary, dates of raises, various jobs held.

(5)   Company Data   :   benefit plan data, retirement information & seniority.

(6)   Capacity of Individual :   test scores on psychological, other tests, and health information.

(7)   Special performance of individuals: geographic location, type of job.

(b)   Management Inventory

Because the type of information required about management personnel sometimes differs from that required about non-managerial employees, some organisations

maintain a separate management inventory. In addition to biographical data, a management inventory often contains brief assessment of the manager past performance, strength, weakness, and potential for advancement.

3.2.2.4   Developing Action Plans

Once the net human resources requirements have been established, action plans must be developed for achieving the desired results. If the net requirements indicate a need for additions, plans must be made to recruit, select, orient and train the specific numbers and types of personnel needed. If a reduction in labour is necessary, plans must be made to realise the necessary adjustments. There are four ways that total number of employees can be reduced: layoffs, termination, early retirement inducements, and voluntary likely that resignation inducement. In addition, there are some approaches that can reduce the employees' number and do not result in leaving the organisation include reclassification, transfer, and work sharing. Action plans should lay in step-by-step sequence exactly how the human resources plans will be implemented (Byars and Rue, 1987,118-121).

3.3   The Recruitment Process

Recruitment could be defined as " the process of attracting potential employees to the company in order that the selection process can be carried out. It follows from a need being identified through planned expansion or loss of staff "(Bell and Balkwill, 1993, 122). Others defined recruitment as " the activities undertaken to encourage sufficient numbers of qualified people to apply for employment with an organisation. Its primary purpose is to ensure that there is an adequate supply of applicants available at the appropriate time (Caruth, Noe III and Mondy, 1990, 10).

3.3.1   Steps Of The Recruitment Process

It is recommended that any organisation have to adopt the following steps, illustrated in figure (3.4), when recruiting any new employees.

Figure 3.4 Recommended Steps Of The Recruitment Process.

3.3.1.1   Determining The Vacancies

The first stage in the procedure is concerned with the question, what resources are needed? Determining vacancies to be filled will depend on the aim and objectives of the organisation and the need of human resources, which these engender. Details of requirements will emerge from the compilation and regular revision of the manpower plan. In practice, job vacancies may occur when an organisation or work-unit is set up, when any re-organisation takes place through changes in policy, technology or location (Tyson and York, 1989, 101). The majority of vacancies, however, occur as replacement for people who have left the organisation or as the final event in a chain of transfers and promotions following on reorganisations (Graham, 1989, 163). When a person leaves the organisation, there are many ways of filling the gap. Recruiting a new employee may be the most obvious tactic when a vacancy occurs, but it is not necessarily the most appropriate. Listed below are some of the alternatives.

3.3.1.1.1   Alternatives To Recruiting

When there is a need for additional or replacement employees, a firm may choose to explore alternatives to recruiting. Recruit cost may be high. Moreover, once employees are placed on the payroll, they may be difficult to remove even if their performance is marginal. Consequently, an organisation is well advised to consider alternatives to adding full time staff members, these alternatives are:

(1)   Use Overtime

The most common approach to meet requirements for additional personnel, especially when need is generated by short-term increases in work volume, is overtime. Both employer and employee may benefit from overtime, the employer voids the cost of recruiting, selecting, and training while the employee gains an increase in compensation. Overtime, however is not without disadvantages, many managers feel

that when employees are required to work extra over hours over an extended length of time, the organisation pays more and receives less per hour in turn. This situation may become worse if excessive overtime is required, employees may become fatigued and lack the energy to perform at normal levels. Two more potential problems are related to prolonged overtime. First, employees may pace themselves during normal hours so that overtime is ensured. Second, employees tend to become accustomed to added income resulting from overtime pay and may elevate their standard of living. When overtime is no longer required and pay check shrinks to its normal level, employees may become disgruntled at what they perceive as a cut in pay (Caruth, Noe III and Mondy, 1990, 129).

(2)   Reorganise The Work

Jobs may be rearranged so that the total amount of work in a section is done by the remaining employees without replacement of the leaver.

(3)   Mechanise The Work

There are all sorts of ways in which the work of a departing member of a staff can be mechanised, though it is seldom feasible to mechanise, automate or robotise, on the basis of a single, casual vacancy. However, the non-replacement of a departing member of a staff is often used to justify the expense of introducing new equipment.

(4)   Make The Job Part-Time

Replacing full time jobs with part-time jobs has become a widespread practice and has the attraction of making marginal reductions more possible at the same time providing the possibility of marginally increasing the amount of staff time available in the future by reducing the full time. It provides potential flexibility by making it possible to turn on full time into two part time posts located in two separate places.

(5)   Sub-Contract The Work

By this means the employer avoids ongoing costs and obligations of employing people by transferring those obligations to another employer. It is simpler to do this when the work can be easily moved elsewhere, such as some features of computer programming, than when the work has to be done on your own premises, with the comparisons of terms and conditions that inevitably take place.

(6)   Use An Agency

A similar strategy is to use an agency to provide temporary personnel, who again do not come onto the company payroll (Torrington and Hall, 1995, 213-214)). The organisation has to quantify the alternatives to recruiting and select the suitable one, or

it has to recruit and employ new employees to occupy the vacancies available in order to perform the jobs and achieve the organisation objectives.

3.3.1.2   Sources Of Recruitment

There are two sources of recruitment, recruiting within the organisation (internal recruiting) and recruiting outside the organisation (external recruiting), each one has its own advantages and limitations, as well as its own sources which provide each of them with the suitable manpower.

3.3.1.2.1   Recruiting Within The Organisation (Internal Recruiting)

As we mentioned before, recruiting is the process of locating and encouraging potential applicants to apply for existing or anticipated job opening. During this process, efforts are made to inform the applicants fully about both the qualifications required to perform the job and the career opportunities the organisation can offer them. Whether or not a particular job vacancy will be filled by someone from within the organisation or outside will, of course, depend upon the availability of personnel, the organisation human resources policies, and the requirements of the job to be staffed. The most popular sources of recruiting within the organisation are depicted in figure (3.5).
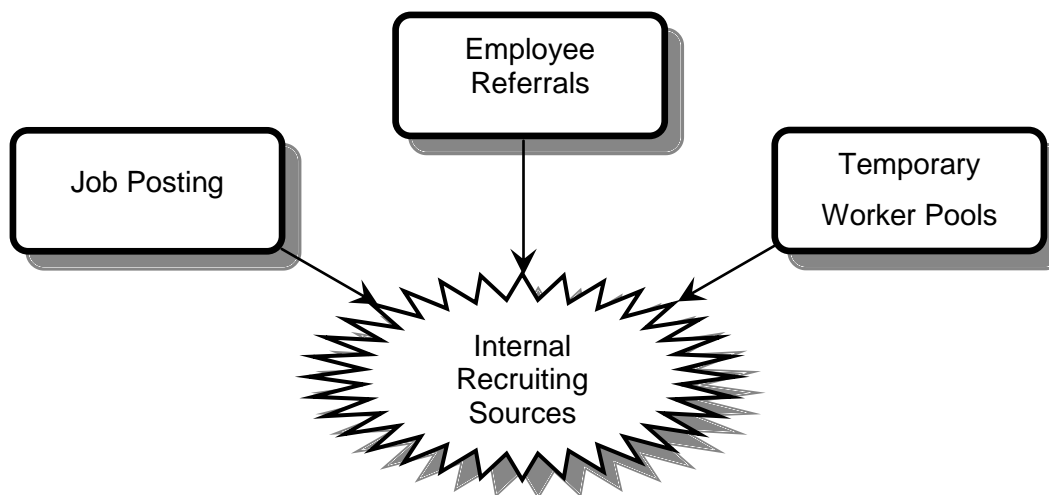
Figure 3.5 Internal Recruiting Sources.

(1)   Job Posting

Advertising available jobs began in the early days of affirmative action, as a means of providing equal opportunity for women and minorities to compete. It served as a method for getting around the "old boy" network, where jobs sometimes were filled more by " who you know" than by " what you knew". Today it is an established practice in many organisations especially for filling jobs up to the lower executive level. Openings are published on bulletin board or in lists available to all employees. Interested employees must reply within a specific number of days, and they may or may not have to obtain the consent of their immediate supervisors. While there are

clear advantages to job posting, potential disadvantages arise if employees " game" the system by transferring to new jobs in other company departments and locations that do not require different or additional skills, simply as a way of obtaining grade or salary increases. To avoid this problem, it is critical to establish consistent pay policies across jobs and locations. Another problem might arise from poor communication. For example, if employees who unsuccessfully apply for open jobs do not receive feedback that might help them to be more competitive in the future, and if they have to find out through the grapevine that someone else got the job they applied for, then a job posting programme cannot be successful. The lesson for managers is obvious, regular communication and follow-up feedback is essential if job posting is to work properly.

(2) Employees' Referrals

Referral of job candidates by present employees has been and continues to be a major source of new hires at many levels, including professionals. It is internal recruitment method, since internal rather than external sources are used to attract candidates. Typically such programmes offer a cash or merchant bonus when a current employee refers a successful candidate to fill a job opening. The logic behind employee referral is that "it takes one to know one". Interestingly, the rate of employee participation seems to remain unaffected by such efforts as higher cash bounce cars, or expense-paid trips. This suggests that good employees will not refer potentially undesirable employees even if the rewards are outstanding. The Apple Bank for Saving in New York city has a typical referral programme current employees who recruit new workers receive $250 after the new recruits have remained with the bank for 3 months and an additional $250 when the recruit has been employer for 1 year. The employee who recruits the new worker must also remain with the bank to receive the payment. Thus the programme incorporates the twin advantages for attracting new employees and retaining old ones. The bank hires about 50 percent of the candidates referred by current employees. Three factors seem to be instrumental in the pre-screening process of referrals: the moral of present employees, the accuracy of job information, and the closeness of the intermediary friend.

(3) Temporary Worker Pools

Unlike workers supplied from temporary agencies, in-house "temporaries" work directly for the hiring organisation and may receive benefits, depending on the number of scheduled hours worked per week. Temporary workers (e.g. in clerical jobs, accounting, word processing) help meet fluctuating labour demand due to such factors as illness, vacations, terminations, or resignation. Companies save on a temporary employee's hourly wages. The Travellers Corporation established a pool of

temporaries made up of its own retirees. A recent survey showed the growing popularity of this practice. Almost half of the firms surveyed used retirees under some contractual arrangement, about 10 percent allowed retirees to share jobs with other employees, and most retirees continued to receive pension and insurance benefits when they come back to work. About 40 percent of the respondents paid market rates for jobs performed by retirees, while 26 percent paid retirees what they had received at the time they retired (Cascio, 1992, 153-155).

3.3.1.2.1.1 The Advantages Of Recruiting Within The Organisation

(1)   The organisation can capitalise on the investment, which has made in recruiting, selecting, training, and developing its current employees.

(2)   Encourage employees to increase their efforts and improve their morals in order to be promoted to better positions.

(3)   It preserves the security of information inside the organisation.

3.3.1.2.1.2 The Limitations Of Recruiting Within The Organisation

(1)   It prevents the organisation to get benefits from the new ideas and latest experience, which could be gained from recruiting employees outside the organisation.

(2)   Some employees will be disappointed when they see the organisation recruit outside employees, and did not prompted them to these posts, and it will cause negative feeling towards the new people and organisation (Sherman, Bohlander and Snell, 1996, 166-167).

3.3.1.2.2   Recruiting Outside The Organisation (External Recruiting)

External recruiting is often needed in organisations that are growing rapidly or have a large demand for technical, skilled, or managerial employees. Figure (3.6) describes the most popular sources of recruiting outside the organisation.
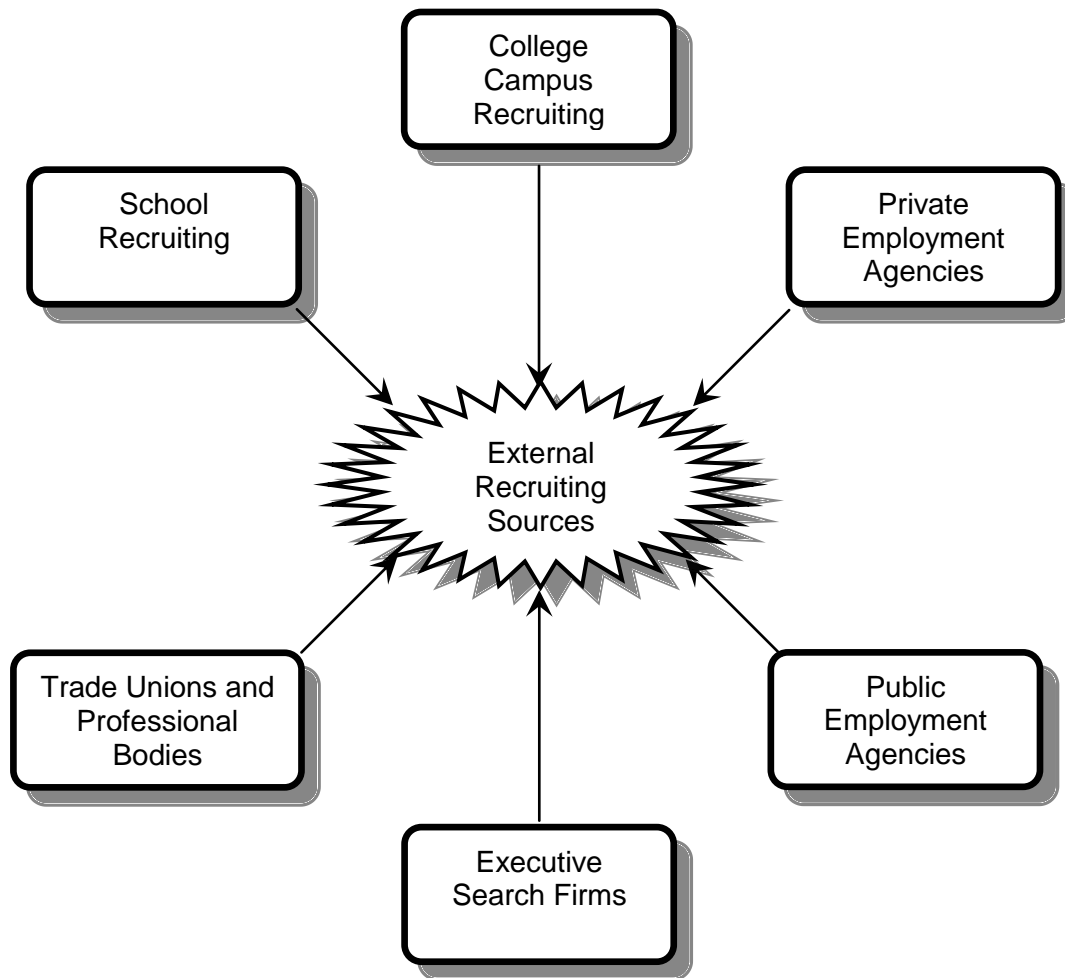
Figure 3.6 External Recruiting Sources.

(1) School Recruiting

Many organisations find that educational institutions offer a good selection of candidates for entry-level or management trainee positions. Guidance and vocational counsellors in high schools, vocational and trade schools, and business schools are continually seeking placement opportunities for their graduates. Organisations that establish good relationship with these personnel often find that the quality of the candidate referred exceeds that of recruits from other resources.

(2) College Campus Recruiting

Recruiting on college campus is an increasingly popular method for obtaining large applicant pools. Most colleges and universities, including junior and community colleges, four-year bachelor's degree institutions, and graduate schools, establish career planning and placement centres on campus which serves as both a training ground for the students and a quasi-clearinghouse for the employer. The initial employer contacts and the establishment of on-campus recruiting activities are usually oriented through the placement office. There are both advantages and disadvantages

to campus recruiting. The most obvious benefits are the substantial number of potentially qualified applicants available from which to choose. On the negative side, however, is the fact that many of the applicants have unrealistic job experience, or they are involved in the process merely for the interviewing experience. As a result, a substantial number of applicants recruited from colleges' campuses may experience low morale and high turnover during their first five years of employment. Most college recurring is conducted in a set fashion. Contact between organisations and the campus placement centre usually result in time slots being chosen for on-campus interviewing. The placement centre disseminates scheduling information through various sources to the student body, and interested students applicants sign up for interview times. In some instance, company recruiters ask for copies of student files prior to scheduling particular interviews in order to pre-screen applicants. These files usually consist of placement applications completed by the student, copies of references letters, and any other pertinent information supplied by the applicants. Other recruiters specify only the total number of applicants they wish to interview, and leave the task of pre-screening to the placement centre. Applicants are usually given printed literature about organisations they are interested in, and they are scheduled for an interview time. Typically, these interviews are between fifteen and thirty minutes long and they serve as preliminary screening technique. After interviews and usually before leaving campus, those candidates selected are invited for a second interview at the workplace. At this point, they usually enter the full selection process. There are several ways in which an organisation can increase the campus recruitment process. These include:

(1)   Careful selection of sites.

(2)   Training of recruiters.

(3)   Pre-screening.

(4)   Establishing rapport with the college personnel (Singer, 1990, 113-114).

(3)   Private Employment Agencies

A private employment agency is a company that assists firms in recruiting employees and, at the same time aids individuals in their attempts to locate jobs. Agencies perform many recruiting and selection activities for the employers such as advertising job opening, reviewing résumés, obtaining application blank data, conducting screening interviews, and testing. Private agencies are an important method for bringing qualified applicants and job opening together. Because of the recruiting and selecting functions it performs, an agency can save an employer a great deal of time in finding potential employees. Agencies work on a fee basis, charging either the company or the individual a certain percentage of annual gross salary of the position being filled. In the past the employer normally paid this fee, but increasingly today employees are paying

the fee. In using private agencies, organisations may list job opening with several agencies or they may use one agency exclusively. Using several agencies tends to broaden the scope of the recruiting efforts. However, working with a single agency allows an organisation the opportunity to develop a relationship that lead to better referrals from the agency since the agency comes to know more about the company and the kinds of employees it need.

(4)   Public Employment Agencies

Public employment agencies are operated by each state under guidance set by that state. They receive overall policy direction from the U.S. employment services. Historically, public employment agencies have been best for their efforts in recruiting and placing individuals in blue-collar jobs. Recently they have become increasingly involved with filling technical, professional, and managerial positions. Public agencies now represent a good source of applicants for all types of positions, which considered to be a source that should not be overlooked by employers in their recruiting efforts. Public agencies perform many of the recruiting and selecting activities for employers as are performed by private agencies. In some instances computerised job matching systems are used to facilitate the recruiting process. The service provided by public agencies are supported by payroll taxes levied on employers. The employer pays no additional charge for listing job opening and securing employees through this source. The service is provided free of charge to job seekers (Caruth, Noe III and Mondy, 1990, 138-139).

(5)   Executive Search Firms

Executive search firms direct their efforts towards finding high-level managerial and professional talent for organisations. Their fees are high, but they provide a specialised service that may require personnel skills not available in the employer's own personnel department. Further, it is often said that the best talent is already employed. To the extent that this is true, executive search firms may provide high-quality talent by "raiding" or luring employees away from other organisations. These firms are sometimes called head-hunters because of this behaviour. Such tactics are often better left to such firms than to an employer's own personnel or human resources department. These agencies may also serve as useful source for highly qualified minority applicants. Such may not be available from other sources more routinely used by the firm (Leap, and Crino, 1993, 209-210). Executive firms differ from employment agencies in that they do not work for individuals; they are retained and compensated by the client organisations they serve. Firms in this business often visit their clients' office to interview company management. This enables them to gain a clear understanding of

the company's goals, the requirements of the position, and the qualifications needed by a candidate. After this information is obtained, the search firm seeks out potential candidates, review their résumés, conduct interviews, and perform background checks. As a general rule, the best three or four candidates will be referred to the client organisation for the actual selection decision (Caruth, Noe III and Mondy, 1990, 141).

(6)   Trade Unions And Professional Bodies

Trade unions and professional bodies often maintain registers of unemployed members to offer an appointments service. Where industrial relations are good, trade unions can sometimes produce reliable people. The appointment service of a professional association can be extremely useful to the closed membership of the profession. The institute of personnel management, for example, runs one, details being circulated twice monthly with the institute's publication Personnel Management and PM Plus subscribed to all members (Cuming, 1993, 88).

In a recent article in recruiting trends, a monthly newsletter published by enterprise publication of Chicago, Squibb Corporation was highlighted for developing an interactive computer diskette to attract MBAs to their organisation. Applicants interested in exploring career opportunities with Squibb can receive this free diskette which provides information about the organisation and their potential jobs (Sweet, 1991, 2).

3.3.1.2.2.1 The Advantages Of Recruiting Outside The Organisation

(1)   The employee hired from outside can bring new insight and perspectives which will help in enhancing the performance and increasing the efficiency of the organisation.

(2)   The pool of the talent is much larger than when recruiting is restricted to internal sources.

3.3.1.2.2.2 The Limitations Of Recruiting Outside The Organisation

(1)   The employee hired from outside need a longer adjustment or orientation period.

(2)   Recruiting from outside may cause moral problems.

(3)   Outside recruiting is more expensive, because of the time and expenses spent in advertising, interviewing, analysing, and testing (Sherman, Bohlander and Snell, 1996, 167-169).

3.3.1.3   Job Analysis

Job analysis is sometimes called the cornerstone of human resources management because the information it collects serves so many human resources functions. Job analysis is the process of

obtaining and reporting information about jobs by determining what the duties, tasks or activities of those jobs are (Sherman, Bohlander and Snell, 1996, 127).

3.3.1.3.1 Importance Of Job Analysis

(1) Helps organisations to have specific objective methods of determining human resources decisions.

(2) Determines both the minimum and desired qualifications necessary to perform a job.

(3) Informs the new employee about what must be learned to complete the job successfully.

(4) Helps management to determine an equitable pay system (Carrell, Kuzmits, and Elbert, 1989, 47-49)

(5) Performs and enhances the different human resources functions such as

the development of performance appraisal criteria or the content of training courses.

3.3.1.3.2 Products Of Job Analysis

The products of job analysis are job description and a job specification.

(a) Job Description

It is a written description of a job and its requirements, It includes:

(1) Job title and location.

(1) Organisational relationship.

(2) Relation to other jobs.

(3) Machine tools and materials.

(4) Working conditions.

(b) Job Specification

It is a written statement of the necessary qualifications of the job incumbent. It includes:

(1) Education.

(2) Experience.

(3) Training.

(4) Mental abilities.

(5) Physical efforts and skills.

(6) Responsibilities.

(7) Judgement.

(8) Decision-Making (Byars and Rue, 1987, 92).

3.3.1.3.3   Getting Job Information

Job data may be obtained in several ways. The more common methods of getting job information are:

(1)   Interview

The job analyst may question individual employees and managers about job under review.

(2)   Questionnaire

The job analyst may circulate carefully prepared questionnaire to be filled out individually by jobholders and managers.

(3)   Observation

The job analyst may learn about the job by observing and recording on standardised form the activities of jobholders.

(4)   Diaries

Jobholders themselves may be asked to keep a diary of their work activities during entire work cycle (Sherman, Bohlander and Snell, 1996, 128-129).

3.3.1.3.4   The Information To Be Collected

The information to be collected about the job is:

(1)   Job Identification Data

Job title, department, division, company, name, and location.

(2)   Relation With Others

Reporting relationship, supervisory relationship, liaison with others, and co-ordinating relationship.

(3)   Job Content

Actual tasks or duties of the job, levels of responsibility for tasks, importance of tasks, and how often performed.

(4)   Working Condition

Physical environment, social environment, and economic environment.

(5)   Performance Standards, And Objectives

Other relevant information.

(6)   Human Requirements

The physical and physiological characteristics of the individual who could fulfil the demands of the job (Torrington and Hall, 1991, 248-249)[b] .

3.3.1.4   Advertising

The main purpose of advertising a job is to attract sufficient candidates of the right calibre, thereby securing a reasonable field from which to choose the most appropriate person. How does one tackle this attraction process?

The organisation has to follow the following steps in order to prepare an efficient and attractive advertising.

        (1)   Define the audience (that is, the type of people to be reached).

        (2)   Decide on the means and establish the cost of making the contact.

        (3)   Write the message.

        (4)   Monitor the results.

(1) The Audience

The nature of vacant position will largely define the size geographically spread of the audience. At the operational level there is usually a local audience which can be tapped. When the necessary skills are not available locally an initial investigation is needed to establish the location of the required audience and the potential available. This also applies to the clerical and technical level, though there is a tendency for technical people to restrict their own availability by becoming identified with particular processes, even within one organisation. This does not seem to be the case with computer staff, whose skills and knowledge have almost universal application and whose mobility transcends national boundaries. It is at managerial level that the audience in broad functional terms (for example, accountants, engineers). Consideration must also be given to defining current salary level from which candidates can be drawn.

(2) The Means

Detailed information abounds on the circulation and readership of newspapers and professional journals and advertising costs. Decisions have to be made on the worth of national coverage against local coverage, the space needed and whether to cover any wider public relations aspects. It seems to turn to press advertising but other methods should also be considered as follows:

- Television or cinema advertisement.
- Posters in appropriate public places.
- Leaflet distribution, especially on housing estates.
- Word of mouth (with the inevitable discount for misstatement).
- Notice boards either in or outside the place of work.
- Job centres.
- Recruitment circuits, using a travelling road show or hotels.
- Pre-recorded tape for distribution or access by telephone.
- Commercial radio.

Most of the above methods are most appropriate when numbers of people are required at the same time, especially during expansion or when staffing a new site. Organisations typically use a mix of methods according to the their needs and funds.

(3)   The Message

There is an art in constructing a message with the necessary basics emotional appeal to the audience. Simplicity is the keynote, together with the need to use technical terms on restricted, meaningful basics. But one must present sufficient hard information. The message includes everything within the physical boundaries of the medium: words, black or white space, line drawing, company symbols. Sometimes it may be important for the text to be in foreign language. A great deal of help on these details is available from advertising agencies and public relations consultants. The aim is to make candidate reach for their writing pads, telephone or even visit.

(4)   The Result

Keeping a record of the response to advertisements enables the user to evaluate in financial terms the relevance of certain media in reaching the required audience. The main statistic is "cost per reply" which can be refined in relation to numbers interviewed, shortlisted or appointed from that particular source. A simple form can be used by a clerk or secretary to record information such as the appointment title, medium used, size of advertisement, cost, number of replies, cost per reply, number interviewed, number shortlisted and the number appointed. Such information is invaluable for advertising budget, and also in setting arguments and destroying preconceived ideas. Equally at this stage, use can be made of the advertising agency in obtaining comparative statistics on a confidential basis from other agency clients (Lock, 1992, 797-798).

3.3.2   Matching People And Jobs

The responsible for making selection decisions should have adequate information about the job to be filled, knowledge of the ratio of job openings to the number of applicants, and as much as relevant information as possible about the applicants themselves are essential for making sound decisions (Sherman, Bohlander and Snell, 1996, 190).

3.4   The Selection Process

Selection is the process of choosing and hiring employees from among those candidates recruited for the organisation. The purpose of selection is to fill positions with the best people from available candidates and to do so in a timely manner (Holt, 1993, 372).

Selection is a difficult process because it involves making judgement about people. Mistakes made in the selection process can be costly. Hiring individuals who can not or will not do their job leads to output and quality problems, and ultimately to employee turnover. Consequently, selection must be done carefully in order to minimise potential negative impacts on the organisation (Caruth, Noe III and Mondy, 1990, 149)

3.4.1   Steps Of the Selection Process

The steps of the selection process and their sequence will vary, not only with the organisation but also with the type and level of jobs, these steps are shown in figure (3.7).

Figure 3.7 Steps Of The Selection Process

3.4.1.1   The Application Form

Completing an application form is normally the first step in most selection processes. It provides basic employment information for use in later steps of the selection process and can be used to screen out unqualified applicants (Byars and Rue, 1987, 168). The typical application form will include the following information about applicants:

(1)   Name.

(2)   Marital and family status.

(3)   Age.

(4)   Handicap.

(5)   Sex.

(6)   Race or colour.

(7)   Address or duration of residence.

(8)   Birthplace.

(9)   Religion.

(10)   Military records.

(11)   Photograph.

(12)   Citizenship.

(13)   Ancestry or national.

(14)   Education.

(15)   Experience.

(16)   Conviction arrest and court records.

(17)   Relatives.

(18)   Notify in case of emergency.

(19)   Organisations.

(20)   References.

(21)   Credit rating.

(22)   Miscellaneous (Byars and Rue, 1987, 70-76).

3.4.1.1.1   EEOC Requirements

EEOC and the court have found that many applications and interviews disproportionately reject minorities and females frequently as not job related. Some of the major questions that should be eliminated from both application form and interviews, or carefully reviewed, to ensure their use in job related and non-discriminatory include:

(1) Race, Colour, National Origin And Religion

Inquiries about race, colour, religion or national origin are not illegal per so, but asking or recording this information in employment records is carefully examined if discrimination charges are filed against an employer.

(2) Arrest And Conviction Records

An individual's arrest record has been ruled by the court to be an unlawful basis for refusal to employ unless a business necessary for such a policy can be established.

(3) Credit Rating

An applicant's poor credit has been ruled by the court to be an unlawful basis for refusal to employ unless a business necessary for such a policy can be established.

3.4.1.1.2   Processing Of Information

The information of the application form is reviewed by a member of the human resources department in order to

- Determine the applicant's qualification in relation to the requirements of currently available jobs.

- Weight the application form, by determining which item responses were given more frequently by applicants who prove to be higher performers but less frequently by applicants who prove to be poorer performers (Byars and Rue, 1987, 168-169).

3.4.1.1.3   Accuracy Of Information

The applicant is then asked to sign a statement that the information contained on the application form is true, and that he or she accepts the employer's right to terminate the candidate's employment if any of the information is subsequently found to be false. In addition to the application form there are many sources could be used to collect as much reliable and valid information about the applicants, these sources are:

(a) Biographical Information Blanks (BIB)

One of the oldest methods for predicting job success uses biographical information about job applicant. It reveals information about a person's history that may have shaped their behaviour. Sample questions from a BIB might include:

- At what age did you leave home?
- How long was the town /city in which you lived as child?
- Did you ever build a model aeroplane that flew?
- Were sports a big part of your childhood?
- Do you play any musical instruments?

Studies have shown that an objective scoring of BIB and application forms is one of the most potentially valid methods that can be predicting job success.

(b) Background Investigation

When the interviewed is satisfied that the applicant is potentially qualified, information about previous employment as well as other information provided by the applicant is investigated. This information might include:

- Former employers.
- School and college officials.

Individual names as references may be contacted for verification of pertinent information such as length of time on the job, type of job, performance evaluation, highest wages, academic degree earned and so on.

(c)   The Polygraph

The polygraph or lie detector is a devise that measures the changes in breathing, blood pressure, and pulse of person who is being questioned. It consists of a rubber tube around the chest, a cuff around arm, and sensor attaches to the fingers that records

the physiological changes in the examinee as the examiner asks questions that call for answer of yes or no. The act prohibit the use of lie detector for pre-hire screening and random testing and applies to all private employees except pharmaceutical companies and companies that supply security guards for health and safety operations.

(d)   Graphology

Graphology, a term refers to a variety of systems of handwriting analysis, is being used by some employers to make employment decisions. Graphologists obtain a sample of handwriting and examine such characteristics as the size and slant of letters, amount of pressure applied, and placement of writing on the page. From their observation they can draw inferences about the writer's personality traits, temperament, cognitive abilities and social traits. Available evidence shows graphology to be reliable, cheaper and faster predictor of personality when compared with other psychological tests (Sherman, Bohlander and Snell, 1996, 196-199).

3.4.1.2   The Initial Screening Interview

The initial screening interview is designed to eliminate candidates that do not interest the organisation and organisations that do not interest the candidate. These interviews seldom take over 30 minutes; many are shorter. Questions are often asked about an employee's job expectations, geographical preferences, work experience, and the like. The interviewer may inquire about certain items on the applicant's résumé or application form. The initial interview indicates whether or not proceeds with the selection process (Schoderbek, Cosier, and Aplin, 1991, 495).

3.4.1.3   The Employment Interview

The employment interview has had a very important role in the selection process. Depending on the type of the job, applicants may be interviewed by one person, by members of work team or other individuals in the organisation. The interview can make a positive contribution to the selection process. It can help the organisations to assess the candidate's capability and motivation to perform a particular job. In addition, it can help the candidate to formulate his own assessment of the job and the organisation.

3.4.1.3.1   Interview Preparation

The preparation of the interview will include the following items.

3.4.1.3.1.1 Documentation

- An accurate job description and a carefully designed personnel specification expressed, as far as possible, in terms of what you want the candidate to perform or be able to perform.

- The interviewer needs sufficient background about the candidates to enable him to obtain a preliminary picture of the candidate past achievements and how these may relates to the requirements of the job.

3.4.1.3.1.2 Administrative Arrangements

The followings are some administrative arrangements, mangers has to take in account, when preparing for successful interview:

(1) Decide when and where the interview to be held.

(2) Decide who will be involved in conducting the interview.

(3) Notify other interviewers of the time and place, and arrange a meeting to plan the interview.

(4) Notify the candidates, in good time, of the time and place, tell them how to go there, who to ask for, and roughly how long and what form the proceeding will take.

(5) Notify the receptionist gatekeeper, or other relevant person, whom to expect and where to direct them.

(6) Make arrangement to avoid being interrupted during the interview.

(7) If the interviewees have to travel some distance to the interview, make arrangements for their expenses to be reimbursed.

(8) If candidate expectations and the timing of the interview warrant it, arrange to have tea or coffee served. If you are interviewing candidate for a senior appointment, it may be appropriate to take him to lunch (if the organisation budget allows it).

3.4.1.3.1.3 Environment

If the candidate who joins the organisation is to work in archaic, badly designed and sparsely furnished surroundings, it may give him quite the wrong impression if he was interviewed in a plush modern office. It is helpful to give him something of the physical flavour of the environment he will meet if selected. One way to solve this problem is to take him or her to see the section where he would be working after the interview. The interview has to be held somewhere private, quiet, comfortable, spacious, and fulfil all the basic social requirements.

3.4.1.3.1.4 Planning

Before conducting any interview it is important to spend some time thinking about what do you hope to achieve and to plan how to set about it. If the interview has to be one in a sequence, it is vital to identify the purpose of each interview and the area to be covered at each stage. If there is to be more than one interviewer present, it is important to meet beforehand to agree both your overall strategy and specific lines of questioning so that every interviewer obtains the information he requires without confusing the candidate or causing undue repetition.

3.4.1.3.1.5 Interview Strategy

There are three basic elements of good interviewing:

    (1) Contact

        The interviewer has to establish rapport by greeting the applicant pleasantly, by explaining the purpose of the interview, and by listening carefully. By this the interviewer can get all the information needed.

    (2) Content

        When the applicant starts to talk, consideration must be given to what he is saying, to see how it relates to what interviewer want to know. The interviewer has to strive to understand, comprehend and match the interview parts in order to form a complete picture about the candidate and his abilities and characteristics.

    (3) Control

        Rapport without a purpose can lead the interview to degenerate into a friendly chat that will not achieve the interview objective. The interviewer has to steer the discussion in an appropriate direction. By using this way the interviewer can find out what he or she needs to know, within the available time.

3.4.1.3.1.6 Questioning Techniques

The general rules of questioning are:

    (1)   Ask open questions and listen to the replies.

    (2)   Links your questions to the candidate's replies or your last question.

    (3)   Probe each reply to find out what the candidate is really saying, without putting him on the defensive position.

    (4)   Keep to a logical sequence of questions so that you do not confuse him or her.

    (5)   Use silence to give the candidate time to think and encourage him to say more.

    (6)   Avoid interrupting the candidate or putting words in his mouth.

    (7)   Avoid using leading or yes/no questions that will limit the scope of the candidate's reply.

    (8)   Avoid criticising the candidate or his replies.

    (9)   Avoid using mannerisms that the candidates may find distracting (Hackett, 1985, 60-63).

3.4.1.4   Employment Tests

Tests are not an alternative to interview. It is another step in the selection process that we can use to gather information about the candidate.

3.4.1.4.1   The Nature Of Employment Tests

Employment test is an objective and standardised measure of sample of behaviour that is used to gauge a person's knowledge, skills, abilities, and other characteristics in relation to other individuals. The test author has to prepare proper sampling of behaviour, and to develop tests that meet accepted standards of reliability.

3.4.1.4.2   Classification Of Employment Tests

Employment tests may be classified in different ways. Generally, they are viewed as measuring either aptitude or achievement. Aptitude tests refer to measures of a person's capability to learn or acquire skills. Achieve tests refers to measure of what a person knows or can do right now, see tables (3.3), (3.4), (3.5), (3.6) and (3.7).

TEST TYPE	OBJECTIVE	EXAMPLES
Cognitive ability test	Measures mental capability	General intelligence. Verbal fluency. Numerical abilities. Reasoning abilities.

Table 3.3   Cognitive Ability Test

TEST TYPE	OBJECTIVE	EXAMPLES
Physical ability test.	Assesses a person's physical abilities	Strength Endurance

Table 3.4   Physical Ability Test

TEST TYPE	OBJECTIVE	EXAMPLES
Personality and interest inventories test	Measures dispositional characteristics	Extroversion inquisitiveness dependability.

Table 3.5   Personality and Interest Inventories Test

TEST TYPE	OBJECTIVE	EXAMPLES
Job knowledge test	Measures a person's level of understanding about a particular job	Information about geography of Europe for travels sales clerk.

Table 3.6   Job Knowledge Test

TEST TYPE	OBJECTIVE	EXAMPLES
Job sample test	Measures skills for office and clerical jobs	Map readings test for traffic control officer. A complex co-ordination test for a pilot.

Table 3.7   Job Sample Test.

3.4.1.4.2   How Tests Can Help?

Tests will help organisations to assess what a candidate can do. If we want to know whether a candidate can type at a certain speed or can calculate percentage, we have two alternatives, either ask him, relatively on his own honesty, or we test him, thereby providing ourselves with opportunity to assess his abilities and measure them against the standards set by the organisation (Hackett, 1985, 60). Tests can help also in predicting a comprehensive; picture about the future of the employee and his abilities to innovate and learn in order to achieve the organisation goals, so training and motivation could be applied to her or him to achieve these goals.

3.4.1.5   References Checking

Such an investigation can be both an energy-saving procedure and a cost-efficient means of screening out undesired applicants. Because applicants tend to misrepresent themselves on their applications or during interview, checking references has become a common practice in personnel. There are several methods of checking references:

(1) The human resources specialist can visit previous employers or friends of the applicant. This method should be reserved for candidates being considered for high ranking positions because the extra time and expenses.

(2) Check references by mail

There are two distinct disadvantages: several days to weeks are required, and it lacks the depth of information required. In addition, most employers are increasingly wary about putting their perception about former employees in writing.

(3) Checking references by telephone calls

It is time-efficient, accurate means of gathering complete information on applicants. Supervisors and employers are more likely to give complete information regarding a candidate's background over the telephone .

The are several advantages of checking references by telephone such as:

- Immediate clarification can be gained.
- More information can be obtained.
- Relatively little expensive.

- Additional area of needed inquiry can be covered.
- Structured form can be minimised.

(4)   checking references by using outside services

Which for a fee will investigate the background of the applicants. Such service conducts interview with former employers and check criminal records, credit files and educational credentials (Carrell, Kuzmits, and Elbert, 1989, 209-210).

3.4.1.6   Physical Examination And Drug Testing

Many organisations require a physical examination before employee is hired. This is given not only to determine whether he or she is physically capable for performing the job, but also to determine the applicants eligibility for group life health and disability insurance. Because of its expenses, physical examination is normally given as one of the last steps in the selection process. The expenses of physical examination have also caused many organisations to have applicants complete a health questionnaire when they fill out their application form. If no serious medical problems are indicated on the medical questionnaire, the applicant is not normally required to have physical examination (Sherman, Bohlander and Snell, 1996, 201-202).

The rehabilitation act of 1973 has caused many employers to re-examine the physical requirements for many jobs. This act prohibits discrimination against handicapped persons and requires government to take affirmation action to employ qualified handicapped persons. This act does not prohibit the employer from giving medical exams (Byars and Rue, 1987, 176).

A growing number of employers use drug tests to screen applicants and current employees for drug use. Urine sampling is the preferred form of drug testing. More sophisticated tests are used to validate positive findings with most employers. Applicants with positive test results have virtually no chance of being hired (Sherman, Bohlander and Snell, 1996, 201-202).

3.4.1.7   The Selection Decision

While all the steps in the selection process are important, the most critical step is the decision to accept or reject applicants. Because of the cost of placing new employee on the pay roll, the short probability period in many organisations, and the final decision must be as sound as possible. Thus, it requires systematic consideration of all the relevant information about the applicants. It is common to use summary forms and checklists to ensure that all of the pertinent information has been included in the evaluation of the applicant.

3.4.1.7.1   Summary Of Information About Applicants

Employers focus on two main factors, the first is what can the applicant do, the second what will the applicant do. The can do factor includes knowledge and skills, as well as, the aptitude (the potential) for acquiring new knowledge and skills. The will do factor includes motivation, interest, and other personality characteristics. It is much easier to measure what individuals can do than what they will do. The "can-do" factor is readily evident from test scores and verified information. What the individual will do can only be inferred by responses to interview and application form questions.

3.4.1.7.2   Final Decision

After the employment interview has been made in the employment department, those applicants who appear to be most promising are then referred to departments having vacancies. Then they are interviewed by the managers or supervisors, who usually make the final decision and communicate it to the employment department. It is of prime importance that managers and supervisors are trained to give the appropriate selection so the scientific efforts of personnel in the human resources department are not neglected. In government agencies, the selection of individuals to fill vacancies is made from list or registers of eligible candidates. Ordinary, three or more names of individuals at the top of the register are submitted to the requisitioning official. This arrangement provides some latitude for those making a selection and, at the same time, preserve the merit system (Sherman, Bohlander and Snell, 1996, 217-218).

3.4.2   Selecting Team Members

When selecting team members, the manager has to make sure that the team contains all the necessary skills and expertise needed to carry out its mission. Don't for example, forget to include a production control representative on a project team working on improving customer delivery time (Dorio, 1994, 256). In selecting the right person for the job it will be necessary to take account of the candidate's acceptability to the working group, not just to the managers responsible for the selection. This is a two-way business, as the result will be equally serious whether the group rejects the individual or the individual rejects the group. The personnel manager, or outside consultant, working for a manager must treat this as a major concern.

A selection activity using groups has developed in popularity. As with all tests it needs efficient organisation and stage management, also staff capable of running it and assessing it. More than one assessor will be required and the optimum group size will vary from six to ten, as control of a bigger group is difficult. Assessors will be concerned not only with the personal behaviour of individuals in the group but with such things as the ability to introduce ideas and sell them to the others, to change track and still be constructive when proved wrong, to argue positively but not stubbornly or resentfully and remain logic when emotions are aroused (Finnigan, 1983, 67).

The standard method can be described quite simply as putting a small group of candidates into action together, observed by a panel of selectors. Selectors are experienced men of good judgement who have been properly trained to know what to look for and how to find it. The setting in which the group works should be comfortable and as informal as possible. Setting the group at a round table is a sound practice, for there is no obvious chairman.

Actual procedure can vary considerably, from direct discussion on general subject or problem put to the group by the selectors, to complicated prepared briefs for " committee sessions" when each candidate in turn acts as a chairman or advocate of his own ideas for solving a particular problem.

When these discussions are going on, the panel of selectors are observing the intellectual and social skills of the candidates and the attitudes of mind they display. Afterwards, the panel will analyse the effort made by each individual, the number and quality of his contributions to the discussion, whether they were well expressed, to the point and positive.

Above all, they will consider what influence he had on the group, the extent to which he dominated it, whether he helped it to achieve its task or prevented it from doing so, and the way in which he made his criticisms and received any directed at him. His intellectual skill would be reflected by the evidence of his thinking logically, clearly and in a flexible manner.

Evidence of social skills will be seen in his relationship with other numbers of the group, if he is tactful in what he says, and if his own personality makes an impact. In the group discussion something of his attitudes and approach to life should be detected, whether, for example, he tends to be positive and constructive or negative and critical. Finally, certain other elements of his personality, initiative, self-confidence and dependability might also be revealed (Bottomley, 1983, 63-64).

3.5   Conclusions

This chapter is divided to three major topics, the first topic is human resources planning, the second one is the recruitment process, and the last topic is the selection process. Human resources planning process enables the organisation to pursue its strategy and fulfil its mission by ensuring that the right employees are placed in the right job at the proper time. In addition, it can help the management in making serious decisions.

This chapter discussed the reasons for Human resources planning and how is it important to adopt a systematic approach to forecast personnel demand. Furthermore, it illustrated the steps that have to be followed in the manpower planning process. These steps are (1) determining the

organisation objectives, (2) determining the skills and expertise required, (3) determining the additional (net) human resources requirements, and (4) developing action plans.

Many human resources forecasting techniques and mathematical models have been explained in details. These techniques are (a) the expert-estimate technique, (b) the trend projection technique, (c) modelling and Multi-productive technique, and (d) the unit demand forecasting technique. Organisations that fail to do an adequate job of personnel planning may find that they have a tendency to make more than their share of incorrect hiring, promotion, transfer, and related decisions. After the organisation recognise the real demand of employees required to achieve the organisation goals, the role of the recruitment process will emanate as the process that generates the pool of applicants from which future employees are drawn. The quality of applicants' pool will directly affect the quality of new employees.

The steps which organisations have to follow when recruiting new employees or team members are (1) determining the vacancy, (2) selecting the suitable and available source of recruiting, (3) job analysis, and (4) advertising. Because of the emerged financial implications, when the organisation decide to hire new employees or team members, organisations tend to innovate methods or alternatives to recruiting that can achieve the organisational goals and at the same time minimise the recruiting cost as much as possible. These alternatives are: (1) use overtime, (2) reorganise the work, (3) mechanise the work, (4) make the job part-time, (5) sub-contract the work, and (6) use an agency. When the organisation found that the suitable solution is to hire new employees or team members there are two main sources of recruiting, the first one is recruiting within the organisation (internal recruiting) which has three sources that provide the organisation with applicants. These sources are (1) job posting, (2) employees' referrals, and (3) temporary work pools. The other source of recruiting is outside recruiting (external recruiting) and it has six providing sources they are (1) school recruiting, (2) college campus recruiting, (3) private employment agencies, (4) public employment agencies, (5) executive search firms, and (6) trade unions and professional bodies.

In order to choose the suitable and competent person, the organisation has to make analysis for the jobs required. Job analysis is a systematic investigation into the work behaviour and other information relevant to performing a job. There are two products of the job analysis process, the first one is job description which describes the job and its requirements, the second one is job specifications which state the necessary qualifications of the job incumbent. This chapter discussed the various methods of getting job information and the information to be collected about the job.

Advertising for the vacancy, is the last step in the recruiting process. The main purpose of advertising is to attract the professional people to apply for the vacant post. Four points have to be cared when preparing an effective advertising, the audience, the means, the message, and the result. The following stage after investigating the organisation's manpower requirements, choosing the suitable recruiting sources, and analysis of the job required is the selection process. The selection process should provide as much reliable and valid information as possible about the applicants so that their qualifications can be carefully matched with job specification. There are many steps which have to be followed in the selection process; these steps are (1) the application form, (2) the initial screening interview, (3) the employment interview, (4) employment test, (5) reference checking, (6) physical examination and drug testing, and (7) the selection decision.

There are many sources of information about the applicants. They are the application form, bibliographical information blanks, background investigation, the polygraph, and the graphology. Interview is an important step in the selection process, so it has to be prepared and planned in order to achieve its aims and objectives. In the process of making decision all "can-do" and "will-do" factors should be assembled and weighted systematically so that the final decision can be based on a composite of the most reliable and valid information.

Chapter three examined the various employment tests. These tests are cognitive ability test, physical ability test, personality and interest invention test, and job knowledge test. In addition, this chapter studied the nature and how these tests can help the organisation select the appropriate candidate. Furthermore, the different ways used in references checking are discussed, these ways are checking by visiting, checking by mail, checking by telephone calls, and checking by using outside service. Because of the expenses of the physical examination and drug testing, organisations tend to make this kind of testing as the last step of the selection process. Finally, when the organisation has the full information about the candidate it has to take the selection decision. The last part of this chapter discussed, due to its particular needs and importance, the process of selection team members, techniques and selecting procedures. After the team members are selected, it is of prime importance to develop their abilities and enhance their skills, by adopting the appropriate training programmes, in order to help them adapt to the rapid changes in every field and to achieve the organisation objectives. In addition, the organisation has to select the suitable motivation techniques which will encourages the team members to increase their productivity and enhance their performance as an approach to deliver projects on time, within budget, and as specified. The next chapter will explain in more details the training and motivation of the team members.

CHAPTER 4

TRAINING AND MOTIVATION OF TEAM MEMBERS

4.1   Introduction

n the previous chapter we discussed the various activities of human resources planning, recruitment and selection of team members. The aim of that chapter was to illustrate how can the organisations plan for the future and achieve their goals by selecting the right people for the right place at the proper time.

Reasons, forecasting techniques and mathematical models for human resources planning have been explained in details in order to determine the real demand of manpower. When that demand is recognised, the role of the recruitment emerge as the process of building a pool of applicants who possess the job qualifications desired by a firm and who may accept invitation for employment. In addition, chapter three discussed the recommended steps that have to be followed when the organisation desires to recruit new employees or team members.

 The selection process is the next step that follows the recruitment of the suitable persons. It refers to choosing a successful job candidate from potential applicants being considered by a firm. A good match between applicants and jobs serves the interests of employees and employers. Chapter three explained the steps of the selection process and illustrated the different sources of information about candidates, which can help the organisation to select the suitable person who can achieve the firm goals.

After the efforts spent in selecting the qualified and competent employees and team members, it is of prime importance that every organisation strives to keep its people and update their skills as well as motivate them to achieve its objectives.

Chapter four will study two major subjects. The first one will focus on the training of team members, where the second subject will concentrate on the motivation process and techniques.

The first subject will define and emphasise the importance of training particularly in the changing environment. The orientation and socialisation processes will be discussed in order to explain that when the new employee is oriented to the right direction, optimum performance will be gained in short time. In addition, to show the newcomers how to deal with the new climate in the organisation and help employees to overcome any expected problems. In order to save time, and money, it is imperative that every organisation decides is training actually needed? Will the training programme help the organisation achieve its objectives? What are they gained benefits if the training programme is implemented? In order to answer these questions, the organisation has to determine the training needs and objectives. These needs and objectives will be explained in this chapter.

The training programmes should fulfil the needs of the different levels of any organisation. There is training for non-managerial employees, and training for managers and supervisors. Each programme has its suitable methods, techniques, devices that provide the trainees with the required information, skills, expertise required at their level. Training for team building, the training process, and principles of training are important topics that will be discussed in the first subject of this chapter.

The second subject of chapter four will be about motivation. Effective motivation has long been one of management's most difficult and important duties. Success in this endeavour is becoming a more difficult in the light of managing diverse work force. Chapter four will explain the meaning of motivation and why it is important to both employees and organisation. In addition, the motivation process, the different motivation theories and motivation techniques will be illustrated in order to show managers how can they exploit the organisation human resources and how can they motivate, encourage and empower employees to get the maximum output.

4.2   Definition And Importance Of Training

Training could be defined as "a systematic process of changing behaviour, knowledge, and motivation of present employees to improve the match between employee characteristics and employment requirements" (Milkovich and Boudreau, 1988, 535). Others define training as "a learning process that involves the acquisition of skills, concepts, rules or attitudes to increase the performance of employees" (Byars and Rue, 1991, 206). The rapid change in technology, information, organisations, economics, and in the expectations of people's need has necessitated the continuous training of workforce. The need for organisations to do much more in less time, with fewer resources, has forced rapid development of innovative, high quality training technologies. More and more HRD practitioners are researching and testing out new, creative ways of training the workforce (Markyord, 1989, 31).

4.3   Orientation

Orientation could be defined as "the introduction of new employees to the organisation, work unit, and job" (Byars and Rue, 1991, 200). When good employees are hard to find, and harder to keep, orientation becomes more crucial than ever. The organisation is not hiring new people, but adopting them into its corporate home. In fact, a good orientation can make all the difference. One study, at corning glass works at N.Y. found that new employees who went through a structured orientation programme were 69 percent more likely to be with the company after 3 years than those who were left on their own to sort out the job. A similar two-year study at Texas Instruments concluded that employees who had been carefully oriented to both the company and their jobs reached full productivity two months sooner than those weren't (Ganzel, 1998).

Employees can obtain orientation either from fellow workers or from the organisation. The orientation provided by the fellow workers is usually unplanned and unofficial and often provides the new employee with misleading and inaccurate information. This is the reason that the official orientation provided by the organisation is essential and important.

There are two distinct levels of orientation:

(1)   General Company Orientation

The topics presented in the company orientation should be based on the needs of both the company and the employee. Generally, the company is interested in making profit, providing good service to customer and clients, satisfying employee needs, and being socially responsible. New employees on the other hand, generally are more interested in pay, benefits, and specific terms and conditions of employment. It is essential to have a good balance between the company's and the employee's needs in order to have positive results. The company orientation programme might include:

- Overview of the company.
- Key policies and procedures.
- Compensation.
- Fringe benefits.
- Safety and accident prevention.
- Employee and union relations.
- Physical facilities.
- Economic factors.

(2)   Department And Job Orientation

The content of departmental and job orientation depends on the specific needs of the department and the skills and experience of the new employee. Both Experienced and inexperienced employees should receive a through orientation concerning department matters. The departmental and job orientation might include:

- Department function.
- Job duties and responsibilities.
- Policies, procedures, rules and regulations.
- Tour of department.
- Introduction to department employees.

4.3.1   Orientation Kit

It is desirable for each new employee to receive an orientation kit, or packet of information, to supplement the verbal orientation programme. This kit is normally prepared by the human resources department and can provide a wide variety of materials. Care should be taken in the kit

design to ensure not only that essential information is provided but also that too much information is not given. Many organisations require employees to sign a form indicating that they have received and read the orientation kit. This has two advantages, firstly it protects the company if a grievance arises and the employee alleges that he or she was not aware of certain company policies and procedures. Secondly, signing a document actually encourages new employees to read the orientation kit (Byars and Rue, 1991, 200-205).

4.3.1.1   The Orientation Kit Components

The orientation kit might include the following items:

- Copy of specific goals and description.
- Copies of performance appraisal forms, dates of appraisals, and appraisal procedures.
- List of on-the-job training opportunities.
- Detailed outline of emergency and accident-prevention procedures.
- Copy of policy handbook.
- Telephone numbers and locations of key personnel and operations.
- Current organisation chart.
- Map of the facility.
- List of key terms unique to the industry, company, and job.
- Copy of union contract which includes:
    (1) List of holidays.
    (2) List of employee benefits.
    (3) Copies of other required forms (e.g., supply requisition and expense reimbursement).
    (4) Source of information.
    (5) Copy of each important organisation publication.
    (6) Copies of insurance plans (Sherman, Bohlander and Snell, 1996, 231).

4.3.2   Orientation Length And Timing

It is virtually impossible for a new employee to absorb in one long session all the information in the company orientation programmes. Brief sessions, not to exceed two hours each, spread over several days increase the likelihood that the new employee understand and retain the information presented. Departmental and job orientation should be brief, well planned and conducted using appropriate techniques (Byars and Rue, 1991, 205). The need for quick immersion directs some

organisations to end the orientation programme with a test, with a 90 percent passing grade. The organisation reserves the right to terminate employee whose score is less than the defined grade.

4.3.3   Orientation Benefits

Both the organisation and employees can obtain many benefits from the orientation process such as:

- Learning job procedures.
- Establishing relationship with co-workers, including subordinates, and superiors, and fitting into the employee's way of doing things.
- Develop realistic job expectations and positive attitude towards the employees.
- Give the employees a sense of belonging by showing how their job fits into overall organisation (Milkovich and Boudreau, 1988, 550).
- Lower turnover.
- Increase productivity.

The more time and effort spent in helping new employees the more likely they are to identify with the organisation and become valuable members.

4.3.4   Follow-Up And Evaluation

Supervisors should always consult with the new employees after the first day and frequently through the first week on the job. After the employee has been on the job

for a month, and again after a year, management should follow up to determine how effective the orientation has been. Evaluation can then be conducted through in-depth interviews, questionnaire, survey and discussion group (Sherman, Bohlander and Snell, 1996, 230).

4.4   Socialisation

Socialisation could be defined as " the process by which a person learns the values, norms, and required behaviours, which permit him to participate as a member of the organisation" (Kreitner and Kinicki, 1992, 277-278). For many individuals their first year of their organisational employment is very frustrating experience, full of stress, anxiety and difficulties. Their struggle to become accepted by others and to function as "true" contributing members within their new work setting is sufficiently dissatisfying, that many switch companies within the first couple of years. The end result is a wasteful outcome, not only economically, but also in terms of lost promise and potential, particularly if the turnover takes place among the most talented individuals.

For other individuals, however, the initial years are a marvellously satisfying experience, full of excitement, achievements, and personal development. Not only are these individuals more likely to

remain with their organisations, but it is also likely that they will continue to perform efficiently and develop strong commitments to both their job and organisational settings.

Given this range of differences in the individual experience of organisation newcomers, one asks what is it that take place during one's initial work years that affects the amount of stress one feels and determine one set of outcomes over the others? One answer lies in the perceptual accuracy with which individuals enter their new organisational environment.

Generally speaking, the more individuals begin their job with the unrealistic view and expectation, the more they encounter "reality shock" as they confront the true demands of their everyday task environment. On the other hand, individuals who assume their new organisational positions with a more realistic understanding and perspective will feel less surprised and disenchanted. Based on this argument, if newcomers are given more accurate information about their perspective jobs they would be able to undertake their new responsibilities with less discomfort and frustration.

4.4.1   Contents Of Socialisation

During the socialisation phase, the newcomers learn not only the specific technical requirements of their job but also socially acceptable attitudes and behaviours necessary for becoming effective organisation member. The newcomers must come to know what others in the organisation are about, how they operate, and how he or she should perform on the job relative to these others. These perceptions provide the new employee with a meaningful way of classifying events and organising the many interrelationships that exist within the workplace.

In developing this local organisation perspective, newcomer must accomplish at least three important tasks. He must build his own role identified within his new job context, he must discover how to deal with peers and other authority figures, especially his boss, and he must decipher the appropriate reward systems and situational norms of acceptable social and task-related behaviours.

4.4.2   Socialisation Period

It takes a fair amount of time for employees to feel accepted and competent and to accomplish all of the tasks necessary to develop a situational perspective. How long this socialisation period lasts is not only influenced by the abilities, needs, and prior experience of individual workers, but it also differs significantly across occupations.

In general, one might suggest that the length of one's initial socialisation stage varies positively with the level of complexity of one's job and occupational requirements, ranging perhaps from as little as a month or two on very routine, programmed-type jobs to as much as a year or more on

very skilled, unprogrammed type jobs, as in the engineering and scientific professions (Katz, 1988, 355-367).

4.5   Determining Training Needs

It is of prime importance in the beginning of the training process to determine whether a need for training actually exists. An organisation should commit its resources to training activity only if the training can be expected to achieve some organisational goals. The decision to conduct training must be based on the best available data, which is collected by conducting a needs assessment. Organisations that implement training programmes without conducting needs assessment may be making errors. For example, needs assessment might reveal that less costly interventions (e.g. personnel selection, a new compensation system, job redesign) could be used in lieu of training (Bernardin and Russell, 1993, 290).

Training is a continuous process, it is not an end in itself, its purpose is to improve performance. Managers should be careful to approach training needs systematically. Three different analyses are recommended for use in determining training needs.

4.5.1   Organisational Analysis

Examination of the goals, resources, and environment of the organisation determines where training emphasis should be placed. Human resources policies and organisational climate have an impact on the goals of the training programme. Similarly, external factors, such as public opinions as reflected in laws, regulations, and court decisions, influence where the training emphasis will be placed (Sherman, Bohlander and Snell, 1996, 235).At the organisational level, records on absenteeism, turnover, tardiness and accident rate provide objective evidence of problems with the organisation. When problems occur, these records should be examined carefully to determine if the problem could be partially resolved through training (Byars and Rue, 1991, 207). Employee's attitude surveys can also be used to uncover training needs at both the organisational and functional-unit levels. In addition, consumer or customer surveys can also indicate problem areas that may not be obvious to the employees of an organisation. After the organisational analysis is determined, it must be followed by a task analysis.

4.5.2   Task Analysis

It is the process of determining what the content of a training programme should be, on the basis of a study of the tasks or duties involved in the job. The first step in task analysis is to list all the tasks or duties included in the job. The second step is to list the steps performed by the employee to complete each task. Once the job is understood thoroughly, the type of performance required (e.g., speech, recall, and manipulation), along with the skills and knowledge necessary for job

performance, can be defined. This information helps trainers to select programme content and choose the most effective training method. When the organisational and task analysis have been made, it is necessary to perform a person analysis.

4.5.3   Person Analysis

It is the process of determining the specific skills, knowledge and attitudes required from people on the job. It is important to determine what prospective trainees can and cannot do so that the training programme can be designed to emphasis the area in which they are deficient (Sherman, Bohlander and Snell, 1996, 235-236). Questionnaire, self-analysis, observation, interviews, and diaries can obtain all the information about organisational, task, and person analysis.

4.6   Establishing Training Objectives

After training needs have been determined, objectives must be established for matching these needs. Unfortunately, many organisational training programmes have no objectives. With this philosophy, it is virtually impossible to evaluate the strengths, weaknesses of training programme. Effective training objectives should state what the organisation, department, or individuals is to be like when the training is completed.

4.6.1   Instructional Objectives

It could be determined by answering the following questions:

What principles, facts, and concepts are to be learned in the training programme?

Who is to be taught?

When are they to be taught?

4.6.2   Organisational And Departmental Objectives

It defines what impacts will the training have on organisational and departmental outcomes, such as absenteeism, turnover, reduced costs, and improved productivity.

4.6.3   Individual Performance And Growth Objectives

It determines what impacts will the training have on the behaviour and attitudinal outcomes of the trainee. What the impact will the training have on the personal growth of the individual trainee (Byars and Rue, 1991, 208). When the training objectives are established it becomes easy for the management to evaluate the training strengths and weaknesses when completed, in order to rectify the mistakes, cure the weaknesses and take advantage from the strengths.

4.7   Training Non-Managerial Employees

Training in non-managerial areas is often called skills training. Skills training programmes may be held on or off-the-job, in addition there is also the apprenticeship training.

4.7.1   On-The-Job Training (OJT)

It is one of the most common methods of training non-managerial employees. OJT has the advantage of providing hands-on experience under working conditions and an opportunity for the trainer- manager or senior employee - to build good relations with new employees (Sherman, Bohlander and Snell, 1996, 239). Although on-the-job training can be inexpensive and simple, there are risks. Damaged machinery, low quality, unsatisfied customers, misfiled forms, or less than optimal performances are examples. On-the-job trainers must be well trained themselves. They should be good performers on the job, plus, they should be aware of training techniques. The following job instruction training approach is one way to systemise the training and ensure follow - up.

First here's what you must do to get ready to teach a job:

(1)   Decide what the learner must be taught in order to do the job efficiently, safely, economically, and intelligently.

(2)   Have the right tool, equipment, supplies, and material ready.

(3)   Have the workplace properly arranged.

Second, you should instruct the learner by the following four basic steps:

Step I.   Preparation (Of The Learner)

(1)   Put the learner at ease.

(2)   Find out what is already known about the job.

(3)   Get the learner interested and desirous of learning the job.

Step II.   Presentation (Of The Operation And Knowledge)

(1)   Tell, show, illustrate, and question in order to put over the new knowledge and operations.

(2)   Instruct slowly, clearly, completely, and patiently, one point at a time. Check, question, and report.

(3)   Make sure the learner really knows.

Step III.   Performances Try-Out

(1)   Tests by having the learner perform the job.

(2)   Ask questions beginning with why, how, when, or where.

(3)   Observe performance, correct errors, and repeat instructions if necessary.

(4)   Continue until you know the learner knows.

Step IV.   Follow-Up

Check frequently to be sure instructions are being followed. Taper of extra supervision and close follow-up until the learner is qualified to work with normal supervision (Milkovich and Boudreau, 1988, 551-552).

4.7.2   Off-The-Job Training

In addition to on-the-job training, it is usually necessary to provide employees with training in settings away from their ordinary workplace. Some methods involve training employees away from their usual locations but still within the organisation's facilities. Other methods involve training employees in locations outside the organisation. The off-job-training methods might include the followings:

4.7.2.1   Conference Or Discussion

This method is used when the training involves primarily the communication of ideas, procedures, and standards. It allows for considerable flexibility in the amount of employees' participation.

4.7.2.2   Classroom Training

Classroom training enables the maximum number of trainees to be handled by the minimum number of instructors. This method lends itself particularly to training in areas where information and instructions can be presented in lectures, demonstration, films, videotapes, and through computer instructions.

4.7.2.3   Programmed Instruction

One method of instruction uses a book, manual, or computer to present programmed subject matter. After being presented with a small segment of information, the trainees are required to answer a question, either by writing in a response frame or by pushing a button. If the response is correct, the trainee is told so and is resented with the next step (frame) in the material. If the response is incorrect, further explanatory information is given and the trainee is told to try again (Sherman, Bohlander and Snell, 1996, 239-243).

4.7.2.4   Computer Based Training (CBT)

It is an effective and flexible method of training and can be used by all levels of staff. It is effective because:

- It engages learners in activity.
- It enables learners to study at their own pace.
- It provides opportunities for learners to check their understanding.
- It supports self-development.

4.7.2.4.1   CBT Strengths

(1)   It is readily available at many company locations and can be fitted in with   their
       work commitments.

(2)   It enables time and resources to be used effectively.

(3)   It can be used on a stand-alone basis, or it can be used to complement other
       forms of training.

(4)   People can work through the material at their own speed.

(5)   The programmes are designed to check understanding of the subject material.

(6)   Many programmes allow for studying only those sections that are relevant to the
       training needs, by means of menu facility, (all the content items are listed and a
       selection is made).

(7)   The time devoted to the training is highly flexible and can be agreed by the
       manager and the individuals.

(8)   Training usually carried out on an individual basis, but people with similar training
       requirements can pair up. Exchange view expressed can result in mutual sharing of ideas
       and issues.

(9)   People are away from their work place for a minimum amount of time.

(10) It promotes consistency in training throughout an organisation

4.7.2.4.2   CBT Constrains

(1)   This form of training requires a great commitment by the manager and the
       individual.

(2)   Since individuals work on their own, they may feel a degree of isolation.

(3)   Some people may be anxious about using computers for training purpose (Wynn,
       1991, 384-386).

4.7.2.4.3   CBT Techniques

Computer based training have two distinct techniques:

(1)   Computer-Assisted-Instruction (CAI) System

       This technique delivers instructional materials directly through a computer terminal in
       an interactive format.

(2)   Computer - Managed Instruction(CMI) System

       This technique is normally employed in conjunction with (CAI), uses to generate and
       score tests and to determine the level of training proficiency.

4.7.2.5   Simulation Methods

Sometimes it is either impractical or unwise to train employees on the actual equipment that is used on the job. An obvious example is the training of personnel to operate aircraft, spacecraft, and other highly technical and expensive equipment. The simulation method emphasises realism in equipment and its operation at minimum cost and maximum safety.

4.7.2.6   Use Other Training Devices

There are many training devices such as portable TV, slides or videotapes which could be used to develop skills, procedures of many productive jobs, and to illustrate the steps in the manufacture and assembly of electronics and other components. Closed-Circuits Television and video recording equipment (such as camcorders) are also standard training devices. Closed-Circuits Television allows an instructional programme to be transmitted to many locations simultaneously. The use of camcorders permits on the spot recording and immediate feedback to the trainer. There are newer training techniques, such as, the videodisk and training by telephone (Teletraining). Interactive videodisks have an advantage over other programmed learning techniques that they allow immediate access to any segment of the instructional programme. This is especially useful for individualised instructions of employees with different levels of knowledge and ability. Teletraining include scheduling flexibility, reduce time and expenses of staff travel, increase access to experts, and the ability to reach dispersed groups of trainees in remote locations (Sherman, Bohlander and Snell, 1996, 239-243).

4.7.2.7   Web Based Training (WBT)

Web-based-training (WBT) instruction is delivered over the Internet or over a company's Intranet. The training is accessed using a web browser, such as Netscape navigator. Other types of internet training refer to any programme that can be delivered from a remote source, even e-mail correspondence courses, or the transfer the files of course materials.

4.7.2.7.1   WBT Advantages

The following section will describe the Web-Based Training advantages

(1)   The Technology Is Cross Platform

Unlike other forms of computer-based training, Windows, Mac, or UNIX users, usually without requiring additional software can access web-based-training. You author the training programme once, and deliver it to any machine over the Internet or your Intranet.

(2)   Widely Available Internet Connections And Browsers

Most computer users have access to a browser such as Netscape Navigator, and are connected to a company's Intranet or have access to the Internet.

(3)   Flexibility, Accessibility And Convenience

Users can proceed through a training programme at their own pace and at their own place. They can also access the training at the time of need and only as much as they need. This is known as "just in time and just enough".

(4)   Cost Saving And Time Saving

Because the Internet can be accessed from any location, there are no travel costs for bringing remote employees to a centralised workshop. The actual time required for training by computer averages about 50 percent of that instructor-led training, additional cost saving are realised.

(5)   Inexpensive World-Wide Distribution

Web-based training can be accessed from any computer anywhere in the world, greatly reducing the distribution costs associated with training in other media.

(6)   Ease Of Update

If changes need to be made in the programme after the original implementation, they can be made on the server, which stores the programme, and everyone world-wide can access the update (Hall, 1997, 15-16).

4.7.3   Apprenticeship Training

It is a system in which an employee is given instruction and experience, both on and off the job, in all the practical and theoretical aspects of the work required in a skilled occupation, craft, or trade. Most apprenticeship programmes range in length from one to five years (Byars and Rue, 1991, 210). Apprenticeship programmes are based on voluntary co-operation between management and labour, between industry and government, between organisation and the school system (Sherman, Bohlander and Snell, 1996, 244).

4.7.3.1   Purpose Of Apprenticeship

Apprenticeship programmes create complement and versatile workers who have developed skills that are in demand by industry. Apprentices learn to work with different kinds of people in an actual working situation and become familiar with a company's organisation and operation. Apprenticeship programmes offer efficient way to learn skills and assess performance in planned and organised manner and they result in advantages for both employer and employee.

4.7.3.2   Advantage Of Apprenticeship

In many apprenticeship programmes, there are advantages to both employer and employees.

For an employer, apprenticeships can:

(1)   Motivate the workforce.

(2)   Set a graduated pay scale in proportion to ability and skill.

(3)   Increase productivity.

(4)   Minimise the need for supervision by developing initiative and ability.

(5)   Assure a supply of skilled workers.

(6)   Improve employer - employee relations.

For an employee, apprenticeship provides:

(1)   The opportunity to develop skills.

(2)   Increased employability and security.

(3)   Versatility to adapt technological changes.

(4)   A guaranteed wage with regular increase.

(5)   Improve employee - employer relations.

(6)   Recognition as skilled worker (HowardIII, 1996, 805).

4.8   Training Managers And Supervisors

Training managers and supervisors programmes may be held on or off the job.

4.8.1   On-The-Job Experience

Management skills and abilities cannot be acquired just by listening and observing or by reading about them. They must be acquired through actual practice and experience in that there are opportunities to perform under pressure and to learn from mistakes. Such experience should be planned and supervised and should be meaningful and challenging to the participants. Methods of providing on-the-job experience include the followings:

(1)   Coaching

Involves a continuing flow of instructions, comments, and suggestions from the manager to the subordinate.

(2)   Understudy Assignment

Grooms an individual to take over the manager's job by gaining experience in handling important functions of the job.

(3)   Job Rotation

It provides, through a variety of work experiences, the broad knowledge and understanding required to manage effectively.

(4)   Lateral Transfer

Involves horizontal movement through different departments along with upward movement in the organisation.

(5)   Project And Committee Assignments

It provides an opportunity for the individual to become involved in the study of current organisational problems, planning and decision-making activities.

(6)   Staff Meetings

It enables participants to become more familiar with problems and events occurring outside their immediate area by exposing them to the ideas and thoughts of other managers.

(7)   Planned Career Progression

It utilises all different methods to provide employees with the training and development necessary to progress through a series of jobs requiring higher levels of knowledge and skills.

4.8.2   Off-The-Job Experience

While on-the-job experience constitutes the core management training, certain methods of development away from the job could be used to supplement these experiences. These experiences could be gained by means of special programmes or seminars. They may include time management, assertiveness training, strategic training, employee appraisal, creative thinking, stress management, interpersonal skills, listening skills, and management of change (Sherman, Bohlander and Snell, 1996, 245-246). Tables (4.1), (4.2), (4.3), and (4.4) will describe some techniques used to develop managerial abilities in off-the-job programmes (Milkovich and Boudreau, 1988, 558).

Technique	Case Method
Description	Trainees study a written description of real decision-making situation, analyse, and choose solution.
Effectiveness	Best if there is interaction between trainer and trainee and among trainees. Can be effective with good cases and trainees. But little research exists to evaluate this technique.

Table 4.1   Case Method Technique

Technique	Role Playing
Description	Each participant is assigned a role and reacts to other players. Background information on other players and the situation is given, but there is no script. Can be videotaped for reanalysis.
Effectiveness	Success depends on ability of participants to play the roles believably. Evidence of effectiveness is mixed.

Table 4.2   Role Playing Technique

Technique	In -Basket
Description	Trainee is given material, which includes items from a manager's mail and telephone messages. Important and pressing matters are mixed in with routine items. Different subordinates or supervisor's versions of a situation make solutions less clear cut. Trainee is critiqued on the number of decisions made in the allowed time period, quality of decisions, and priorities used in making them.
Effectiveness	Some evidence that this method is useful in predicting managerial success.

Table 4.3   In-Basket Technique

Technique	Management Games
Description	The operating characteristic of a company is described in the form of equations, which can be manipulated in response to decisions made by a team. Each team's decisions compete with those of other teams. Results of team decisions provide inputs for next round of decisions.
Effectiveness	Advantages include integration of interacting decisions makers, provision of feedback, and the requirement that decisions be made with independent data, which simulates reality. Disadvantages include development and administration costs and the sometimes unrealistic or limited models underlying the equations.

Table 4.4   Management Games Technique

4.9   Training For Team Building

In recent years, more and more organisations have turned to the use of small work teams as a basic tool for reengineering their workforce and gaining employee commitment. Research supports the idea. Small groups have been found to be terrific at coming up with innovative ideas and high-quality solutions to problems. Some organisations are attempting to capitalise on the brain power and skills of the people closest to the jobs through the use of quality circle and other problem-solving team processes. In encouraging employees to work together, bounce ideas off each other, and come up with solutions to critical problems, organisations are beginning to adopt team strategies to keep up with competition. Competition is getting more difficult, and the need for innovation and commitment rather than mere efficiency become apparent.

How does a traditionally run organisations, in which the individual is the unit of analysis, change into a team-oriented one? Many strategies are needed. One popular approach is to provide training on how to work effectively as teams. Training can play a key role in the development of team concept, but certain deficits are apparent in the typical team-training approach. What follows are 10 common pitfalls, have to be avoided, of team building approaches.

(1)   Confusing team building with teamwork.

(2)   Viewing teams as if they are "closed systems."

(3)   Not using a systematic model to plan the team development.

(4)   Starting team training without assessing team needs.

(5)   Sending team members to team training individually rather than collectively.

(6)   Adopting and applying team building concepts that are not suitable for your society and are not based on your experience.

(7)   Assuming that teams are all basically alike.

(8)   Counting training alone to develop effective teams.

(9)   Treating team building as a programme rather than a process.

(10) Not holding teams accountable for using what they learn in team training (Huszczo, 1991, 41-64).

4.10   Training Process

There are 10 sequential steps necessary to be followed in order to help both team members and organisations achieve their objectives. These steps are:

(1)   Organisational performance analysis.

(2)   Training-needs integration plan.

(3)   A competency description.

(4)   Creation of learning objectives.

(5)   Participant analysis.

(6)   Learning design.

(7)   Evaluation and measurements.

(8)   Learning programme administration.

(9)   Reporting individual progress.

(10) Assessing organisational achievement (Becker, 1990, 9-10).

4.11   Principles of Learning

In previous sections of this chapter we have discussed the training needs and how they can be met. The use of sound learning principles during the training and the implementation of its programmes will help to ensure that the programme will succeed. The following principles are essential to enhance and improve the learning process.

(1)   Motivation To Achieve Personal Goals

If the training programme helps employees achieve some of their objectives, such as job security, financially and intellectually rewarding works, recognition, social status, responsibility, and achievement, the learning process is greatly facilitated.

(2)   Knowledge Of Results

Knowledge of results (feedback) influences the learning process. When employees are informed of their progress as measured against some standards, this help in setting goals for what remains to be learned. The continuous process of analysing progress and establishing new objectives greatly enhances learning. The progress of an individual or group can be plotted on a chart to form what is commonly called learning curves. Figure (4.1) illustrates two different learning curves. In the decreasing returns curve the trainee initially learns rapidly but later the learning rate slows. In the plateau curve, the trainee initially shows rapid improvement, this improvement levels off, and then shows rapid improvement again. The primary purpose of learning curves is to provide feedback on the trainee's progress. It could be used to help in deciding when to increase or decrease training or when to change training method.

(3)   Reinforcement

Praise and recognition are two typical positive reinforces. A trainee who is praised for good performance is likely to continue to strive to do better work. Punishment can be either the withholding of a reward or the use of an unpleasant act in an attempt to stop some type of behaviour. Punishment should be used carefully because it can produce harmful effect.

(4)   Flow Of Training Programme

Each segment of training should be organised, so that the individual can see not only its purpose but also how it will fit in with other parts of the programme. Gaps and inconsistencies in material are not conductive to effective learning.

(5)   Practice And Repetition

The old adage " practice makes perfect " is applicable in learning. When the trainees perform a particular operation or discuss their ideas, it helps them to concentrate on the subject. Repeating a task several times develops facility in performing it. Practice and repetition almost always enhance effective learning.
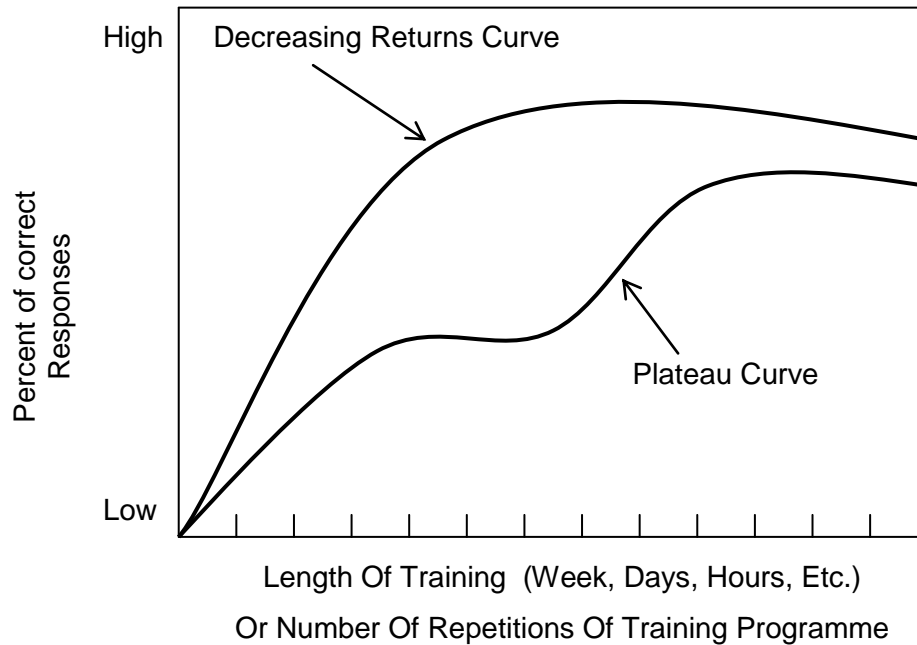
Figure 4.1 Learning Curves

(6) Spacing Of Sessions

Organisations frequently want to get an employee out of training and into a productive job as quickly as possible. The organisation has to decide whether the training should be given on consecutive days or at intervals. Generally, spacing out training over a period of time facilitates the learning process. But the interval most conducive to learning depends on the type of training (Byars and Rue, 1991, 212-213).

(7) Whole Versus Part Learning

Most jobs and tasks can be broken down into parts that lend themselves to further analysis. It is necessary to consider the nature of the task to be learned. The task can be broken down to facilitate learning. If not, it should be taught as a unit (Sherman, Bohlander and Snell, 1996, 255).

4.12   Training Evaluation

Training evaluation involves the collection of information on whether trainees were satisfied with the programme, learned the material, and were able to apply the skills in their jobs. In addition, evaluation ensures that the programmes are accountable and meet the particular needs of employees in a cost-effective manner (Bernardin and Russell, 1993, 311). Evaluation is the final phase of training. When the results of training programme are evaluated, a number of benefits occur. Less effective programmes can be withdrawn to save time and effort. Weaknesses within established programmes can be identified and remedied. Evaluation of training can be broke down into the following logical areas:

(1)   Reaction Evaluation

Reaction evaluation should consider a wide range of topics including programme content, programme structure and format, instructional techniques, instructors abilities, and style, quality of learning environment, extent to which training objectives were achieved, and recommendation for improvement (Byars and Rue, 1991, 215). Evaluation at this area can be either informal of formal.

- **Informal**

    Trainee gives oral feedback in answer to general questions such as "how do you enjoy it?" or "which parts were of most use of you?". If the trainer himself ask these questions, particularly on an individual basis, it can become embarrassing for both parties. If it is done on a group basis, at the end of training course, for instance, it needs careful handling to ensure that it remains both constructive and representative of the major view.

- **Formal**

    A questionnaire can be designed to elicit trainee's reaction to the course as whole and to specific aspects of it (Hackett, 1985, 128). The reaction evaluation questionnaire normally administrated immediately following the training, but can be administrated several weeks later.

(2)   Learning Evaluation

Learning evaluation is concerned with how well, the principles, facts and skills were understood and absorbed by the trainees. In the teaching of skills, classroom demonstration by trainees is a fairly objective way to determine how much learning is occurring. Where principles and facts are being taught, paper and pencil tests can be used. In order to obtain an accurate picture of what was learned, trainees should be tested both before and after the programme.

(3)   Behaviour Evaluation

Behaviour evaluation is concerned with the changing in the job behaviour of the trainee. It is much more difficult than reaction and learning evaluation. The following guidelines are offered for evaluating behaviour change:

(a)   A systematic appraisal should be made of on-the-job performance in a before - and - after basis.

(b)   The appraisal of performance should be made by one or more of following groups (the more the better) :

- The trainee.
- The trainee's superior or supervisor.
- The trainee's subordinates.

- The trainee's peers or other people thoroughly familiar with his or her performance.

(c)   A statistical analysis should be made to compare performance before and after and to relate changes to the training programme.

(d)   The post training appraisal should be made several months after the training so that the trainees have an opportunity to put into practice what they have learned.

(e)   A control group (not receiving the training) should be used.

(4)   Results Evaluation

Results evaluation attempts to measure changes in variable such as reduced turnover, reduced costs, improved efficiency, reduction in grievance, and increase in quantity and quality of production. Pre-tests, post-tests, and control groups, are required, as with behaviour evaluation, in performing an accurate results evaluation (Byars and Rue, 1991, 208-210).

4.13   Motivation

By referring to Oxford Dictionary, " to motivate, " means to supply motive or inducement. Motivation is the term used to describe the forces acting on or within a person that cause the person to behave in a specific, goal-directed manner (Hellriegel, Slocum, and Woodman, 1988, 142). Others defined Motivation as "an internal process through which human wants, needs, and desires are satisfied". Each person is unique and possesses different experiences, attitudes, and opinions. For most people, the need to work is a fact of life, they must earn money to support themselves and their families. Some workers devote their best efforts to the accomplishment of job tasks and perform beyond reasonable expectations. Others contribute minimal effort to their jobs, and few workers perform so poorly that they must be terminated. The priorities placed on job security, wages, potential for advancement, and preferred hours of employment vary widely among people.

4.14   The Importance Of Motivation

Human resources are essential to an organisation's success, in the forms of increased productivity, greater competitiveness, and improved quality of goods and services. Therefore, managers should learn to recognise what factors are important to employees' productivity. Today workers value meaningful work, give more attention to leisure activities, seek personal feedback, and exhibit impatience about gaining career success.

Employees, who are treated with respect, encouraged to excel, and reward for their efforts are more likely to demonstrate motivated job performance. Workers who are content with their jobs, who feel challenged, who have the opportunity to fulfil their goals will exhibit less destructive behaviour on the job. They will be absent less frequently, they will be less inclined to change jobs, and most importantly, they will produce at a higher level. The needs to motivate employee performance and emphasise product and services quality will continue to be top priority concerns (Miller, Catt, and Carlson, 1996, 320-321).

4.15   The Motivation Process

The word motivation comes from the Latin word " movere", which means" to move" the term has numerous definitions, usually include such words as aim, desire, end, impulse, intention, objectives. These definitions normally include three common characteristics of motivation. First, motivation is concerned with what activate human behaviour. Second, motivation involves what directs this behaviour toward a particular goal. Third, motivation is concerned with how behaviour is sustained. Motivation can be analysed using the following causative sequence, see figure (4.2).
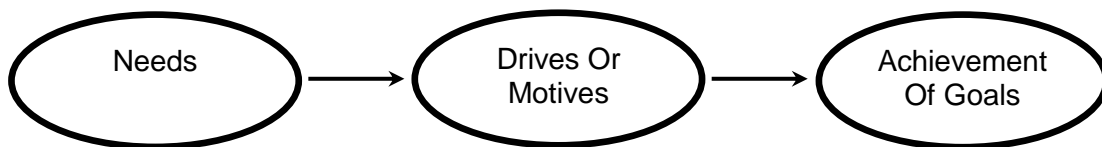
Figure 4.2 A Model For Motivation Process

In motivation, needs produce motives, which lead to the accomplishment of goals. Need arises from deficiencies, which can be either physical or psychological. A motive is a stimulus that leads to an action that satisfies the needs. Achievement of the goal satisfies the need and reduces the motive. When the goal is reached, balance is restores. However other needs arise which are then satisfied by the same sequence of events.

Understanding the motivation sequence in itself offers a manager a little help in determining what motives people. If, however, one reasons through the above sequence, it become evident that if a manager can change an employee's goals, the manager can then change the employee's behaviour, since behaviour results in positive or negative goal attainment (Rue and Byars, 1997, 286).

4.16   Theories Of Motivation

No organisation can succeed without a certain level of commitment and effort from its members. For that reason, managers and management scholars have always formed theories about motivation. The main objective of these theories is to perceive the factors that motive people towards gaining specific goals, and enable managers to deal with employees in order to achieve both the organisational goals and the human being needs.

4.16.1   Early Views Of Motivation

The early theories of motivation tried to construct a single model of motivation that would be applied to every worker in every situation. The traditional model, the human relations model and the human resources model each presented a different view of human beings. The assumptions, policies and expectations of these theories are discussed in tables (4.5), (4.6) and (4.7) (Stoner and Freeman, 1992, 440-442).

Traditional Model	
Assumptions	1. Work is inherently distasteful to most people. 2. What they do is less important than what they earn for doing it. 3. Few want or can handle work that requires creativity, self- direction, or self-control.
Policies	1. The manager should closely supervise and control subordinates. 2. He or she must break down tasks into simple, repetitive, easily learned operations. 3. He or she must establish detailed work routines and procedures, and enforce these fairly but firmly.
Expectation	People can tolerate work if the pay is decent and the boss is Fair. If tasks are simple enough and people are closely controlled, They will produce up to standard.

Table 4.5   The Traditional Model.

Human Relation Model	
Assumptions	(1) People want to feel useful and important. (2) People want to belong and to be recognised as individuals. (3) These needs are more important than money in motivating people to work.
Policies	(1) The manager should make each worker feel useful and important. (2) He or she should keep subordinates informed and listen to their objections and plans. (3) The manager should allow subordinates to exercise some self-direction and self-control on routine matters.
Expectation	(1) Sharing information with subordinates and involving them into routine decisions will satisfy their basic needs to belong and to feel important. (2) Satisfy these needs will improve moral and reduce resistance to formal authority and subordinates will "willingly co-operate"

Table 4.6   The Human Relation Model.

Human Resources Model	
Assumptions	(1) Work is not inherently distasteful. People want to contribute to meaningful goals that they have helped to establish. (2) Most people can exercise far more creativity, self-direction, and Self-control than their present job demand.
Policies	(1) The manager should make use of under-utilised human resources. (2) He or she must create an environment in which all members may contribute to the limits of their ability. (3) He or she must encourage full participation in important matters. Continually broadening subordinates self-direction and Self-control.
Expectation	(1) Expanding subordinate influence, self-direction, and self-control will lead to direct improvement on operating efficiency. (2) Work satisfaction may improve as a "by-product" of subordinates making full use of their resources.

Table 4.7   The Human Resources Model.

4.16.2   Content Theories Of Motivation

Content theories of motivation focus on the inner needs that motivate behaviour. They are four theories Maslow's Hierarchy of needs, ERG theory, Achievement - Power-Affiliation Approach, and Herzberg's Two-Factor theory. The following section will describe each of them in deep detail.

4.16.2.1   Maslow's Hierarchy Of Needs

Abraham Maslow formulated a theory that explained human behaviour in terms of a hierarchy of five general needs, see figure (4.3).

(1)   Physiological Needs

Physiological needs were the most basic needs in Maslow's hierarchy and include needs that must be satisfied for a person to survive including food, water, oxygen, sleep, sex, and sensory satisfaction.

(2)   Safety And Security

If the physiological needs are relatively satisfied, Maslow claimed that safety and security needs would emerge. These needs include a desire for security, stability, dependency, protection, freedom from feared anxiety, a need for structure, order and law. Threats of physical harm assault, tyranny, or wild animals prevent individuals from satisfying their safety needs and cause them to focus their energies almost exclusively on eliminating these threats.

(3)   Social Needs

Originally Maslow referred to these needs as the need for belongingness and love. Social needs include the need for motional love, friendship, and affectionate relationships with people in general, but specially a spouse, children, and friends. Individuals who are unable to satisfy this need will feel pangs or loneliness, ostracism, and rejection.

(4)   Ego And Esteem Needs

The need for ego and esteem includes the desire for self-respect, self-esteem, and for the esteem of others. These needs may be focused either internally or externally. When focused internally, the esteem needs include a desire for strength, achievement, adequacy, mastery, confidence, independence, and freedom. When focused externally these needs consist of a desire for reputation or prestige, status, fame and glory, dominance, recognition, attention, importance, dignity, and appreciation.

(5)   Self - Actualisation Needs

The highest need in Maslow's hierarchy was for self-actualisation, which refers to the needs for self-realisation, continues self-development, and the process of becoming all that a person is capable of becoming.

High-Order Needs

Self- Actualization
Needs

Ego And Esteem Needs

Social Needs

Safety And Security Needs

Physiological Needs

Low-Order Needs
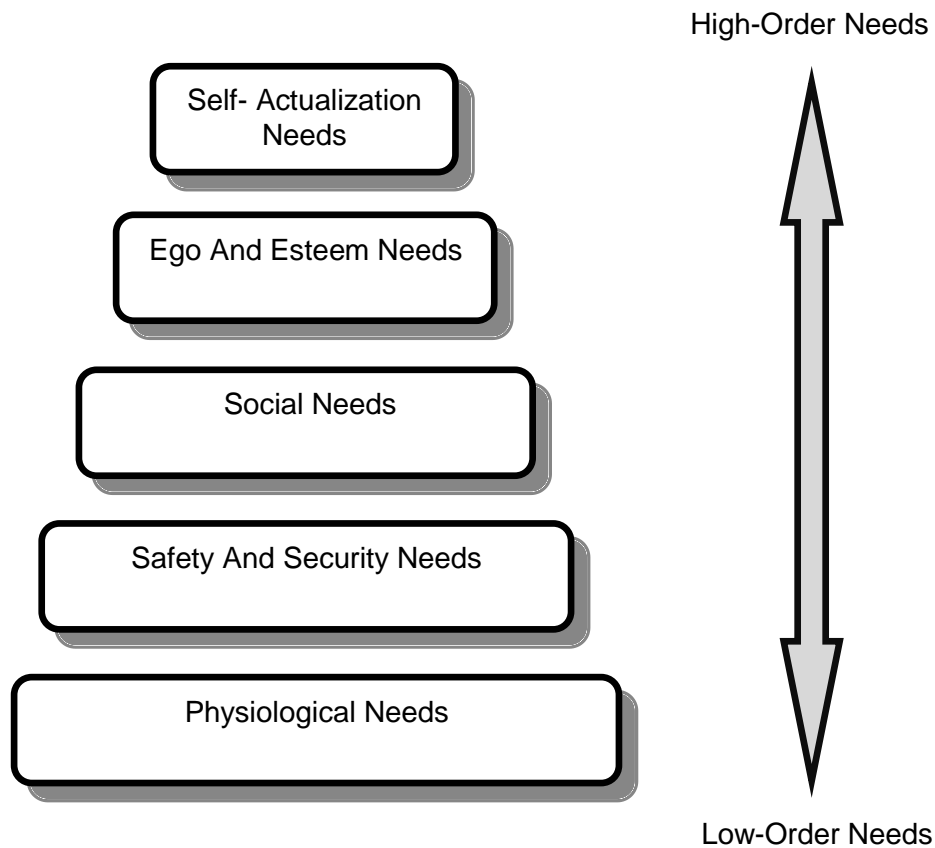
Figure 4.3 Maslow's Needs Hierarchy.

According to Maslow, these needs are arranged in a hierarchy of importance, which he called pre-potency. Higher-level needs are not important and are not manifested until lower-level needs are satisfied. Once lower-level needs are satisfied, needs at the next highest level emerge and influence behaviour. Maslow's theory has been widely adopted by organisations and is frequently used as the foundation for organisational development programmes such as participate management, job enrichment, and quality of work-life projects. According to his theory, an organisation must use a variety of factors to motivate behaviour since individuals will be at different levels of the need hierarchy (Steers and Porter, 1991, 34-45).

4.16.2.2   ERG Theory

Clayton Alderfer modified Maslow's approach and developed the ERG theory of motivation. Alderfer condensed Maslow's five categories of needs to three: Existence (E) needs, Relatedness (R), and Growth (G) needs.

(1)   Existence Needs

Include basic necessities, such as food, air, and water and are similar to Maslow's physiological and safety/security needs.

(2)   Relatedness Needs

Focus on interpersonal relationships, a feeling of being accepted by others, having their respect, and gaining positive recognition from them. Relatedness needs are similar to Maslow's social needs.

(3)   Growth Needs

Which include Maslow's self-actualisation and esteem needs, are illustrated by efforts to make creative work contributions and to develop professionally to the fullest extent possible. Compared to Maslow's hierarchy, Alderfer's model is probably more representative of actual human behaviour. Maslow's hierarchical arrangements emphasise the fulfilment of needs in an orderly progression from lower-to higher- order needs.

According to ERG theory, however, multiple unmet needs can simultaneously motivate behaviour. For example, an employee who holds a low-wage job and has a concern about job security (existence need) may also seek to be accepted by colleagues and earn their approval (relationship need). In addition, failure to meet a higher-order need may cause an individual to become frustrated, regress, and direct effort toward previously satisfied lower-order needs. For instance, an employee who has trouble developing satisfactory interpersonal relationships might strive to earn more income, even though the person already enjoys a comparatively high standard of living. Furthermore, it is possible that higher-order needs may be dominant over a lower-order need (Miller, Catt, and Carlson, 1996, 329-330). Figure (4.4) illustrates the relationship between Growth, Relatedness, and Existence. The solid line indicates a direct relationship between the set of needs, desire, and needs satisfaction. The dotted line indicates what happens when sets of needs are frustrated.

Needs Frustration	Desire Of Strength	Needs Satisfaction
Frustration Of Growth Needs	Importance Of Growth Needs	Satisfaction Of Growth Needs
Frustration Of Existence	Importance Of Growth Needs	Satisfaction Of Growth Needs
Frustration Of Existence	Frustration Of Existence	Satisfaction Of Growth Needs
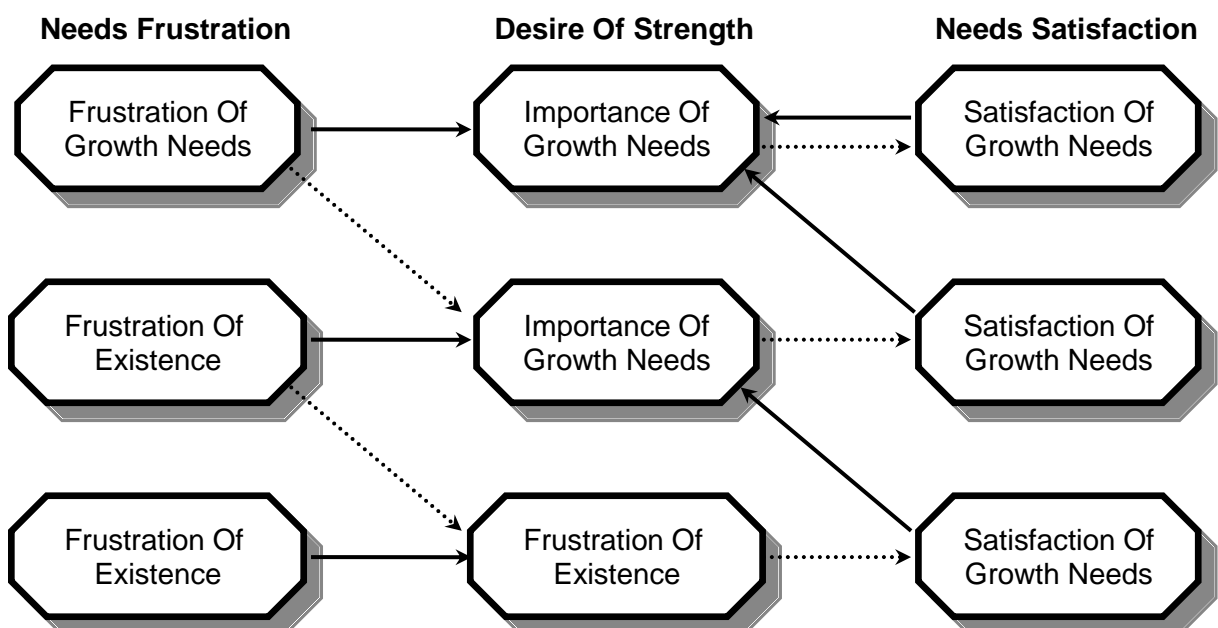
Figure 4.4 Graphic Representation Of Alderfer's ERG Theory

4.16.2.3   Achievement-Power-Affiliation Approach

The achievement-power-affiliation approach to motivation is primarily developed by David McClelland. While recognising that people have many different needs, this approach to motivation focused on three needs, (1) the need to achieve, (2) the need for power, and (3) the need for affiliation. The need for achievement is a desire to do something better or more efficiently than it has been done before that is, to achieve. The need for power is basically a concern for influencing people to be strong and influential. The need for affiliation is a need to establish or maintain friendly relations with others.

McClelland maintains that most people have developed each of these needs to some extent, but the level of intensity varies among people. To motivate employees using this approach, the manager should determine which of the needs are dominant and design motivational appeals accordingly. If all levels were low, goal adjustment would probably be necessary. Measuring each of the areas and the various possible combinations is where the problem with this method usually lies (Rue and Byars, 1997, 289-290).

4.16.2.4   Herzberg's Two-Factor Theory Of Motivation

Frederick Herzberg's research centred on the workplace itself. Herzberg analysed data obtained from engineers and accountants. He used critical incidents to identify motivators and hygiene factors that corresponding to the good and bad feelings that they had about their jobs. In Herzberg's view, motivator factors contribute to job satisfaction and accordingly serve to motivate. Conversely, hygiene factors, often called dissatisfies, represent potential source of job dissatisfaction. Although employees want to have good salaries, positive relations with the boss, and up-to date equipment, the presence of these factors does not necessarily mean that they will work harder and be more productive at their jobs. Opportunities for advancement, achievement, and recognition are examples of motivator factors. Unlike hygiene factors, motivator factors do not solely help workers to avoid job dissatisfaction. Motivator factors also encourage employees to be productive. For example, the potential for promotion (a motivator factor) encourages a worker to excel, but if no such opportunities exist, employees motivation is not directly affected. On the other hand, the quality of supervision (a hygiene factor) does not encourage motivation but is a source of job dissatisfaction an employee perceives it to deteriorate. The theory provides a basis for enriching jobs to make work meaningful and fulfilling (Miller, Catt, and Carlson, 1996, 331).

4.16.2.5   Critique Of the Content Theories

Content theories stress understanding the factors within individuals that cause them to act in a certain way. For example, an employee who has a strong need to achieve may be motivated to work overtime to complete a difficult task on time; an employee with a strong need for self-esteem may be motivated to work carefully to produce high-quality work. At first glance, this approach

seems simple: determine a subordinate's needs, and a manager can predict the type of task and setting that will best motivate the subordinates, in practice, motivation is far more complicated. There are many reasons for that. First, needs vary among individuals and change over time. Many managers failing to understand this find motivating subordinates a discouraging and frustrating task. Second, the ways in which needs are translated into behaviour also vary widely.

One person with a strong need for security may play it safe and avoid responsibility for fear of failing; another person with an equal strong need for security may seek out responsibility for fear of being judged a low performer. Third, even if needs are consistent, behaviour is not. An employee with a strong need for self-esteem might outperform our highest expectation on one day and perform dismally on another day. Fourth, the way people react to need fulfilment varies. Take individuals with a high need for security, some who fail become frustrated and give up, while others will reduce their effort. Finally, some critics charge that the content theories do not travel well. People from other countries and cultures tend to rank their needs differently. These critiques do not mean that the content theories are without value. On the contrary, they are extremely valuable in helping managers realise that motivation varies from person to person. Managers can try to assess individual needs and use this understanding to create work assignments that will build on existing motivational strength (Stoner and Freeman, 1992, 447-448).

4.16.3   Process Theories of Motivation

Process theories of motivation study the thought process by which people decide how to act.

4.16.3.1   The Expectancy Approach

It is a widely accepted approach to motivation. It was developed by Victor H. Vroom and has been expanded and refined by Porter, Lawler and others. Vroom explains that motivation is a product of three factors: valence, which refers to the strength of a person's preference for receiving a reward. Expectancy, which refers to the strength of belief that one's work-related effort, will result in completion of a task. Instrumentality, which represents the employee's belief that a reward will be received once the task, is accomplished. This relationship is stated in the following formula: **Valence X Expectance X Instrumentality = Motivation** (Newstrom and Davis, 1997, 145-152).

We can think of these three components as three questions. If I do this, what will be the outcome? Is the outcome worth the effort to meet? What are my chances of achieving an outcome that will be worthwhile for me? As individual answer to these questions will depend on, to some extent, the type of outcome expected. Some outcomes act as intrinsic rewards that experienced directly by the individual. Examples are feeling of accomplishment, increased self-esteem, and the satisfaction of developing new skills. Extrinsic rewards, in contrast, such as bounce, praise, or promotion, are provided by an outside agent, such as supervisor or work group, see figure (4.5).

Individual Decides To
Work Hard And Best
Effort

Expectancy   "I Expect To Be A High Performer"

High performance
Is achieved and is
associated with:

Instrumentally

Being Ostracized For
Being A High
Performer

Being Transferred

Being Expected To
Always Be A High
Performer

Being Ostracized For
Merit Pay Increase

Recognition For Good
Work

Being Considered For
Promotion

Being Named To A
Work Improvement
committee

Negative Valance Outcomes   Positive Valance Outcomes

Figure 4.5 The Expectancy Theory Of Motivation.

The expectancy model has a number of clear implications for how managers and organisations should motivate subordinates.

4.16.3.1.1 Manager Implications

Manager implications include the following items.

(1)   Determining The Rewards Valued By Each Subordinate

If rewards are to be motivators, they must be suitable for the individuals. Managers can determine what rewards their subordinates seek by observing their reactions in different situations and by asking them what reward they desire.

(2)   Determining The Performance You Desire

Managers must identify what performance level or behaviour they want so they can tell subordinates what they must do to be rewarded.

(3)   Make The Performance Level Attainable

If subordinates feel the goal they are being asked to pursue is too difficult or impossible, their motivation will be low.

(4)   Link Rewards To Performance

To maintain motivation, the appropriate reward must be clearly associated within a short period of time with successful performance.

(5)   **Analyse What Factors Might Counteract The Effectiveness Of The Reward**

Conflicts between the manager reward system and other influences in the work situation may require the manager to make some adjustment in the reward. For example, if the subordinate work group favour low productivity, an above average reward may be required to motivate a subordinate to high performance productivity.

(6)   Make Sure The Reward Is Adequate.

Minor rewards will be minor motivator.

4.16.3.1.2 Implication For Organisations

The expectancy model of motivation also has a number of implications for organisations. These include:

(1)   Organisations Usually Get What They Reward, Not What They Want

The organisation reward system must be designed to motivate the behaviours desired. For example, reward the duration of one's employment in the organisation, not the quality of one's performance.

(2)   The Job Can Be Made Intrinsically Rewarding

If jobs are designed to fulfil some of the higher needs of employees (such as independence or creativity), they can be motivating in themselves. This implication is obviously the basis of many job-enrichment programmes. However, those individuals who do not desire enriched jobs should not to take them.

(3) The Immediate Supervisor Has An Important Role In Motivation Process.

The supervisor is in the best position to define clear goals and to provide appropriate rewards for his or her various subordinates; the supervisor should therefore be trained

in the motivation process and given enough authority to administer rewards (Stoner and Freeman, 1992, 451-452).

4.16.4   The Equity Approach

The equity approach is concerned with individual's beliefs about how fairly they are treated compared with their peers. One of the manager's most difficult tasks is to assure equity in rewarding performance. The primary research on the equity model was done by J.S.Adams. He stated that individuals mentally form ration to compare their outcomes and inputs with those of similar others to determine whether they have been treated fairly. Outcomes from work include both intrinsic and extrinsic rewards. Inputs are what the employee gives to the job (Hellriegel and Slocum, 1992, 448-450). The possible results of the comparison process are summarised as follows.

$$\frac{Op}{Ip} < \frac{Oc}{Ic} \qquad \text{" I'm Getting Less Than I Deserve For My Effort"}$$

$$\frac{Op}{Ip} > \frac{Oc}{Ic} \qquad \text{" I'm Getting More Than I Deserve"}$$

$$\frac{Op}{Ip} = \frac{Oc}{Ic} \qquad \text{" We Are Being Treated Equally"}$$

Where, Op =   What the focal person gets from a situation.

Ip =   What the focal person puts into a situation.

Oc =   What the comparison others get from a situation

Ic =   What the comparison others put into a situation

This concept implies that employees are willing to accept that others make more money than they do if they see that the others are working harder, or that the others are better qualified for the job. If a person sees the comparison individual, or reference group, as a marginal contributor to the situation, and still their rewards are greater, then the person will experience inequity. Those people, who experience inequity, will choose one of the following six alternatives in an effort to reduce it, see figure (4.6).
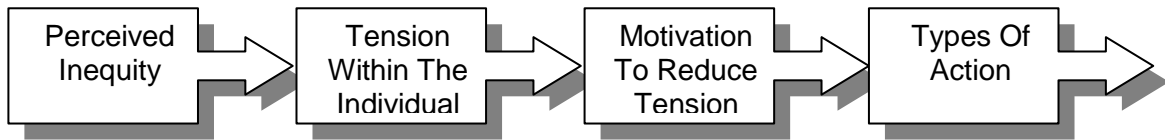
Figure 4.6 Motivational Process Of Inequity.

(1)   By altering their inputs or changing the amount of effort or energy they put into the situation.

(2)   By changing their outcomes, for example, by demanding pay rises or promotion.

(3)   By distorting their inputs and/or outcomes cognitively, for example, by rationalising to themselves that they really did not work so hard after all.

(4)   By leaving the field, in other words, by increasing their absence or quitting.

(5)   By trying to influence the comparison people, for example, by trying to get the others not to work so hard.

(6)   By changing the objects of their comparison, for example, by comparing themselves with people within the department rather than across the entire organisation.

The major contribution of equity theory is that it highlights the importance of social comparison process. People evaluate themselves in the social context and compare themselves to others. Equity theory suggests that managers would provide employees with accurate information, not only about their inputs and outcomes, but also about the input and outcomes of others. In this way employees can make correct assessments (Bonne and Kurtz, 1992, 356-357).

4.16.5   Goal Setting Theory

Goals are targets and objectives for future performance. They help focus employees' attention on items of greater importance to the organisation, encourage better planning for the allocation of critical resources (time, money, and energy), and stimulate the preparation of action plans for goal attainment. Goal setting works as a motivational process because it creates a discrepancy between the current and expected performance. This results in a feeling of tension, which the employee can diminish through goal attainment. Meeting the goals also helps satisfy a person's achievement drive, contributes to feeling of competence and self-esteem, and further stimulates personal growth needs. Individuals who achieve goals tend to set even higher goals in the future.

4.16.5.1   Elements Of Goals Setting

Goal setting, as a motivational tool, is most effective when all its major elements are present. These elements are:

(1)   Goal Acceptance

Effective goals need to be not only understood but also accepted. Simply assessing goals to employees may not result in their commitment to those goals, especially if the goals are difficult to accomplish. As a minimum, supervisors need to explain the purpose behind goals and the necessity for them. A more powerful method of obtaining acceptances is to allow the employees to participate in the goal-setting process.

(2)   Specificity

Goals need to be as specific, clear, and measurable as possible so that employees will know when a goal is reached.

(3)   Challenge

Perhaps surprisingly, most employees work harder when they have difficult goals to accomplish rather than easy ones. Hard goals present a challenge that appeals to the achievement drive with many employees. These goals must, however, still achievable, given the experience of the individual and the resources available.

(4)   Performance Monitoring And Feedback

Even after employees have participated in setting well-defined and challenging goals, two other closely related steps are important to complete the process. The first step is performance monitoring where the second one is feedback. Performance monitoring includes observing behaviour, inspecting output, or studying documents of performance. These indicators provide at least subtle cues to employees that their tasks are important, their effort is needed, and their contributions are valued. Monitoring results, however, may not be enough. Many employees are hungry for information about how well they are performing. Without performance feedback people will be working in the dark, and have no clear idea how successful they are (Newstrom and Davis, 1997, 135-138).

4.16.5.2   Critique Of The Process Theories

The process theories help explain what goes on inside the heads of employees and colleagues and can aid us understand, and even anticipate, people's reaction to a manager's effort to lead. The major drawback of these theories is that they are only really useful after managers have gotten to know their subordinates and their individual personalities; and this takes some time and effort. Moreover, employees who have experienced inequity in the past or who have unfulfilled security needs may be slow to trust a manager and reveal what rewards have the most valences for them. This drawback can be overcome, however, if managers are careful to establish clear standards for acceptable performance and an equitable system of extrinsic rewards. They should also remember

that while the valence of certain extrinsic rewards will vary from person to person, the satisfaction of doing a good job is intrinsically satisfying for almost everyone. The manger first task, is to assume that employees have the resources they need to do their best (Stoner and Freeman, 1992, 454).

4.16.6   Reinforcement Theory

The development of the reinforcement theory of motivation is generally credited to B.F.Skinner. The general idea behind reinforcement theory is that the consequence of person's present behaviour influence future behaviour. For example, behaviour that leads to positive consequence is likely to be repeated, whereas behaviour that leads to a negative consequence is unlikely to be repeated. The consequences of an individual's behaviour are called reinforcement. Basically, there are four types of reinforcement exist:

(1)   Positive Reinforcement

Involves providing a positive consequence as a result of desirable behaviour.

(2)   Avoidance

It is also called negative reinforcement, refers to giving a person the opportunity to avoid negative consequence by exhibiting a desirable behaviour.

(3)   Extinction

Involves providing no positive consequence or removing previously provided positive consequence as a result of undesirable behaviour.

(4) Punishment

Involves providing a negative consequence as a result of undesirable behaviour (Rue and Byars, 1997, 292).

W.Clay Hamner has developed a six-rule formula for behaviour modification:

Rule 1.   Don't Reward All Individuals Equally

To be effective reinforce, rewards should be based on performance. Rewarding everyone equally in effect reinforces poor and average performance and ignores high performance.

Rule 2.   Be Aware That Failure To Respond Can Also Modify Behaviour

Managers influence their subordinates by what they do not do as well as by what they do. For example failing to praise a deserving subordinate may cause that subordinate to perform poorly next time.

Rule 3.   Be Sure To Tell Individuals What They Can Do To Get Reinforcement

Setting a performance standard lets individuals know what they should do to be rewarded, they can then adjust their work pattern accordingly.

Rule 4.   Be Sure To Tell Individuals What They Are Doing Wrong

If a manager withholds rewards from a subordinate without indicating why the subordinate is not being rewarded, the subordinate may be confused about what behaviour the manager finds undesirable.

Rule 5.   Don't Punish In Front Of Others

Reprimanding a subordinate might, sometimes, be a useful way of eliminating an undesirable behaviour. Public reprimand, however, humiliates the subordinates and may cause all the members of the work group to resent the manager.

Rule 6.   Be Fair

The consequence of behaviour should be appropriate. Subordinates should be given the rewards they deserve. Failure to reward subordinates properly or over-rewarding undeserving subordinates reduce the reinforcing effect of rewards (Stoner and Freeman, 1992, 456).

4.16.6.1   Critique Of Reinforcement Theory

The idea of " behaviour modification" is disturbing since it implies that individuals behaviour can be predicted from a person's past experiences and present environment, which seems to challenge the held beliefs that human beings freely choose how to act. In addition, many people fear that behaviour modification techniques can be abused to make people behaviour in unethical way. Reinforcement-based approach is sometimes more practical than approaches based on other theories of motivation. In day-to-day operations, a manager may not be able to take the time to understand the personal needs of every employee.

4.17   Motivation Techniques

Highly motivated people typically work hard and devote considerable energy to the attainment of their goals. More and more organisations are encouraging employees to become involved in problem solving, seeking their recommendation and loyalty, and granting them greater authority to make decisions. Many techniques are applied to motivate human resources.

(1)   Self-Motivation

Managers who cannot motivate themselves are likely to have difficulty trying to motivate their employees. Attitude is a major factor in self-motivation. Rather than dwelling on negative possibilities, a focus on positive outcomes helps to overcome obstacle and inevitable disappointment. Self-Motivation involves an examination of oneself in terms of needs, wants, and interests. Many people who excel appear to possess insight into their own behaviours (Miller, Catt, and Carlson, 1996, 338). Organisation have to help team members and employees to build and enhance their

self-motivation and encourage them to learn from their mistakes, and try to be persistent contributor to achieve both the organisational and personal goals.

(2)   Empowering Employees

Empowerment is more than a buzzword. Power is the ability to act. Empowerment implies giving power to others or creating in others the sense of personal power: power to achieve, accomplish and succeed. An organisation which has people who feel empowered, act empowered and empower others in a highly flexible resources. Leaders need to recognise their responsibility for enabling empowerment in others and developing the environment for success. Lack of power means inability to act. Nobody wants to work in an organisation, which has no ability to

act or do anything. Everyone wants to participate in achievement. Therefore, we need empowered organisations and empowered people (Leppitt, 1993).

(3)   Goal Setting

Goal setting focuses on making a conscious effort to achieve specified goals. This technique involves employees and provides opportunities for them to ask questions, express opinions, give criticisms, and receive feedback. When goal setting is in place, workers know what they are trying to accomplish and have a basic motive to allocate their time and effort. Several characteristics are important to effective goal setting. Specific and challenging goals that employees accept are most motivational. Feedback is also relevant because it enables workers to assess their progress in reaching goals. When workers are given a sense of direction, fewer misunderstandings occur and less time is lost by concentrating effort in appropriate tasks. If goals are too easily reached, they will not motivate workers, on the other hand if goals are too difficult or must be completely attainable, workers will give up and not try to reach them. So goals must be at least moderately challenging (Miller, Catt, and Carlson, 1996, 340).

(4)   Rewards System In Organisation

The organisation reward system consists of the types of rewards that are to be offered and their distribution. The reward system should achieve the following objectives:

(a)   Attract individuals with the knowledge, ability, and talents demands by specific organisational tasks.

(b)   Retain valued and productive employees.

(c)   Promote specific job behaviours conductive to higher level of job performance.

(d)   Promote attitudes conductive to loyalty and commitment to the organisation, high job involvement, and job satisfaction.

(e)   Stimulate employees growth that enables the employee to accept more challenging positions (Kanungo and Mendonca , 1994,51-52).

There are two kinds of rewards, the tangible and the intangible rewards. The tangible rewards include salary increase, promotion, prizes and bounce. Intangible rewards include recognition, praise, and approval. Managers have to practice and use positive reinforcement, from simplest to strongest, this may include: expressing of pleasure, smiling, nodding, touching the shoulders, saying thanks and words of encouragement, asking them to serve as a model to others, also teaching their techniques to others, and helping build a winning team. Positive reinforcement is the key both to training and to motivation (Higgins, 1993, 94-98).

(5)   Communication And Feedback As Motivator

Employees want to be treated fairly and to be given opportunities to express their views. High organisational morale is associated with managers who are accessible and responsive to worker concerns. Some managers have an open-door-policy; their employees are invited to come in and discuss topics of interests. Managers employ the concept of Managing By Walking Around (MBWA) to become better acquainted with employee job responsibilities and problems. Such a setting is more informal and conversational in nature. Managers who visit employees at their workstations are likely to learn quite a lot about job interests and quality concerns. In many Japanese firms, tables and chairs are arranged with no dividers to physically separate workers from bosses. Such an approach enables managers to know if job assignments are being completed and to become better acquainted with the strengths and weaknesses of their employees. (Miller, Catt, and Carlson, 1996, 342). Feedback is most effective when follows performance is. Feedback should be relevant to task and should provide employees with clues on how they might improve their performance at the task. Never give negative evaluation feedback without providing informational feedback (Spitzer, 1990, 101-103).

4.18   Conclusions

Chapter four manipulated two subjects, training and motivation of team members. The literature defined training as "a learning process that involves the acquisition of skills, concepts, rules or attitudes to increase the performance of employees". Training programmes are essential for both organisation and employees, because they help organisation to achieve its objectives and help employees and team members to adapt to the continuous changes in the surrounding environment. Most medium-size and large organisations have a formal orientation programme to introduce the new member to colleagues and procedures. An effective orientation programme should provide the individual with the basic understanding of the organisation and its philosophy, objectives, policies, and organisation structure. There are two levels of orientation, general company orientation and department and job orientation. Every team member has to be provided

with an orientation kit in order to supplement the verbal orientation programme. This chapter discussed the orientation length and timing as well as orientation benefits.

The first year of many employees is very frustrating experience, full of stresses, anxiety and difficulties. For others, the initial years are a marvellously satisfying experience, full of excitement, achievement and personal development. Socialisation process explains what takes place during initial work years that affects the amount of stress one feels and determine one set of outcomes over the others. In addition, it shows employees and team members how to deal with the new environment. Socialisation period varies from person to person according to their abilities, need, prior experience, and level of complexity of one's job. It may range from month or two on very routine, programmed type jobs to as much years on very skilled, unprogrammed type job.

Training programme should help individuals and team members to adapt to the continues changes in the business market and increase the organisation effectiveness and productivity. It is important for organisations to determine its training needs. There are three different analyses recommend for use in determining training needs. They are organisational analysis, task analysis, and person analysis. After training needs are determined, it is necessary to establish training objectives. These objectives could be established at three levels, instructional objectives, organisational and departmental objectives, and individual performance and growth objectives.

Training programmes should be designed to fulfil the need of all levels of organisation. There are two levels of training, training for non-managerial employees and training for managers and supervisors. Training could be performed on-the-job or off-the job.

Managers must use training as an effective tool to enhance the team building process. This could be achieved by encouraging team members to improve their skills and to work together to obtain new techniques in order to escalates their productivity and enhance their performance. In addition, it is imperative that both trainers and trainees understand the training process, learning principles, and training evaluation so that every person can contribute his or her effort to make success to the training programmes.

The second subject discussed in chapter four was the motivation process. Organisations could not increase their efficiency without a certain level of commitment and effort from their members. For that reason mangers need to understand motivation which is defined as "an internal process through which human wants, needs and desires are satisfied". Individuals and team members strive to satisfy identified needs. When these needs are fulfilled, satisfaction occurs. If needs remain unfulfilled, individuals and team members become frustrated.

The early views of motivation tried to construct a single model of motivation that would apply to every work in every situation. The traditional model assumes that workers were best motivated by financial incentives, while the human relations model emphasised employees social needs. Theorists of the human resources proposed the idea that works in inherently satisfying, employees have ambition, want to work, and willing to accept responsibility. Content theories of motivation emphasise the individual's inner needs. The most influential theories here are Maslow's hierarchy of needs, ERG theory,

McClelland's work on the need for achievement, the Herzberg's two factor theory. The relative simplicity of content theories is appealing, but they have been criticised
for not recognising that needs vary among individuals and change over time, just as the behaviour resulting from needs varies over time.

Process theory of motivation examined the thought process by which people decide how to act, in the expectancy approach, this decision involves answering three questions "If I do this, what will be the outcome?" " Is the outcome worth the effort to me?" and " what are my chances of achieving an outcome that will be worthwhile to me?" The equity approach studies how motivation is affected by expectation of equity and inequity, while goal-setting theory studies the process by which people set goals. Although process theory has many advantages, it works best when managers come to know their employees as individuals, a time-consuming and sometimes frustrating task.

Reinforcement theory associated with the psychologist B.F.Skinner, side steps the question of inner motivation by looking at how the consequence of a person's present behaviour influences future behaviour. Behaviour modification, the use of reinforcement theory to change human behaviour, is controversial because it seems to threaten individual freedom. However behaviour modification can be very useful in training and dealing with many employees who have widely varying values and levels of motivation. Self-Motivation, empowering employees, goal setting, rewards, and communication and feedback are techniques used to encourage and motivate employees and team members to escalate their efficiency and productivity.

In the next chapter we will apply the principles and concepts discussed in chapters two, three and four on the process of building the architectural teams in design firms.

CHAPTER 5

BUILDING THE ARCHITECTURAL TEAM IN DESIGN FIRMS

5.1   Introduction

Training and motivation of team members were the two topics discussed in chapter four. The rapid changes in policy, economy, law, technology, competition as well as the people's need have necessitated the training for workforces. Training programmes help both, organisations to achieve its objectives and employees and team members to adapt to the continues changes in the surrounding environment.

Orientation and socialisation have two important roles to new employees. Orientation introduces them to the organisation, work unit, and job, where socialisation explains what takes place during initial work years and how the new employee deals with the new environment. Both processes are discussed in chapter four.

Successful training programmes should be built on two important bases, the training needs and the training objectives. The first base is intended to determine whether a need for training actually exists, where the second one is intended to establish the objectives that match these needs. The previous chapter examined the determination of training needs and establishment of training objectives.

Many important subjects were discussed in order to illustrate its contribution to the training process, these subjects are the training programmes for non-managerial employees, managers and supervisors coupled with the role of training in team building, as well as training process, principles of learning and training evaluation.

Employees and team members, who are treated with respect, encouraged to excel, and rewarded for their effort are more likely to demonstrate motivated job performance. In order to help managers to learn what factors motivate employees and team members to increase their productivity, the second topic of chapter four was devoted to explain the motivation process, theories of motivation, and motivation techniques.

Chapter five will apply all the concepts, information, roles, techniques, theories discussed and examined in chapter two through to chapter four in order to build the effective architectural team in design firms. This chapter will explain the role of the architectural team in the construction industry and the importance of building a successful and effective team who are capable to achieve both the client and the organisation objectives.

In order to have the right approach to building the architectural team, this chapter will establish an elaborated background about the architecture profession. It will illustrate

what is meant by architecture, the historical role of the architect, and an introduction to design, which encompasses design theories, design process and systematic plan of work.

As many hands make light work, and many heads are better than one, the team work In the architectural field is an imperative issue since any design involves the blending together of various disciplines which no one individual is expert in every area involved in the architectural design. The importance of team concept in design firms and organisational frame works will be discussed.

To be aware of how design firms recruit and select the architectural team members, this chapter spots the lights on the recruitment philosophy, the different activities and recommended steps involved in the recruitment and selection process. After the selection process is completed, the team leader has to maintain the team spirit and state the team building concepts and principles that ensure the creation of successful and competent team.

Training the architectural team members is an essential activity in design firms. The aim of training is to improve the abilities and skills of team members to achieve the client and the organisation objectives as well as to help team members to cope with the rapid change in the construction industry. In addition, motivating the architectural team members has an enormous impact on enhancing and increasing the team productivity. Chapter five will explain in detail the training and motivation process of architectural team members.

5.2   Why Studying An Architectural Team?

When the client perceive that the best way to achieve his or her objectives is to construct a building, whatever the use of that building will be, the client has to contact an architect who will design that building. Clients typically select architects according to certain qualifications. They usually include combination of the followings:

(1)   Resources Available To The Job

Most owners want to be sure that the firm has, or can assemble, the expertise necessary to meet the project's scope, quality, time and cost requirements. Experienced owners want to meet the key people who will be working on their projects.

(2)   Experience With Owner, Project , Or Facility Type

For more complex projects or facilities, specialised expertise and experience may be required.

(3)   Management Ability

Architects are often asked to submit proposals describing project organisation and team co-ordination concept, strategies, and control.

(4)   Compatibility

Every person and organisation has its own values, priorities, and operating styles. The owner-professional relationship must be established quickly and well. Compatibility, sometimes, called "chemistry", between owner and professional is important.

(5)   Problem-Solving Approach

How sensitive is the architect to the owner's needs and the important issues in the project? How will the architect go about addressing them?

(6)   Cost And Value Services

As in retaining any professional on whose judgement one intends to rely, it is the quality of that judgement that serves as the primary selection factor. Most experienced clients, including government, select architects on the basis of qualifications, the cost of services becomes an issue if agreement on compensation cannot be reached with the most qualified firm.

(7)   Strength Of Ideas

Some owners are willing to trade any or all of the above to select professionals who have strong ideas and manifest them in their work (Haviland, 1994, 419-420).

After the client chose the professional and the suitable architect, the architectural team members will devote all their efforts to achieve the client project. It is imperative that the architectural team achieves the client goals, on time, within budget, and as specified. As the proverb says "the first impression is the last", the architectural team is the first line of contact with clients in the construction industry. When the team succeeds to fulfil the client requirements, we can consider it as a successful and competent team who can compete for the future. In addition, it is a healthy indicator of the organisation growth and stability. Furthermore, the organisation won a customer who will encourage others to deal with it. In the light of the above, any design firm has to understand the principles of team building in general, and architectural team in particular. The following section will establish an elaborated background about the architectural profession and the design process as an approach in order to facilitate the study of team building, recruitment and selection, as well as training and motivation of architectural team members.

5.3   What Is Architecture?

By referring to Webster Dictionary, " Architecture" has one of the following meanings:

(1)   The art of making plans for buildings, the work of an architect.

(2)   The style or styles of building that an architect produces or imitates; as a church or modern architecture.

"Architecture" could be defined as the science and the art of building. It is understood to be the whole of the environment built by humans, including buildings, urban spaces, and landscape.

Architecture is the unavoidable art. Every moment, awake or asleep we are in buildings, around buildings, in spaces defined by buildings or in landscapes shaped by human artifice. It is possible to take deliberate steps to avoid looking at painting, sculpture, drawings, or any of the other visual arts, but architecture constantly touches us, shape our behaviour, and conditions our psychological mood. The blind and deaf may not see painting or hear music, but like all other humans they must deal with architecture.

More than being merely shelters or a protective umbrella, architecture is also the physical record of human activity and aspiration. It is the culture legacy left us. The architect Louis Kahn wrote, "architecture is what nature cannot make". Humans are among several animals that build, and indeed some structures built by birds, bees, termites, to name but a few, are like human engineering in their economy of structure.

The only thing that distinguish the human buildings from other creatures that build, that human think as they build, so that human building is a conscious act, a reflective act, an act that embodies countless decisions and choices. Humans build to satisfy a need, but even they do so, they give expression to feelings and values; they are expressing in wood, stone, metal, plaster, and plastic what they believe vital and important, where it is a bicycle shed or cathedral (Roth, 1994, 1-5).

5.4   The Historical Role Of The Architect

The word "architect" comes from the Greek word "archikton" meaning "chief craftsman". During the middle age (about 1000 to 1400 AD) the term "architect" was seldom used. Architect was commonly referred to as "Master" in English, "Magister" in Latin, and "Maestro" in Italian. Whether the title "the architect" in those days was considered to be chief craftsman or master builder and overseer of work he would not only plan and design, but engage the craftsmen and labourers needed to build his creations and also supervise the actual building operations.

It is arguable that the term "chief craftsman", the person who controls the erection of any structure is an architect. Under this definition a properly erected wigwam, a primitive hut and Stonehenge are all the work of the architects. Nowadays however, most critics would tend to argue that an architect is a person responsible for a building, which is not only conventionally planned and properly built, but is pleasurable to the eye of the beholder. This is summed up in Sir Henry Wooton's book "The Elements of Architecture", 1624, of commodity, firmness, and delight. Which remains today as the standard by which many judge architecture.

In Egyptian times it was difficult to build structures which met Wooton's criteria. The slave labour used at that time was unskilled, and the buildings tended to be massively formed from huge blocks of stone. The best example is the pyramids, which are still standing today. These pyramids were in fact huge tombs, and clearly the originator of these gigantic structures possessed great mathematical skills, see figure (5.1).

Figure 5.1 View Of The Pyramids, Giza, Egypt

Surrounding the pyramids were colleges and temples. The temples were commonly constructed of granite, with tapering walls, rather squat pillars, and flat roofs. These Egyptian architects were proving that one of the simplest way of roofing over a building is to span beams from wall to wall, supported by pillars where required. Outside the more important temples there would be gardens, and at the entrance to the temple a pair of tall tapering shafts, squat on plan and known as obelisks, see figures (5.2) and (5.3).

Figure 5.2 Temple Of Isis: Columns

Figure 5.3 Temple Of Isis, Philae: Tapering Philae: Tampering Walls

When the Greeks came to power the columns and beams used by Egyptians in their temples were still employed. The Greeks were artists, and their apparently simple, though in reality extremely sophisticated buildings, such as the Parthenon in Athens, were often used as a background to their sculpture, see figure (5.4).

Figure 5.4 The Parthenon, Athens

In Greek buildings all were not as it appeared to be. The columns were not vertical, but curved to give an illusion of straightness. Students of this period of architecture confirm that Greek architects, among other things had a wonderful sense of proportion and great mathematical skills, see figure (5.5).

Figure 5.5 The Temple Of Aphaia, Aegina

The practice of architecture continued during the period of Roman Empire, although the Romans lacked the Greek's artistic skills. The Greeks had understood the arch, but it was the Romans who used the arch freely, and this was one of the main contributions of the architects of the roman period. They also devoted themselves to work, which today we would classify as civil engineering, such as roads, bridges and foundations, see figures (5.6), (5.7) and (5.8).

Figure 5.6 Arch Of Trajan, Beneventum

Figure 5.7 Column Of Aurelius, Rome
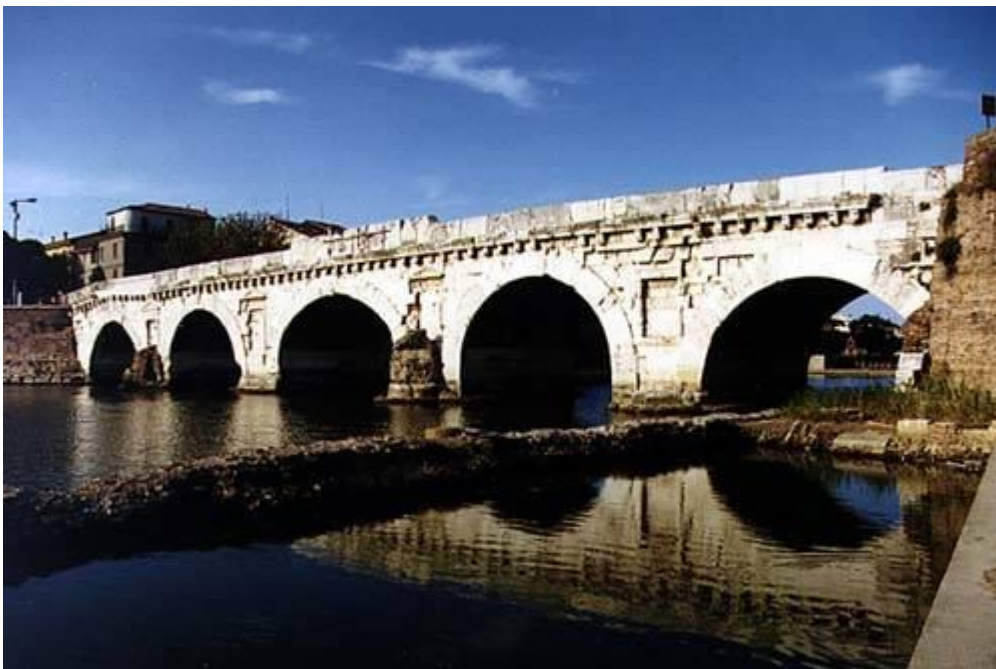
Figure 5.8 Bridge Of Augustus, Rimini

With the rise of Christianity came a demand for new type of buildings. There was a succession of styles. The Norman style was heavy construction and very formal. It has been claimed that the man in charge of such a building, who we can call the "architect", was sometimes considered a "Jerry builder", because

Figure 5.9 Monastery Of Hosios Louckas, Phocis

rubble was often used behind the finely finished surface work. The workmanship improved with the coming of the pointed arch dur ing the early English, decorated and perpendicular styles. The stone masons themselves greatly influenced the detail of the final buildings, and it is not certain where the master's work ended and the mason's work begin. In any event much more was left to the craftsmen than in previous times. Painters and poets of this period are well known to us, but much less is known of the "architect" or "'master". Many great churches were supposedly designed and built by monks and priests. But whether they had architects or master craftsmen helping them is not known (Thompson, 1990, 6-7). See figures (5.9) and (5.10).

Figure 5.10   Gracancia Church

When Islam came and carried his mission of faith, peace, and tranquillity to the world, invited his followers to fill the society with life and think about the last day. Islam encouraged his followers to build and erect buildings, such as mosques, houses, public drinking fountains, trading agencies, public baths, hospitals, and schools (Madrassah as they called at that time), see figures (5.11) and (5.12).

There were two factors motivated Muslims to build these buildings, the first one was to enable Muslims to perform their prayers in mosques and help them to live in houses. In addition, Islam encouraged his followers to trade and practice their professions by building markets and trade agencies. Furthermore, other kinds of buildings were erected, such as hospitals and schools. The second factor is the rewards and retribution at the last day, by erecting charity buildings such as public drinking fountains, and orphans care houses.

The architect at that period was responsible for designing, constructing, supervising, and directing workers in site. There were famous families names known as "specialised builders" or "masters" such as " Al Tolony" in Cairo, and " Al maneef" in safaqes, Tunisia. The architect at that period had many skills; some of them were mathematicians and astronomers (Ibraheem, 1986, 63-65).

Figure 5.11 The Great Mosque Of Cordoba

Figure 5.12 The Al-Mustansiriyah Madrassah, Baghdad

When you walk through any traditional Islamic city in any part of the world, say from Indonesia to Morocco, whatever the difference in natural environment or climate, what is immediately apparent is its Islamic identity. And this immediately recognisable and tangible identity depends not upon uniformity of design or material but upon the fundamental unity of the civilisation and its traditional institutions and principles (El-Wakil, 1984, 26). See figures (5.13), (5.14) and (5.15).

The rulers used to hire architects from other towns to build palaces, courts, and grand mosques. According to this, architects used to travel from town to town carrying their experience and designs, teaching others what they had achieved and learn from others new experiences and way of building, which expanded the architect's knowledge. This was the main reason that we did not find books written by those architects holding their theories in architecture or recording their designs, except some records of these architectural achievements collected by historians through their travels (Ibraheem, 1986, 64).

Figure 5.13   Madrassah of Sultan Qaytbay, Cairo

Figure 5.14 The Mosque of Sultan Ahmed, Istanbul

Figure 5.15 The Gur-I-Mir Mosque, ,Samarkand

During the Renaissance period, from about 15th to the 18th century, England produced two of its greatest architects, Indigo Jones and Christopher Wren. Indigo Jones is sometimes referred to as the first architect, but he was also celebrated theatrical designer and architectural technician. He became surveyor general of the royal buildings. Christopher Wren was an architect, scientist and mathematician. He, like many of his contemporaries, was very much involved with the technology and structural theory of buildings, as well as the design.

During this period, the architect, like the master builder before him, was a man of many skills. He would certainly be a builder and designer, but he might be an artist, sculptor, scientist and mathematician.
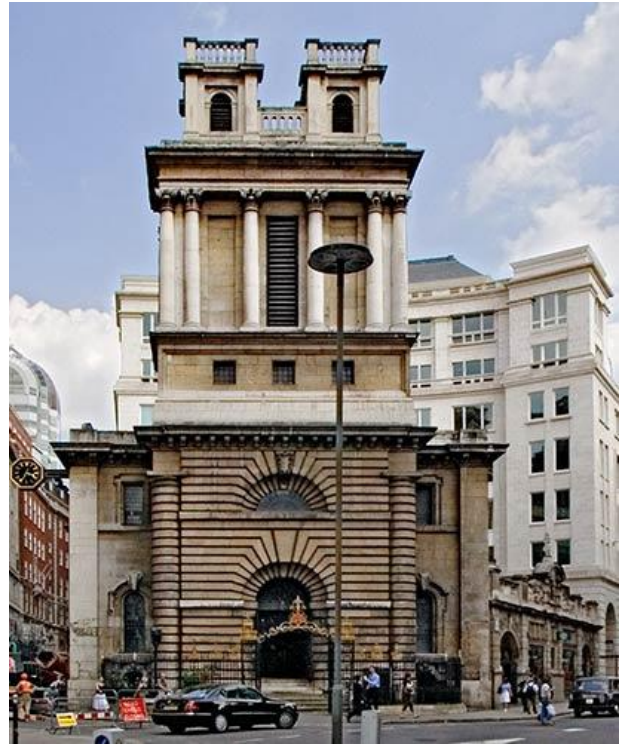
Figure 5.16   S.Mary Woolnoth, London

Figure 5.17   Four Courts, Dublin

Figure 5.18   The Custom House, Dublin

Around this time a movement began, which was to see the establishment of civil engineering as a profession distinct from architecture. A corps of military engineering had already been formed in France when, in 1716, a body of civilian engineering was established for building of roads and bridges. A similar group of engineers took place in Britain, and by second half of the 18th century, civil engineering established itself as a separate profession, which was taking over many of the architect's traditional roles, particularly in matters relating to science. Early civil engineering concerned itself mainly with the building of canals and work associated with transport, but with the increasing use of machinery and the need of new structures such as mills, they extended their influences.

In some countries, architects and civil engineers were considered to be a joint profession. Even in Britain there were those, like Telford, who reckoned themselves to be architect-engineers. In the main however, architects concerned themselves with traditional materials, such as stones, brickwork, concrete and timber. It was left to the civil engineers to involve themselves with the new materials of wrought iron and structural steel. These materials were first used in mills, and then in great railway stations, and were largely the work of civil engineers. Architects for their part were often engrossed in the artistic side of their profession, and frequently continued to hide their buildings behind a veneer of classical detail, so that by the Victorian era the architects were more concerned with decoration, while structure was the province of civil engineer (Thompson, 1990, 8-10).

The development of the architectural profession in Britain is marked by the foundation of the institute of British architect launched by T.L.Donaldson in 1834, and the setting up the first chairs of architecture in the universities. Donaldson held the first chair of architecture when it was set up at University College, London, in 1841. The Royal Institute of British Architect (RIBA), as it is subsequently became, was designed to prevent "the great contaminating trade element" such as builders, carpenters, cabinetmakers, ironmongers, painters, and undertakers from undermining the professional status of architects. The aim of Donaldson, the institute's first secretary, was "to uphold in ourselves the character of architecture as men of taste, men of science and men of honour". The use of term "men" is significant, for women were not admitted to the architectural profession until the late nineteenth century, when Ethel Mary Charles became the first woman member of the RIBA in 1898. Women have nevertheless practised architecture throughout history although their contribution has been largely unrecognised. In present communities they were often both architect and builder and we can still see examples of this in some developing countries today (Conway and Roenisch, 1994, 12-13).

By the 19th century, builders had separated from architects, and in 20th century builders occasionally employed architects to prepare plans of their speculative housing and industrial schemes. Meanwhile, as buildings became more complicated, with a wide variety of components, materials

and services, architects handed over more of their function to other specialists such as mechanical and electrical engineers and quantity surveyors. In conclusion, it can be said that the constant role of the architect through the centuries has been to plan or design buildings, including the production of many of the drawings required. Generally he has been, involved to some extent in the construction, either actually building, or being engaged in the supervision or inspection of the work. As has been suggested earlier, his detailed role has varied from period to period, and his skills have included those of artist, mathematician, and engineer. At the present time we have moved away from the concept of the architect being responsible for everything to a situation of shared responsibility. However, even though much of his original role has been taken over by others, the remains of producing a building, which meets sir Henry Wooton's criteria of commodity, firmness, and delight (Thompson, 1990, 8-10).

5.5   An Introduction To Design

Every construction project starts with a plan. The plan identifies all the details of the project. It is developed by many different people, such as architects, engineers, draughtsmen, and specification writers. Design is the first step in a construction project. It could be defined as "the process of deciding what a structure will look like and how it will function. Designing a project can be entirely new or it can be a result of several ideas combined together to meet the needs of a specific project (Fales, 1991, 239).

5.5.1   Design Theories

Generally, commentators and researchers active in the field of design assume that the subject of design is well stated and therefore the design problem is the solution to the well-stated subject. Rittle and Webber (1973) coined the phrase "wicked" problem when referring to complex design tasks such as buildings, because such tasks have no definitive formulation, have many interdependent sub-tasks and no identifiable best solution. Such problems, they say, can never be "solved" merely "resolved", and the acceptability of any given solution depends simply on how it compares with other possible solutions in the judgement of the decision making unit.

Simon (1973) suggests that wicked or as he terms them "ill-structured" problems are treated by designers as a number of interrelated sub-problems which are well structured (i.e. have a near precise formulation and a criteria for solution). Thus, at a higher level, the designer will seek to deal with an ill-structured problem by breaking it down into a set of smaller well-structured sub-problems. Simon recognised that the way in which the sub-problems are defined, and the order in which their solution is tackled will influence the final, overall design solution. But what he does not explain is how to ensure that the sub-problem solutions are mutually compatible.

This approach to design also tends to assume that the designer is interested in developing "a solution" rather than making any attempt at finding a solution which in any sense optimal. There is therefore the propensity for solving some sub-problems well (in the context of their restricted definition), but only developing a poor solution to the overall design problem.

5.5.2   Design Process

There are two opposing views of the process of design. In one view, termed the "Glass Box Theory", design is taken to be a rational, explicable decision making process, while the opposing view, the "Black Box Theory", holds design ability to be a talent which cannot as yet be rationally explained.

According to the Jones (1980), the glass box view design assumes that the process is a transparent, rational one where objectives are fixed in advance, information relevant to the problem is gathered, this data is analysed, a possible solution is synthesised and then evaluated against the objectives. If it is thought that the attempt at the solution can be improved upon, then a re-iterative process follows where the solution is refined until some optimum is achieved. The proponents of the "Black Box Theory" maintain that the most important part of the design process is the creative act on the part of the designer. They point out that the unpredictable, associative abilities of the human mind which produce an idea cannot be accounted for by any rational model, and as such glass box models can never explain the design process. It is to this theory that many practising designers subscribe. They resent the attempts to explain away their abilities and argue that designers cannot always give convincing reasons for their design decisions.

Eastman (1970), and Lawson (1980) found that contrary to the assumptions of the glass box theory, designers did not attempt an exhaustive analysis of the available data before attempting to synthesise a solution, but rather that they made early attempts ate solutions as a way of trying to understand the problem more fully.

Darke (1978) conducted interviews with architects charged with the task of designing local authority housing and found that in an effort to understand the various complex aspects of the problem, they would propose a form of solution at an early stage and then use it to further explore the problem and highlight areas in which they had insufficient information.

Mackinder and Marvin (1982) reported, from their observations that early scheme designs were drawn up by an experienced senior architect with little reference to any written information. They also noted that time restrictions almost always precluded any serious attempt at evaluating substantially different design alternatives. Hence, final detailed design usually followed the first attempt at an outline design very closely.

Reviewing these research works in hindsight, it is legitimate to question exactly what is being observed here. It would appear that to some extent the designers are adopting an "Information Rejection Strategy", to avoid information overload, the designer makes a decision on what data he will take into consideration and what he will ignore. The need to take such measures arises firstly from the nature of design problems themselves and secondly from the environment in which the design problem is being solved.

Design problems are extremely complex, requiring the designer to deal interrelationship between many sub-problems. It has been shown, however, that the human mind is very limited in its ability as an information processor and can only handle around seven items of information at any one time. When dealing with problems requiring the manipulation of more than one a few parameters then, the designer must initially focus on a well-structured sub-problem as a point of entry to the design problem. The environment in which the design problem is being solved brings various pressures to bear on the designer. Principals among these pressures are lack of time and increasing professionalism. Bishop (1984) argues that architects gain more kudos from peer approval than from the satisfaction of the client or users. It is therefore in their interest at times to pursue their own aims in designing a building, particularly from the aesthetic point of view, and deny the client group the opportunity of interfering with his own ideas of how the building should be designed.

5.5.3   Systematic Plan Of Work

In 1964 the Royal Institute of British Architects published the RIBA Handbook in which was published a model procedure for methodical working of the design team, termed the RIBA plan of Work. Subsequently, the plan of work has been used in a variety of ways assisting the management of projects and as a basis for the control of office procedures. In developing the plan of work certain assumptions were made:

- ❖   The model assumes a building costing about £300,000 (in 1964 this would represent a medium to large building say 4000 m^2 of office accommodation).
- ❖   Full team of designers would be employed.
- ❖   The architect would be responsible for leading the client and the design team.
- ❖   The architect's field of action may vary according to the time of his appointment.
- ❖   The project would be of a complexity where the outcome of one stage launches the next.

The cycle of work in each stage comprises:

    (1)   Stating objectives and assimilation of relevant facts.

    (2)   Assessment of resources required and setting up of the appropriate organisation.

    (3)   Planning the work and setting timetables.

    (4)   Carrying out the work.

    (5)   Making proposals.

    (6)   Making decisions.

    (7)   Setting objectives for next stage (Kelly and Bowles, 1998, 2-4).

The following stage outlines the way which the architect should administrate a building project both at the pre-contract and contract-stages. Although it is comprehensive and describes all the activities the architect needs to undertake, it is flexible enough to suit the requirements of any project.

The various stages are:

    (a)   Inception.

    (b)   Feasibility.

    (c)   Outline Proposal.

    (d)   Scheme Design.

    (e)   Detail Design

    (f)   Production Information.

    (g)   Bill of Quantities.

    (h)   Tender Action.

    (i)   Project Planning.

    (j)   Operation on Site.

    (k)   Completion.

    (l)   Feedback (Choong, 1985, 12).

Table (5.1) through to table (5.12) will describe every stage of the RIBA Plan of Work in terms of purpose of work and decision to be reached, tasks to be dons, and people directory involved (Cox and Hamilton, 1991).

Inception Stage	
Purpose Of Work And Decisions To Be Reached	To prepare general outline of requirements and plan future action.
Tasks To Be Done	Set up client organisation for briefing.
People Directory Involved	All client interests and project manager. client representative Architects, engineers, and quantity surveyor.

Table 5.1   Inception Stage

Feasibility Stage	
Purpose Of Work And Decisions To Be Reached	To provide the client with an appraisal and recommendation in order that he may determine the form, in which the project is to proceed, ensuring that it is feasible functionally, technically and financially.
Tasks To Be Done	Carry out studies of user requirements, site conditions, planning, design, and cost, as necessary to reach decisions
People Directory Involved	Client's representatives, architects, engineers and quantity surveyor according to nature of project.

Table 5.2   Feasibility Stage

Stage C begins when the architect's brief has been determined in sufficient detail.

Outline Proposal Stage	
Purpose Of Work And Decisions To Be Reached	To determine general approach to layout, design and construction in order to obtain approval of the client on outline proposal and accompanying report.
Tasks To Be Done	Develop the brief further. Carry out studies on user requirements technical problems, planning design and cost as necessary to reach decisions.
People Directory Involved	All client interests, architects, engineers, quantity surveyor and specialists are required.

Table 5.3   Outline Proposal Stage

Scheme Design Stage	
Purpose Of Work And Decisions To Be Reached	To complete the brief and decide on particular proposal, planning arrangement appearance, constructional method, outline specification, cost, and obtain all approvals.
Tasks To Be Done	Final development of the brief, full design of the project by architects. Preliminary design by engineers. Preparing of cost plan and full explanatory report. Submission of proposal for all approval.
People Directory Involved	All client interests, architects, engineers, quantity surveyor, specialists and all statutory and other approving authorities.

Table 5.4   Scheme Design Stage

Brief should not be modified after this stage.

Detail Design Stage	
Purpose Of Work And Decisions To Be Reached	To obtain final decisions on every matter related to design, specification, construction, and cost.
Tasks To Be Done	Full design of every part and component of the building by collaboration of all concerned. Complete cost checking of design.
People Directory Involved	Architects, quantity surveyor, engineers, specialists, and contractor (if appointed)

Table 5.5   Detail Design Stage

After stage (e) is completed, any further change in location, site, shape, or cost after this time will be charged.

Production Information Stage	
Purpose Of Work And Decisions To Be Reached	To prepare production information and make final detailed decisions to carry out work.
Tasks To Be Done	Preparation of final production information. I.e. drawings, schedules, and specifications.
People Directory Involved	Architects, engineers, specialists, and contractor (if appointed).

Table 5.6   Production Information Stage

Bill of Quantities Stage	
Purpose Of Work And Decisions To Be Reached	To prepare and complete all information and arrangement for obtaining tender.
Tasks To Be Done	Preparation of Bill of Quantities and tender documents.
People Directory Involved	Architects, quantity surveyor, engineers, contractor, and client.

Table 5.7   Bill Of Quantities Stage

Tender Actions Stage	
Purpose Of Work And Decisions To Be Reached	Action is recommended in relevant National Joint Consultative Committee (NJCC) Code of Procedure for selective tendering.
Tasks To Be Done	Action as recommended in relevant National Joint Consultative Committee (NJCC) Code of Procedure for selective tendering.
People Directory Involved	Architects, quantity surveyor, engineers, contractor, and client.

Table 5.8   Tender Actions Stage

Project planning Stage	
Purpose Of Work And Decisions To Be Reached	To enable the contractor to programme the work in accordance With contract conditions; brief site inspectorate; and make Arrangements to commence work on site.
Tasks To Be Done	Action in accordance with RIBA Plan of Work.
People Directory Involved	Contractor, sub-contractor, and site operations.

Table 5.9   Project planning Stage

Operations on site Stage	
Purpose Of Work And Decisions To Be Reached	To follow plans through to practical completion of the building.
Tasks To Be Done	Action in accordance with RIBA Plan of Work.
People Directory Involved	Architects, engineers, contractors, sub-contractors, quantity surveyor, and client.

Table 5.10 Operations On Site Stage

Completion Stage	
Purpose Of Work And Decisions To Be Reached	To hand over the building to the client for occupation, remedy any defects, settle the final account, and complete all work in accordance with the contract.
Tasks To Be Done	Action in accordance with RIBA Plan of Work.
People Directory Involved	Architects, engineers, contractor, quantity surveyor, and client.

Table 5.11 Completion Stage

Feedback Stage	
Purpose Of Work And Decisions To Be Reached	To analyse the management, construction and performance of the project.
Tasks To Be Done	Analysis of job records. Inspection of completed building. Studies of building in use.
People Directory Involved	Architects, engineers, contractor, quantity surveyor, and client.

Table 5.12 Feedback Stage

There are some items of work, which will be reported at most stages. These are as follows:

(a)   Prepare office resources for each stage of the job.

(b)   Keep records and files up to date.

(c)   Keep client "in the picture", particularly in respect of matters affecting programme or costs.

(d)   Circulate relevant information to all members of the design team.

(e)   Confirm everything in writing, using an agreed form of communication.

(f)   Check that the project is proceeding in accordance with agreed programme and cost limit.

(g)   Check that design office costs and staff resources are not being exceeded.

(h)   Make sure that nothing is done contrary to statutory requirements.

(i)   Ensure all fees and other charges are paid as they become due.

(j)   On completion of one stage prepare for the next stage (Thompson, 1990, 79-80).

5.6   The Importance Of Team Work In Design Firms

Construction work, which of course includes the design, is more complex today due to a wider choice of new materials and techniques, an increase in the scope of work, and the fact that jobs are more likely to be unique. This leads to the need for a properly structured design team in which everyone contributes their own particular skills.

Depending on the size of the job, the architect will have help from other architects and technicians. Sometimes they will develop their own specialisation and concentrate on particular aspects. For example, one might prepare the perspective, another the schedules, a third the small scale location drawings, another might concentrate on more complicated areas of construction and so on. Apart from work undertaken by architectural staff, help will often be required from consultants for specialised areas of work. The RIBA architect's job book lists the following consultants services: quality surveying, structural engineering, mechanical engineering, electrical engineering, landscape and garden design, civil engineering, town planning, furniture design, graphic design, industrial design and interior design.

Sometimes these consultants' services are provided within the architect's own office by partners, association, or directly employed staff. Sometimes the services will be by consultants in association with the architects. Frequently, they will be undertaken by consultants in independent professional practice.

Whether or not it is necessary to employ consultants depends on the complexity of the project. For example, if the project consists of a single house the architect will consider the design of the structure part of his normal duties. If it were a large office block with a steel or reinforced concrete structure, a structural engineer would generally be engaged, and the client would normally pay additional fees for his services. The most common employed consultants are probably quantity surveyors, structural engineers, and building services engineering responsible for mechanical, and electrical engineering services (Thompson, 1990, 11-12).

5.7   Organisational Frameworks In Design Firms

Although the practice of architecture is at least in part an art, it is also a business. It therefore needs to be organised in an efficient way so that the maximum use is made of everyone working for the firm. This organisation takes place at two levels. First in the matter of the overall organisation, and secondly in the way individual projects are handed. Both of these levels involve the use of what is sometimes referred to as "Organisational Framework".

An organisational framework is an arrangement where total workload of the firm is divide among the staff. Some may work on their own, but the majority will probably combine together in teams. If the operational framework is probably devised everyone will know preciously what he has to do, whom he manages, and to whom he is answerable. The simplest framework is a shallow one, in which, everyone is answerable to a single person, see figure (5.19).
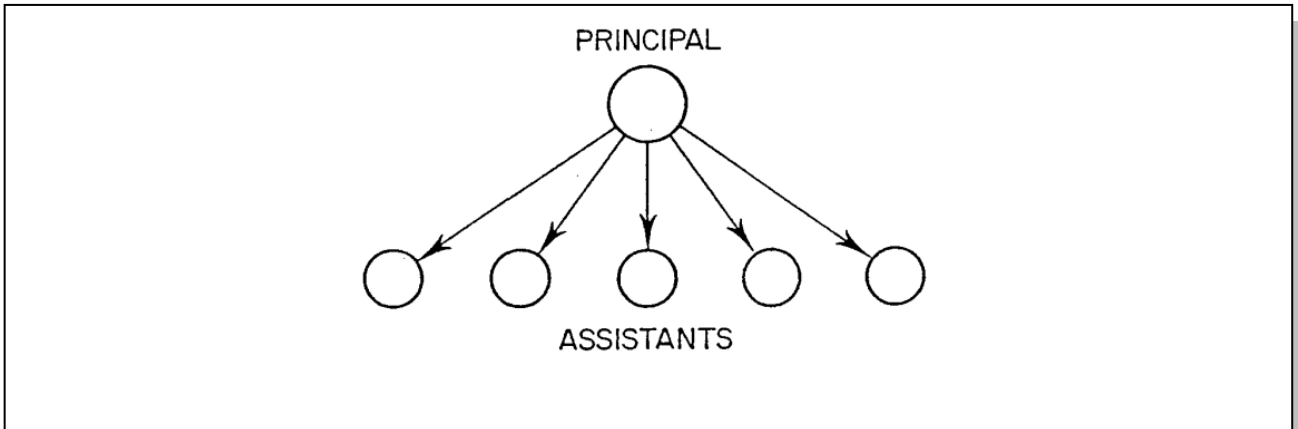
Figure 5.19   Shallow Framework.

As the number of staff increases this become impractical, so a deep framework may be used, see figure (5.20). Project leaders are introduced, who receive instruction from the principal of the firm, and then in turn direct the work to a group of assistants. Also in the case of an architect's practice, there may be two or more "principals" (i.e. partners or directors) of equal status, each managing either a number of assistants or a number of project leaders.
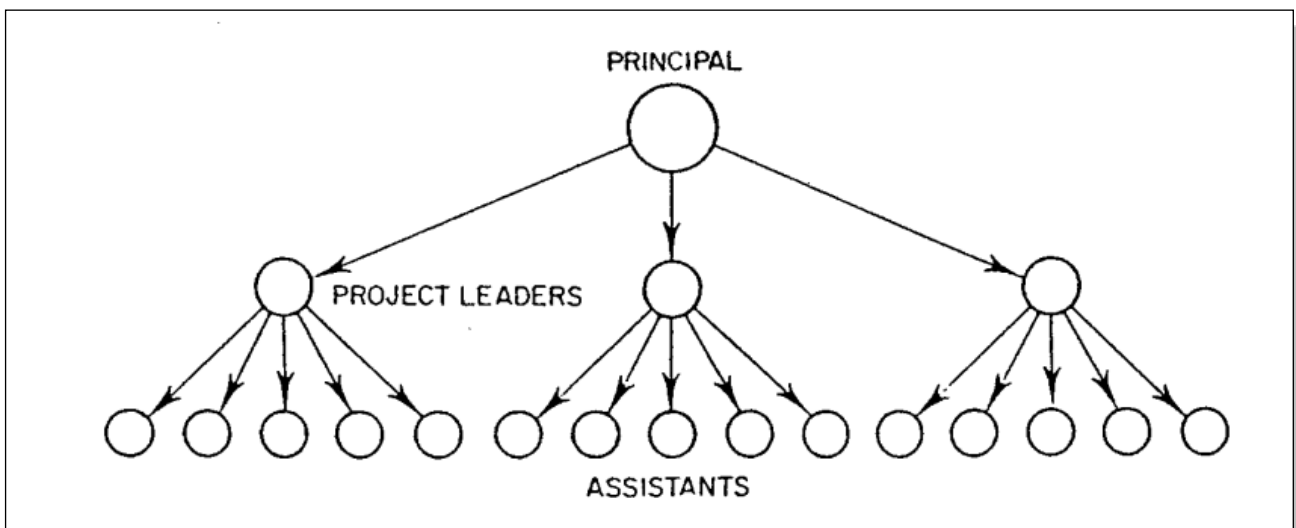
Figure 5.20   Deep Framework.

Further variation is, in effect, a combination of a shallow framework and a deep framework. In figure (5.21), the principal manages some people working on their own, as well as a number of project leaders, who in turn manage further groups of people.
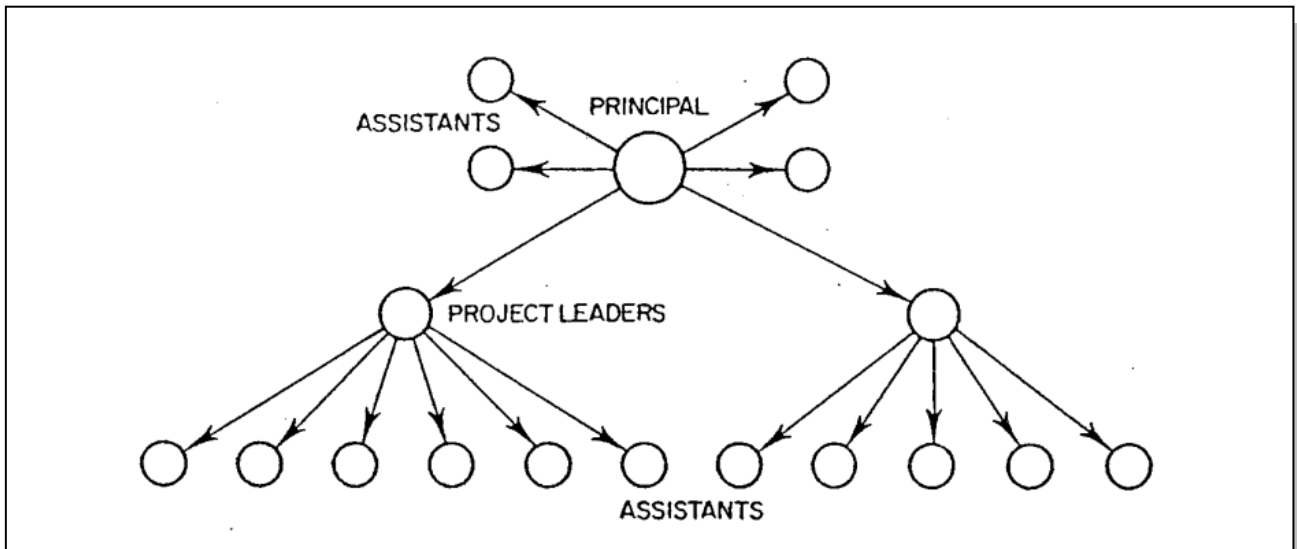
Figure 5.21   Mixed Framework.

References have already made to the two levels of organisation. In the matter of general organisations, the architectural firms have to decide the degree of specialisation they wish to pursue. If they are fairly large firm, who employ staff with a wide range of experience, they may decide to make specific groups generally responsible for certain types of projects. One group might specialise in domestic work, another in commercial projects, a third in industrial projects, and so on. Alternatively there might be a design group responsible for all the projects in the early stages, and staffed with people who are particularly gifted in design and presentation work. They would then pass the project over to other groups when the production information stage is reached. In both the above arrangements, a decision has to be made as to who is responsible for specialist areas of work, such as Computer Aided Drawing and Design (CAAD), and non-technical matters such as administration. In the organisations of an individual job, there are decisions to be made as to how the various tasks are divided among the individual assistants. If the project is a large one, the overall design will probably be mainly the work of group leader, although one of the partners is likely to be involved. Once the production information is reached, a decision has to be made as to whether a degree of specialisation is introduced, or whether most people will undertake most of the different types of tasks. If the first model is followed, one or more assistants may be mainly responsible for the small-scale drawings, others might work mainly on assembly drawings, others on components drawings, with one or more assistants producing the schedule. If the second model is followed, most of the team members will perform the various types of project tasks.

5.7.1   Some Examples Of Organisational Frameworks

Consideration will now be given as to the organisation of some typical architectural practices, and the implication on the people involved.

(1)   The simplest situation is clearly that of one architect working on his own. The architect has to accept only works that he can complete without assistance. In addition, he has to plan the work in an efficient manner as possible.

(2)   The second situation consists of an architect with one assistant. The architect will need to know as much as he can about the assistant's background, interests and ability, so that he can allocate tasks to him, which he is able to do in a satisfactory manner.

(3)   The next case is shown in figure (5.22). This indicates a shallow framework in which a single principal has a sufficiently small staff to manage. It is assumed that the firm undertakes mainly domestic work, with some commercial projects. Where possible, the five technical assistants specialise in one of these two areas. There also a secretary who undertakes the administrative work, and an office junior, who does some of the simpler drawing job, but is mainly employed to run errands, file drawings and work the plan printer.
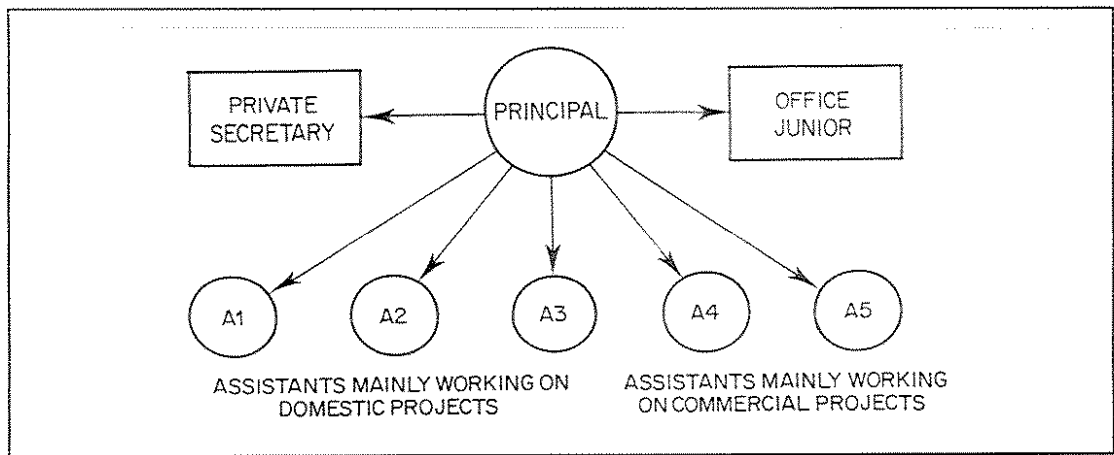
Figure 5.22   Small Firm With Sole Principal.

(4)   Figure (5.23) shows a single principal, but this time the firm is larger. He employs three senior assistants who he calls project leaders. These are either architects or senior architectural technician, and that are each lead a group of people responsible for one or more projects any one time. The principal also directly manages general assistant, a technical information assistant, and private secretary who in turn manages two other assistants.
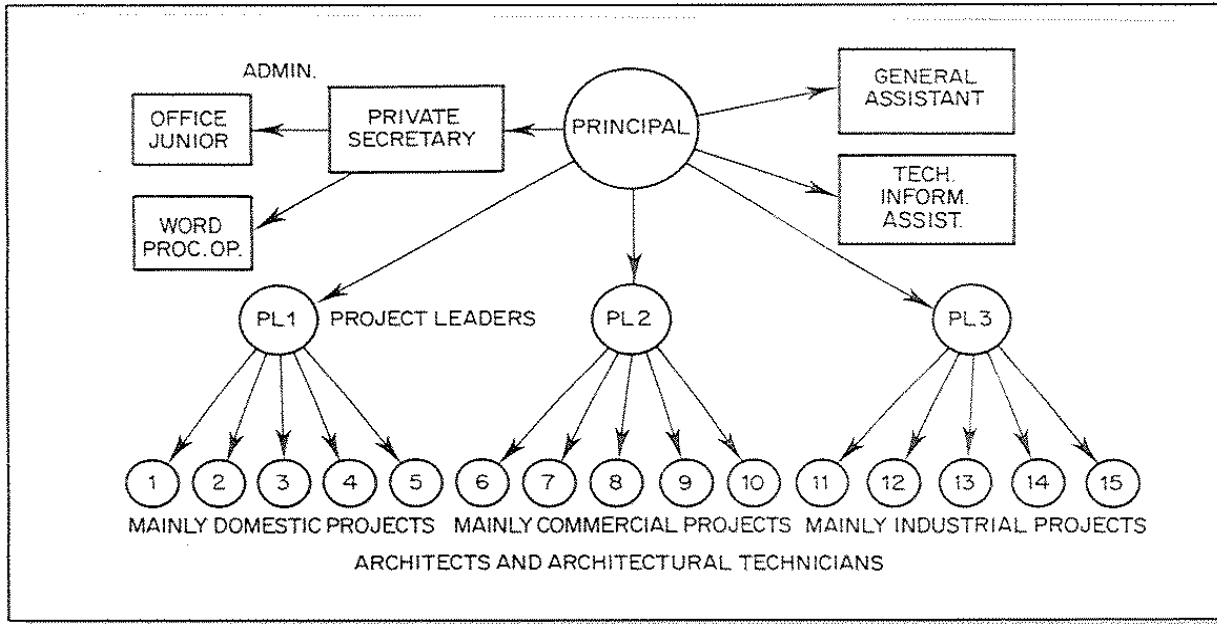
Figure 5.23   Medium Firms with Sole Principal
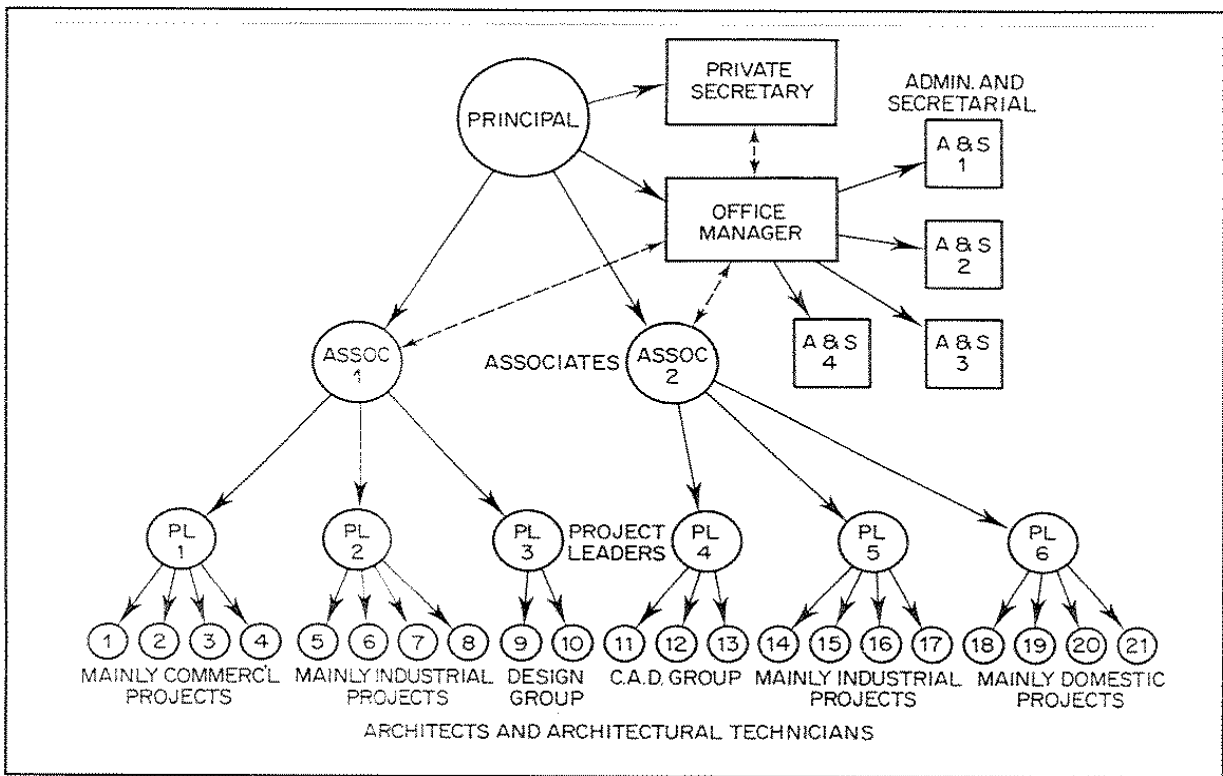
Figure 5.24   Large Firm With Sole Principal

(5)   As an architectural practice increases in size, it may be best to introduce a further tier
         in the organisation framework. In the example shown in figure (5.24), it is assumed
         that there is still a single principal. Directly under him there are two associates,
         although in a firm of this size they may made junior partners instead. Both of these

associates will manage several project leaders, whom in turn lead a number of assistants. The principal (or senior partner) directly manages his own private secretary, and also the office manager who is in charge of the administrative and support office.

(6)   Figure (5.25) shows the arrangement for a firm in which there are three partners, who have five associates working under them. One of these associates has a special responsibility for the administrative side of the practice, and the others manage one or more projects, under the overall guidance of the partners. Each associate has a team of assistants to help him. The partners each have a private secretary, and one of the partners' controls the work of CAD operators.
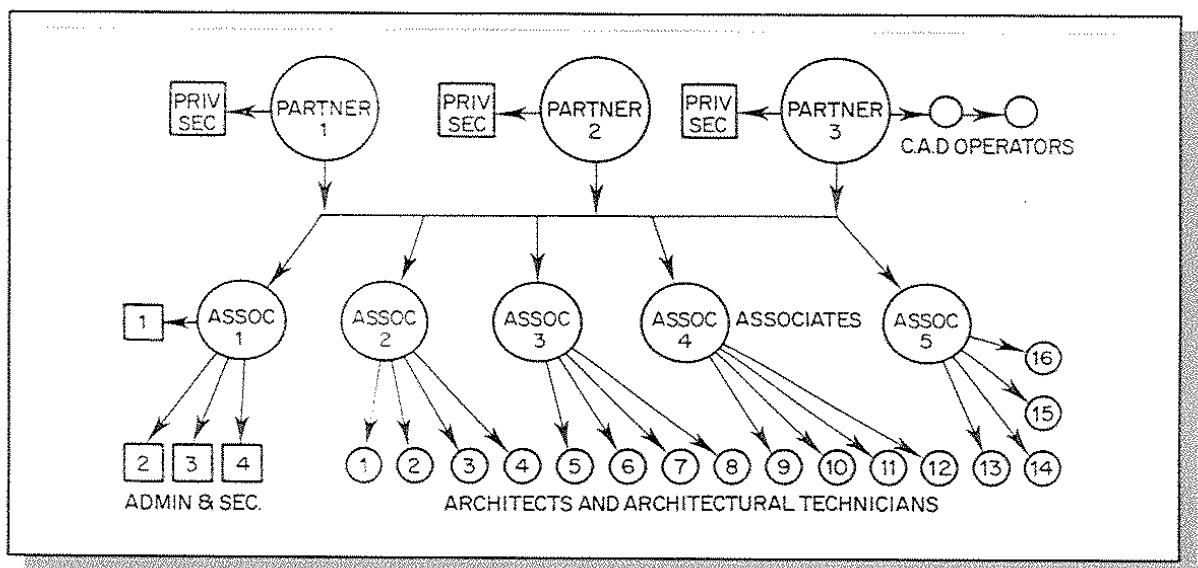
Figure 5.25   Partnership

5.7.2   Organisation Of Individual Projects

To achieve good overall organisation of the firm, the architect must also organise each individual project in such a way so as to enable the contractor to provide the client with what he wants, and also ensure that his own architectural firm makes a profit. There are some stages have to be followed in order to organise the architectural projects.

(a)   Decide What Has To Be Done

This is the thinking process. Tasks to be done include receiving the client's brief, organising the design team, preparing sketch plans and costing the scheme, preparing a full set of drawings and specifications, obtaining statuary approvals, preparing bills of quantities, selecting the contractor and sub-contractors, preparing the contract documents and administrating the contract.

(b)   Programme The Work

This will involve setting a time against each individual task, and deciding what resources need to be allocated to achieve the required programme.

(c)   Organise The Work

This will consist of allocating people to each task, deciding exactly "who does what" and the manner in which they operate.

(d)   Co-Ordinating And Controlling The Work

This means setting up procedures to ensure that everyone is working towards a common aim, with no task left undone or duplicated. It also means ensuring there is a satisfactory chain of command, with everyone aware of who they are answerable to, thus minimising the risk of disagreement between members of the team. It will be also involve checking that progress is being maintained at the required rate, and that the job is keeping within the office budget (Thompson, 1990, 28).

Two important factors have to be measured, the work productivity and the work effectiveness (Nicholson, 1992, 81).

The **Work Productivity** could be expressed as:

$$\frac{\textbf{Actual Value Of Work Done To Date}}{\textbf{Planned Value Of Work To Be Done By This Date}}$$

Where the "value" is a percentage of the work in a project or stage of the project.

The **Work Effectiveness** could be expressed as:

$$\frac{\textbf{Actual Cost Of Work}}{\textbf{Planned Cost Of Work Done}}$$

(e)   Organising Records Procedures

Architectural practice will tend to follow standard procedures and will often be guided by the RIBA plan of work. The procedures will include the ways instructions and information are issued, and the keeping of records for drawings issued and received

5.8   The Members Of The Architectural Team

The number of the architectural team members varies according to the organisation size, and the project requirements. In order to take an overall view of the members of the architectural team, we will consider the largest size and the optimum project requirements. Accordion to this, the architectural team members are depicted in figure (5.26).
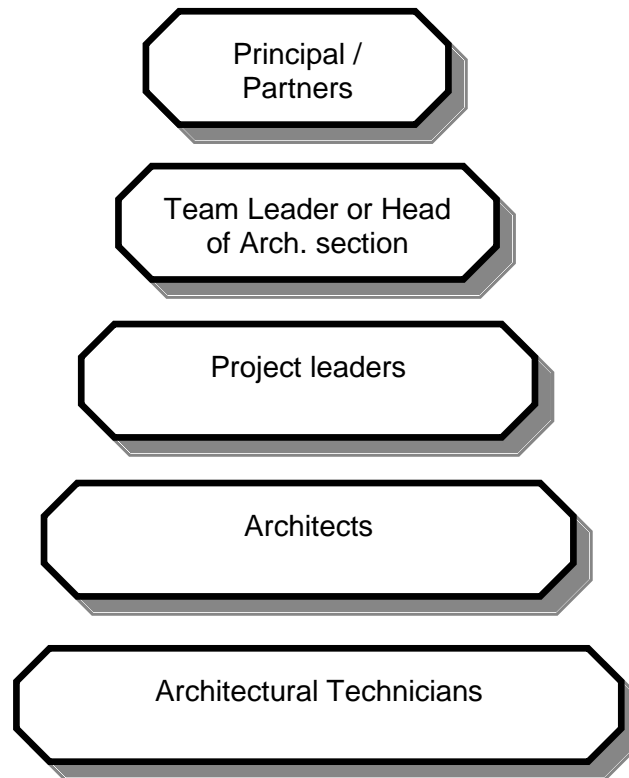
Figure 5.26   The Architectural Team Members.

5.9   Recruitment Of The Architectural Team Members

Every firm working in the Architectural/Engineering/Planning (A/E/P) industry complains about the difficulty of finding good people. There is a serious shortage of talent for most positions. It is estimated, in 1991, that many design firms in the United States spend an average of $ 6000 and 22 man-hours of labour for every person hired. When it comes to the long-term survival and prosperity of the design firm, there is no more important activity than recruitment.

5.9.1   Recruitment Philosophy In Design Firms

There is one Company Executive Officer (CEO) of a 275 persons, five offices, A/E/P firm who believes nothing is more important than recruiting. He puts his money where his mouth is by keeping a specialised, design-industry executive firm on annual retainer just to look for certain types of staff. He drops whatever what he is doing to meet an employment prospect and interviews all applicants for each position personally. These forward-looking firms do not wait for somebody to

turn in his or her notice to start recruiting for new staff. And this contrast between the strategic recruiting philosophy and ad hoc recruiting illustrates difference in what is referred to as recruitment philosophy. Ad hoc recruiting is recruitment by crisis to fill an unplanned opening. It is not consistent way to produce the best candidate. It is, however, the preferred method of design practise today. Strategic recruiting is keeping an eye open at all time for people who would fit into each level or position in the organisation, so that if a need does develop, it can be filled quickly with the best qualified candidate. This type of recruiting produces the most consistent results.

Design firms compete to get the highly qualified, talented, and experience professionals. The best people have a habit of making themselves when you are not looking, so any design firm wishes to compete for the future should be ready even if existing staff members have to be cut in order to add someone better. For a firm to build a top quality staff, it must have feelers that allow it to learn about the best people, as they become available, and then it must be prepared to act when the time is right. The establishment of recruitment philosophy is of prime importance in attracting the best job candidates. There has to be consensus at the top management level of the firm that recruitment is a priority activity that deserves constant attention not just when there is a particular position to fill. The firm should always be on the lookout for quality people and should always strive to upgrade its staff resources, regardless of whether there is a specific position to fill.

5.9.2   Recruitment Of The Architectural Team Members

The following section will apply the recommended recruitment steps, which are discussed in chapter three, refer to (3.3.1), to the architectural team in design firms.

5.9.2.1   Determining The Vacancies

Although the time to hire an outstanding candidate is always now, that does not mean that firms should hire at will, without and consideration to the alternatives. For routine recruiting and hiring decisions, it's important to have a decision-making process to ensure that the key recruiting resources go to the most pressing needs. This cautiousness may seem to contradict the previous advocacy of aggressive recruitment philosophy, but the concept is simple. Outstanding people are the exception, not the rule. When a branch manager, department manager, project manager, or studio head, comes to you and says he or she needs to hire someone, how do you know if the need is real? You should start by looking at a number of different factors, including but not limited to:

(1)   Utilisation Rates

Do you have established utilisation rate (percentage of time worked that is job-charged) targets for all organisational units? If not, why not? If utilisation rates have fallen below targeted levels in the recent past, why do you need hire someone else?

(2)   Duration Of The Need

How long will you need this person? If it is only for a short time, you may be able to fill the need with overtime, part-time staff, or personnel who are not fully utilised in some other office or department of the company. If there is resistance to using staff from internal sources, is it because your labour-transfer-pricing policies penalise either the user or providers? Do you have established transfer-pricing policies that encourage inter/interoffice personnel swap?

(3)   Use Of Temporary/Subcontractors Help

If it is only a short-time crisis, have you fully considered the possibility of using temporary employees/subcontractors? If not, why not? More and more temporary employment, technical services, and job shop firms are catering to the A/E/P marketplace.

(4)   Dropping Marginal Projects And Raising Prices

Rarely considered by a design firm is the possibility that all work cannot be taken on. Are there clients who will not pay fair fees or who do not pay their bills promptly? Are your prices is too low? Perhaps that is why there is so much demand for your services? Elasticity of demand is a reality in the design business, and all services are to some extent price sensitive. Higher profits and better work could be the result of being more selective about whom you work for and charging more for your services.

(5)   The "Create A Job For Friends Or Family Members " Syndrome

Does your manager have someone he or she wants to see hired? Is that the reason for the sudden interest in hiring new staff? Do you have no-nepotism policy? If not, why not?

(6)   Working Overtime

How much overtime is the group or department working on a regular basis? Is it possible for the existing staff to work more hours? Have they been asked, or it is assumed what their response will be? (Zweig, 1991, 21-24).

These are some of the most important factors to consider before embarking on a recruitment assignment to fill a specific position with someone on a full-time, regular employment basis.

5.9.2.2 Selecting The Recruiting Sources

Although the two main sources of recruiting are discussed deeply in chapter three, refer to (3.3.1.2), I would like to spot the lights on some of these sources in order to add new information and explain some issues relating to Architectural /Engineering /Planning firms.

5.9.2.2.1   Internal Recruiting Sources

(1)   Job Posting

Most design firms should first attempt to fill a position from within the organisation. Promoting from within not only contribute to high morale, but holds down recruitment and training costs. Vacancies are published on bulletin board or in lists available to all employees. Interested employees must reply within a specific number of days, and they may or may not have to obtain the consent of their immediate supervisors (Cascio, 1992, 153). Figure (5.27) shows a sample of an internal advertising for position vacancies (Zweig, 1991, 27).

Memo to: all ZN56C, Inc. Employees

From Marshall Zebowitz, Director of Human Resources

Date:September 3, 1999

Position Vacancies

Attention all employees- the following positions are now open:

Number Required	Job Title	Location	Qualifications Of Job Incumbent
1	Design Architect	Orlando	4-10 Years Experience, In Health Care Facilities Required.
1	HVAC Engineer	Dallas	3-6 Years Experience Required.
2	Elec. Engineer	Peoria	3-6 Years Experience Required.
1	Contract Administrator	St. Louis	Degree Plus A/E/P Experience Required.
1	Marketing Coordinator	St. Louise	Degree Plus Ventura Publisher Experience Required.
1	Sr. Land Planner	Seattle	8-15 Years Experience In Major Projects Required.
1	Utilities Engineer	Seattle	2-6 Years Municipal Project Experience Required.
1	File Clerk	Dallas	No Experience Required.

9 Total positions open. If you are interested in being considered for any of the above positions, or if you know of anyone you think might be interested, please contact the human resources department in Dallas, with 15 days.

Thank you
Marshall Zebowitz
Director of Human Resources

Figure 5.27   Sample Job Posting

5.9.2.2.2   External Recruiting Source

(1)   College Campus Recruiting

Most design firms look on college recruitment as necessary evil- and not without reason. Firms do not need greenhorns or know-it-all-22-years-old; they need seasoned professionals who can step in and start making money for them. At the same time, every firm recognises that if they only hired veterans, there would be no design industry of tomorrow, and that recruiting and training new college graduates is insurance for the future of their firm and the entire industry. One observation about college recruiting and today's new college graduates, design firms have never nor will they probably ever be able to match the starting salary opportunities of other industries. As a result, in some engineering disciplines, those with heavy competition from big dollars industries like high tech and defence, the design profession gets left with the dregs from the graduating class, those whose grades were not high enough to work for one of the major glamour employers. Couple this problem with the high exception for responsibility and earnings new grads often have for their first job and you have got some serious obstacles to overcome if you want sharp new grads who are going to last with the firm. Young people are all too often blinded by the high starting salaries of high-tech companies and defence contractors. In fact, graduates starting at a lower rate in an A/E/P firm may be earning more than their industry counterparts 5 to 10 years after graduation. This is especially true for those with the interpersonal, communication and managerial abilities so sought after by design firms today.

(2)   Employment Agencies and Executive Search Firms

In order to understand the attitude of the design firm towards these agencies and firms we have to distinguish between these agencies.

Employment Agencies

- Typically work on contingency fee basis.
- Tend to be generalists or specialise in broad areas under heading "Technical."
- Have less skilled staff.
- Pay staff on commission.
- Have high staff turnover rate.
- Advertise and use in-house resume bank to fill positions.
- Will market employment candidates to companies not knowing if an opening exists.
- Have fee schedule usually based on 1 percent per $ 1000 in salary or some derivative on this formula.
- Tend to work in their local market.

- Work on positions up to $ 50,000, which the bulk in the $ 20,000 range.

Executive Search firms

- May work on their contingency or retainer depending on skill of search consultant and current workload.
- Charge fees ranging from 20 to 30 percent of first year earnings, with the best firms charging well over 20 percent.
- May work on a flat-fee percent.
- Typically charge for reimbursable expenses.
- Have more highly skilled consultants. The best work on salary plus bounce; the others typically work on some salary plus commission.
- Tend to specialise in one area only, for example, architectural/ Engineering, Mechanical/Electrical, and the like.
- Never or rarely market candidates to companies on a speculative basis.
- Fill most positions through direct recruiting methods.
- Work on positions with salaries over $ 50,000, with the majority between $ 60,000 and $ 85,000.

Because of the high recruiting expenses, the risk in making a bad recruiter selection and design professional performance for self-sufficiency, design firms need and want to minimise the use of employment agencies and search firms. But with the incredible difficulty of finding professionals in just about every discipline, how is this possible? The best way is to establish a sound Human Resources (HR) programme in your design firm, but even without your own HR programme, there are four major steps you can take:

(1)   Establish a company policy of not using executive search firms or employment agencies. And make everyone in the company with the authority to hire aware of it. The CEO can always authorise exception special cases.

(2)   Plan for needs before they occur so that when an opening develops, the firm is not thrown into crisis. It is precisely the crisis management approach that mandates the use of outside sources to fill a position.

(3)   Assign one person in your firm the responsibility for hiring. This is the concept of the hiring process manager. By assigning one person for hiring, you will make sure that all employment agency or search firm inquiries are directed to one individual who knows your policy, knows the status of hiring for any position, and knows what recruiting firms the company will use.

(4)   Have no budget for payment of employment agency and search firm fees. If the money is not there, you will have to seek out methods for filling the job.

Despite the best of intentions to maintain a completely self-sufficient recruitment process, there may be times when you still need help filling a critical position. In that case:

(1)   Select the best firm for the particular need. Use an appropriate specialist who is most likely to succeed.

(2)   Check references. Unless you have prior personal experience dealing with the firm and the recruiter on a recruitment project, you should always go through the process of checking references with past clients.

(3)   Be willing to pay a retainer and reimburse expenses. Face it, the best professionals in any field do not need to invest their time on a purely speculative basis. They perform a service and expect to get paid for their time. By the same token, design firms charge separately for professional services and reimbursable, so why should not recruiters?

(4)   Go through a formalised process of determining whether a staffing need exists, and use search firms and employment agencies only for real needs. Like design professionals, they do not want to invest time in a project that is not for real.

(5)   Give the recruiting firm well defined, written position criteria. Clearly communicate what the firm wants. Do not make substantial changes in the criteria after starting the search unless absolutely necessary. If changes in direction are required, tell your recruiter as soon as possible.

(6)   Ask for feedback from the recruiting firm on how realistic your criteria appear to be. A good recruiter, someone who specialise in filling the types of positions that you are using him or her for, is in the hiring market place every day. Chances are he or she will know even better than you what people are likely to be earning, what kinds of diversity in skills is available, and so on.

(7)   Make use of the recruiter's ability to provide feedback throughout the hiring process. Do not cut them out of the picture after interview is set up or before an offer is mad. A good recruiter will be in touch with all candidates from the time each is first contacted until after the new employee reports to work. He or she will be able to advise you along the way of the candidate's concerns, needs, motivations, and hidden agendas.

(8)   Return all phone calls from your recruiter promptly. Nothing kills a recruiter's enthusiasm for filling your position like an uncommunicative client. Treat your recruiter as you or any other professional would like to be treated.

(9)   Keep your promises. Call candidate on the dates and at the time you have committed to. Send out information you have promised to send. Keep up your end of the project, and do not kill your recruiter's credibility with the candidates he or she has recruited.

(10)   Respect the perishable nature of recruited candidates and what your recruiter has gone through to find them. Proper follow-through is essential to keep candidates from pulling themselves out of the hiring process.

(11)   Give honest feedback to the recruitment firm if they appear to be missing the target. Even the best recruiters may get off track occasionally. But do not hesitate to pull a search away from an obviously incomplete firm.

(12)   Give the search firm any information they request or that you think would be helpful to them on both your firm and your geographic area.

One thing some design firms done successfully is work out discounted fee arrangements with a recruiter for a longer-term relationship than just filling one position. Some design firms work on this basis with an independent recruiter. Others, actually bring the recruiter into their firm and provide him or her with an office under a contractual relationship. It is advised that the design firm make such agreement only after successful assignment already completed, and both parties test each other (Zweig, 1991, 26-40).

5.9.2.3   Job Analysis

Job analysis could be defined as " the process of obtaining and reporting information about jobs by determining what the duties, tasks or activities of those jobs are (Sherman, Bohlander and Snell, 1996, 127). Job analysis consists of the two components: job description and job specification. The following section will establish the Job description and job specification for the architectural team members.

Principal/Partner

Job Description

(1)   Managing or sharing in managing the design firm. In addition, he is responsible for portraying the firm strategies, policies, norms, priorities, quality control requirements and so on.

(2)   Accepting the appointment. Setting out, with the client, the main lines of the project which include the project aims, requirements, information, budget, procurement method, specification, and expected date of completion. In addition, he has to advise the client on the choice of the quantity surveyor and specialist consultant.

(3)   He is involved with the feasibility study and with the outline proposals and scheme design, and will possibly be directly responsible for the scheme design.

(4)   He has to manage a private secretary and office manager as well as associates.

Job Description

(1)   Professional architectural degree, higher studies in architecture and management is a must.

(2)   20 years experience, occupying the same or similar post before is essential.

(3)   Excellent management, leadership, decision-making, controlling, scheduling, monitoring and negotiation skills.

(4)   Sensitive abilities in predicting market and environment changes, and prepares strategies and plans to adapt to these changes and overcome any emerging problems.

(5)   Sound architectural design and presentation skills, coupled with construction experience.

It is essential that the principal of the design firm should be a qualified architect. Many design firms suffer from their principals when he is not an architect. The principal may be a qualified civil engineer or qualified electrical engineer and possesses the managerial, technical abilities and skills to manage and lead a design firm. In spite of his experience in his field, he does not practice the architecture as a profession and does not know the time and effort spent in the design process and preparing the complete drawing set accompanied with specification and bill of quantities.

To recap he does not think and manipulate the project as an architect. Add to this, he does not have enough experience to ask the client the questions which is required by an architect, in fact this type of principals interfering the design process and the selection of building materials without prior experience and architectural sense. So the principal of the design firm should be a qualified architect possessing the design and management skills, which enable him, to manage and lead this kind of specialised firms.

Team Leader Or Head Of The Architectural Section

Job Description

(1)   Sharing the top management portraying the firm policy and strategies. He plays the role of the liaison officer between the top management and the team leader. He is responsible for transferring the organisation policy in the form of procedures and schedules to the project leaders in order to achieve the organisation objectives. By return he has to raise the project leader's needs and desires to the management.

(2)   Establishing strategies, plans, schedules for the architectural section which aim to manage the work and achieve both the organisation and client objectives. In addition, he has to devote all his efforts to ensure that the projects are delivered on time, within budget, and as specified. Furthermore he has to follow up, monitor and control the progress of projects. Periodical reports have to be raised to the top management in order to keep it informed about the projects status and work progress.

(3)   Managing and leading the architectural team members who are working on different types of projects from inception to completion. This will include establishing the team spirit, roles, norms, cohesiveness, size, communication and managing team conflicts.

(4)   He is responsible for a fair Dividing of the projects to project leaders with respect to their abilities, skills and specialisation.

(5)   According to his experience in the architectural field, he has to be involved the design procedures and advise the team members to the best solutions and suggestions. From time to time, the team leader has to follow up the progress of the construction of the designed projects, and try to solve any problem.

(6)   He is responsible for co-ordination between the architectural team and other engineering teams in order to prepare and produce a compatible set of tender drawings with specification and bill of quantities.

(7)   The team leader has to allocate resources for all team members in order to facilitate the work and help them perform their duties perfectly and smoothly.

(8)   Establishing training needs and selecting the suitable training programmes required enhancing and improving the team productivity. In addition, he should use tangible and intangible rewards to motivate team members to achieve organisation objectives and client goals.

(9)   He is answerable to the principal or the organisation partners, and he has to report directly to the principal.

Job Specification

(1)   Professional architectural degree, higher studies in architecture and management is an advantage.

(2)   15 years experience, occupying the same or similar post before is essential.

(3)   Excellent design and presentation skills. Efficient use of CAD, presentation, and management packages is vital.

(4)   Wide experience in managing architectural work and job running. In addition he should have experience in portrays strategies, policies, and schedules. In addition he has the ability to follow up and monitor the work progress and take serious decisions to rectify any deviation in the work schedules.

(5)   Communication skills, co-ordination and negotiation abilities.

(6)   Sound knowledge of building construction, legislation, contract management, town planning and authorities regulations.

(7)   Ability to managing, leading, motivating, and directing project leaders and team members.

Project Leader

Job Description

(1)   Ascertaining, interpreting and formulating the client's requirements into an understandable project brief.

(2)   Designing buildings to meet the client's requirement and constraints imposed by such factors as statuary obligations, technical feasibility, environmental standards, site conditions and cost.

(3)   Bringing together a team of construction professionals such as the quantity surveyor, structural engineer and services engineer to give expert guidance on specific points of the client's construction project.

(4)   Assessing client's cost limit and time scale, and specifying the type and grade of materials/components for use on the construction project.

(5)   Preparing production information for pricing and construction and inviting building contractors to submit their tenders.

(6)   Following up the production on site, constantly keeping client informed of the project's progress and issuing production instructions as and when required.

(7)   Keeping the client informed of the status of project's cost and advising on when payment should be made or withheld.

(8)   Advising on the conduct of the project generally and resolving all contractual disputes between client and the building contractor.

(9)   Issuing the certificate of completion, and the final certificate for payment.

(10)   Dividing the work to the architects and technicians according to their skills and specialisation (Kwakye, 1997, 33-34).

(11)   He plays the role of the liaison officer between the team leader and other team members. He transfers the organisational and departmental objectives to them in the form of project objectives, requirements, specifications, time limit, and budget.

(12)   He is answerable to the team leader, and he has to report periodically to him.

Job Specification

(1)   Professional architectural degree.

(2)   10 years experience, occupying the same as similar post before is essential.

(3)   Excellent design and presentation skills. Efficient use of CAD, systems. In addition, knowledge of planning, scheduling, and controlling projects is important.

(4)   Managing and job running abilities, as well as communication, co-ordination and negotiation skills.

(5)   Extensive knowledge of building construction, materials, legislation, contract management, town planning and authorities regulations is an advantage.

Architects

Job Description

    (1)   Proven ability of innovative designs and high quality of producing layouts, presentation for all types of buildings.

    (2)   Preparing design alternatives that fulfil the client's needs in great depth.

    (3)   Informing the project leader about any item that may not be considered at the stage of collecting the client's requirement, and appeared at the design stage.

    (4)   A deep and throughout understanding of contemporary design sensibilities and technology is essential.

    (5)   Proficiency in using the latest versions of design, draughting, presentation programmes is vital.

    (6)   Ability to manage, schedule, control, and monitor the progress of the projects he or she is responsible for.

    (7)   He is answerable to the project leader, and he has to report directly to him.

Job specification

    (1)   Professional architectural degree.

    (2)   5 years experience.

    (3)   Excellent design skills, preferably including CAD and presentation computer packages.

    (4)   Knowledge of town planning, municipal and concerned authorities regulations to design regulations, such as room sizes, duct dimensions, ceiling height for different uses, specification of fire doors, requirements for disables and the like. In addition, good knowledge of construction work is an advantage.

    (5)   Energetic, enthusiastic person who has co-ordination and negotiation abilities.

    (6)   Ability to work as a part of a team and on own initiative.

It is imperative to appoint one architect to be responsible for dealing with authorities, reviewing project and get their approvals. By doing this we can save the other architects time and effort.

Architectural Technicians

Job Description

    (1)   Preparing working drawings and architectural details for the projects, taking in account the impact of the structural, electrical, and mechanical designs on the architectural design.

    (2)   Scanning, indexing, editing, and vectoring all drawings.

    (3)   He is answerable to the project leader, and he has to report directly to him.

Job Specification

    (1)   Professional architectural technician certificate.

    (2)   7 years experience of board drawing skills and familiar with AutoCAD.

    (3)   Self motivated and experienced in preparing work drawings and architectural details.

    (4)   Ability to work as a part of a team and on own initiative.

    (5)   Knowledge of building regulation, construction technology, and authority requirements is an advantage.

5.9.2.4 Advertising

The job description and the personal specification provide the blueprint for the post to be filled with the person required. Advertising is the process of communicating the vacancy to potential applicants. When advertising, the job and working conditions should be expressed in a way that make them attractive to the right sort of people. It is usual to include some detail of the job and terms and conditions of employment. At the same time there is a need to limit the number of potential applicants to those that are most likely to be able to do the job (Freeman-Bell and Balkwill, 1996, 301-302).

The placement of an advertisement should be appropriate to the audience that is to be attracted. This might indicate use of national rather than local press, of the use of certain trade or professional journal, and finally one of the effective way to put the organisation advertisement is through the internet, where your advertisement will be read worldwide. Design firms should advertise consistently in the same publications. Being seen in the same place all the time helps build name recognition of the firm. This name recognition increases the likelihood that even those who are not looking change jobs now may contact the design firm when they do get in the job market. You may also get quantity discounts for being frequent advertiser. For the A/E firms, the following are some the specialised architectural media (Zweig, 1991, 30-31).

(1)   Architect's Clearinghouse

    521 America Street

    Baton Rouge, LA 70802

    (504) 387-23359

(2)   Architectural Record

    Classified Advertising office - A/R

    1221 Avenue of the Americas, 42nd. floor

    New York, NY 10020

    (212) 512-2556

(3)   Consulting - Specifying Engineer

Classifieds Department

1350 E. Touhy Ave.

Des Plaines, ILL 60018-5080

(708) 390-2556

(4)   Engineer New Record

Classified Ad Office-ENR

1221 Avenue of the Americas, 42nd floor

New York, NY 10020

(212) 512-2556

(5)   Progressive Architecture

P/A Classifieds

1100 superior AVE.

Cleveland, OH 44114

(216) 696-7000, Ext. 2584

(6)   PSMA Ascent

Job Bank

Professional Services Management Association

1213 prince Street

Alexandria, VA 22314

(703) 684-3993

(7)   SMPS

Positions Open Advertising

The Society For Marketing Professional Services

99 Canal Centre Plaza, Suite 300

  Alexandria, VA 22314

  (800) 292-7677

(8)   Architects' Journal

151 Rosebery Avenue,

London EC 1R 4GB

(171) 505 6744

The followings are selected advertisements for different architectural posts collected from the Architects' Journal and the Gulf Times newspaper.

City of SUNDERLAND

City Consultancy Services

City Consultancy Services is a multi-professional consultancy offering architectural, engineering, surveying and estate management services.

Architect

£19,752 - £28,269 bar at £24,510 – Post Ref BU/A(4)

We require an imaginative and enthusiastic architect with proven ability and innovative design, draughting and presentational skills.

You will have opportunities to work on a range of building types which may include housing, schools, factories, sheltered homes and offices. Your involvement will be in the feasibility, design and construction stages of projects and your role will include project management.

We have a commitment to use the latest IT and modern technology in both business management and design and currently operate AutoCAD 14.

For an informal discussion, please contact Mike Hornsby on (0191) 553 1223.

Application form, job description and person specification are available from City Consultancy Services, PO Box 104, Civic Centre, Sunderland SR2 7DN or by telephoning (0191) 553 1229. Please quote post reference. Closing date 6th March 1998.

"The City Council operates a No-Smoking Policy"

An equal opportunity employer

ARCHITECTURAL TECHNICIAN

required by busy creative interior design company. 3 years post qualification experience with good knowledge of Building Regulations. Knowledge of CAD and ability to work on own initiative essential. *Please reply in writing to:* **Wingate and Moon 3/9 Broomhill Road, London, SW18 4JQ.**

ARCHITECTS

Required for busy Edinburgh Practice Minimum 2 years experience Applicants must be able to demonstrate exceptional design skills and job running ability New build and/or conservation/adaptive projects

Apply in writing with full CV Box No 3175 Architects' Journal Recruitment, 151 Rosebery Avenue, London EC1R 4QX.

BDP

BDP Dublin
The Dublin office of Building Design Partnership is seeking highly motivated architectural staff for the following positions:-

Senior Architect
RIAI Part 3, 7-10 years post graduate experience, and a track record in the successful co-ordination and delivery of complex, high-quality projects across a range of sectors.

Assistant Architect
Graduate, with good CAD skills (Microstation and/or Autocad).

The positions will provide significant opportunities to contribute to a young and growing design group, which is part of one of Europe's largest multi-disciplinary design practices.

Applications in writing, by fax or e-mail to:

**BDP Ltd
116 Lower Baggot Street
Dublin 2
Tel: 01 676 5220
Fax: 01 676 5232
E-mail: dublin@bdp.co.uk**

ARCHITECTURAL TECHNICIAN

Young qualified Architectural Technician with good drawing board skills and ideally with CAD experience required, to assist the Divisional Director of a multi-disciplined Surveyors and Valuers practice. You must be enthusiastic and able to work to tight time schedules in a small committed team.

You will be responsible for:
• preparation of scheme and detail drawings for mainly industrial and commercial projects.
• preparation and submission of applications for planning and building regulation approval.

We offer a competitive salary, together with a package of company benefits.

Please send your CV with details of experience to:-

**Charles Evans
Edward Rushton Son
& Kenyon Limited
1 St Ann Street
Manchester M2 7LG**

ERS&K
Edward Rushton Son & Kenyon

0161 834 1814

Figure 5.28   Group (1) Of Advertisements For Architectural Vacant Posts

Figure 5.29   Group (2) Of Advertisements For Architectural Vacant Posts

GROUP ARCHITECT

£26,391 - £28,269 p.a

Based at: Henshaw House - Please note that a "No Smoking Policy" is in operation at Henshaw House. (The building has level access, lifts and disabled persons' toilets). Meet the challenge of leading a committed team of professionals with an exciting and varied workload.

You will be responsible for:

- management of the architectural services design consultancy
- provision of professional expertise
- liaison with other professional disciplines, officers from other council departments, and council members
- programming, monitoring and implementation of a wide range of capital, Lottery, SRB and other projects.

You will be a highly motivated Registered Architect and able to demonstrate:

- at least ten years' experience, some of which will have been spent at senior management level.
- excellent design skills, preferably including Micro Station CAD
- comprehensive knowledge of building construction and legislation, CDM Regulations, and contract management
- well developed communication and presentation skills
- the ability to use a PC.

Oldham is a thriving Pennine town, proud of its reputation for quality and enterprise. There is easy access to the North West's motorway network and Manchester's major international airport. First class leisure and shopping facilities and magnificent countryside all around make Oldham an ideal location in which to live and work.

Informal enquiries to: Mr D K Mycock. Tel: 0161 911 4130

Application forms from: Director of Technical Services, Henshaw House, Cheapside, Oldham OL1 1NY. Tel: 0161 911 4315.

Closing date: 27 April 1998.

AN EQUAL OPPORTUNITY EMPLOYER

POSITIVE ABOUT DISABLED PEOPLE

ARCHITECT (ARABIC & ENGLISH SPEAKING)

Salary Dhs 20,000/- (negotiable). An international project management firm seeks a qualified Architect (preferably US / Europe educated), with minimum 15 years experience in design & construction of major building projects of high standard finishes, in addition to a strong background in materials & detailing related to Islamic decoration works. Should be computer literate & have good working knowledge of Autocad. (AUH-S).

NIALL PHILLIPS ARCHITECTS LTD BRISTOL

We wish to recruit architects with 3-5 years post-qualification experience in offices of repute, with exceptional design ability and good contract and administration skills to work on live projects including:

- A visitor centre in the Shropshire hills
- A new museum and archive complex for the University of Reading
- A major contemporary art gallery extension to Wolverhampton Art Gallery
- Conversion of a listed Victorian workhouse to provide Civic Offices in Somerset

Please send your CV with representative examples of your work to:

Helen Marsh
Niall Phillips Architects Ltd
35 King Street
Bristol BS1 4DZ

Figure 5.30   Group (3) Of Advertisements For Architectural Vacant Posts

Before moving to the next point, I would like to point out to some important items in the process of recruitment of the architectural team members.

(1)   The design firm has to review its benefits package. Too many firms still have benefits packages that were put together in 1980s. Be sure that your benefits reflect the needs of both single employees and working teams. Remember that workplace flexibility and "time off" have now meanings as more important to employees today than they did a decade ago.

(2)   Contact former employees. If you downsized and let good people go, find out where they are and if they are interested in returning to your organisation.

(3)   Screen candidates thoroughly. Most architects do a good job for evaluating perspective employees for technical competence, but they forget such key points as: supervisory experience, communication skills, business acumen and marketing

success. Try cutting recruitment costs at the beginning if there is no preliminary fit between your position and the candidate (Slavid, 1998).

5.10   Selection Of The Architectural Team Members

Chapter three recommended the steps and procedures that have to be followed when any organisation wishes to select new employee or a team member, refer to (3.4.1). The following section will study in details some of these steps with particular emphasis on the architectural team.

5.10.1   The application Form

After the organisation announced its need to employ one or more of the architectural team members, it will receive many curriculum vitae or résumé from potential candidates. For most design firms the first impression is normally made by the résumé. If the resume leads to further interest from a potential employer, the applicant will normally have to fill out much of the same information on an employment application (Babcock, 1991, 103). Some organisations when advertise vacancies they ask anyone find that his abilities and skills meet with the job requirements to collect an application from the organisation office. One of the best, least expensive, and fastest ways for a design firm to generate qualified candidates for a position is to develop and maintain a resume/application databank. This data bank should include the resume, application for employment or recruitment notes for every single person who had applied to the firm. It can be either computerised or manual system. There are a number of excellent computerised resume/application tracking system available for PCs, and a few for mini and mainframe systems. But before a design firm goes charging off to invest in hardware and software systems, it should consider whether file folders and good manual classification scheme would suffice. It usually, makes sense to put a manual system in a place first before computerising. The following steps are recommended to establish resume and application tracking databank system.

(1)   Collect all of the resumes, applications forms and interview notes.

(2)   Tell whoever opens the mail to direct all unsolicited resume and letter concerning employment to the person in charge of your firm's hiring activities.

(3)   Classify every existing and incoming resume according to a predetermined scheme.

(4)   Set up categories that are pretty much mutually exclusive, you do not need to look in five places for candidates to fill one position. It is recommended that you adopt a comprehensive list of categories. Even if your firm does not employ people in all of them you will probably find that you will still receive resumes from engineers if you are an architectural firm (and vice versa) and you will want to have someplace to file those resumes. Categorising all resumes will provide you with pool of applicants if some day the firm decided to get into new discipline or service area.

(5)   Each year, you should start a new set of files even if you do not change you classification scheme. This will allow you to review the most recently acquired applications first when a need develops.

(6)   Create a cross-reference system on note card field by last name. This way, if someone calls in to see what the status of his or her resume or application is, you will be able to look them up quickly by last name in your file cards, which will tell you how you classified him or her and what year's file they fall in (Zweig, 1991, 28)

5.10.2   The Initial Screening Interview

An interview has been defined as "a meeting of two people, face-to-face to accomplish a known purpose by discussion" (Langford et al, 1995, 110). Some candidates for the vacant posts do not interest the design firm, and some design firms do not interest the candidate, both candidates should be eliminated. This is the main aim of the initial screening interview. The questions to be asked are often about work experience, geographical performance, and employee job expectation. The initial screening interview is of prime importance because it sifts the large number of candidates who apply for a post in order to determine the eligible candidate for further steps in the selection process.

5.10.3   The Employment Interview

Interviews selection includes at least one interview and many design firms use two, three or even more interviews. The first session may be a meeting to determine mutual interests, get all the details on the candidate's background, and set the stages for the next meeting with the technical person responsible for the area the person would be working in. The technical person will discuss with the candidate his previous designs and projects, any courses and training programmes attended, his managing skill, or his draughting and presentation abilities either manual or by using CAD. The aim of the interview is to determine which candidate from the short list best meets the requirements of the job. It is also to present the job and the organisation to the candidate. The interview should allow the organisation to determine if the new team member could do the job and whether he or she will fit in with the existing team members. The interview should be well prepared in terms of documentation, selection of the suitable place, time, and environment, as well as planning and strategy.

5.10.4   Employment Tests

Tests are becoming increasingly common in the selection of the architectural team members. There are many types of tests that play an important role in the selection process. The tests range from cognitive test which measure the mental capability of the candidate, personality and interest inventories test which examine the measure dispositional characteristic of the architectural team member. In addition there is physical ability test that assesses the person physical abilities,

particularly when any member of the architectural team has to manage or supervise construction works in site at different climate conditions, and in the case of limited project time, which requires double efforts from all members in order to finalise the project on time. There is also job knowledge test that measures the person's level of understanding about a particular job, in our case it will test the conceptual design and architectural details for the different kinds of projects, add to this, the use of computer in architecture. Job knowledge test will assess the architect understanding about the new technologies, building materials and managerial, scheduling, controlling, and monitoring abilities. The sample test is the final test, which will be conducted. This test will measure the skills for office work. The member of the architectural team is given a part of job in order to assess his ability, this could be the preliminary design of small building, preparing perspective for a selected project, preparing specification and contract for already designed project, or managing a team consists of group of architects and architectural technicians, in order to measure his ability to lead a group and how he can solve the problems.

5.10.5   References Checking

If you sometimes neglect to check the credentials and references of employment candidates because it seems uncomfortable or unprofessional, consider the following anecdote. One full-service A/E/P company hired a supposedly degree and licensed civil engineer for their office in Anchorage, Alaska, a branch started as project office to handle a large asbestos abatement construction services project. The engineer's degree and licence were not initially necessary for the asbestos work the firm was doing, but a year or so later when the contract was nearing its end, home-office management thought it would make sense for him to market municipal engineering service in the area. Something came up that required the firm have proof of his registration, and the engineer was unable to produce it. When the firm attempted to verify his registration and education, both turned out to be misrepresented. One of the firm's vice presidents then flew to Anchorage and confronted the engineer, who stormed out of the office, vowing to go over to the school and "get everything squared away now." He never returned, leaving all of his personal effects in his office (Zweig, 1991, 86). In order to complete the picture and information about the potential candidate, reference from previous employers, college lectures or people that have known the candidate for a significant period of time are usually required. Anyone, who cannot find someone to say something positive about him should be treated with caution, for instance he may have left his previous employers under dubious circumstances (Freeman-Bell and Balkwill, 1996, 304). If a job candidate's is still employed, informal reference checking should be conducted confidentially with the employee's knowledge and permission. Checking references without permission creates the potential for lawsuits from job candidate you do not end up hiring. In few cases where a former employer will not tell you anything, go back to the candidate and ask him or her if there is anyone else in the company that you might be able to talk with. May be there is another supervisor in the firm who will talk to you, or one who has left and is working elsewhere. So it is important that any

design firm develop a standard reference form with a corresponding list of questions that you use regularly, see figure (5.31).

<u>Reference Check Form</u>

_____, I'm calling to check a reference on someone who used to work for you. Your honest comments will be sincerely appreciated. Rest assured anything you say will be held in the strictest confidence.

We are considering hiring _____for a position of _____

Candidates:_____   Date:_____

Position applied for: _____   Date: _____

Name & title of reference:_____

Company:_____   Location:_____   Phone:_____

1.   How long have you known_____? _____

2.   How long did _____ worked there? _____

3.   How would you rate _____ technically?

☐ Below pare   ☐ Average   ☐ Excellent

4.   How would you rate _____ managerially?

☐ Below pare   ☐ Average   ☐ Excellent

5.   How would you rate his/her overall job performance?

☐ Below pare   ☐ Average   ☐ Excellent

6.   Did he/she get along well with his/her?

☐ Supervisor?   ☐ Peers?   ☐ Subordinate?

7.   Did he/she miss work often? _____

8.   Did he/she have any drug or alcohol problems to your knowledge? _____

9.   Did he/she have any other problems that you are aware of?_____

10.   What else I should know about? _____

Providing you don't have a policy against rehiring former employees, would you rehire_____?

Yes   ☐   No   ☐

Figure 5.31   Sample Reference Check Form

5.10.6   Physical Examination And Drug Testing

5.10.7   The Selection Decision

These two steps are fully examined and explained in chapter three, refer to (3.4.1.6) and (3.4.1.7)

5.10.8   What After Selecting The Architectural Team Members

When the architectural team members are selected, The team leader has to apply the team building concepts in order to form an effective team who are capable to complete projects on time, within budget, and as specified. The team leader has to create the team spirit through establishing number of activities as summarised below:

(1)   He has to perceive the nature, abilities, and skills of every member of the team. This is very important because it enables the team leader to assign the appropriate job and role that commensurate with his abilities and skills.

(2)   The early forming of teams, the maximum benefits can be gained. The team leader has to form his team from the early stages in the project, in addition he has to maintain that team through the life cycle of the project.

(3)   The team leader with the collaboration of all team members has to state the team objectives, which should be emerged from the firm's objectives. Achieving consensus objectives ensure that team members are fully committed to them, and will devote all their effort to achieve the state objectives.

(4)   The team leader has to establish the team norms. He has to state the things that should not be done, the things that should be done, and the things that may be done.

(5)   The team leader has to maintain the team cohesiveness. He has to pay attention to all factors that make the team members attracted to remain in the group. This could be achieved by having common goals, close co-operation, creating conditions for satisfying member's personal needs.

(6)   The team leader has to be figurehead, motivator, liaison officer, monitor of information technology, spokesman on behave of the team, resources allocator, negotiator, excellent listener, and problem-solver and decision maker. In addition, the team leader has to adopt the most suitable style that match with his abilities and the work situation.

(7)   Effective communication within the team members should be established in a manner that ensures smooth transferring of information from one person to another. The team leader has to choose the suitable communication pattern that suite the team members.

(8)   The team leader plays an important role in managing team conflict. He has to resolve it by the suitable method such as avoidance, or negotiation, confrontation.

(9)   Team performance should be appraised to ensure that the organisational objectives are achieved, and that every team member devotes his or her efforts to complete his duties on time, within budget, and as specified. This could be conducted on the basis of ability or on the performance against specific target.

5.11   Training Of The Architectural Team Members

"If you think education is expensive, try ignorance", Derek Bok.

When the design firm feels budget pressure, training is the first thing to get cut. But, are profits low because the firm spends too much, or because staff is inadequately trained to perform their roles? Or is the company not making good use of the money it does spend on training? The answer is probably a combination of all three factors. Of course, simply allocating more money for training is not the answer. If firms are to get their money worth from the training budget, they will need to ask the right questions and weigh the alternatives. Why training is needed? How can it best be provided? Who should participate? What will it cost? How can a company make the best use of its own resources? (Zweig, 1991,157-158).

Occasions arise daily in design firms that point out the need for training even if that investment is minimal compared to what other industries spend. The rapid changes in the architectural field, computer applications, information revolution, construction technology, building materials and project management practice, increased the need of design firms to respond to these changes by adopting and designing training programmes, in order to improve and enhance team members' skills, abilities and increase their effectiveness and productivity.

5.11.1   Orientation And Socialisation Of The Architectural Team Members

When a new member of the architectural team reports to work, the employing organisation needs to help the new member to become part of the organisation by introducing him or her to the policies and values of the design firm in general and architectural department and job in particular.

The human resources department normally has the responsibility to tell the newcomer about fringe benefits such as medical insurance, vacations, tuition reimbursement, pensions, and the like. This could be accomplished with a short one-to-one discussion on the first day as the new employee process through human resources department or a more formal presentation periodically for all new employees. Most design firms provide newcomers with a current edition its orientation kit, refer to (4.3).

When the architectural team member already employed and began to practice his duties, he has to learn not only the job technical requirements, but also he or she has to learn how others perform their jobs and the accepted attitude and behaviour in order to an effective team member.

As part of the socialisation process, the newcomer firstly, has to build his or her own role identifies within their new job context. Secondly, he or she has to explore how to deal with team leader, project leader, team members and in general with all organisation individuals. Finally, the newcomer should decipher the appropriate reward system and situational norms of acceptable social and task-related behaviours.

5.11.2   Determining Training Needs

In order to achieve the objectives of the training programme, it is imperative that the design firm defines at the outset if the training is needed and it will achieve the organisational objectives. As described in chapter four, refer to (4.5), there are three levels of training needs. These levels are organisational analysis, task analysis, and person analysis.

5.11.2.1   Organisational Analysis

At that level, the principal of the design firm has to identify and test the objectives, resources, context and problems confronting the firm to determine where the training can be placed in order to achieve the firm goals. In addition, training programme has to utilise the firm resources, improve the working context and solve any problems could hinder the organisation mission, and stand in the way of progress.

The team members' survey could be an effective way in assigning the training needs. In addition, the client point of view is of prime importance in determining some problems that are not obvious to the firm or team members, such as project delay, using long routine procedures. As well as, not adopting new ideas in design, or new materials and construction technologies and confine the architect's abilities to limited types of buildings. More than that some architectural offices insist to raise the design and supervision fees. These impel the client to search for new designs in other firms.

5.11.2.2   Task Analysis

In order to determine what the contents of the training programme will be according to the tasks and duties involved in the job, two steps should be examined. The first step is to identify the tasks and duties included in the job, which is discussed in the study of the job description of every member of the architectural team, refer to (5.9.2.3). The second step is to list the steps that performed by the team members in order to complete each task according to the RIBA plan of work.

5.11.2.3   Person Analysis

In the person analysis level, we have to determine the specific skills, knowledge and attitudes required from the architectural team members in order to design a training programme which will provide the trainees with these missed skills and knowledge. All the skills, knowledge and attitudes of the architectural team members are widely explained in the job specification of each team member.

5.11.3   Establishing Training Objectives

When the design firm determined the training needs at all levels, the next step is to establish the training objectives in order to match these needs.

5.11.3.1   Organisational Objectives

The training objectives of the design firm at this level will involve the principal of the firm, partners, team leaders or head of departments. Training programmes will concentrate on achieving the organisation objectives, increasing and developing the firm productivity. In addition, training has to improve the managing, planning, scheduling, controlling and monitoring abilities of the involved members. Furthermore, it has to be taken in account that it is of prime importance to train them how to win and satisfy client needs.

5.11.3.2   Task Objectives

The team members who will be involved at this level are the project leader, architects and architectural technicians. The training objectives will focus on performing the projects on time, within budget, and as specified. In addition the training programme has to provide the trainees with the latest knowledge in the computer application in the architectural field, coupled with new techniques and materials in the construction industry in order to enable them to perform the job perfectly.

5.11.3.3   Person Objectives

The training objective at this level will concentrate on improving and enhancing the team member's behaviour, skills, knowledge, and experience.

5.11.4   Training Principal, Partners, And Team Leaders

Training principal, partners, and team leaders could be held on or off the job experience. The on-job-training may include:

- Developing management, leadership, and negotiation skills.
- Planning and monitoring projects progress.
- Learning how to win and satisfy the client needs.

- Methods and strategies of increasing and improving the organisation productivity.

- Innovative techniques used in minimising project costs and exploiting available resources in order to increase the firm profitability.

- Because it is hard to find professional people, and harder to keep. Principal and team leaders should be learned how to keep and reserve those professionals. This could be achieved by creating a co-operative, co-ordinated and pleasant environment of work. In addition they have to be learned how to reduce routine procedures, as well as motivate team members and state rewarding systems for excellent achievements.

- In addition to the managerial training, team Leaders should gain technical, presentation and computer training.

Many techniques could be used to supplement off-the-job experience such as case method, role playing, in basket, and management games. Refer to (4.8.2.).

5.11.5   Training Project Leaders

Training programmes for project leaders comprises managerial and technical skills.

Managerial skills are required because he or she has to manage and lead architects and architectural technicians as well as planning and controlling projects. This could be done on or off the job experience. Furthermore, technical training is essential for project leader because design and supervising work is one of his or her main responsibilities; this could be done on or off-the-job. The project leaders training may include:

- Developing management, leadership, and negotiation skills.

- Preparing strategies, schedules, and plans to control and monitor projects progress. The team leader should be trained to deliver projects on time, within budget and as specified.

- Learning how to win and satisfy the client needs.

- Enhancing project leader productivity by providing him or her with the recent knowledge in information technology, project management and architectural design programmes.

- Co-ordination skills not only, between the architectural team and other engineering teams, but also between the architectural team members themselves.

- Learning how increase you team productivity by creating pleasant environment of work, encouraging and motivating team members to perform their job perfectly.

- Participating workshops in sites to supervise the execution of the designed project, learn the new techniques in construction, and avoid any mistakes in design which appeared on site.

5.11.6   Training Architects

It is not enough for the architect to be a talented artist, but he or she has to be a good organiser and business person. So that, training of architects concentrate not only on the development of the design and presentation abilities, but also on the management skills. Architect training needs to include a proper understanding of the symbolic and aesthetic associations of people and their architecture. Only then can an architect create built forms with which the community will wholeheartedly identify and which will become worthy of being regarded as the community's heritage over time (Doshi, 1986, 186)

Most architects have clearly avoided formal training in management for three reasons:

(1)   Architectural educators believe there is too little time available in schools to add management courses.

(2)   Architects argue that management training would be useless since architectural education adequately prepares for contingencies.

(3)   (3) Architects frequently see wrong-headed and unethical ideas and issues emerging from management training (Akin and Eberhard, 1996, 4-5).

The architect training may include:

- Improve the technical knowledge of the architect by providing him with catalogues, manuals, and details of the new construction materials and methods in order to imply them in his or her designs.

- Advanced courses of using computer in designing, draughting, presentation, scheduling, controlling and monitoring project. This will help the architect to deliver the project on time, within budget, and as specified. In addition, the architect has to be learned how to utilise the use of the architectural sites on the Internet.

- Participating seminars, lectures, site workshops, and visiting historical and modern building in order to enrich the architect experience.

- Providing the architect with the essential information required in design, such as building regulations and town planning rules and procedures.

5.11.7   Training Architectural Technicians

Architectural technicians have an important role in design firms. They are responsible for preparing working drawings. The training of the architectural technician will include:

- Using the latest version of Computer Aided Design and Draughting (CAAD) programmes effectively, and know all the tips that accelerate the performance of the projects.

- Providing him with all new details and construction technology to enable him to do his work efficiently.

- Training him how to co-ordinate the architectural drawings with other engineering drawings such as structural, mechanical, electrical, drainage and landscape drawings in order to produce a compatible set of tender drawings.

5.11.8   Training Evaluation

After we have discussed the training of the architectural team members it is imperative to evaluate the training programme and assess the achievement of the established objectives and the gained benefits. In addition, we have to measure to what extent the trainees will apply the learned and practised materials and skills back on the job. This information could be gathered even by questionnaire, survey or interviews.

Training evaluation could be broken down into the following areas:

(1)   Reaction.
(2)   Learning.
(3)   Behaviour.
(4)   Results.

These four areas are explained in chapter four, refer to (4.12)

5.12   Motivation Of The Architectural Team Members

Due to the unique role that the architect plays in society, a comprehensive approach is absolutely necessary in the study of motivating architects. Architects are associated with the entire spectrum of human activities. Architects as professionals and highly skilled type of workers need to be motivated in order to contribute all their effort to design buildings, which is suitable, harmonise and interact with the surrounding environment which achieve the client requirements and fulfil the organisation goals. Architects have a great impact on the quality of life. In many organisations, management failure to reward architects with motivations beyond those appealing to non-professionals has resulted in a higher rate of turnover among the first than among the latter group on comparable organisational level. Another reason relates to management failure is that architects are intrinsically creative and cannot be managed like other labour, that architects are professionals who demand special treatment.

In order to overcome the management failure of motivating professionals such as architects, there are some concepts should be considered as follows:

(1)   Treat Architects As Professionals

The great source of tension and disappointment for architects is that current management method and policies do not reflect an adequate understanding of their need orientation and expectations as professionals. This needs to be changed. Responsibility, achievement and contribution are very important ingredients of motivational system for architects.

Management methods and policies should also reflect an understanding and appreciation of the difference in work orientations and expectation between architects as knowledge workers, and non-knowledge workers. Architects for example, should be given the opportunity to review, appraise and judge their own performance and should be given the information and tools to do their jobs.

(2)   Enhancing Managerial Competency Of Engineering Managers

The single important factor in motivating architects is the engineering manager or architectural team leader. Management should look well beyond the candidate's technical abilities, searching for possible ingredients and characteristics that would make him a successful manager or team leader. In addition better selection methods must be employed to identify those promising candidates who are likely to have the psychological prerequisites for managerial competency: a strong will to manage, a strong need for power, and a strong capacity for empathy.

(3)   Establishing Positive Motivational Climate

A powerful motivational mechanism is through job redesign. The meaning of meaningful work for architects is changing due to changes in cultural values and social expectations. The jobs need to be redesigned containing elements of challenge, achievement, and conveying the feeling that work has meaning and would make a positive contribution causing no ecological damages or future problems. In short the concept of job enrichment is quite relevant here and should be used by team leaders to enhance motivational potential and productivity of architects. Reward systems appropriate for architects are those emphasising such factors as status, advancement to managerial positions, and authority and influence within the firm hierarchy. Opportunities for participating and involvement in managerial and technical planning and decision- making are expected to enhance the architect's status, influence, satisfaction, and productivity. In order to stimulate and reinforce creativity, appropriate organisational climates should be established. An organisation with a more decentralised and less formal structure with variety of opportunities for

communication, interaction, and participation should be designed. More positive and enthusiastic responses to new ideas and a reasonable degree of freedom and autonomy are some positive ingredients of a creative climate.

(4)   Better Personnel Management Policy

Architectural team members are more productive when they feel they are a valuable part of the design firm and that the firm cares about them. In addition, professionals like architects are a special kind of asset because they gain in value with time, particularly when improvement and development are made. This means that the future of the design firms depends on recruiting good people. Placement is an important area because of professional is the key to their productivity. Architects should be placed where their strength can be productive. Designing appropriate placement policies for architects is thus a vital concern for personnel managers. In view of the importance to architectural team members of salary and economic incentives, a sound scheme is necessity. Salary ranges for architectural classifications should be spelled out, with recognition for extra schooling, higher degrees, personal development efforts, and attendance of technical and professional seminars. Pension is a related area where changes are needed. Architects should not be "tied" to a particular company. They should stay with a company because they are interested and challenged by their work and feel adequately compensated, not because of their pension plan, extended vacation or captive fringe benefits. This arrangement suggests that companies should consider participation in portable pension plan that will allow any member of the architectural team to move from employer to another without losing benefits.

(5)   Better Strategies For Career Planning And Motivation Of Old Architectural Team Members

There is a need for improved management understanding of the concept of career planning for professional enrichment and growth for architects. Management must also learn how to manage and motivate older members of the architectural team. Several strategies could be adopted. These include continuing education, retaining, sabbatical leaves, rotation programmes, job transfers, and redesign. Management must show commitment to the concept of continued learning throughout life as a powerful tool. That is, company policy and reward system must reinforce these learning behaviours and professional enrichment programmes. These mechanisms are particularly important for motivation and technical vitality of older architectural team members, as they can become bored with the same work after 5 to 10 years.

5.13 Conclusions

The architectural team is the first line of contact with the client in the construction industry. Because of the large number of design firms that can submit the same service, most clients typically select architects according to their qualifications. They usually include some combination of the following factors: (1) resources available to the job, (2) experience with owner, project , or facility type, (3) management ability, (4) compatibility, (5) problem-solving approach, (6) cost and value services, (7) strength of ideas

The success of the architectural team in particular and design firms in general depends on the achievement of the clients' objectives. In the light of the above, it is obvious that it is of prime importance that any design firms should pay attention to the team work, in all sections in general and in the architectural section in particular, as the corner stone for achieving its objectives, win new clients, and compete for the future.

Architecture could be defined as " the science and the art of building. It is understood to be the whole of the environment built by humans, including buildings, urban spaces, and landscape. Architecture is the unavoidable art, it constantly touches us, shape our behaviour, and conditions our psychological mood. More than being merely shelters or a protective umbrella, architecture is also the physical record of human activity and aspiration. It is the culture legacy left us.

The word "architect" comes from the Greek word "archikton" meaning "chief craftsman". The architect during the different centuries was a man of many skills, he was responsible for planning, designing, engaging the craftsmen and labourers needed to build his creations and also supervising the actual building operations. In addition, he was excelled in many branches of sciences such as mathematics and astronomy. But as buildings became more complicated, with a wide variety of components, materials and services, architects handed over more of their function to other specialists such as mechanical and electrical engineers and quantity surveyors.

Design could be defined as "the process of deciding what a structure will look like and how it will function. Designing a project can be entirely new or it can be a result of several ideas combined together to meet the needs of a specific project". Rittle and Webber coined the phrase " Wicked " problem when referring to complex design task, such problems, they say, can never be "solved" merely "resolved", and the acceptability of any given solution depends simply on how it compares with other possible solutions in the judgement of the decision making unit. Simon (1973) suggests that wicked or as he terms them "Ill-Structure" problems are treated by designers as a number of interrelated sub-problems, which are well structured.

There are two opposing views of design process. The first one termed the "Glass Box Theory", which postulate that design is a rational, explicable decision making process, while the opposing view, the "Black Box Theory", holds design ability to be a talent which cannot as yet be rationally explained.

In order to set a model procedure for methodical working of the design team, the Royal Institute of British Architects published in 1964 the RIBA plan of Work. It is used in assisting the management of projects and as a basis for the control of office procedures. The RIBA Plan of Work stated the following stages which outline the way which the architect should administrate a building project both at the pre-contract and contract-stages. The various stages are: (a) Inception, (b) Feasibility, (c) Outline proposal, (d) Scheme design, (e) Detail design, (f) Production information, (g) Bill of Quantities, (h) Tender Action, (I) Project Planning, (j) Operation on Site, (k) Completion, and (l) Feedback.

Today Construction work, which of course includes design, is more complex than before, this is because of the wider choice of new materials, construction methods and management techniques, coupled with the fact that jobs are more likely to be unique. This necessitates the need for a well-structured design team in which everyone contributes their own particular skills.

Studying the organisational frameworks in design firms is imperative in order to utilise the use of every one working for the firm. These frameworks takes place at two levels, in the matter of the overall organisation, and in the way individual projects are handed. The overall organisation frameworks are shallow, deep, and mixed. In addition, there are some frameworks for architectural practices according to the people involved; they are one architect working on his own, one architect with one assistant, small firm with sole principal, medium firm with sole principal, and large firm with sole principal. For individual projects, the architect must perform the following stages in order to organise the architectural projects. (1) decide what has to be done, (2) programme the work, (3) organise the work. (4) co-ordinating and controlling the work, (5) organising records procedures.

The Members of the Architectural Team are principal / partner, team leader or head of the architectural section, project leader, architects, and architectural technicians.

This chapter explained in detail the recruitment process of architectural team in design firms. It defined the recruitment philosophy, the recommended steps which have to be followed in recruitment of team members which are: (1) determining the vacancy, (2) selecting the recruiting sources, (3) job analysis, and (4) advertising.

After the design firm attracted the professionals to submit for its vacant posts, the selection process will take place. It is advised that the selection process follow the recommended steps of: (1) the application form, (2) the initial screening interview, (3) the employment interview, (4) employment tests, (5) references checking, (6) physical examination and drug testing, and (7) the selection decision. After the team members are selected, the role of the team leader in maintaining, creating an effective team will emerge by adopting and applying the team building concepts and principals.

Training programmes for architectural team members have an effective impact on achieving the design firm objectives as well as enhancing and improving the skills and abilities of the team members. Orientation and socialisation of the architectural team members are discussed in order to explain the process of introducing newcomers to the design firm and to show them what happens in the first year of employment and illustrate how they can deal with the new environment.

Determining training needs and establishing training objectives at the Organisational, Task, and Person levels are discussed in detail. In addition, this chapter discussed training programmes for principal, partners, Team Leaders, Project Leaders, Architects, and Architectural Technicians. Furthermore, training evaluation which could be broken down into (1) reaction, (2) learning, (3) behaviour, and (4) results are explained in order to know if the training programme achieved its objectives or any corrective decisions should be made.

Because its importance in encouraging team members to devote their efforts to achieve the design firm objectives, the motivation process of architectural team members are studied in order to assess the most suitable motivator for such unique profession.

In order to overcome the management failure of motivating professionals such as architects, The following concepts should be considered: (1) treat architects as professionals, (2) enhancing managerial competency of engineering managers, (3) establishing positive motivational climate, (4) better personnel management policy, (5) better strategies for career planning and motivation of old architectural team members.

Chapter six will be about research and methodology. It will identify the survey locations, as well as the design and structure of the methods to be used in data collection.

CHAPTER 6

RESEARCH METHODOLOGY

6.1   Introduction

According to the unique role which the architectural team plays in the construction industry, the previous chapter was devoted to study the process of building the architectural team in design firms. Chapter five explained the reasons of studying the architectural team and how can such a team be an attractive element to get new clients.

In order to give complete background about the architecture profession, chapter five explained the meaning of architecture and the historical role of the architect. In addition, a brief introduction to design, the importance of team work in design firms, and the different organisational frame work in design firms are discussed in detail. After that, we discussed the recruitment philosophy in design firms, the recommended steps which have to be followed in recruiting and selecting newcomers, and what the team leader has to do when selection decision is made.

In order to achieve the design firm objectives, training programmes are discussed as an effective method to improve the skills and abilities of team members and keep them up to date with the new technologies in the construction industry. Furthermore, the importance of the motivation process as well as the different motivation techniques are explained to show managers and team leaders how they can improve the team performance and increase its productivity.

This Chapter will identify and portray a picture about the locations where the survey will be carried out. In addition, chapter six will explain the design and structure of the different methods that will be used in data collection, the people who will be contacted, and the topics to be covered.

6.2   The Survey Locations

The United Arab Emirates is located toward the middle of the Arabian Gulf, north of the equator, between latitudes 22 degrees and 26.30 degrees to the North, and longitudes 51 degrees and 56.30 degrees East of Greenwich mean time (GMT). It is bordered to the North by the Arabian Gulf, to the West by the State of Qatar and the Kingdom of Saudi Arabia, to the South by the Sultanate of Oman and the Kingdom of Saudi Arabia, and to the East by Gulf of Oman, see figure (6.1).

The total area of the Country is 83600 square kilometres. This includes an archipelago with an area of about 5900 square kilometres. The total population in 1991 was estimated to be 2,011,400 individuals. The city of Abu Dhabi is the Capital of the State. The United Arab Emirates is composed of seven Emirates: Abu Dhabi, Dubai, Sharjah, Ajman, Umm Al-Quwain, Ras Al-Khaimah and Fujairah, see figure (6.2).

Figure 6.1 The Geographic Location Of The United Arab Emirates.

The U.A.E., since its establishment in 1971, has witnessed a remarkable and swift economic development, which is very difficult to attain even in the most developed communities. The U.A.E has rapidly maximised the benefits obtained through its immense oil proceeds to provide for the basic requirements of the society.
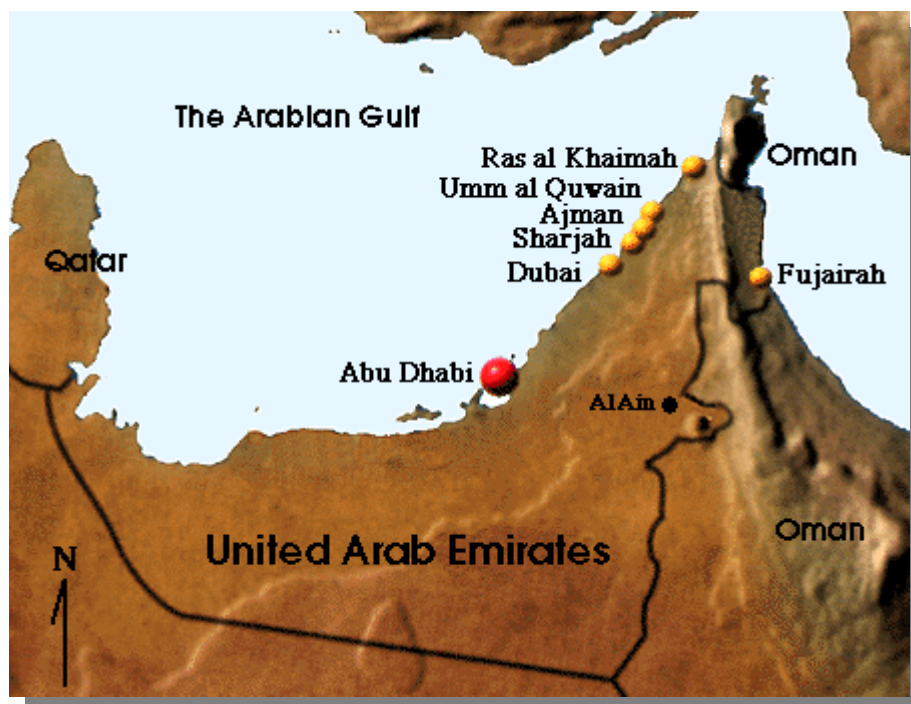
Figure 6.2 The Map Of The United Arab Emirates.

The U.A.E. has lived up to the expectations of the international community, and generously stood by its sister countries in the Arab World and other developing countries in the rest of the world.

The U.A.E is one of the best world winter resorts. Between November and March it experience warm sunny days with an average temperature of 26 C and cold nights with an average temperature and high humidity increase between June and August.

 The time in the U.A.E is four hours ahead of GMT, and the currency used is Dirhams, £1* = 6 DHS. (*= Estimated).

The survey is designed to cover design firms in the main Emirates of the United Arab Emirates. They are the Emirates of Abu Dhabi, Dubai, and Sharjah.

6.2.1   The Emirate Of Abu Dhabi

The Emirate of Abu Dhabi is the largest of the seven Emirates, and its main city. It is the capital of the UAE. It has an area of 87,340 square kilometres equivalent to 86.7% of the country's total area, excluding the islands. The estimated population of the Emirate is 841,000 (1992).

The Emirate of Abu Dhabi is comprised of three major regions:
The Abu Dhabi region, which includes the city of Abu Dhabi. It is the headquarters for the president of the state, the cabinet and most of the ministries, the Federal institutions, foreign embassies, broadcast television, Zayed Port, Abu Dhabi Airport, and most of the oil companies and prestigious hotels, see figures (6.3) and (6.4).

The Eastern region, with its capital Al-Ain City. This region is very fertile and rich in greenery, with plenty of farms and public parks. This region is also very rich in ground water, with numerous artesian wells. The most attractive land marks in this region are Ain-Faydah Parks, Hafeet Mountain, Al-Heili Leisureland, the Zoo, and Al-Ain Museum. It has the most admired cultural landmark: The UAE University.

The Western region's capital city is Beda-Zayed. It has a wide stretch of grown forests to combat the desert climate. Its current area is about 100,000 hectares containing about 20 million green trees. Certain on-shore oil fields are located in this region. The largest oil refinery in the country is located in this region at Al-Ruwais city.

A number of islands are part of this Emirate. The most significant in this chain are Das Island, Mubraz Island, Zirku Island, and Arzana Island, which constitute the main offshore oil fields. Other islands include Al-Sadyaat and Abu El- Abyaadh.

Figure 6.3 The Corniche Road

Figure 6.4 Abu Dhabi Inter-Continental Hotel

Major percentage of the government and individuals capitals are invested in constructing high rise buildings, factories, universities, colleges, institutes, schools, mosques, roads, bridges, residential and commercial villas.

6.2.2   The Emirate Of Dubai

Dubai lies along the Arabian Gulf, over a distance approximately 72 kilometres long. The area of Dubai is 3885 square kilometres, equivalent to 5% of the country's total area, excluding the islands. The Emirate's population is estimated to be 529,000 persons (1992).

The town of Dubai is the capital of the Emirate. It is penetrated by a water creek known as Khor-Dubai, 10 kilometres long, dividing the town into two divisions. The Southern division, known as Bur-Dubai, comprises the Ruler's office, head offices of major companies, banks, customs, port, broadcast station and postal authority. The most significant land marks are the Dubai Trade Centre, the Zoo and Al-Jumeirah coast park, see figure (6.5).

The Northern division, known as Diera, is the centre of business traffic and tourism. It comprises most shops, markets, schools, hotels, clubs and the Dubai International Airport. The two divisions are linked by the Al-Maktoum and Al-Girhoud bridges and Al-Shandagah Subway which passes under Al-Khor, see figures (6.6), (6.7) and (6.8).

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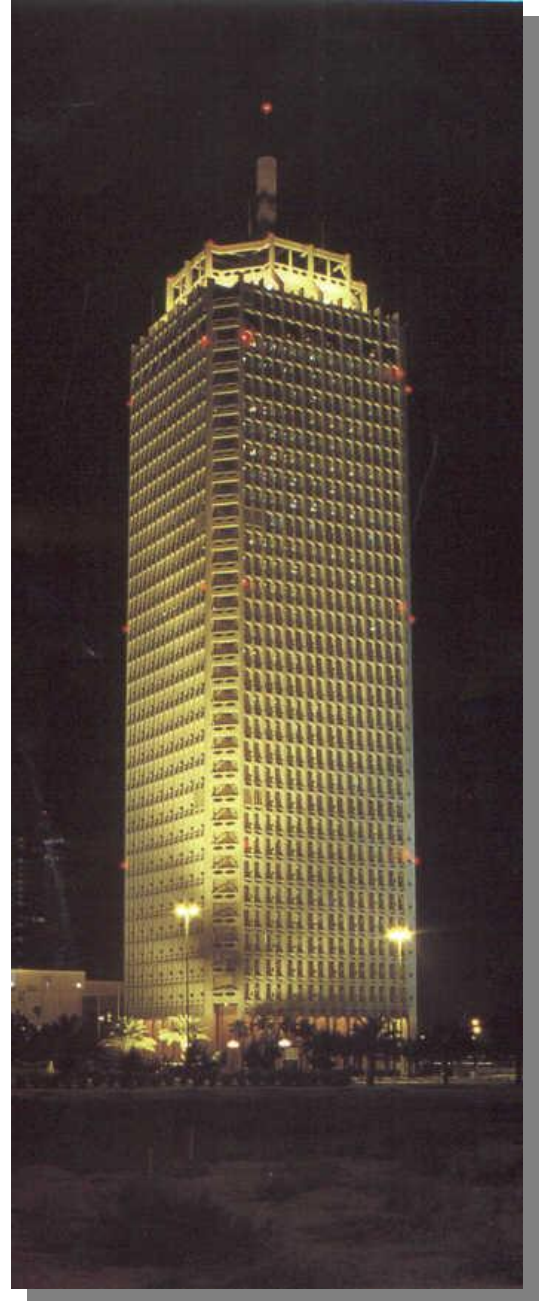
Figure 6.5   Dubai Trade Centre.

Figure 6.6 Emirates Golf Club.

Jabel Ali area is considered one of the most significant industrial and commercial areas in the whole country. It has the biggest free trade zone in the whole Gulf. It comprises the Dry-Dock, Jabel Ali Port, and the Dubai Aluminium Factory. The most important tourism land marks are Hatta district, Al-Aweer district and Al-Khwaneej. Investment in constructing buildings, high standard shopping malls, tourist clubs, hotels, factories represent a major field of investment in Dubai.

Figure 6.7 Emirates Telecommunications Corporation

Figure 6.8 View Of Dubai Creek

6.2.3   The Emirate Of Sharjah

The Emirate of Sharjah is located along the coast of the Arabian Gulf over a distance of 16 kilometres long, and extending into the interior for a distance exceeding 80 kilometres. The three other parts of Sharjah lying on the Gulf of Oman are Kalba, Khor Fakan and Dabba El-Husn. The Emirate has an area of 2590 square kilometres, equivalent to 3.3% of the country's total area excluding the islands. The population of the Emirate is estimated to be 330,000 for 1992.

The city of Sharjah is the capital of the Emirate, overlooking the Arabian Gulf. It comprises the Ruler's office, government departments, companies, banks and hotels. Distinctive land marks of the city are the commercial markets built on the lines of the Islamic design, such as Sharjah and Al-Magara markets, see figure (6.9).

Figure 6.9   Al-Magara Market.

Many recreational areas and public parks, and museums are established in the city, like Al-Gazera Fun Park, Al-Bouheira Corniche, and Sharjah Science Museum & Learning Centre. The city is also famous for its great number of mosques. Two other important achievements are the Sharjah International Airport and Khalid Seaport. Some oases are scattered in the interior, the most well-known is Zeid with very rich and fertile soil which produce large quantities of vegetables and agricultural products, see figure (6.10).
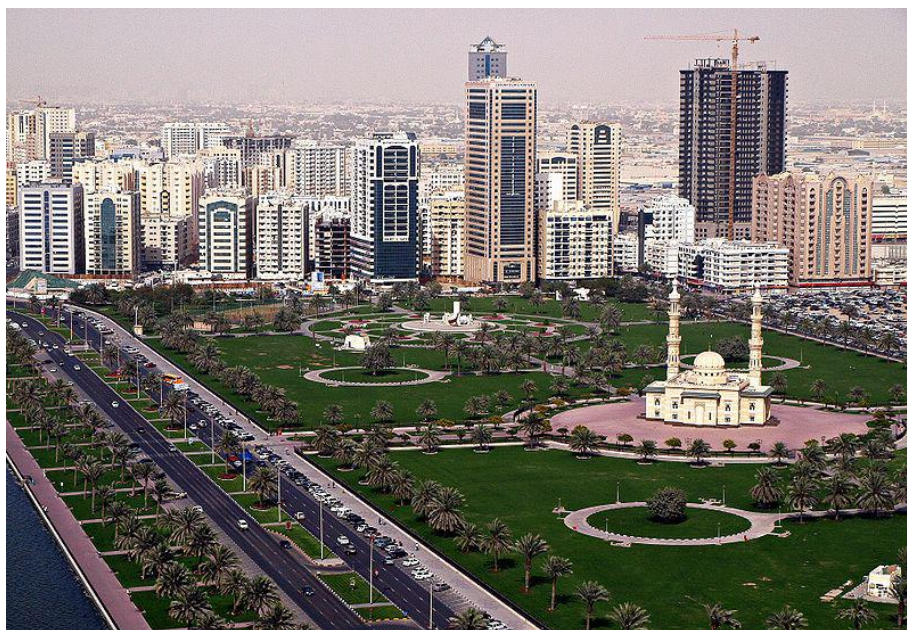
Figure 6.10   The City Of Sharjah

On the Eastern region along the Gulf of Oman there is the town of Khor Fakan, having the main port for the Eastern region. The other islands in the area are Abu Mousa and Sayeer Bou Naa'eer. The government of Sharjah has obvious concerns with culture and education till the extent it was selected to be the Cultural Capital Of The Arab World for 1998 by UNESCO. Major construction project includes universities, galleries, museums, mosques, markets, ports, public parks and recreational areas were constructed and still many to be built, see figure (6.11).

Figure 6.11   King Faisal Mosque

The rapid growth in the U.A.E is accompanied with tremendous growth in the construction industry, which plays an important role in achieving government and individuals needs. This attracts hundreds of national and international design firms, construction companies, and suppliers to invest and construct large project in the U.A.E. So such locations and environment are an ideal climate to carry out the questionnaire, interviews, and observation.

6.3   Design And Structure Of Collecting Data Methods

The collected data is principally made by the use of questionnaire, interview and observation. The questionnaire is designed to be answered by the architectural team members, the interview is prepared to be conducted by design firms principals, partners, and personnel/human resource officers, finally the researcher used his own experience and observation accompanied by the

utilisation of different experiences and observations of a selected number of qualified and experienced team leaders and project leaders.

These three methods are used to collect data regarding the following topics:

(1)   The perception, acceptance and implementation of the team building concepts.

(2)   Recruitment and selection of the architectural team members.

(3)   Training and motivation of the architectural team members.

In addition, the door was open for all team members and management to suggest any new ideas, techniques, and methods that in their perspective will achieve the organisation objectives, and improve the team work.

6.3.1   The Questionnaire

The questionnaire is designed in line with the literature review. According to the large number of architectural team members in the selected design firms, taking in account their work commitment and time constraints, it was difficult to conduct an interview with each one, so the questionnaire was a suitable method of collecting data from them. The questionnaire intends to have an internal view about the architectural team, so the questionnaire is designed to be answered by team members.

An attempt was made for the questionnaire to be as simple and practical as possible in order to generate a higher rate of responses. Furthermore, a cover letter introducing the research tasks to the respondents. Attached envelope facilitating the postal responses, for cities other than Abu Dhabi, was accompanied with the questionnaire. A copy of the cover letter is shown in Appendix (I), while the questionnaire is contained in Appendix (II), respectively.

6.3.1.1   The Questionnaire Objectives

The architectural team members were asked to argue on three different parts as follows:

Part 1:   The Team Building Concepts

This part is intended to investigate and measure the perception and importance of adopting the team building approach in the architectural sections in design firms, and to examine all the activities accompanied by the team building process.

Part 2:   Recruitment And Selection Of The Architectural Team Members

This part is intended to investigate how the different team members find their current positions, what interviews, tests and examinations attended in order to be selected.

Part 3: Training and Motivation of the architectural team members

Last part is intended to investigate the training process and motivation techniques of the architectural team members. It will concentrate on identifying the importance of training, what are the different methods used by design firms to train architectural team members, and what are the skills need to be acquired. Furthermore, this part is designed to investigate the necessity of the motivation process, what are the different techniques used to motivate team members in order to achieve the organisational objectives.

Detailed analysis of the objective of every question will be explained in chapter seven. The questionnaires were issued early May of 1999 and completed returns were received for a period of up to eight weeks thereafter.

I would like to mention that about 60 questionnaires were distributed and collected in Abu Dhabi by hand in order to encourage people to answer the questions and to make sure that the mentioned member of the surveyed firms got a copy of the questionnaire, and to avoid mail delay or loss. Equally 20 questionnaires were sent by mail to design firms in Dubai and Sharjah.

6.3.2   The Interview

Interview is the second method used to collect the required data. Because of the plenty of time spent in fixing appointments with principals and key people in design firm, coupled with their engagement and commitments some of the interviews made face to face and the rest done by telephone and E-mail.

Structured interview is prepared to contact the principals and partners of design firms as well as the personnel and human resources officers in order to get the required data. The interview was a suitable method of collecting data at that level of management, this is because the discussion and interaction with decision-makers and manager enriched the survey with new data, trends, and practical experience. A copy of the questions asked in the interview is shown in Appendix (III).

6.3.2.1   The Interview Objectives

The interview is designed to investigate three different parts as follows.

Part 1: The Team Building Concepts

Part one is intended to investigate the role of management in adopting and applying the team building concept in design firms, and how this approach will increase their productivity, and enhance their performance.

Part 2:   Recruitment And Selection Of The Architectural Team Members

This part is intended to investigate the application of human resource planning and forecasting techniques used by design firms. In addition, it intends to investigate the steps followed when recruiting new member. Alternatives to recruiting, sources of recruiting either internal or external the design firm, job analysis, and advertising for the vacant posts will be examined.

Furthermore, this part will examine the steps followed in the selection process. Application forms, interviews, employment test, reference checking, physical and drug testing, as well as the selection decision will be investigated in order to know the role of management, personnel and human resources officers in selecting the team members.

Part 3: Training And Motivation Of The Architectural Team Members

This part is intended to investigate the training process and different motivation techniques used by design firms in order to encourage team members to achieve organisational objectives and complete project on time, within budget, and as specified.

6.3.3   The Observation

The third method used in data collection is the experienced observation of the team work in the architectural section of design firms. These observations were collected from the researcher experience, observation and interaction with the architectural teams. In addition, the researcher asked many team leaders and project leaders who have wide experience in leading, managing, and controlling architectural teams to write down their observations and comments.

This method is distinguished from the other two methods because there are no structured questions, but the engaged parties are provided with main topics and left on their leisure to write down what they noticed and observed from their experience. Summary of these data will be analysed in the next chapter.

To recap, free thinking and brainstorming is the dominant characteristic of the observation method. These data is of prime importance due to the value of the practical experience.

6.3.3.1   The Observation Objectives

As the two other methods used, the observation method concentrates on three parts: the team building process, recruitment and selection of architectural team members, as well as training and motivation of architectural team members.

6.4   Conclusions

According to the rapid growth in the construction industry in Abu Dhabi, Dubai, and Sharjah, they were selected to be the survey locations. This chapter discussed the different method used in data collection. These methods are the questionnaire, the interview, and the observation. The questionnaire is designed to be answered by architectural team members, the interview is prepared to be conducted with principals, partners, and human resources/personnel officers, finally the observation method is used to collect data from experienced team leaders and project leaders according to their long and wide experience in the architectural field.

The next chapter will analyse the data collected in three axes: the architectural team members, the design firm management, and the experienced team leaders and project leaders. It will be devoted to analyse the perception and application of the team building process as an approach to achieve the organisation objectives, in addition the collected data will be used to analyse the recruitment and selection process applied in design firms. Furthermore, it will be used to know the importance and different training programmes adopted to improve and enhance the team members' abilities and skills. The essentiality and different motivation techniques used by design firms to stimulate architectural team members will be analysed.

CHAPTER 7

DATA ANALYSIS

7.1   Introduction

I n the previous chapter we discussed the different methods used in collecting data from design firm. Each method is used and designed in order to support a specific objective. Three methods are used: the questionnaire, the interview, and the observation.

For the purpose of this research 100 design firms and engineering consultants were conducted, 60 of them were in Abu Dhabi, where 20 design firms were equally located in Dubai and Sharjah.

This chapter will exhibit the returns ratios from the three emirates of Abu Dhabi, Dubai, and Sharjah.   In addition, it will explain in detail the objective of every question asked in the questionnaire, the interview, and the topics of the observation. Furthermore, this chapter will be devoted to analysis of the responses from design firms and engaged parties.

7.2   Returns

Out of 100 questionnaires issued a total of 55 completed and usable returns were received. 38 questionnaires were collected from Abu Dhabi, 10 were received from Dubai, and the remaining 7 questionnaires were received from Sharjah, see figure (7.1).

Out of 15 interviews were planned to conduct with principals, partners, human resources/personnel officers, 8 were achieved. 4 of them were done in Abu Dhabi, 2 in Dubai, and the other 2 in Sharjah. The interviews in Abu Dhabi were conducted face to face, where the other interviews were done by telephone or E-mail, see figure (7.2).

Out of the 20 experienced architectural team leaders and project leaders who were asked to write do their observations, 10 responses were collected including the researcher observation. 5 observations were collected from Abu Dhabi, 3 from Dubai, and 2 from Sharjah, see figure (7.3). Summary of the above numbers is shown in table (7.1).

To recap, out of 135 questionnaires, interviews, and observations planned to perform, 73 were achieved, see figure (7.4). This represents rate of 54.07% which is considered a good rate of responses that will support the aim of the research and reach reliable results and recommendations.

	Questionnaire		Interview		Observation	
	Planned	Achieved	Planned	Achieved	Planned	Achieved
Abu Dhabi	60	38	9	4	10	5
Dubai	20	10	3	2	5	3
Sharjah	20	7	3	2	5	2
Total	100	55	15	8	20	10
Total Planned	135					
Total Achieved	73					
Total Responses Percentage	54.07%					

Table 7.1   Responses From Design Firms.
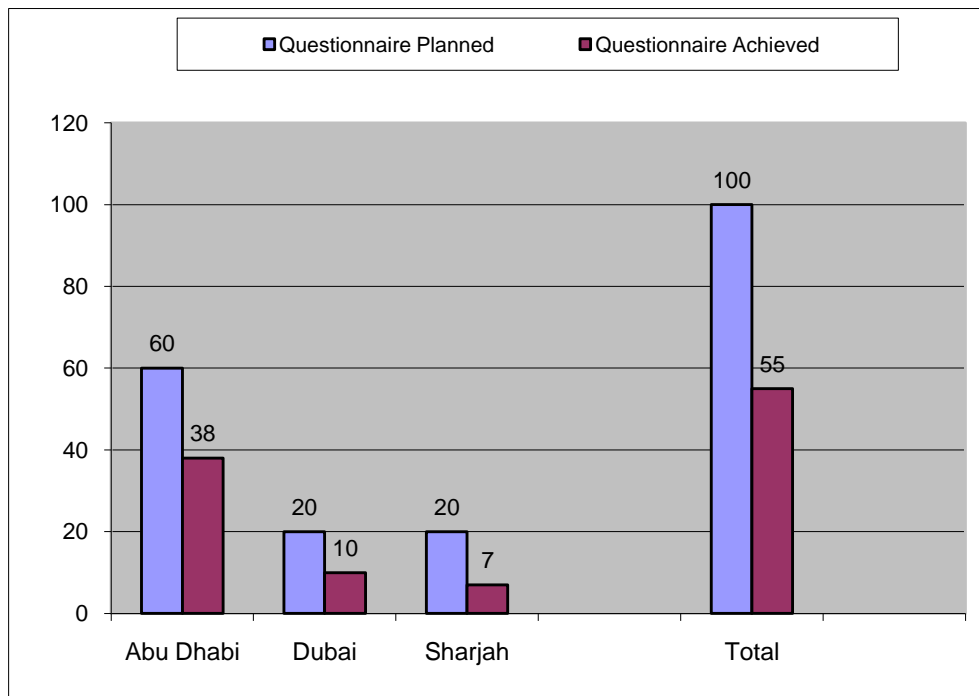
Figure 7.1 Number of Planned and Achieved Questionnaires.
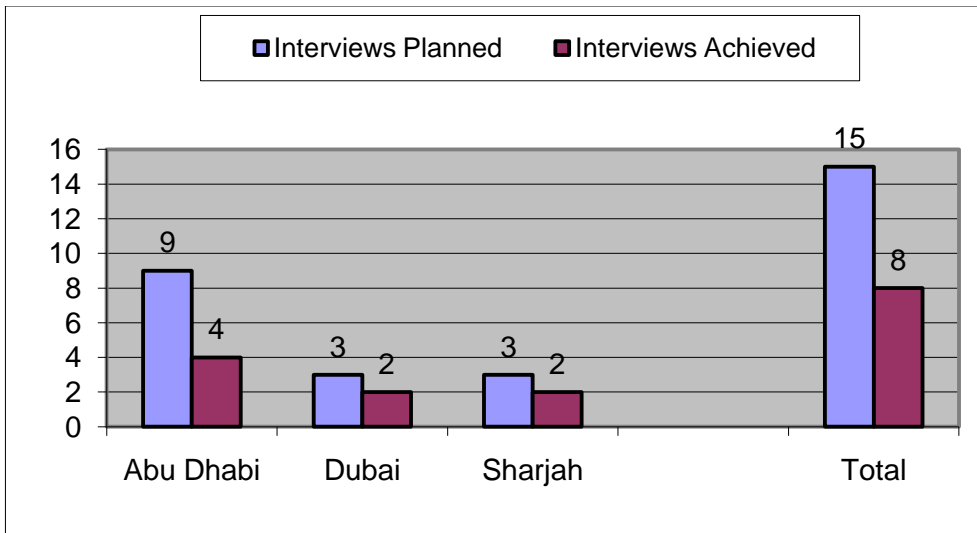
Figure 7.2 Number of Planned and Achieved Interviews.
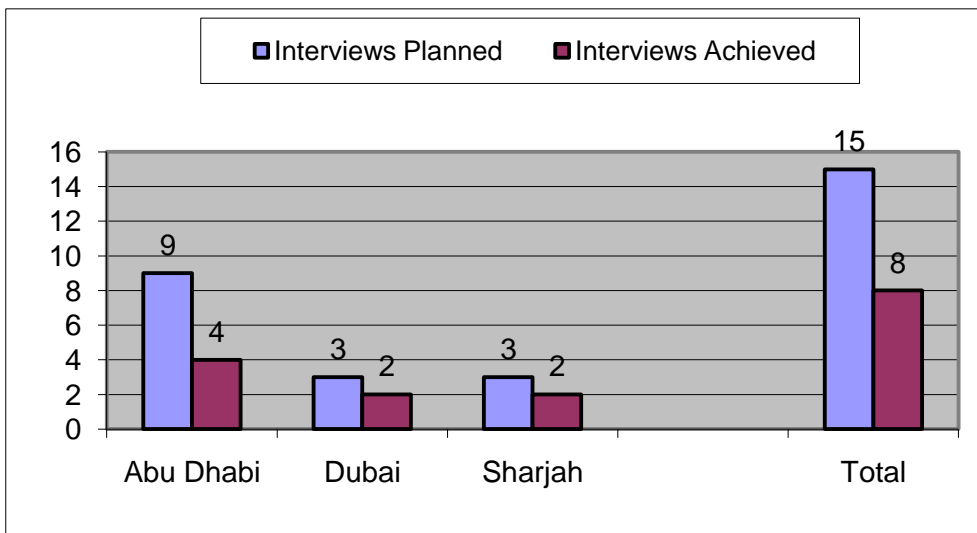
Figure 7.3 Number Of Planned And Achieved Observations.
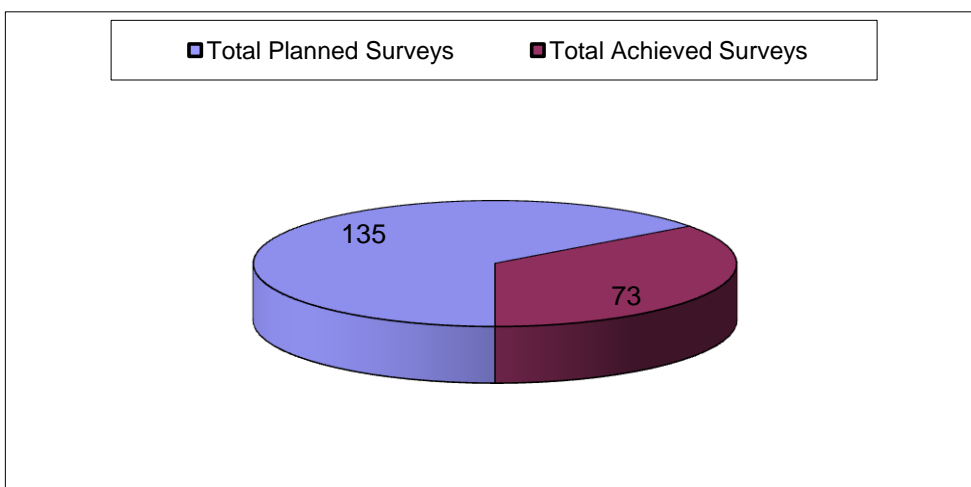
Figure 7.4 Number of Planned and Achieved Surveys.

Table (7.2) and figure (7.5) show the relationship between the size of the architectural team and the size of the organisation.

Number Of Organisations Surveyed	Number Of Architectural Team Members Per Organisation	Total Number Of Architectural Team Members	Number Of Employees Per Organisation	Total Number Of Employees in Organisations
5	3	15	15	75
7	6	42	35	245
10	9	90	50	500
30	12	360	75	2250
3	15	45	100	300

Total Number Of Organisations Surveyed		Grand Total Of Architectural Team Size		Grand Total Of Organisation Size
55		552		3370

Table 7.2   An Analysis Of The Architectural Team Size And The Organisation Size.
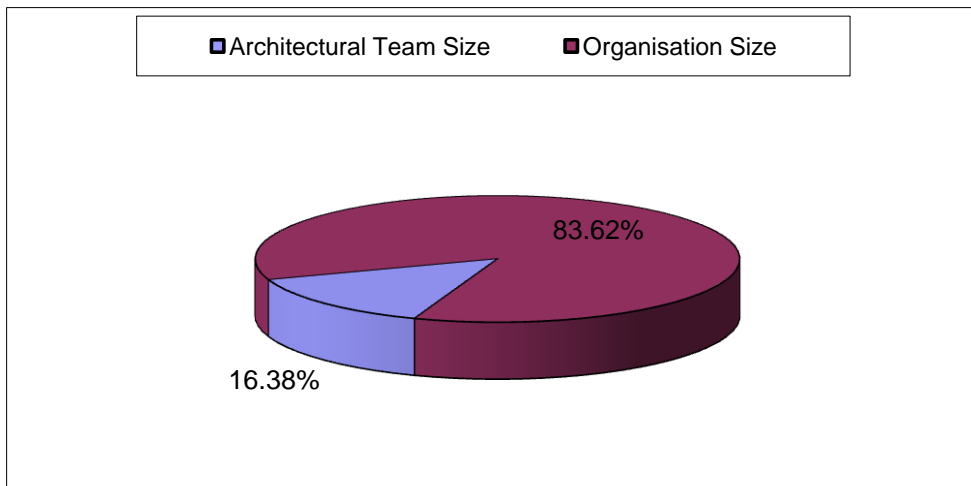
Figure 7.5 The Relationship Between The Architectural Team Size And The
Organisation Size.

7.3   Data Analysis

The following section will identify the objectives of the questionnaire and the interview questions as well as the observation topics. In addition, the data collected from respondents will be analysed in three axes: The architectural team members, the design firm management, and the observation of experienced team leaders and project leaders. These different axes will cover three topics: the team building concepts, recruitment and selection of architectural team members, as well as training and motivation techniques of architectural team members. Every person engaged in the survey process will contribute to the research in his or her related topic. I would like to point out that most questions have rooms for team members to define, illustrate, suggest, and record their comments. These additions enriched the research and helped in generating new ideas.

7.3.1   The Questionnaire

The following questions are answered by the architectural team members

Part 1

The Team Building Concepts

Question (1)

What the word " team " means to you?	**Yes**	**No**
• Individuals working at the same place	☐	☐
• Individuals have a common goal	☐	☐
• Group of people working together and co-operating between each other to achieve a common goal	☐	☐
• Others, specify_____	☐	☐

Objective   This question is designed to measure the perception of the architectural team members about the word "team" and what does it mean to them.

Responses   All the architectural team members agreed that the word " team" means a group of people working together and co-operating between each other to achieve a common goal.

Question (2)

How are goals established in your section?	**Yes**	**No**
• The team leader sets the goals for you	❑	❑
• The team discusses goals, but finally the leader sets the goals	❑	❑
• All the team members work together to arrive at consensus and agreed goals	❑	❑
• Others, specify_____	❑	❑

Objective   This question intends to:

    (1)   Investigate to what extent do the architectural team members share in setting their section goals.

    (2)   Measure the commitment of the architectural team members to achieve these goals.

Responses   50% of the architectural team members responded that the team leader sets the goals. 27.174% of them responded that the team discusses the goals but the leader sets the final goals. 22.826% of the respondents agreed that the team members work together to arrive at consensus and agreed goals

Question (3)

Does your section adopt the team concept to perform its projects?	**Yes**	**No**
	❑	❑

Objective   This question intends to know if the architectural section adopts the team concept as an approach to perform its projects, or the architectural section consists of individuals working alone.

Responses   All the team members agreed that their architectural sections adopt the team concept to perform their projects.

The respondent to the questionnaire is asked to go to question (4) if his or her answer was "yes", and to go to question (1) in part (2) if the answer was "no".

Question (4)

Which of the following reasons encouraged your section to adopt and apply the team building concept?	Yes	No
• Because it helps the team members adapt to the rapid changes in the construction industry.	❑	❑
• Because projects being completed on time.	❑	❑
• Because project being completed within budget.	❑	❑
• Because projects being completed as specified.	❑	❑
• Because of all the above.	❑	❑
• Because it is the fad of management today.	❑	❑
• Others, specify_____	❑	❑

Objective   This question is designed to examine how team building and the use of team approach will contribute to the success of projects.

Responses   89.855% of the architectural team members confirmed that their sections adopt and apply the team building concept because it helps the team members adapt to the rapid changes in the construction industry, projects could be completed on time, within budget, and as specified. 10.145% of them responded that they adopt the team concept because many government authorities insist that any architectural firm wishes to be entitled for new projects should prove that they adopt the team concept.

Question (5)

The team building process is most effective when applied:	Yes	No
• At the briefing stage	❑	❑
• At the sketch plans stage	❑	❑
• At the working drawing stage	❑	❑
• At the construction stage	❑	❑
• As a continues process throughout the project life cycle	❑	❑
• Others, specify_____	❑	❑

Objective   This question is designed to assess which stage should the team building process takes place In order to be effective.

Responses   79.710% of the architectural team members confirmed that the team building process should be a continues process through the project life cycle. 20.290% of them agreed that the process should take place at the working drawing stage and the construction stage.

Question (6)

Which of the following types are applicable to your team?   **Yes**   **No**

- Advice team   ☐   ☐
- Production team   ☐   ☐
- Project team   ☐   ☐
- Action team   ☐   ☐
- Others,
  specify_____   ☐   ☐

Objective   This question aims to investigate what are the different purposes, which the architectural team is formed for, and intended to achieve.

Responses   Figure (7.6) shows the responses collected from the architectural team members.
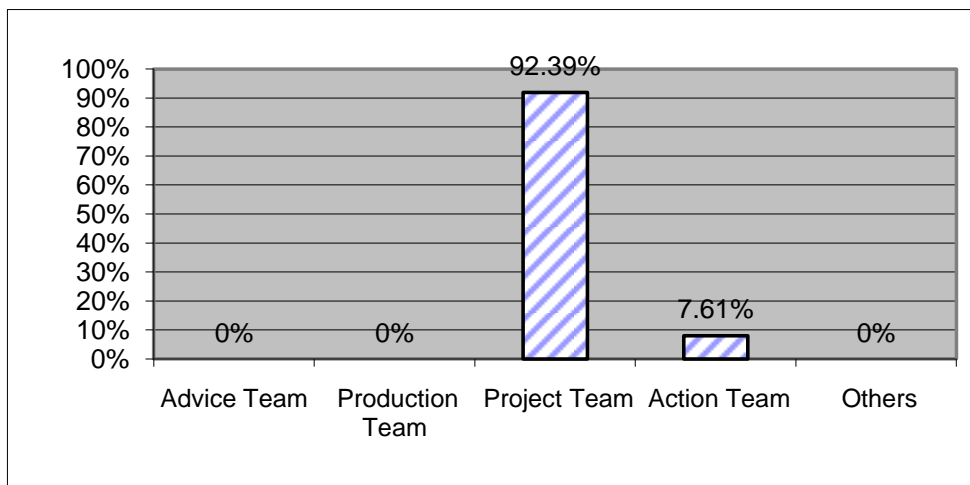
Figure 7.6 The Various Types Of Teams Applicable To The Architectural Team.

Question (7)

What is the role you play in your team?   **Yes**   **No**

- Visionary   ❏   ❏
- Pragmatist   ❏   ❏
- Explorer   ❏   ❏
- Challenger   ❏   ❏
- Referee   ❏   ❏
- Peacemaker   ❏   ❏
- Beaver   ❏   ❏
- Coach   ❏   ❏
- Librarian   ❏   ❏
- Confessor   ❏   ❏
- All of the above.   ❏   ❏
- Others,   specify   ❏   ❏
  _____

Objective   This question intends to identify the function and the role, which the different team members can perform and play. This function and role should commensurate with his or her abilities and skills.

Responses   11.956% of the architectural team members confirmed that they play the role of visionary, pragmatist, and coach. 10.144% of them play the role of explorer, peacemaker, and confessor. In addition, 8.152% of the respondents play the role of challenger, 6.16% of them play the role of referee. Furthermore, 75% of the architectural team members play the role of beaver, and 13.043% of them play the role of librarian. Note that some of the team members play more than one role.

Question (8)

To what extent do your team members comply with team Norms?   **Yes**   **No**

- Team members do not comply with team norms.   ❏   ❏
- Team members sometimes comply with team norms.   ❏   ❏
- Team members are fully complying with team norms.   ❏   ❏

Objective   This question Investigates the behaviours of the architectural team members when interacting between each others to achieve a consensus goal.

Responses   All the architectural team members agreed that they are fully complying with the team norms.

<u>**Question (9)**</u>

Which of the following factors indicate the team cohesiveness?	**Yes**	**No**
• Loyalty to the team.	❏	❏
• Identification with the team.	❏	❏
• Agreement with team goals.	❏	❏
• Defence of the team and members.	❏	❏
• Conformity to team norms.	❏	❏
• Responsibilities of team.	❏	❏
• All of the Above.	❏	❏
• Others, specify_____	❏	❏

Objective   This question identifies the factors that point out and increase the team cohesiveness. It is Important for team leaders to know the most effective factors in order to adopt them when building cohesive teams.

Responses   79.71% of the architectural team members confirmed that all the mentioned factors indicate and enhance the team cohesiveness. 20.29% of them selected loyalty to the team, identification with the team, agreement with the team goals, and conformity to team norms as factors that could indicate the team cohesiveness.

<u>**Question (10)**</u>

What is the role of your team leader?	**Yes**	**No**
• Figurehead.	❏	❏
• Motivator.	❏	❏
• Liaison officer with the outside contacts.	❏	❏
• Monitor of information technology.	❏	❏
• Team spokesman.	❏	❏
• Resources allocator.	❏	❏
• Negotiator.	❏	❏
• Creative.	❏	❏
• Good listener.	❏	❏
• Resolving conflicts.	❏	❏
• All of the above.	❏	❏
• Others, specify_____	❏	❏

Objective   Assessing the functions and roles to be played by the team leader is the objective of this question. These functions and roles emerged from the characteristics, experience, and knowledge of the team leader.

Responses   69.927% of the architectural team members pointed out that their leader play all the roles mentioned above. 20.11% of them confirmed that their leaders play the roles of figurehead, motivator, team spokesman, resource allocator, and creative. 9.963% of the respondents agreed that their team leaders play the role of, monitor of information technology, negotiator, good listener, and resolving conflicts.

Question (11)

What is your team leader style?   **Yes**   **No**

- Directive leadership.   ☐   ☐
- Participative leadership.   ☐   ☐
- Achievement-oriented leadership.   ☐   ☐
- All of the above.   ☐   ☐
- Others,
  specify_____   ☐   ☐

Objective   This question is prepared to identify the management style of the team leader. He or she may exhibit more than one style according the project situation taking in account his or her characteristics, experience, abilities, skills and knowledge.

Responses   59.963% of the respondents confirmed that their leaders adopt all the above-mentioned styles, 17.934% of them pointed out that their leaders adopt the directive leadership style. In addition, 11.956% of the architectural team members referred that that their leaders adopt the supportive leadership styles, and 10.147% of them agreed that their leaders adopt the Participative, Achievement-oriented leadership styles.

Question (12)

What is your team size?   **Yes**   **No**

- Less than 4   ☐   ☐
- 4-6   ☐   ☐
- 7-9   ☐   ☐
- 10-12   ☐   ☐
- More than 12, specify _____   ☐   ☐

Objective   This question intends to identify the ideal number of the architectural team members. This will help design firms in two ways. The first one when building new teams, by selecting the optimum team size. The second way, by deciding if the current teams should remain as they are or they have to be divided to more than one team. This is because when team size increases, problems arise with communications and co-ordination. In addition, Large teams are more difficult to handle and require a higher level of supervision.

Responses   The respondents of this question are shown in table (7.3).

Team Size	Respondents
Less than 4	9.901%
4-6	12.727%
7-9	18.182%
10-12	54.545%
More than 12	5.455%

Table 7.3   The Architectural Team Size As Collected From Design Firms.

Question (13)

How open and free is communication in your team?

Objective   This question asks team members to write down their comments and notes about the communication between the team members. This is of prime importance because of the role played by communication in achieving the objectives of the design firm.

Responses   all team members agreed that the communication in their teams is completely open and free.

Question (14)

When people have conflicts, how are they handled?   **Yes**   **No**

- Conflicts are avoided.   ☐   ☐
- Conflicts are negotiated.   ☐   ☐
- Conflicts are confronted.   ☐   ☐
- Others, specify, _____   ☐   ☐

Objective   This question intends to know how design firms resolve and handle any conflicts may arise between team members.

Responses   Figure (7.7) shows how team members handle the conflicts which may take place between them.
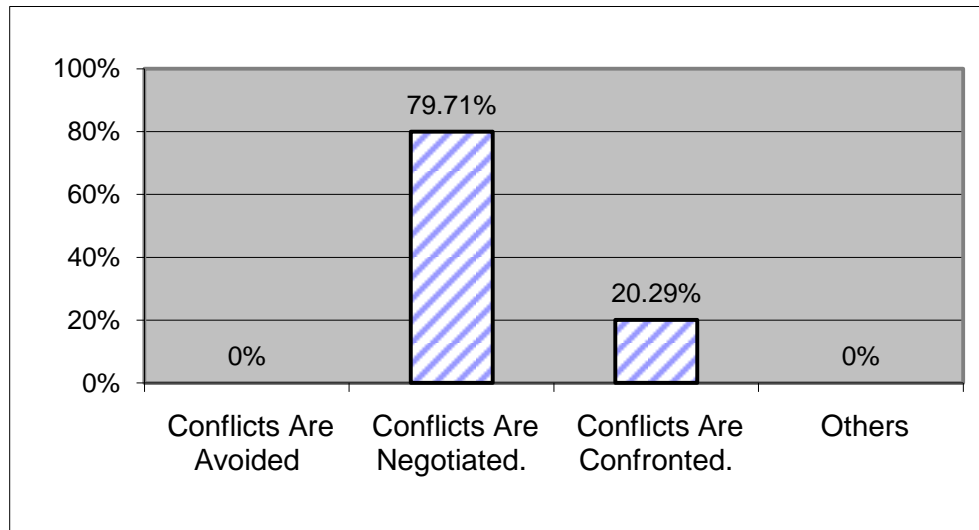
Figure 7.7 The Different Methods Of Handling Team Conflicts.

Question (15)

Appraising the team performance is based on: **Yes**   **No**

- Team ability.   ☐   ☐
- Performance against target.   ☐   ☐
- Combination of the two.   ☐   ☐
- Others, specify _____   ☐   ☐

Objective   This question is prepared in order to know which criteria do design firms use in appraising the team performance.

Responses   79.71% of the respondents agreed that appraising their performance is based on performance against target. 20.29% of them selected team ability as the base of appraising team performance.

Question (16)

Are you invited to participate in an appraisal meeting?   **Yes**   **No**

☐   ☐

Objective   This Question is asked to investigate to what extent do team members share in attending appraisal meeting. This will help in predicting the team spirit in the architectural section.

Responses   69.927% of the architectural team members responded that they are invited to participate in appraisal meetings. 30.073% of them pointed out that they are not invited to participate in any appraisal meetings.

The respondent to the questionnaire are asked to go to question (17) if their answer was "yes", and to go to question (1) in part (2) if their answer was "no".

Question (17)

Which of the following activities take place at the appraisal meeting?   **Yes**   **No**

- Record activities for the past period.   ❏   ❏
- Assess performance.   ❏   ❏
- Agree opportunities.   ❏   ❏
- Agree targets for the next period.   ❏   ❏
- All of the above.   ❏   ❏
- Others, specify_____   ❏   ❏

Objective   This question intends to ask team members who participated in appraising meeting what are the different activities that take place at such meetings.

Responses   All the architectural team members, who participated in appraisal meetings, confirmed that all the above activities take place at that meetings.

Part 2

Recruitment And Selection Of The Architectural Team Members

Question (1)

Where did you find your current job advertisement?	**Yes**	**No**
Television or cinema advertising.	❑	❑
Poster in a public place.	❑	❑
Leaflet.	❑	❑
Word of mouth.	❑	❑
You know a key person in the firm.	❑	❑
Notice boards.	❑	❑
Job centres.	❑	❑
News papers.	❑	❑
Professional journals.	❑	❑
Internet.	❑	❑

Objective   This question intends to know which is the most effective media to advertise the architectural vacant posts.

Responses   The architectural team responses are summarised in table (7.4).

Percentage	Advertise Media
55.435%	Agreed that they found their current job because they know key persons in the firm.
44.565%	Confirmed that they found their current jobs at job centres and news papers.

Table 7.4   The Most Effective Advertise Media For Architectural Vacant Posts.

Question (2)

Did you fill an application form?	**Yes**	**No**
	❑	❑

Objective   This question intends to know if the design firms use application forms in selecting new team members.

Responses   59.964% of the respondents answered that they did not fill an application form. 40.036% of them confirmed that they filled application forms.

Question (3)

How many interviews did you conduct?   **Yes**   **No**

- 1   ☐   ☐

- 2   ☐   ☐

- 3   ☐   ☐

- More, specify_____   ☐   ☐

Objective   This question aims to know how many interviews the newcomer has to conduct. Some design firms arrange for one interview, others may arrange for two or more. The number of interviews depend of the job description and job specification and any additional requirements should the job incumbent enjoys.

Responses   75% of the architectural team members pointed out that they conducted two interviews, the first one was with the design firm principal, partner, or the head of the human resources/personnel section, where the second one was with the head of the architectural section. 25% of them responded that they conducted one interview, it mostly conducted with the principal of the organisation.

Question (4)

Where did these interviews take place?

Objective   This question investigates the place where the interviews are held.

Responses   The architectural team members confirmed that 84.964% of the interviews were held at the design firm main office, where 15.036% of them were held at hotels

.

Question (5)

In what place do you prefer to conduct any interview in the future?

Objective   This question asks the team members to select the preferred place if further interviews will be conducted in the future.

Responses   75% of the respondents prefer to conduct the interview at office, 25% of them prefer to conduct it outside the office, at places such as hotels, restaurants, gardens etc.

Question (6)

What was the nature of the interview questions?

Objective   This question intends to know what was the kind of questions asked in the interview. Structured, well-oriented and specific questions will show how professional and experienced the design firm is.

Responses   89.855% of the architectural team members pointed out that the questions of the interview were about personality, qualifications, past experience and projects designed, presentation and computer skills, managing abilities, what he can do for the design firm, the applicant's new ideas and suggestions in order to enhance and improve the organisation productivity, and the job salary and other benefits. 10.145% of them mentioned that they were asked why did they left their previous jobs.

Question (7)

Which of the following tests did you undergo?	**Yes**	**No**
• Cognitive test.	❑	❑
• Physical ability test.	❑	❑
• Personality and interest inventories test.	❑	❑
• Job knowledge test.	❑	❑
• Job sample test.	❑	❑
• Others, specify_____	❑	❑

Objective   This question intends to investigate the different tests applied when selecting new team members. The number of tests emerges from and commensurate with the job requirements and the authorities and government regulations.

Responses   personality and interest inventories test, job knowledge test, and job sample test were the answer of 84.964% of the respondents. 15.036% of them pointed out that they underwent cognitive tests and physical ability test.

Part 3

Training And Motivation Of The Architectural Team Members

Question (1)

	Yes	No
Are training programmes important for enhancing your abilities and skills?	❑	❑

Objective   This question asks the architectural team members about the importance of training programmes and can these programmes enhance their abilities and skills.

Responses   All the architectural team members confirmed the important role of training programmes in enhancing their abilities and skills.

Question (2)

	Yes	No
Which of the following programmes are necessary to enhance your skills and abilities in order to achieve your organisation objectives?		
• Personality training.	❑	❑
• Management training.	❑	❑
• Technical training.	❑	❑
• Computer training.	❑	❑
• Site training.	❑	❑
• Others, specify_____	❑	❑

Objective   Among the wide variety of training programmes, the architectural team members are asked to select the training programmes that will enhance their skills and abilities in order to achieve the design firm objectives.

Responses   72.826% of the respondents confirmed that management training, technical training, and computer training are important programmes that can enhance their skills and abilities. 27.174% of them agreed that personality training and site training programmes have an imperative role in improving team members skills in order to achieve the organisation objectives.

Question (3)

	Yes	No
How many training programmes/workshops did you participate last year?		
• None.	❑	❑
• 1-5	❑	❑
• 6-10	❑	❑
• More, specify_____	❑	❑

Objective   The aim of this question is to know how many training programmes or workshop did the architectural team member attend last year. This will indicate the concern of the design firm about improving its employees' abilities and skills. In addition, it will give an idea about the professionalism of the architectural team members.

Responses   51.993% of the architectural team members pointed out that they did not participate in any training programmes or workshops last year. 37.862% of them confirmed that they participated 1 training programme, and 10.145% of the respondents agreed that they attended 2 workshops last year.

Question (4)

	Yes	No
Which of the following rewards will motivate you to achieve the organisation objectives?		
• Salary increase.	❑	❑
• Promotion.	❑	❑
• Prizes and bounce.	❑	❑
• Recognition.	❑	❑
• Praise and approval.	❑	❑
• Asking you to serve as a model to others.	❑	❑
• Asking you to teach your techniques to others.	❑	❑

Objective   This question is designed to identify what motivators stimulate the architectural team member to achieve the organisation objectives. This is very important because it will help design firms to adopt the most effective rewards and motivation techniques in order to complete projects on time, within budget, and as specified.

Responses   75% of the respondents confirmed that salary increase, promotion, prizes and bounce are the most effective motivators. 25% of them stated that recognition,

praise and approval, asking them to serve as a model to others, and asking them to teach their techniques to others are the best motivators that encourage them to achieve the organisation objectives.

Question (5)

What are your hopes and dreams that you wish to be realities in your team, section, and organisation?

Objective   In order to improve the team work and achieve the organisation objectives, the architectural team members are asked to write down what hopes and dreams do they like to be realities in their teams, sections and organisations. Brainstorming and free thinking are encouraged at this question and the next one.

Responses   The architectural team wishes and hopes are as follows: (1) good working environment, (2) more collaboration and co-operation between team members and co-ordination between the architectural team and other teams in the organisation, (3) new computer systems, design and presentation packages, (4) a modern and up to date architectural library, (5) more training programmes and reward systems, (6) fair distribution system for the jobs, sharing in setting the goals and objectives, (7) establishing box for suggestions and complaints, and (8) appreciation of old team members.

Question (6)

Write down the obstacles that constraint the team effectiveness and organisation objectives?

Objective   following the previous question, the architectural team members are asked to list the obstacles that hinder the team effectiveness and the achievement of the organisation objectives.

Responses   The obstacles that constraints the team effectiveness are: (1) losing time in taking decisions, (2) there are no clear schedules for projects deliverables, (3) rewards are confined to some team members and are not based on performance, (4) some team leader punish architects or architectural technicians in front of others, (5) careless from some architectural team members, (6) some design firms delay paying the overtime even after the project is finished, this force team members not to work more than the official time when they are asked to work over time, (7) some principals and partners are not architects and they interfere and change designs without any architectural experience.

7.3.2   The interview

The following questions are answered by principals, partners, and human resources/personnel officers of design firms.

Part 1
The Team Building Concepts
Question (1)

Does your firm adopt the team building concept as an approach to   **Yes**   **No**
achieve its objectives?   ❑   ❑

Objective   This question is designed to investigate to what extent do the management of the design firm perceive and adopt the team building concept as a way to complete its projects on time, within budget, and as specified.

Responses   All design firms agreed that they adopt the team building concept as an approach to achieve their objectives.

Part 2:
Recruitment And Selection Of The Architectural Team Members
Question (1)

Does your design firm perform human resources planning before   **Yes**   **No**
hiring new architectural team members?   ❑   ❑

Objective   This question intends to know if the design firm plans and assesses its human resources before hiring new architectural team members, or newcomers will be hired on random basis.

Responses   90.909% of principals, partners, and human resources/personnel officers confirmed that their organisations perform human resource planning before hiring new team members. 9.091% of them pointed out that no human resource planning takes place in their organisations.

Question (2)
Why does your firm perform human resources planning?

Objective   This question is prepared to identify the reasons behind human resources planning, and the benefits that the design firm will gain from this process.

Responses   85.454% of the respondents confirmed that human resource planning could help
                  design firms in utilising the human resources available, and reducing the cost of
                  hiring new employees. 14.546% of them mentioned that human resources planning
                  enable them to comply with the Equal Employment Opportunity Commission
                  (EEOC) requirements.

The interviewer is asked to go to question (3) if the answer of principals, partners and human
resources/personnel officers was "yes", and to go to question (6) if their answer was "no".

Question (3)

What are the steps followed by your firm in human resources planning?

Objective   This question aims to know what are the different steps followed by the design firm
                  in human resources planning.

Responses   All of the respondents pointed out that they follow the following steps in human
                  resources planning: (1) review of the organisation objectives and its impact on
                  different organisational units, (2) define the number of employees, skills, and
                  expertise required to achieve these objectives, (3) if the available resources are not
                  enough then the organisation has to determine the additional human resources
                  required, (4) prepare plans and take actions to get the required resources.

Question (4)

Which of the following steps are followed in the recruitment process?	Yes	No
• Determining the vacancies.	❑	❑
• Selecting the recruiting sources.	❑	❑
• Job analysis.	❑	❑
• Advertising.	❑	❑
• All of the above.	❑	❑
• Others, specify _____	❑	❑

Objective   This question asks principals, partners, and human resources/personnel officers of
                  design firms to assess the steps that are followed in the recruitment of new team
                  members.

Responses   90.909% of the respondents agreed that they follow all the above steps. 9.091% of them pointed out that they do not follow certain steps when recruiting new team members, when these firms have a vacant post they tend to ask their friends in other firms if they know an architect or an architectural technician who are searching for a job.

Question (5)

What are the recruiting alternatives that adopted by your firm?   **Yes**   **No**

- Reorganise the work.   ❑   ❑

- Mechanise the work.   ❑   ❑

- Make the job part-time.   ❑   ❑

- Sub-contract the work.   ❑   ❑

- Use an agency.   ❑   ❑

- Others, specify _____   ❑   ❑

Objective   In order to know how design firms save money and time which will be spent in recruiting and selecting new team members, add to this the cost of adding new employees to the design firm's pay roll, this question is designed to investigate what are the recruiting alternatives adopted by design firms.

Responses   Due to the different policies and strategies of design firms, there were many answers to this question. Some organisations prefer to use overtime and make the job part-time, where others prefer to adopt other alternatives, see table (7.5).

Percentage	Alternative used
87.273%	Use overtime, make the job part- time.
12.727%	Reorganise the work, mechanise the work, and sub-contract the work
0%	Use an agency, and others.

Table 7.5   The Different Recruiting Alternatives Adopted By Design Firms.

Question (6)

Which of the following sources are mostly used for internal recruiting?   **Yes**   **No**

- Job Posting.   ☐   ☐

- Employees Referrals.   ☐   ☐

- Temporary Worker Pools.   ☐   ☐

- Others, specify _____   ☐   ☐

Objective   This question intends to know what are the internal recruitment sources used by design firms.

Responses   The used sources for internal recruiting are shown in figure (7.8).
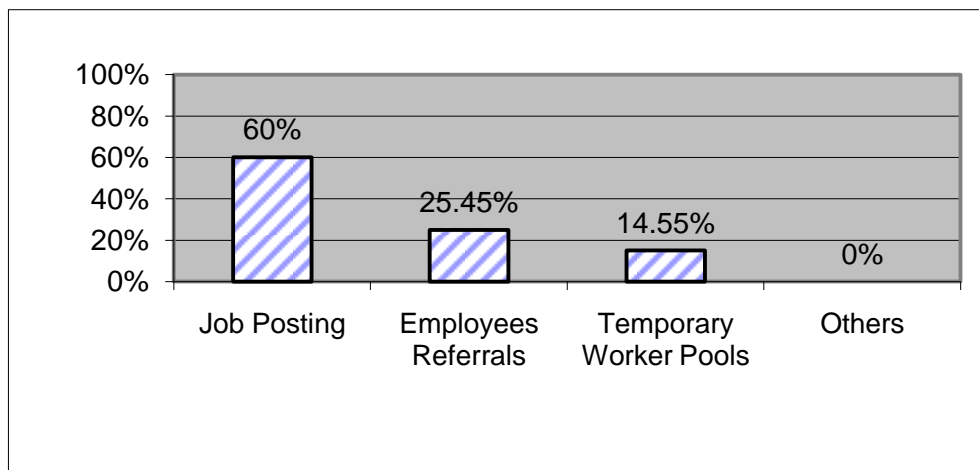
Figure 7.8 The Internal Recruiting Sources Selected By Design Firms.

Question (7)

Which of the following sources are mostly used for external recruiting?   **Yes**   **No**

- School recruiting.   ☐   ☐

- College campus recruiting.   ☐   ☐

- Private employment agencies.   ☐   ☐

- Public employment agencies.   ☐   ☐

- Executive search firms.   ☐   ☐

- Trade unions and professional bodies.   ☐   ☐

- Others, specify _____   ☐   ☐

Objective   This question intends to know what are the external recruitment sources used by design firms.

Responses   50.909% of the design firms use private employment agencies and executive search firms as sources for external recruiting. 7.273% of them use public employment agencies, and 41.818% of the respondents use their relations with their friends and external team members to recruit new employees.

Question (8)

Analyse the following jobs in terms of job description (job title, location, duties, etc.) and job specification (education, experience, training etc.).

- Principal/Partner.
- Architectural team leader.
- Project leader.
- Architect.
- Architectural technician.

Objective   This question is designed to analyse the jobs of principal, partner, team leader, project leader, architect, and architectural technician. This analysis will help design firms in identifying the job and duties to be performed as well as the experience, skills, abilities, and knowledge of the job incumbent.

Responses   The followings are collections of the job descriptions and job specifications of the architectural team members. These collections emerged from the interviews conducted with the principals, partners and human resources/personnel officers in design firms.

Principal/Partner
Job Description

- Managing the design firm, establishing its strategies, policies, norms, priorities, and quality control requirements.
- Dealing with clients, accepting their appointment, receiving their requirements.
- He or she should follow up the feasibility study, outline proposals and scheme design.

Job Description

- Most of the respondents pointed out that the principal or partner should have a professional architectural degree with higher studies in architecture and management. Some prefer if he or she has an M.Sc. of Ph.D.
- 20 years experience in the field of architecture and it is essential if he or she occupied the same or similar post in other firms.

- The principal or partner should have wide experience in architectural design and negotiation abilities in order to deal with and persuade clients. In addition, he or she should have excellent management and leadership skills.

Team Leader Or Head Of The Architectural Section

Job Description

- Portraying with principal and partners the firm policy and strategies in the light of the needs and abilities of the market and the architectural section.
- Playing the role of liaison officer between top management and project leaders.
- Managing the work in the architectural section, following up, controlling and monitoring projects progress. In addition, he or she has to raise periodical reports to the top management.
- Leading the architectural team members, creating and maintaining the team spirit, roles, norms, cohesiveness, size, communication and resolving team conflicts.
- One of his or her main responsibilities is the fair dividing of work load to project leaders with respect to their abilities, skills and specialisation.
- The team leader has to be involved in the design process, following up and solving any problems may arise during the construction phase. In addition, he or she is responsible for co-ordination between the architectural team and other engineering teams.
- The team leader is responsible for allocating resources, establishing training needs and selecting training programmes as well as adopting the tangible and intangible incentives in order to motivate team members to achieve organisation objectives and client goals.
- He or she has to report directly to the principal or the organisation partners.

Job Specification

- Professional architectural degree. It is preferred if he or she has higher studies in architecture and management.
- 15 years experience and it is essential if he or she occupied the same or similar post in design firms.
- He or she should have excellent design and presentation skills. It is imperative that the team leader has good experience in using CAD, presentation, and management packages.
- The team leader should has management, communication, co-ordination, and negotiation abilities and skills in order to lead, direct, motivate the architectural team members to achieve the organisation objectives.

Project Leader

Job Description

All of the respondents confirmed that the project leader is responsible for the following jobs:

- Formulating the client's requirements into an understandable project brief.

- Designing buildings that fulfilling client needs, statuary obligations, technical feasibility, environmental standards, and site conditions.

- Leading, directing, dividing the work to the architects and technicians according to their skills and abilities.

- Assessing the project date of completion, cost, and specification.

- Preparing complete tender set for pricing and construction and inviting building contractors to submit their tenders.

- Following up the progress of projects on site. In addition, he or she has to keep the client informed of the work status and resolve any problem between client and the building contractor.

- Issuing the certificate of completion, and the final certificate for payment.

- He is answerable to the team leader, and he has to report periodically to him.

Job Specification

- Professional architectural degree with 10 years experience.

- Professional design and presentation skills. Effective using of CAD systems.

- Knowledge of planning, scheduling, and controlling projects is an essential.

- Managing, communication, co-ordination and negotiation abilities.

- It is essential that the project leader has an extensive knowledge of building construction, materials, legislation, contract management, town planning and authorities regulations is an advantage.

Architects

Job Description

- Preparing design alternatives and presentations for all building types.

- Informing the project leader about any item that may not be considered at the stage of collecting the client's requirement.

- Understanding the new trends in architecture and construction technology.

- Using the latest packages of design, draughting, and presentation.

- Managing, scheduling, controlling, and monitoring the progress of the projects he or she is responsible for.

- He is answerable to the project leader, and he has to report directly to him.

Job specification

All of the respondents confirmed that the architect should have the following specification.

- Professional architectural degree.

- 5 years experience.

- Professional design skills including CAD and presentation computer packages.

- Wide knowledge of building regulations and construction work.

- He or she should be motivated, energetic, and talented with co-ordination and negotiation abilities.

- He or she should show the ability to work as a part of a team as well as on initiative.

Architectural Technicians

Job Description

- Preparing working drawings and architectural details.

- Studying the impact of the structural, electrical, and mechanical designs on the architectural design.

- Arranging, indexing, scanning drawings and saving system.

- The architectural technician is answerable to the project leader, and he has to report directly to him.

Job Specification

- Professional architectural technician certificate with 7 years experience of board drawing skills and familiar with CAD system.

- He or she should be self-motivated, energetic, and experienced in preparing working drawings and architectural details either manually or by computer system.

- It is an advantage if he has knowledge about building regulation, and authority requirements.

- Ability to work as a part of a team and on initiative.

- Many design firms now tend to appoint architects to do the work of architects and architectural technicians.

<u>Question (9)</u>

In which media does your firm prefer to advertise the vacant posts?   **Yes**   **No**

- Television or cinema advertising.   ☐   ☐

- Poster in a public place.   ☐   ☐

- Leaflet distribution.   ☐   ☐

- Word of mouth.   ☐   ☐

- Notice boards.   ☐   ☐

- Job centres.   ☐   ☐

- News papers.   ☐   ☐

- Professional journals.   ☐   ☐

- Internet.   ☐   ☐

Objective   This question is intended to know which is the media preferred by design firms to advertise the vacant posts.

Responses   58.182% of the design firms advertise the vacant posts in job centres, news papers, professional journals, and Internet. 7.272% of them use notice board, and 34.546% of the respondents use word of mouth as advertising media.

<u>Question (10)</u>

Do you use application forms?   **Yes**   **No**

        ☐   ☐

Objective   This question asks the principals, partners, and human resources/personnel officers of design firms about the use of application forms in selecting new team members.

Responses   70.909% of the design firms confirmed that they use application forms, when selection new employees. 29.091% of them confirmed that they do not use application forms, but they rely on the applicant's C.V.

The interviewer is asked to go to question (11) if the answer of principals, partners, and human resources/personnel officers was "yes", and to go to question (13) if their answer was "no".

Question (11)

Which of the following items will affect the selection process?	**Yes**	**No**
• Race, Colour, National and Religion.	☐	☐
• Arrest Conviction records.	☐	☐
• Credit rating.	☐	☐
• All of the above.	☐	☐
• None of the above.	☐	☐
• Others, specify _____	☐	☐

Objective   Some design firms do not comply with the requirements of the Equal Employment Opportunity Commission which was established in 1964 by Title VII of the Civil Rights Act of 1964 to eliminate discrimination based on race, colour, religion, sex, national origin, disability, or age in hiring, promoting, firing, setting wages, testing, training, apprenticeship, and all other terms and conditions of employment. This question is intended to know if there any factors that affects the selection process of new team members.

Responses   All design firms confirmed that none of the previous factors have an effect on the selection process.

Question (12)	**Yes**	**No**
Do you use other information sources, rather than the	☐	☐
application forms?		

If yes, specify _____

Objective   This question is designed to investigate the other resources of information about the candidates rather than the application form.

Responses   All design firms confirmed that they do not use any other information sources rather than the application form. I would like to refer that about 60% of the design firms ask the applicant to show them authenticated copies of their certificates.

Question (13)	**Yes**	**No**
Do you held an initial screening interview for new team members?	☐	☐

Objective   This question is prepared to know if the design firm arranges for initial screening interview for new team members or it is not used in the selection process.

Responses   All design firms agreed that they arrange for an initial interview of new employees and team members.

Question (14)

How many employment interviews do you arrange for each candidate?   **Yes**   **No**

- 1   ☐   ☐
- 2   ☐   ☐
- 3   ☐   ☐
- Others, specify _____   ☐   ☐

Objective   Identifying the number of the employment interviews conducted is the objective of this question. The number of interviews held emerges from the importance of the vacant post, the job requirements and the specification of the job incumbent.

Responses   85.455% of the design firms concluded that they held one employment interview. 14.545% of them pointed out that they arrange for 2 interviews.

Question (15)   **Yes**   **No**

Do you use employment tests?   ☐   ☐

Objective   This question is designed to know if design firms use employment tests or they are not included in the selection process.

Responses   All design firms agreed that they use employment tests.

The interviewer is asked to go to question (16) if the answer of principals, partners, and human resources/personnel officers was "yes", and to go to question (17) if their answer was "no".

Question (16)

Which of the following tests are used?   Yes   No

- Cognitive ability test.   ❏   ❏

- Physical ability test.   ❏   ❏

- Personality and interest inventories test.   ❏   ❏

- Job knowledge test.   ❏   ❏

- Job sample test.   ❏   ❏

- Others, specify _____   ❏   ❏

Objective   Design firms arrange for many types of tests in order to make sure that the new candidates are suitable and matching with the job requirements. Assessment of these different tests is the objective of question (16).

Responses   75% of the design firms responded that they use personality and interest inventories test, job knowledge test, and job sample test. 25% of them pointed out that they use cognitive ability test, and physical ability test.

Question (17)

Do you use checking references? If " yes" in which way   Yes   No

                                                                    ❏   ❏

Objective   In order to get reliable information about the candidate, many design firms check references in many ways. This question intends to investigate the use of checking references and in which way if it is used.

Responses   60% of the design firms responded that they do not adopt checking references. 40% of the respondents pointed out that they adopt and apply checking references as a step in the selection process, and the most used way is checking by telephone.

Question (18)

Do you ask new candidates to undergo physical examination and drug   Yes   No
testing?

                                                                    ❏   ❏

Objective   This question is designed to know if the design firm asks new candidates to undergo physical examination and drug testing or none of them are required.

Responses   All of the respondents pointed out that they ask new employees and team members to undergo physical examination and drug test. In addition, the government of the United Arab Emirates asks all employees in any organisation to undergo a blood test in order to check if they have AIDS virus. Any person who has positive AIDS result will not be issued a residence in the U.A.E.

Question (19)

Do you put a group of candidate into an action discussion to discover the   Yes   No different skills of each candidate?

❑   ❑

Objective   This question aims to investigate how do design firms examine the different skills of the candidate and to what extent the candidate will be a member of a team.

Responses   61.818% of the design firms confirmed that they put a group of candidates into an action discussion to discover the different skills of each candidate, were 38.182% of them pointed out that they do not use this way or other ways.

Question (20)

Who takes the final decision?	Yes	No
• Principal / Partners.	❑	❑
• Head of human resources/personnel department.	❑	❑
• All or some of the above.	❑	❑
• Others, specify_____	❑	❑

Objective   This question is prepared in order to explore who takes the selection decisions in design firms.

Responses   75% of the design firms pointed out that the principals and partners take the final decision. 25% of them confirmed that the selection decision would be made by the principal, partners, head of human resources/personnel department and head of the architectural section.

Part 3

Training And Motivation Of The Architectural Team Members

Question (1)

Is training important to achieve the organisation objectives?   **Yes**   **No**

❑   ❑

Objective   Due to the rapid changes in the construction industry, many design firms rely on training programmes as an effective approach to enhance their employees' skills and abilities, so the design firms objectives could be achieved. This question asks design firms if training programmes are essential to achieve their goals.

Responses   All design firms confirmed the importance of the training programmes in achieving the organisation objectives.

Question (2)

Do you have orientation programmes for new team members?   **Yes**   **No**

❑   ❑

Objective   Because of the essential role that the orientation process plays in achieving maximum output, this question intends to know if design firms have orientation programmes for new team members.

Responses   All of the respondents agreed that they have orientation programmes for new team members.

The interviewer is asked to go to question (3) if the answer of principals, partners, and human resources/personnel officers was "yes", and to go to question (6) if their answer was "no".

Question (3)

Do you have orientation programmes for new team members?	**Yes**	**No**
• General Company Orientation.	❑	❑
• Department and Job Orientation.	❑	❑
• All of the above.	❑	❑
• Others, specify_____	❑	❑

Objective   This question requests the principals, partners, and human resources/personnel officers of design firms to assess the orientation programme adopted. In addition, they are stimulated to add and specify other orientation programmes experienced.

Responses All design firms confirmed that they use all the above mention programmes.

Question (4)

Do you have an orientation kit? If yes, What are its components?   **Yes**   **No**

                                                                                                          ❑   ❑

Objective   Following question (3), this question is designed to know if design firms have an orientation kit, if yes they are asked to write down its components.

Responses   All the respondents confirmed that they have orientation kits, but their components vary from organisation to another. The following list of components are mentioned in 87.273% of the design firms orientation kits:

- The organisation name, addresses, branches, history, goals, strategies, resources, and priorities.
- List of project designed and constructed by the organisation.
- Organisation breakdown structure with their addresses, telephone numbers, and E-mails.
- 12.727% of the respondents added that their orientation kits include:
- Training and motivation system.
- List of holidays, employees' benefits.

Question (5)

Write down the orientation benefits?

Objective   Undoubtedly, many design firms gain various benefits when orientation programmes are adopted. This question requests such firms to record their experiment with orientation benefits**.**

Responses   All design firms pointed out that there are many benefits of the orientation process. 81.818% of them confirmed the following benefits:

- Introducing the employee to the organisation.
- Create positive attitude towards other employees.
- Show the new employee his or her job position into the overall organisation.
- Increase productivity.

18.182% of the design firms added that that orientation could help in reducing the turnover rate and develop a realistic job expectations and eliminate the anxiety and stress of many employees.

Question (6)

How do you determine the training needs?

Objective   Training programmes should be planned to fulfil the design firms needs. These needs will be analysed at three different levels: the organisation level, the job level, and the personal level. This question is concerned with the way of determining of the training needs.

Responses   60% of the design firms confirmed that the principal with the collaboration of partners, and human resources/personnel officers identify the problems of the organisation and how can training programmes be applied to solve and overcome these problems. In addition, they added that the principal asks the team leader or the head of the architectural section to held a periodical meeting with the architectural team members in order to assign two matters: the first one is the obstacles that hinder the work progress and how these obstacles could be eliminated, the second matter is to determine the skills and knowledge to be learned in order to help team members to perform their job effectively.

23.636% of the respondents referred that in addition to the above-mentioned methods, some principals ask their clients to identify any problem confronted them when dealt with the design firm. Some of this information could be gained by questionnaire or by interviews. 16.364% of the design firms pointed out that the principal determine the training needs at all levels on his own.

Question (7)

What are your training objectives?

- For design firm
- For architectural section
- For architectural team members

Objective   When the training needs are established, then the training objectives should be designed in order to fulfil these needs. This question is designed to know what are the training objectives of design firms.

Responses

Training objectives for the design firm

All design firms confirmed that training at that level will include principal, partners, head of sections, and management officers and will encompass the enhancement of the managerial skills and the art of wining clients, setting out the organisational strategies, norms, planning, controlling, scheduling, and monitoring works as well as facilitating procedures, exploiting available resources, studying the outside environment and how to take advantage of the opportunities and avoid any threats.

Training objectives for the architectural section

All design firms confirmed that training at that level will include the team leaders, project leader, architects, and architectural technicians. Training aims to help the team members to produce their jobs on time, within budget and as specified. This could be achieved by training team members how to organise work, make efficient use of details, past experience and projects. Moreover, it could be achieved by minimising work procedure, which spend more time and effort and so on.

Training for the architectural team members

All of the respondents confirmed that the training at this level will be devoted to enhance the team members skills, technical information, and related knowledge in order to help them adapt to the changes in the information technology and the construction industry.

Question (8)

What are the training programmes do you offer for the followings:

- Principal / Partner
- Architectural team leader
- Project leader
- Architect
- Architectural technician

Objective   Because of the different jobs to be performed in the architectural section. Training programmes should be selected to provide each team member with the skills and knowledge required to perform his duties efficiently. This question is concerned with identifying the training programmes offered by the design firms to enhance and improve the team members' abilities.

Responses   Table (7.6) shows the adopted training programmes for the above mentioned team members.

Team Members	Programmes Offered
Principal and partners	Managerial programmes.
The architectural team leader	Managerial and technical programmes.
Project leaders	Mainly: design, presentation, and technical programmes. Secondary: leading, managing, and planning programmes.
Architects	Design, presentation, technical information, computer skills, site supervision, and management abilities.
Architectural technicians	Draughting, presentation, and computers skills as well as new techniques of construction

Table 7.6   Training Programmes For Architectural Team Members.

Question (9)

Which of the following criteria are used to evaluate training programmes?   Yes   No

- Reaction evaluation   ❑   ❑
- Learning evaluation   ❑   ❑
- Behaviour evaluation   ❑   ❑
- Results evaluation   ❑   ❑

Objective   In order to make sure that training programmes achieve their objectives, the evaluation process should takes place periodically. The objective of this question is to identify the evaluation criteria used by design firms.

Responses   72.727% of the respondents confirmed that reaction, learning, and behaviour evaluations are the most used criteria for training evaluation. 27.273% of them agreed that results evaluation is the criteria used to evaluate training programmes.

Question (10)

Is it important to motivate team members to achieve the firm objectives?   Yes   No

❑   ❑

Objective   This question is designed to measure how is it important to encourage and stimulate the architectural team members to achieve the design firms objectives.

Responses   All design firms confirmed the importance of motivating team members to achieve the organisation objectives.

Question (11)

What are the different techniques used to motivate the architectural team members?

Objective   Most design firms use different motivation techniques in order to motivate team members to achieve the firm objectives. This question intends to know what are the various techniques used by design firms to motivate the architectural team members.

Responses   81.818% of the respondents pointed out that monetary incentives such as increasing salaries, promotions, and bounce are the most used and effective motivators. 18.182% of them confirmed that intangible rewards such as thanking letters and praising is the most effective motivators.

7.3.3   The Observation

Observation is the third method used to collect information from experienced team leaders and project leaders. The observation covered three topics: the team building process, recruitment and selection of the architectural team members, as well as training and motivation of the architectural team members. The responses of the engaged parties are as follows:

Part 1

Team Building Concepts

(1)   All experienced team leaders and project leaders emphasised the importance of adopting the team building concept as an approach to fulfil the client requirements and achieve the organisation objectives.

(2)   They emphasised the importance of sharing team members in establishing the architectural section goals and priorities.

(3)   Many of the respondents confirmed that when the organisation size is small and it does not have large projects then the team size will decrease and then we can find one person does more than one job. For example, an experienced architect will be the team leader and the project leader at the same time. But 25% of the respondents pointed out that there must be at least 7 members in the architectural section in order to build an effective team. There should be a team leader, project leader, two architects, and three architectural technicians.

(4)   All team leaders pointed out that in order to reduce the cost of projects and exploit the human resources in the architectural section, it is of prime importance that all the architectural work done within the organisation. For that reason the architectural team should include members who can cover all the required areas such as preparing presentation drawings, models, technical reports and so on.

(5)   All project leaders confirmed that it is essential that the work is divided between team members according to their abilities and skills. It is dangerous if some members perform most of the work when some others have no work to do.

(2) Part 2

Recruitment And Selection Of The Architectural Team Members

(1)   All of the respondents stressed that most design firms face problems when their recruitment and selection processes are not based on job description and job specification. Some of them added that many design firms do not arrange for enough interviews and tests in order to make sure that the candidate is competent for the vacant post, then after sometime the design firm discover that it selected the wrong person.

(2)   At that concern, I would like to refer that the work law in the United Arab Emirates constitutes that there is a period of three months to be given to both parties, the organisation and the employee, where the two parties examine each other. If the organisation would like to terminate the work of the job incumbent or the candidate wishes to leave the organisation, a written notification should be submitted fifteen days before the end of these three months.

(3)   All of the respondents prefer that the organisation use recruiting alternative before recruiting new employees in order to minimise the recruiting cost. But if the organisation will hire new employees, they prefer to use external recruiting source in order to bring new experience and skills to the organisation. In addition, they stressed that the organisation should promote its qualified employees and old team members to keep their loyalty to the design firm.

(4)   All of the respondents confirmed that the interviewer should be an experienced architect who can discover the candidate skills and examine his or her abilities. They

added that selecting a nice place for carrying out the interview gives a prestigious indication about the design firm, but the place fees should commensurate with the importance of the job and the organisation ability.

Part 3

Training And Motivation Of The Architectural Team Members

(1)   They emphasised that all design firms perceive the importance of training, but many of them do not wish to spend any money in training employees. Some of the architectural team members arrange for training programmes on their own fees in order to enhance their skills and find better jobs. They added that if these organisations trained their employees they would win their team members and achieve their objects.

(2)   Motivating team members will increase their productivity and enhance their performance. They emphasised that design firms should review from time to time its reward system, and should make a celebration to thank and reward the distinguished team members. This will stimulate those people to increase their productivity and will encourage other employees to work harder to be rewarded next time. Some of the team leaders said that it is dangerous to promote and reward the same persons every time even if their effort is impressive. The design firm should change the people to be rewarded from time to time.

7.4   Conclusions

Three different methods are used in data collection from design firms in Abu Dhabi, Dubai, and Sharjah. Out of 135 total numbers of questionnaires, interviews, and observations planned to perform, 73 were achieved. This represents rate of 54.07% which is considered a good rate of responses. This chapter analysed the questions mentioned in the architectural team questionnaire and the management interview as well as the observation topics. The aim of this analysis was to measure the perception of the engaged parties about the team building concepts, recruitment and selection of the architectural team members, as well as the training programmes and motivation techniques used to train and motivate the architectural team members.

The next chapter will summarise the survey results, research recommendations for design firms, and the need for future research.

CHAPTER 8

RESULTS AND RECOMMENDATIONS

8.1   Introduction

C hapter seven was about analysis and data collection. That chapter discussed the returns from design firms and analysed the question of the questionnaire, interview, as well as the observation topics.

 Every question in analysed in a simple but effective way. Each question is analysed in three steps. The first one is the question text, the second one is the question objective, and the third step is the responses collected from the engaged parties. Figures and tables are used, when appropriate to illustrate these responses.

This chapter will concentrate on three main parts: summary of the survey results, research recommendations, and the need for future research.

8.2   Summary Of Survey Results

As mentioned in chapter six out of the 135 questionnaires, interviews, and observations planned to perform, 73 were achieved. The summary of survey results will be categorised in three topics as follows:

8.2.1   The Team Building Concepts

(1)   All of the respondents showed clear and deep perception of the team concept and its role in fulfilling the client goals, achieving the organisation objective, and helping team members adapt to rapid changes in every field. In addition, 79.710% of the architectural team members confirmed that the team building process should be a continues process where 20.290% of them pointed out that it should take place at the working drawing stage and construction stage.

(2)   As partners in assessing the architectural section goals, 50% of the architectural team members responded that their team leaders sets the goals, where 27.174% of them responded that the team discusses the goals but the leader sets the final goals. 22.826% of the respondents agreed that the team members work together to arrive at consensus and agreed goals.

(3)   A large number of design firms (92.39%) use the project team during the project life cycle, where 7.61% of them use the action team. In addition, the role to be played by each team member varies due to the skills, abilities of each member.

(4)   All architectural team members confirmed that they are fully complying with team norms. In addition, most of them (79.71%) agreed that loyalty to the team, identification with the team, agreement with team goals, Defence of the team and members, conformity to team norms, responsibilities of team are factors which indicate the team cohesiveness.

(5)   The leader role and the leader style should commensurate with his or her skills, abilities, and experience. 69.927% of the architectural team members pointed out that their team leaders play the role of figurehead, motivator, liaison officer with the outside contacts, monitor of information technology, team spokesman, resources allocator, negotiator, creative, good listener, resolving conflicts. Furthermore, 59.963% of the respondents confirmed that their leaders adopt the directive, supportive, participative, and achievement-oriented leadership styles.

(6)   More than half of the respondents (54.545%) pointed out that their team size range from 10-12 members.

(7)   All architectural team members confirmed that communication within their team is open and free. In addition, 79.71% of the respondents agreed that team conflicts are negotiated in order to resolve them. Furthermore, they confirmed that appraising their performance is based on performance against target. And 69.927% of the architectural team members are invited to participate in appraisal meeting.

8.2.2   Recruitment And Selection Of The Architectural Team Members

(1)   90.909% of the design firms exhibited obvious understanding of the human resources planning, recruitment and selection processes. They confirmed the use of regular steps when recruiting and selecting new team members.

(2)   In order to reduce the cost of recruiting, 87.273% of the design firms use overtime, and make the job part-time as recruiting alternatives. In addition, 60% of the respondents confirmed the use of job posting as a source of internal recruiting and 50.909% of them use private employment agencies and executive search firms as sources for external recruiting.

(3)   Many observers pointed out that the design firms may confront problems if their selection process was not build on a clear definition of job description and job specification. The job description and job specification for each team member are, as collected from design firms, mentioned in chapter seven, see the responses of question (8) in part (2) of the management interview.

(4)   Design firms use different media to advertise their vacant posts. 58.182% of them advertise in job centres, news papers, professional journals, and Internet.

(5)   It is obvious that most design firms follow elaborated steps when selecting new team members such as using application forms, initial screening interview, employment interview, employment tests, checking references, physical examination and drug testing.

(6)   75% of the architectural team members pointed out that they attended two interviews, and 84.964% of them confirmed that they attended these interview at the design firm main office. In addition, most of the architectural team members (89.855%) mentioned that the interview questions were about personality, qualifications, past experience, and designed projects.

(7)   84.964% of the architectural team members underwent personality and interest inventories test, job knowledge test, and job sample test. 15.036% of them pointed out that they underwent cognitive test and physical ability test.

(8)   61.818% of the design firms put a group of candidate into an action discussion to discover their different skills. In addition, 75% of them pointed out that their principals and partners make the final decision.

8.2.3   Training And Motivation Of The Architectural Team Members

(1)   All of the respondents confirmed the importance of training in enhancing the team members' abilities and achieving the design firms objectives.

(2)   72.826% of the architectural team members pointed out that management training, technical training, and computer training are vital programmes to enhance their abilities and improve their skills. 51.993% of them confirmed that they did not attend any training programmes last year. In addition, 37.862% of the respondents mentioned that they participated 1 training programmes, and 10.145% of them referred that they attended 2 workshops last year.

(3)   All design firms have orientation programmes, and they pointed out that their programmes contain general company orientation, and department and job orientation. In addition, they mentioned that they have orientation kits, which include information about the organisation, and its policy, strategies, structures, addresses, training and rewarding systems, and holidays.

(4)   60% of design firms stated that they determine training needs at three different levels: the organisation level, the architectural section level, and the personal. 23.636% of the respondents pointed out that they ask the clients for their point of view, where 16.364% of them referred that their principals determine the training needs on their own. In addition, all design firms confirmed that their training objectives are designed to achieve training objectives.

(5)   Many training programmes are offered to different team members in order to enhance the abilities and improve the skills. These programmes include managerial, technical, computer skill programmes. Furthermore, 72.727% of the design firms confirmed that reaction, learning, and behaviour evaluations are the most used criteria to evaluate training programmes.

(6)   Due to its role, all design firms confirmed the importance of motivation of the architectural team members in order to achieve the organisation objectives. 81.818% of the respondents agreed that monetary incentives such as salary increase, promotion, and bounce are the most effective motivators.

8.3   Research Recommendations

Based on the literature review and the analysis of the responses collected from the engaged parties, the following recommendations are endorsed regarding the team building process and its application on the architectural team in design firms.

(1)   Use The Team Building As A Continues Process

Design firms in general and architectural sections in particular should deal with the team building as a continues process. This will help in fulfilling the client goals, and the organisation objectives. Team building should be built in the organisation philosophy and adopted by the top management. In addition, it should be projected in the organisation structure.

(2)   Share Your Team Members In Setting Out The Work Goals

The architectural team members should share in setting out and deciding their section goals and reach, together, at consensus objectives. When this happen, the design firm makes sure that the team members are fully committed to achieve these goals. Moreover, new ideas, suggestions, and innovative methods to complete projects on time, within budget, and as specified will emerge from team members, as they are the people who will perform the work.

(3)   Select The Team Leader Carefully

Due to the important role he or she plays to create and maintain the team spirit as well as leading, directing, and driving team members towards the achievement of consensus goals, particular attention should be paid when selecting team leaders. Efforts should not be spared when identifying the team leader job description and job specifications. In addition, the suitable recruiting sources should be chosen, the enough number of interviews and tests should be made in order to select the right person for the right place at the proper time.

(4)   Establish Norms, Roles, And Effective Communication Systems

In order to make sure that the architectural work achieve its goals and objectives, it is essential that the team leader establish the team norms, roles, and effective communication system at the outset of the team life cycle. This will eliminate any conflicts that may arise between team members and will increase the team cohesiveness and efficiency.

(5)   Select The Suitable Team Size

Every design firm should select the suitable team size that commensurate with its projects to be performed and objectives to be achieved. The team should be composed of the necessary people who deliver projects on time, within budget, and as specified. Extra team members should be terminated in order to increase the team effectiveness, minimise team conflicts and disputes, as well as reduce the organisation expenditures.

(6)   Do Not Ignore Appraising The Team Performance

Attention should be paid to appraise the team performance. Periodical appraisal meeting should be held in order to know what objectives are achieved and what obstacles may constraints the projects progress. This will help in allocating resources, resolving problems, and enhancing performance.

(7)   Enrich The Architectural Section With Periodicals, Reviews, Magazines, References, And Latest Software.

The architect has, from time to time, enrich and refresh his or her information with the new trends in the architectural field and the construction industry. An architectural library should be established in every design firms in order to help team members to adapt to the rapid innovations and development in design, draughting, computer, and presentation techniques. In addition, they have to use the new methods of data storing, and up to date architectural computer packages.

(8)   Encourage Your Team Members To Continue Their Studies Leading To Higher Degrees.

The best way to invest your money is to use it to increase your knowledge, enhance your abilities, and improve your skills. Design firms has to encourage their Innovative, energetic, and distinguished team members to continue their studies leading to higher degrees in their field. This will be benefit to both the team member and the organisation. Team members should be allowed to attend lectures, exams, and helped to complete their studies, for example, some design firms sponsor their employees.

(9)   Visit Other Design Firms And Invite Others To Visit Your Organisation

Arrange for periodical visits between your organisation and other organisations. These visits could be at the managerial level, team leaders level, or selected team members' level. The aim of these visits is to know how other organisation are managed and how team building process takes place there. Add to this, the different techniques used in performing works, training and motivating people.

(10) Establish International Award For Architectural Team Building (IAATB)

I suggest establishing an annual international award to be rewarded to the architectural design firms that adopt and apply the team building process on scientific basis. This award to be sponsored and financed by the international union of architects, the American Institute of Architects, or The Royal Institute Of British Architects. Each organisation wishes to submit for this award should submit documentation that prove that it adopts the team building concept and have to show how this concept enabled it to complete projects on time, within

budget, and as specified. In addition, the award committee should arrange for site visiting in order to investigate the accuracy of the submitted documentation.

(11) Increase Communications And Create Friendships

Team members have to be involved, whenever possible, in social events such as celebrations, recognition ceremonies, picnics. These activities will increase the team communications, create friendship and good human relations between architectural team members.

(12) Reduce Recruitment Costs

Recruitment process is not inexpensive and design firms should minimise its cost. This could be gained by define the exact human resources needed, and adopt the recruitment alternative suitable for each organisation as well as the adequate selection of recruitment sources and advertising media.

(13) Follow Systematic Steps When Recruitment And Selection Of Architectural Team Members.

All design firms should follow systematic steps when recruiting and selecting new team members. These steps help in choosing the most suitable person for the vacant posts and eliminate any problems that may arise in the future if the wrong person is selected. In addition, these steps can help in reducing time, effort, and cost, which will be spent when no systematic steps are followed. Design firms may reduce the recruitment and selection steps to suite the job and incumbent required.

(14) Do Not Think That Training Is Expensive Or Could Be Ignored

When you spend £100 in training a team member, you will gain them many times in the form of productivity and quality. Design firms should pay particular attention to the training process for architectural team members. Team members have be shared in determining training needs and what kind of problems do they face when performing their jobs and how can training programmes reduce them. The elaborated selection and periodical evaluation of training programmes will resolve problems and achieve the training objectives.

(15) Train And Motivate At The Same Time

Design firms could offer training programmes overseas or as a part of recreational journey. This could be a reward for distinguished team members. When design firms do this, team members are trained and motivated at the same time.

(16) Select The Suitable Motivation Techniques

Design firms should select the suitable motivation techniques to encourage their team members to complete projects on time, within budget, and as specified. Motivators should

commensurate with the organisation situation and its size of work as well as the team members' status. For example, rewards for married people should be distinguished from single employees. Furthermore, rewards for elder people should commensurate with their age and wide experience from youth and new graduated employees.

8.4   Research Publications

The research resulted in publishing 1 academic refereed paper. Details of this paper is as follows. Copy of these paper is attached in appendix (V).

Othman, A.A.E. (2008). Building the Effective Architectural Team in Design Firms: The Case of the United Arab Emirates. *Emirates Journal for Engineering Research,* Vol. 13, No.1, pp. 1-11.

8.5   The Need For Future Research

Team building and managing people is one of the exciting fields of study. Many writers and specialists wrote books and articles about that subject, but the application of this knowledge in the different fields is not adequately covered. In addition, I would like to point out to the importance of management in the architectural field. Future researchers are encouraged to consider the following topics in their academic studies:

(1)   The application of team building concepts, recruitment and selection process as well as training and motivation techniques to building teams in other fields such as civil engineering, mechanical and electrical engineering, as well as surveying.

(2)   Managing the design process in design firms.

(3)   The role of building architectural teams in reducing project costs at the design stage.

(4)   The Application of Value Planning (VP) and Value Engineering (VE) in architecture.

(5)   The role of early co-ordination between different engineering teams in reducing project errors and conflicts.

8.6   Conclusions

In this chapter we summarised the results of the questionnaires, interviews, and the observations. The summary covered three topics: the team building concept, recruitment and selection of architectural team members, as well as training and motivation of architectural team members. In addition, this chapter included the research recommendations and the need for future research. The following section of the dissertation will encompass the research appendices, which include the cover letter, the architectural team questionnaire, the management interview, the observation, list of design firms surveyed, and bibliography.

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LIST OF APPENDICES

DEPARTMENT OF BUILDING ENGINEERING AND SURVEYING

HERIOT-WATT UNIVERSITY

RICCARTON

EDINBURGH, EH14 4AS

SCOTLAND,

U.K.

To whom it may concern

Dear Sir,

Re: The Team Building Process And Its Application On The Architectural Team In Design Firms

I am currently undertaking a MSc. in Construction Management (Project Management) at Heriot-Watt University, Edinburgh. As part of my dissertation, I am carrying out a research regarding the team building process and its application on the architectural team in design firms.

The proposed questionnaire was sent to limited, selective number of well established design firms. Dr. Bill Wallace (dissertation supervisor) and I would be very grateful if you answer the questionnaire to the best of your knowledge. Your reliable responses will contribute towards the fulfilment of my dissertation.

According to the difficulties that may encountered (i.e. work commitment, time constraints), I devoted my effort to make the questionnaire as subjective and simple as possible. Hoping that you wish to facilitate the successful completion of this academic research, I would like to ensure that your responses will be used purely and strictly in my academic studies and not for other purposes.

If you have any queries or you would like to discuss any question, please do not hesitate to contact me on the address mentioned in the questionnaire.

Thanks for your co-operation

Ayman Ahmed Ezzat Othman

Research Student

THE ARCHITECTURAL TEAM MEMBERS QUESTIONNAIRE

I would like to take this opportunity to thank you for taking the time to complete this questionnaire. The data of the questionnaire will be used in researching the team building process and its application on building the architectural team in design firms. All responses will remain completely confidential.

This questionnaire will be answered by the architectural team members.
Please complete the following information:

Number of employees in you organisation…………………………………..
Number of employees in the architectural section…………………………
Designation:………………………………………………………………………

For contact:

Tel (Home)   (02)   317233

Tel (Office)   (02)   6151450

Fax   (02)   789537

E-mail   AOTHMAN@EMIRATES.NET.AE

Please return the completed questionnaire in the envelope provided to:

Ayman Ahmed Ezzat Othman

P.O.Box 46172

Abu Dhabi

U.A.E

Part 1

The Team Building Concepts

Question (1)

What the word " team " means to you?   **Yes**   **No**

- Individuals working at the same place   ❏   ❏
- Individuals have a common goal   ❏   ❏
- Group of people working together and co-operating between   ❏   ❏
  each other to achieve a common goal
- Others, specify_____   ❏   ❏

Question (2)

How are goals established in your section?   **Yes**   **No**

- The team leader sets the goals for you   ❏   ❏
- The team discusses goals, but finally the leader sets the goals   ❏   ❏
- All the team members work together to arrive at   ❏   ❏
  consensus and agreed goals
- Others, specify_____   ❏   ❏

Question (3)

Does your section adopt the team concept to perform its projects?   **Yes**   **No**
                                                                            ❏   ❏

Question (4)

Which of the following reasons encouraged your section to adopt   **Yes**   **No**

and apply the team building concept?

- Because it helps the team members adapt to the rapid   ❏   ❏
  changes in the construction industry.
- Because projects being completed on time.   ❏   ❏
- Because project being completed within budget.   ❏   ❏
- Because projects being completed as specified.   ❏   ❏
- Because of all the above.   ❏   ❏
- Because it is the fad of management today.   ❏   ❏
- Others, specify_____   ❏   ❏

Question (5)

The team building process is most effective when applied: **Yes**   **No**

- At the briefing stage   ❏   ❏

- At the sketch plans stage   ❏   ❏

- At the working drawing stage   ❏   ❏

- At the construction stage   ❏   ❏

- As a continues process throughout the project life cycle   ❏   ❏

- Others, specify_____   ❏   ❏

Question (6)

Which of the following types are applicable to your team?   **Yes**   **No**

- Advice team   ❏   ❏

- Production team   ❏   ❏

- Project team   ❏   ❏

- Action team   ❏   ❏

- Others, specify_____   ❏   ❏

Question (7)

What is the role you play in your team?   **Yes**   **No**

- Visionary   ❏   ❏

- Pragmatist   ❏   ❏

- Explorer   ❏   ❏

- Challenger   ❏   ❏

- Referee   ❏   ❏

- Peacemaker   ❏   ❏

- Beaver   ❏   ❏

- Coach   ❏   ❏

- Librarian   ❏   ❏

- Confessor   ❏   ❏

- All of the above.   ❏   ❏

- Others,   specify   ❏   ❏

    _____

Question (8)

To what extent do your team members comply with team Norms?   **Yes**   **No**

- Team members do not comply with team norms.   ❏   ❏
- Team members sometimes comply with team norms.   ❏   ❏
- Team members are fully complying with team norms.   ❏   ❏

Question (9)

Which of the following factors indicate the team cohesiveness?   **Yes**   **No**

- Loyalty to the team.   ❏   ❏
- Identification with the team.   ❏   ❏
- Agreement with team goals.   ❏   ❏
- Defence of the team and members.   ❏   ❏
- Conformity to team norms.   ❏   ❏
- Responsibilities of team.   ❏   ❏
- All of the Above.   ❏   ❏
- Others, specify_____   ❏   ❏

Question (10)

What is the role of your team leader?   **Yes**   **No**

- Figurehead.   ❏   ❏
- Motivator.   ❏   ❏
- Liaison officer with the outside contacts.   ❏   ❏
- Monitor of information technology.   ❏   ❏
- Team spokesman.   ❏   ❏
- Resources allocator.   ❏   ❏
- Negotiator.   ❏   ❏
- Creative.   ❏   ❏
- Good listener.   ❏   ❏
- Resolving conflicts.   ❏   ❏
- All of the above.   ❏   ❏
- Others, specify_____   ❏   ❏

Question (11)

What is your team leader style?   **Yes**   **No**

- Directive leadership.   ❏   ❏

- Participative leadership.   ❏   ❏

- Achievement-oriented leadership.   ❏   ❏

- All of the above.   ❏   ❏

- Others, specify_____   ❏   ❏

Question (12)

What is your team size?   **Yes**   **No**

- Less than 4   ❏   ❏

- 4-6   ❏   ❏

- 7-9   ❏   ❏

- 10-12   ❏   ❏

- More than 12, specify _____   ❏   ❏

Question (13)

How open and free is communication in your team?

_____

_____

_____

_____

Question (14)

When people have conflicts, how are they handled?   **Yes**   **No**

- Conflicts are avoided.   ❏   ❏

- Conflicts are negotiated.   ❏   ❏

- Conflicts are confronted.   ❏   ❏

- Others, specify, _____   ❏   ❏

Question (15)

Appraising the team performance is based on: **Yes**   **No**

- Team ability.   ❏   ❏

- Performance against target.   ❏   ❏

- Combination of the two.   ❏   ❏

- Others, specify _____   ❏   ❏

Question (16)

Are you invited to participate in an appraisal meeting?   **Yes**   **No**

                     ❏   ❏

Question (17)

Which of the following activities take place at the appraisal meeting?   **Yes**   **No**

- Record activities for the past period.   ❏   ❏
- Assess performance.   ❏   ❏
- Agree opportunities.   ❏   ❏
- Agree targets for the next period.   ❏   ❏
- All of the above.   ❏   ❏
- Others, specify_____   ❏   ❏

Part 2

Recruitment And Selection Of The Architectural Team Members

Question (1)

Where did you find your current job advertisement?   **Yes**   **No**

    Television or cinema advertising.   ❏   ❏

    Poster in a public place.   ❏   ❏

    Leaflet.   ❏   ❏

    Word of mouth.   ❏   ❏

    You know a key person in the firm.   ❏   ❏

    Notice boards.   ❏   ❏

    Job centres.   ❏   ❏

    News papers.   ❏   ❏

    Professional journals.   ❏   ❏

    Internet.   ❏   ❏

Question (2)

Did you fill an application form?   **Yes**   **No**

                     ❏   ❏

Question (3)

How many interviews did you conduct?   **Yes**   **No**

- 1   ❏   ❏

- 2   ❏   ❏

- 3   ❏   ❏

- More, specify_____   ❏   ❏

Question (4)

Where did these interviews take place?

_____
_____
_____
_____

Question (5)

In what place do you prefer to conduct any interview in the future?

_____
_____
_____
_____

Question (6)

What was the nature of the interview questions?

_____
_____
_____
_____

Question (7)

Which of the following tests did you undergo?   **Yes**   **No**

- Cognitive test.   ❏   ❏

- Physical ability test.   ❏   ❏

- Personality and interest inventories test.   ❏   ❏

- Job knowledge test.   ❏   ❏

- Job sample test.   ❏   ❏

- Others, specify_____   ❏   ❏

Part 3

Training And Motivation Of The Architectural Team Members

Question (1)

Are training programmes important for enhancing your abilities and   **Yes**   **No**

skills?   ❏   ❏

Question (2)

Which of the following programmes are necessary to enhance your   **Yes**   **No**

skills and abilities in order to achieve your organisation objectives?

- Personality training.   ❏   ❏
- Management training.   ❏   ❏
- Technical training.   ❏   ❏
- Computer training.   ❏   ❏
- Site training.   ❏   ❏
- Others, specify_____   ❏   ❏

Question (3)

How many training programmes/workshops did you participate last   **Yes**   **No**

year?

- None.   ❏   ❏
- 1-5   ❏   ❏
- 6-10   ❏   ❏
- More, specify_____   ❏   ❏

Question (4)

Which of the following rewards will motivate you to achieve the organisation objectives?	**Yes**	**No**
• Salary increase.	❏	❏
• Promotion.	❏	❏
• Prizes and bounce.	❏	❏
• Recognition.	❏	❏
• Praise and approval.	❏	❏
• Asking you to serve as a model to others.	❏	❏
• Asking you to teach your techniques to others.	❏	❏

Question (5)

What are your hopes and dreams that you wish to be realities in your team, section, and organisation?

_____
_____
_____
_____

Question (6)

Write down the obstacles that constraint the team effectiveness and organisation objectives?

_____
_____
_____
_____

THE MANAGEMENT INTERVIEW

Part 1

The Team Building Concepts

Question (1)

Does your firm adopt the team building concept as an approach to achieve its objectives?

Yes ☐   No ☐

Part 2:

Recruitment And Selection Of The Architectural Team Members

Question (1)

Does your design firm perform human resources planning before hiring new architectural team members?

Yes ☐   No ☐

Question (2)

Why does your firm perform human resources planning?

_____
_____
_____
_____
_____
_____
_____
_____

Question (3)

What are the steps followed by your firm in human resources planning?

_____
_____
_____
_____
_____
_____
_____
_____

Question (4)

Which of the following steps are followed in the recruitment process?   **Yes**   **No**

- Determining the vacancies.   ❑   ❑

- Selecting the recruiting sources.   ❑   ❑

- Job analysis.   ❑   ❑

- Advertising.   ❑   ❑

- All of the above.   ❑   ❑

- Others, specify _____   ❑   ❑

Question (5)

What are the recruiting alternatives that adopted by your firm?   **Yes**   **No**

- Reorganise the work.   ❑   ❑

- Mechanise the work.   ❑   ❑

- Make the job part-time.   ❑   ❑

- Sub-contract the work.   ❑   ❑

- Use an agency.   ❑   ❑

- Others, specify _____   ❑   ❑

Question (6)

Which of the following sources are mostly used for internal recruiting?   **Yes**   **No**

- Job Posting.   ❑   ❑

- Employees Referrals.   ❑   ❑

- Temporary Worker Pools.   ❑   ❑

- Others, specify _____   ❑   ❑

Question (7)

Which of the following sources are mostly used for external recruiting?   **Yes**   **No**

- School recruiting.   ❏   ❏

- College campus recruiting.   ❏   ❏

- Private employment agencies.   ❏   ❏

- Public employment agencies.   ❏   ❏

- Executive search firms.   ❏   ❏

- Trade unions and professional bodies.   ❏   ❏

- Others, specify _____   ❏   ❏

Question (8)

Analyse the following jobs in terms of job description (job title, location, duties, etc.) and job specification (education, experience, training etc.).

Principal / Partner

Job Description   **Job Specification**

_____   _____
_____   _____
_____   _____
_____   _____
_____   _____
_____   _____
_____   _____

Architectural team leader

Job Description   **Job Specification**

_____   _____
_____   _____
_____   _____
_____   _____
_____   _____
_____   _____

Project Leader

Job Description   **Job Specification**

_____   _____
_____   _____
_____   _____
_____   _____

_____   _____
_____   _____
_____   _____
_____   _____

Architect

Job Description   **Job Specification**

_____   _____
_____   _____
_____   _____
_____   _____
_____   _____
_____   _____
_____   _____

Architectural technician

Job Description   **Job Specification**

_____   _____
_____   _____
_____   _____
_____   _____
_____   _____
_____   _____
_____   _____

Question (9)

In which media does your firm prefer to advertise the vacant posts?   **Yes**   **No**

- Television or cinema advertising.   ❏   ❏

- Poster in a public place.   ❏   ❏

- Leaflet distribution.   ❏   ❏

- Word of mouth.   ❏   ❏

- Notice boards.   ❏   ❏

- Job centres.   ❏   ❏

- News papers.   ❏   ❏

- Professional journals.   ❏   ❏

- Internet.   ❏   ❏

Question (10)

Do you use application forms?   **Yes**   **No**

❏   ❏

Question (11)

Which of the following items will affect the selection process?   **Yes**   **No**

- Race, Colour, National and Religion.   ❏   ❏

- Arrest Conviction records.   ❏   ❏

- Credit rating.   ❏   ❏

- All of the above.   ❏   ❏

- None of the above.   ❏   ❏

- Others, specify _____   ❏   ❏

Question (12)   **Yes**   **No**

Do you use other information sources, rather than the   ❏   ❏

application forms?

If yes, specify _____

Question (13)   **Yes**   **No**

Do you held an initial screening interview for new team members?   ❏   ❏

Question (14)

How many employment interviews do you arrange for each candidate?   **Yes**   **No**

- 1   ❏   ❏

- 2   ❏   ❏

- 3   ❏   ❏

- Others, specify _____   ❏   ❏

Question (15)   **Yes**   **No**

Do you use employment tests?   ❏   ❏

Question (16)

Which of the following tests are used?	Yes	No
• Cognitive ability test.	❏	❏
• Physical ability test.	❏	❏
• Personality and interest inventories test.	❏	❏
• Job knowledge test.	❏	❏
• Job sample test.	❏	❏
• Others, specify _____	❏	❏

Question (17)

Do you use checking references? If " yes" in which way	Yes	No
	❏	❏

Question (18)

Do you ask new candidates to undergo physical examination and drug testing?	Yes	No
	❏	❏

Question (19)

Do you put a group of candidate into an action discussion to discover the different skills of each candidate?	Yes	No
	❏	❏

Question (20)

Who takes the final decision?	Yes	No
• Principal / Partners.	❏	❏
• Head of human resources/personnel department.	❏	❏
• All or some of the above.	❏	❏
• Others, specify_____	❏	❏

Part 3

Training And Motivation Of The Architectural Team Members

Question (1)

Is training important to achieve the organisation objectives?   **Yes**   **No**

❏   ❏

Question (2)

Do you have orientation programmes for new team members?   **Yes**   **No**

❏   ❏

Question (3)

Do you have orientation programmes for new team members?   **Yes**   **No**

- General Company Orientation.   ❏   ❏

- Department and Job Orientation.   ❏   ❏

- All of the above.   ❏   ❏

- Others, specify_____   ❏   ❏

Question (4)

Do you have an orientation kit? If yes, What are its components?   **Yes**   **No**

❏   ❏

Question (5)

Write down the orientation benefits?

_____
_____
_____
_____

Question (6)

How do you determine the training needs?

_____
_____
_____
_____

Question (7)

What are your training objectives?

- For design firm
- For architectural section
- For architectural team members

Question (8)

What are the training programmes do you offer for the followings:

- Principal / Partner
- Architectural team leader
- Project leader
- Architect
- Architectural technician

Question (9)

Which of the following criteria are used to evaluate training programmes?	Yes	No
• Reaction evaluation	❏	❏
• Learning evaluation	❏	❏
• Behaviour evaluation	❏	❏
• Results evaluation	❏	❏

Question (10)

Is it important to motivate team members to achieve the firm objectives?	Yes	No
	❏	❏

Question (11)

What are the different techniques used to motivate the architectural team members?

_____
_____
_____
_____
_____
_____
_____
_____

THE OBSERVATION

Due to your practical experience in participating, building, leading, and managing architectural teams in design firms, please write down your observations, comments, notes, suggestions, and criticism about the following three topics.

(1)   The Team Building Concepts

_____
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(2)   Recruitment And Selection Of The Architectural Team Members

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(3)   Training And Motivation Of The Architectural Team Members

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BUILDING THE EFFECTIVE ARCHITECTURAL TEAM IN DESIGN FIRMS: THE CASE OF THE UNITED ARAB EMIRATES

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إن الإكمال الناجح لمشاريع البناء من خلال إنجاز أهداف المالك في حدود الوقت و الميزانية ومعايير الجودة المطلوبة يجب أن يكون في قائمة أولويات أي مؤسسة تصميمية ترجو البقاء في السوق و المنافسة في المستقبل. هذه الأهداف لا يمكن إنجازها من قبل أفراد يعملون بمفردهم و إنما من خلال فريق عمل فعال، منسق و ملتزم. بسبب الدور المهم الذي يلعبه في صناعة البناء، فإن كل مؤسسة تصميمية عليها التركيز على بناء فريق معماري فعال، قادر على تسليم مشاريع ناجحة وتحسين معدل إنتاج المؤسسة. يهدف هذا البحث إلى تأسيس المبادئ ووضع القواعد لبناء فريق معماري فعال في المؤسسات التصميمية. تم تصميم طريقة بحثية مكونة من مراجعة الأدبيات والدراسة الميدانية لتحقيق هذا الهدف. أولا: تم استخدام مراجعة الأدبيات لدراسة مفهوم بناء الفريق، التوظيف، الاختيار، البرامج التدريبية وتقنيات التحفيز في المؤسسات التصميمية. ثانياً: أجريت دراسة ميدانية على عينة مختارة من المؤسسات التصميمية بدولة الإمارات العربية المتحدة لدراسة مدى الفهم والتطبيق لعملية بناء الفريق. في نهاية البحث تم تلخيص الدروس المستفادة من الدراسة الميدانية إضافة إلى توصيات البحث للمؤسسات التصميمية.

Successful completion of construction projects in terms of achieving client's objectives on time, within budget and as specified should be the first priority of any design firm wishes to remain in market and compete for the future. These deliverables could not be accomplished by individuals working alone, rather by effective, coordinated and committed teams. Because of the important role it plays in the construction industry, every design firm has to focus on building effective architectural team that is capable to deliver successful projects and improve the organisation's productivity. This research aims to establish the principles and set the rules for building effective architectural teams in design firms. A research methodology consisted of literature review and field study is designed to achieve this aim. Firstly, literature review is used to study the concept of team building, recruitment, selection, training programmes and motivation techniques in design firms. Secondly, a field study is carried out in a selected sample of design firms in the United Arab Emirates (UAE) to study the perception and application of the team building process. Finally, leaned lessons extracted from the field study as well as recommendations for design firms are summarised.

Keywords: Teamwork, Architects, Recruiting, Selection, Training, Motivation

1. INTRODUCTION AND RESEARCH RATIONALE

The rapid changes in the business environment in terms of policy, economy, law, technology, and competition have important impacts on today's organisations. As an approach to exploit the positive impacts of these changes and avoid their threats to the organisation's future, many organisations changed their policies, strategies, structures and methods of performing works. Team work has become the cornerstone of any organisation wishes to remain in market and compete for the future[1,2].

Organisations have realized that employees working in teams can achieve, effectively, clients' objectives, accomplish their satisfaction, facilitate coping with rapid changes in the work environment, and significantly improve the product quality. Teams have the potential to highlight employees' awareness and involvement which are considered essential ingredients for organisation's long-term success in today's market place[3,4].

The increasing competition between design firms offered clients the opportunity to select between these firms based on their resources availability, experience, management ability, compatibility, problem-solving approach, cost and value services[5]. As the first line of contact with clients in the construction industry, building effective architectural team becomes a basis for any design firm aims to retain its clients, keep them loyal and win new ones. In addition, it is essential for increasing the organisation's profitability and enhancing its performance[1,6,7]. Team building commences with selecting the right people at the right

time. Teams could be formed internally when the organisation has the sufficient capabilities. Alternatively, accurate planning, attraction and selection of external candidates could be carried out. Training programmes for team members play an important role in improving their skills and enhancing their abilities. Design firms have to implement the most appropriate motivation techniques to encourage the architectural team members devote their efforts to achieve client satisfaction, increase the organisation profitability and enhance its performance.

Although team building is a well established discipline, its application in the construction industry in general and the architectural practice in particular received scant attention in construction literature[8,9]. Results of observations, survey questionnaires and interviews carried out in the United Arab Emirates showed that different design firms have different perceptions and use unlike procedures for building their architectural teams. This necessitated the importance to establish the grounds and state the rules for building effective architectural teams in design firms. To achieve this aim, four objectives have to be accomplished.

1. Reviewing the concept of team building in design firms,
2. Investigating the recruitment and selection process of the architectural team members,
3. Examining the training programmes and motivation techniques of the architectural team members, and
4. Outlining the leaned lessons and feedback extracted from the field study and summarising the research recommendations.

2. RESEARCH METHODOLOGY

The abovementioned aim and objectives called for a research strategy, which could gather data sufficiently rich to establish the principles and state the rules for building effective architectural teams in design firms. The research methodology developed for this research consisted of literature review and field study. Literature review is used to review the importance of the team work in design firms, teams and team building, organisational frameworks in design firms and the members of the architectural team. In addition, literature review investigated the recruitment, selection, training programmes and motivation techniques of the architectural team. Results of a field study carried out by the author in a selected sample of design firms in the Emirates of Abu Dhabi, Dubai and Sharjah of the United Arab Emirates will be presented. This field study aimed to investigate the perception of design firms regarding the team building concept and examine the practical implementation of recruiting, selecting, training and motivating the architectural teams in these firms.

3. THE IMPORTANCE OF TEAM WORK IN DESIGN FIRMS

Clients of the construction industry typically select design firms on the basis of their qualifications, experiences and capabilities. Once, the design firm has been selected, the architectural team becomes responsible for delivering the building design that achieves the client's objectives and meet his / her requirements. A successful and competent team is the one that succeeds in producing a product that meets or exceeds client expectations within time frame, allocated budget and quality standard required. Such a team is a healthy indicator of the organisation growth and stability. In addition, team work helps the organisation retain and keep its clients loyal and win new customers. This highlighted the importance that every design firm has to understand the principles of team building in general and architectural team in particular[9,10].

4. TEAMS AND TEAM BUILDING

A team is defined as a group of people with a high degree of interdependence geared towards the achievement of a goal or completion of a task; they agree on a goal and agree that the only way to achieve this goal is to work together[11]. Team building is a catchall term for a whole host of techniques aimed at improving the internal functioning of work groups, whether conducted by company trainers or outside consultants[12]. The Association of Project Management (APM) defined team building as the ability to assemble the right people to join the project and to get everybody working together for the benefit of the project. Training, motivating and resolving conflicts between team members are important elements of team building[13]. Encouraging team members to work and plan together results in their commitment to achieve the agreed goals. The sense of being a part of a team encourages people to develop their talents, contribute their ideas and pass the sense of teamwork to others in their organisations[14].

5. THE TEAM LIFE CYCLE

A number of individuals begin to work at interdependent job often pass through several stages as they learn to work together as a team, Figure 1. The typical stages of the team life cycle are:

5.1 Forming

Members share personal information, start to know and accept one another, and begin turning their attention towards the group's tasks. An aura of courtesy prevails, and interactions are often cautious.

5.2 Storming

Members compete for status, jockey for positions of relative control, and argue about appropriate direction

for the group. External pressures interfere with the group, and tensions rise between individuals as they assert themselves.

5.3 Norming

The group begins moving together in a co-operation fashion, and a tentative balance among competing forces is struck. Group norms emerge to guide individual behaviour, and co-operative feelings are increasingly evident.

5.4 Performing

The group matures and learns to handle complex challenges. Functional roles are performed and fluidly exchanged as needs, and tasks are efficiently accomplished.

5.5 Adjourning

The most successful groups, committees, and project teams disband sooner or later. Their break up is called adjournment, which requires dissolving intense social relations and returning to permanent assignments. Lessons learned and feedback will help team members improve their performance in future projects[15].
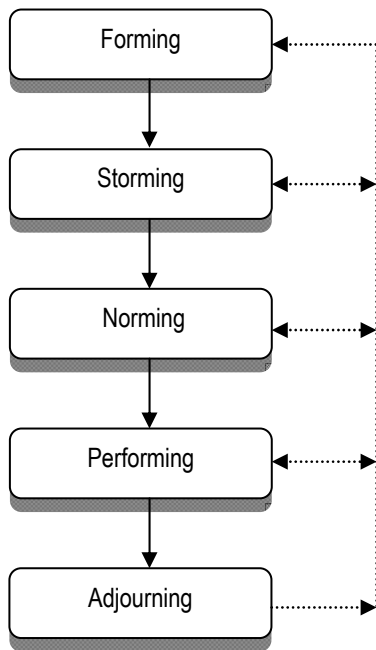

Figure 1. Life Cycle of a Team

6. ORGANISATIONAL FRAMEWORKS IN DESIGN FIRMS

The architectural practice needs to be organised in an efficient way to maximise the use of everyone working for the firm. An organisational framework is an arrangement where the total workload of the firm is divided among the staff. The organisational frameworks in design firms and the implication on the people involved are:

- The simplest situation is where one architect working on his own. The architect has to accept only works that he can complete without assistance. In addition, he has to plan the work in an efficient manner as possible.

- The second situation consists of an architect with one assistant. The architect has to know as much as he can about the assistant's background, interests and abilities in order to allocate appropriate tasks to him.

- Figure 2 shows a shallow framework in which a single principal has a sufficiently small staff to manage. It is assumed that the firm undertakes mainly domestic work, with some commercial projects. Where possible, the five technical assistants specialise in one of these two areas. There also a secretary who undertakes the administrative work, and an office junior, who does some of the simpler drawing job, but is mainly employed to run errands, file drawings and work the plan printer.

- Figure 3 shows a single principal, but this time the firm is larger. He employs three project leaders. They are either architects or senior architectural technicians, and each one leads a group of people responsible for one or more projects. The principal also directly manages general assistant, a technical information assistant and private secretary who in turn manages two other assistants.

- As an architectural practice increases in size, it may be best to introduce a further tier in the organisation framework. In Figure 4, it is assumed that there is still a single principal. Directly under him there are two associates, although in a firm of this size they may have junior partners instead. Both of these associates will manage several project leaders, whom in turn lead a number of assistants. The principal (or senior partner) directly manages his own private secretary, and also the office manager who is in charge of the administrative and support office.

- Figure 5 shows the arrangement for a firm in which there are three partners, who have five associates working under them. One of these associates has a special responsibility for the administrative side of the practice, and the others manage one or more projects, under the overall guidance of the partners. Each associate has a team of assistants to help him. Each partner has a private secretary and one of the partners controls the work of CAD operators[9,16].
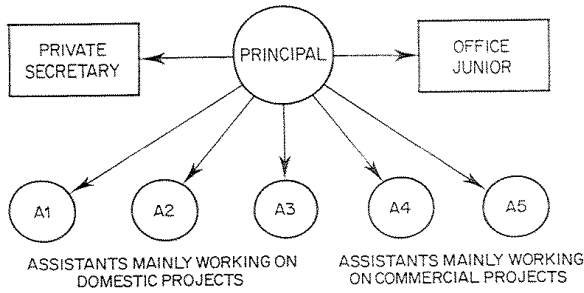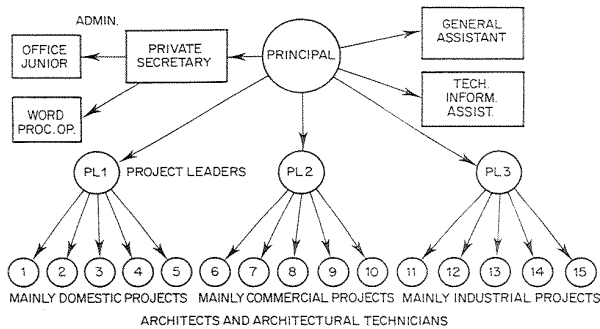
Figure 2. Small Firm with Sole Principal
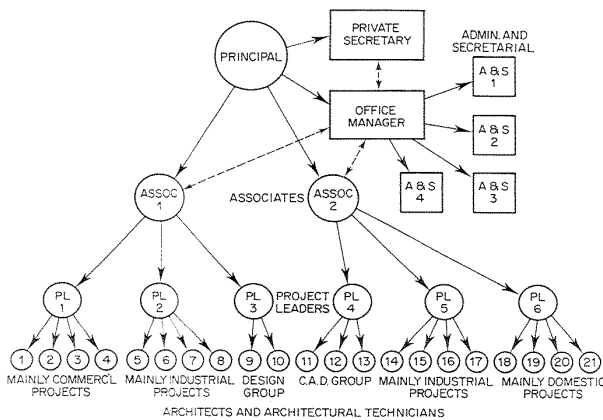

Figure 3. Medium Firm with Sole Principal
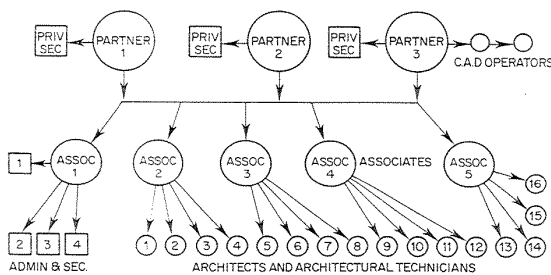

Figure 4. Large Firm with Sole Principal

Figure 5. Partnership

7. THE MEMBERS OF THE ARCHITECTURAL TEAM

The number of the architectural team members varies according to the organisation size and the project requirements. Hence, the largest size and the optimum project requirements are considered. Accordion to this, the architectural team members are: (1) Principal / Partners, (2) Team Leaders or Associates, (3) Project leaders, (4) Architects and (5) Architectural Technicians[2,9].

8. RECRUITMENT PHILOSOPHY IN DESIGN FIRMS

Design firms complain of the difficulty of finding appropriate people. There is a serious shortage of talent for most positions. It is estimated that design firms spend an average of $ 6000 and 22 man-hours of labour for every person hired. When it comes to the long-term survival and prosperity of the design firm, there is no more important activity than recruitment. Recruitment is the set of activities a design firm uses to attract job candidates possessing the abilities and attitudes necessary for the enterprise to achieve its objectives. The recruitment process is a systematic, ongoing attempt to find qualified prospects for existing or potential openings in the organisation. Professional design firms have to strive to get the highly qualified, talented, and experienced professionals. For a firm to build a top quality staff, it must have feelers that allow it to learn about the best people, as they become available, and then it must be prepared to act when the time is right. The establishment of recruitment philosophy is essential for attracting the best job candidates. The top management of the firm has to agree that recruitment is a priority activity that deserves constant attention not just when there is a particular position to fill. The firm should always be on the lookout for quality people and should always focus on upgrading its staff resources, regardless of whether there is a specific position to fill[8,10].

8.1 Recruitment of the Architectural Team Members

The steps which design firms have to adopt when recruiting architectural team members are:

Determining the Vacancies
Although the time to hire an outstanding candidate is always now, that does not mean that firms should hire without consideration to the alternatives. It is imperative to assess the need for a new staff. Because of the emerged financial implications, when the organisation decides to hire new team members, organisations tend to innovate alternatives that can achieve the organisation's objectives at the lowest recruiting cost. These alternatives could be: use overtime, reorganise the work, mechanize the work,

make the job part-time, sub-contract the work, and use an agency[8,16].

Selecting the Recruiting Sources

The two main sources of recruiting for design firms are: the internal recruiting sources and the external recruiting sources.

- *Internal Recruiting Sources:* Design firms have to attempt to fill vacant positions from within the organisation. Promoting internal staff to apply not only contributes to high morale, but holds down recruitment and training costs. Vacancies are published on the bulletin board or lists available to all employees. Interested employees must reply within a specific number of days. Recruiting internally encourages employees to increase their efforts and improve their morals in order to be promoted to better positions. In addition, it preserves the security of information inside the organisation[17,18].

- *External Recruiting Source:* External recruiting is often needed in design firms that are growing rapidly or have a large demand for skilled technical and managerial employees. The most popular sources of external recruiting are: college campus recruiting, private employment agencies, public employment agencies, executive search firms, trade unions and professional bodies[8]. External recruiting can bring new team members with new insights and perspectives which will help enhancing the performance and increasing the efficiency of the organisation. In addition, the pool of the talent is much larger than when recruiting is restricted to internal sources. On the other hand, team members hired from outside the design firm need a longer adjustment or orientation period. In addition, outside recruiting is more expensive, because of the time and expenses spent in advertising, interviewing, analyzing, and testing[18].

Job Analysis

Job analysis is the process of obtaining and reporting information about a job by determining what the duties, tasks or activities of this job are. Job analysis consists of two components: job description and job specification.

- *Job Description* It is a written description of the job and its requirements, it includes: job title and location, organisational relationship, relation to other jobs, machine tools and materials as well as working conditions.

- *Job Specification* It is a written statement of the necessary qualifications of the job incumbent. It includes: education, experience, training, mental abilities, physical efforts and skills, responsibilities, Judgment and decision-making[19].

Advertising

The job description and specification provide the blueprint for the post to be filled with the person required. Advertising is the process of communicating the vacancy to potential applicants. The job and working conditions should be expressed in a way that makes them attractive to the right sort of people. At the same time there is a need to limit the number of potential applicants to those that are most likely to be able to do the job[20]. The placement of an advert should be appropriate to the audience that is to be attracted. This might indicate using national press, trade or professional journals and related web site, where the advertise will be read world wide. Design firms should advertise consistently in the same publications. Being seen in the same place all the time helps build name recognition of the firm. This name recognition increases the likelihood that even those who are not looking change their jobs now, may contact the design firm when they do get in the job market[8].

9. SELECTION OF THE ARCHITECTURAL TEAM MEMBERS

The steps which design firms have to adopt when selecting architectural team members are:

9.1 The Application Form

After the organisation announces its need to employ one or more of the architectural team members, it will receive many resumes from potential candidates. For most design firms the first impression is normally made by the resume. If the resume leads to further interest from a potential employer, the applicant will normally have to fill out much of the same information on an employment application. One of the best, least expensive, and fastest ways for a design firm to generate qualified candidates for a position is to develop and maintain an electronic resume databank that include the resume for every person applied to the firm[21].

9.2 The Initial Screening Interview

The main aim of the initial screening interview is to eliminate the candidate who does not interest the design firm and the candidate who is not interested in the firm. The initial screening interview sifts the large number of candidates who apply for a post in order to determine the eligible candidate for further steps in the selection process[22].

9.3 The Employment Interview

Employment interview includes at least one interview and many design firms use two, three or even more interviews. The first interview determines the mutual interests, get the details on the candidate's background, and set the stages for the next interview with the technical person responsible for the area the person would be working in. The technical person will discuss with the candidate his previous experience, training courses attended and managing skills. The

aim of the interview is to determine which candidate from the short list best meets the requirements of the job. It is also to present the job and the organisation to the candidate. The interview should allow the organisation to determine if the new team member could do the job and fit in with the existing team members.

9.4 Employment Tests

There are many types of tests that play an important role in selecting the architectural team members. The tests range from cognitive test which measures the mental capability of the candidate as well as personality and interest inventories test which examines the measure dispositional characteristic of the architectural team member. There is also job knowledge test that measures the person's level of understanding of a particular job such as architectural details, building materials, managerial, scheduling, controlling, and monitoring abilities. The sample test is the final test, which will be conducted. This test will measure the skills for office work. The candidate is given a part of a job to assess his abilities, this could be the preliminary design of a small building, drawing a perspective for a selected project, preparing specification and contract for a project, or managing a team consists of group of architects and architectural technicians[2,23].

9.5 References Checking

In order to complete the picture of the potential candidate, references from previous employers, college lecturers or people that have known the candidate for a significant period of time are usually required. If a job candidate is still employed, informal reference checking should be conducted confidentially with the employee's knowledge and permission[20].

9.6 The Selection Decision

While all the steps in the selection process are important, the most critical step is the decision to accept or reject applicants. Because of the cost of placing new team member on the pay roll, the final decision must be as sound as possible. Thus, it requires careful consideration of all the relevant information about the applicants. It is common to use summary forms and checklists to ensure that all of the pertinent information has been included in the evaluation of the applicant. The manager has to ensure that the team contains all the necessary skills and expertise needed to carry out its mission. It is necessary to take account of the candidate's acceptability to the working group, not just to the managers responsible for the selection. This is a two-way business, as the result will be equally serious whether the group rejects the individual or the individual rejects the group[4]. Ordinary, three or more names of team members at the top of the register are submitted to the requisitioning official. This

arrangement provides some latitude for those making a selection and, at the same time, preserves the merit system[18].

9.7 The Team Leader

When the architectural team members are selected, the team leader has to create the team spirit in order to build an effective team who are capable to achieve both the client's and organisation's objectives. This could be achieved through:
- Perceiving the nature, abilities, and skills of every team member to assign the appropriate job and the role that commensurate with his abilities and skills.
- Forming the team as early as possible to maximise its performance throughout the project life cycle.
- Collaborating with team members to state and achieve consensus objectives will ensure their commitment to achieve the stated objectives.
- Establishing the team norms and maintaining team cohesiveness through having common goals, close co-operation, creating conditions for satisfying member's personal needs.
- Being a figurehead, motivator, liaison officer, spokesman on behaves of the team, resources allocator, negotiator, excellent listener, and problem-solver as well as a decision maker.
- Establishing effective communication within the team members to ensures smooth transferring of information from one person to another.
- Managing team conflict and appraising team performance to ensure that the client's and the organisation's objectives are achieved[24].

10. TRAINING THE ARCHITECTURAL TEAM MEMBERS

Occasions arise daily in design firms that point out the need for training. The rapid changes in the architectural field, computer applications, information revolution, construction technology, building materials and project management practice, increased the need of design firms to respond to these changes by adopting and designing training programmes to improve and enhance team members' skills and abilities[25,8]. Table (1) establishes the training needs and objectives at the different levels of the design firm.

10.1 Training Evaluation

Evaluation is the final phase of training. It involves collecting information on whether trainees were satisfied with the programme, learned the material, and were able to apply the skills in their jobs. In addition, evaluation ensures that the programmes achieve their objectives in a cost-effective manner[26]. Training evaluations helps rectifying the weakness of training programmes and withdraw less effective ones to save time and cost. Evaluation of training can be categorised into the following areas:

Table 1. Training needs, objectives and targeted architectural team members.

	Training Needs	Training Objectives	Targeted Members
Organisation Level	Identifying and testing the objectives, resources, context and problems confronting the firm.	Achieving the organisation objectives, increasing and developing the firm productivity, improving the managing, planning, scheduling, controlling and monitoring abilities, wining and satisfying clients.	Principal, partners and Team leaders
Task Level	Identifying the job's tasks and duties and listing the steps that performed by the team members in order to complete each task.	Achieving client objectives, meeting their requirements, performing projects on time, within budget, and as specified. Provide the trainees with the latest computer applications in the architectural field, new techniques and materials.	Project leader, architects and architectural technicians
Personal Level	Determining the specific skills, knowledge and attitudes required for the architectural team members	Improving and enhancing the team member's behaviour, skills, knowledge, and experience.	Team members who need to improve their skills

- ***Reaction Evaluation***

Reaction evaluation includes: programme content, programme structure and format, instructional techniques, instructors abilities, and style, quality of learning environment, extent to which training objectives were achieved, and recommendations for improvement.

- ***Learning Evaluation***

Learning evaluation is concerned with how well, the principles, facts and skills were understood and absorbed by the trainees. In order to obtain an accurate picture of what was learned, trainees should be tested both before and after the programme.

- ***Behaviour Evaluation***

Behaviour evaluation is concerned with the changing in the job behaviour of the trainee. A systematic appraisal should be made on-the-job performance in a before and after basis.

- ***Results Evaluation***

Results evaluation attempts to measure changes in variables such as reduced turnover, reduced costs, improved efficiency, reduction in grievance, and increase in quantity and quality of production. Pre-tests, post-tests are required, as with behaviour evaluation, in performing an accurate results evaluation[19].

11. MOTIVATION OF THE ARCHITECTURAL TEAM MEMBERS

Team building is essential for design firm's success, in terms of achieving client satisfaction, increasing productivity, greater competitiveness, and improving quality of products and services. Therefore, managers should learn to recognise what factors are important to increase team productivity. Team members who are treated with respect, encouraged to excel, and rewarded for their efforts are more likely to demonstrate motivated job performance. Highly motivated teams typically work hard and devote considerable energy to the attainment of their goals. More and more organisations are encouraging employees to become involved in problem solving, seeking their recommendations and loyalty, and granting them greater authority to make decisions. Many techniques are applied to motivate architectural teams in design firms.

11.1 Self Motivation

Team leaders who cannot motivate themselves are likely to have difficulty motivating their teams. Attitude is a major factor in self-motivation. Rather than looking for negative possibilities, a focus on positive outcomes helps overcoming obstacles and disappointments. Self-Motivation involves an examination of oneself in terms of needs, wants, and interests. Many people who excel appear to possess insight into their own behaviours[27]. Design firms have to help team members to build and enhance their self-motivation and encourage them to learn from their mistakes, and try to be persistent contributor to achieve both the organisational and personal goals.

11.2 Establishing Positive Motivational Climate

A powerful motivational mechanism is through including elements of challenge, achievement, and conveying the message that the team product is meaningful and makes positive contribution to the organisation success. Opportunities for participation and involvement in managerial and technical planning and decision-making are expected to enhance the architectural team member's productivity. Appropriate organisational climate, less formal structure, positive and enthusiastic responses to new ideas are essential elements for stimulating and reinforcing creative climate.

11.3 Better Personnel Management Policy

Architectural team members are more productive when they feel they are a valuable part of the design firm and that the firm cares about them. Designing

appropriate placement policies for architectural team members is a vital concern for personnel managers. In addition, the establishment of sound schemes of salaries increment, financial incentives and medical insurance are essential for motivating the organisation employees[28].

12. FIELD STUDY

In order to investigate the perception and practical implementation of the team building process in design firms, a systematic sample was used to select 100 firms from a list of design firms in the United Arab Emirates[29]. Three different methods are used for data collection. These methods are: survey questionnaires, interviews and experts observations. These methods are used to:

- investigate the perception and adoption of the team building approach in design firms,
- investigate the recruitment and selection process of the architectural team members
- Identify the training programmes and motivation techniques applied in design firms.

The survey questionnaires were answered by team leaders, project leaders, architects and architectural technician. The interviews were conducted with principals, partners of design firms and human resources officers. Discussion and interaction with decision-makers and manager enriched the survey with new data, trends, and practical experience. Due to the difficulties confronted to fix appointments with principals and key people in design firm due to their work commitments, some of the interviews were conducted face to face where the rest was done by telephone. Experts' observations were collected from professional team leaders and project leaders who have wide experience in leading, managing, and controlling architectural teams. This method is distinguished from the other two methods because there are no structured questions, but the engaged parties are provided with main topics and left on their leisure to record what they noticed and observed from their experience.

12.1 Response Rate

Out of 100 questionnaires issued, 55 were completed and received. 38 questionnaires were collected from Abu Dhabi, 10 were received from Dubai, and the remaining 7 questionnaires were received from Sharjah. Out of 15 interviews planned to be conducted, 8 were achieved. 4 of them were done in Abu Dhabi, 2 in Dubai, and the other 2 in Sharjah. The interviews in Abu Dhabi were conducted face to face, where the other interviews were done by telephone. Out of the 20 experienced architectural team leaders and project leaders asked to write their observations and feed back, 10 responses were collected. 5 observations were collected from Abu Dhabi, 3 from Dubai, and 2 from Sharjah.

12.2 Data Analysis

Data collected from the field study were analysed under the following categories.

The team building concepts
- Questionnaire respondents showed their understanding and perception of the team building concept and mentioned that it is adopted by their organisations to complete projects successfully.
- 50% of the questionnaire respondents stated that they were not involved in setting the goals of the team, which done by the team leader. 27.17% of them mentioned that they discuss the goals but the leader sets the final goals. 22.83% of the respondents agreed that the team members work together to arrive at consensus and agreed goals.
- 79.71% of the architectural team members confirmed that the team building process should be a continuous process through the project life cycle, where 20.29% of them agreed that the process should take place at the working drawing and the construction stages.
- 70% of the architectural team members pointed out that the team leader plays an important role as a figurehead, motivator, spokesman, liaison officer between them and the organisation management. 30% of the respondents stated that their team leaders lack management and leadership skills, which resulted in creating uncoordinated and unpleasant work environment.
- All management levels of the design firms agreed that they adopt the team building concept as an approach to complete projects successfully and achieve the organisation objectives.
- Observations of experienced team and project leaders emphasized the importance of adopting the team building concept as an approach to fulfil the client requirements and improve the organisation productivity. In addition, they emphasized the importance of sharing team members in establishing the architectural team goals. Furthermore, they confirmed the importance of dividing workloads between team members according to their abilities and skills.

Recruitment and Selection of the Architectural Team Members
- 55% of the respondents agreed that they found their current jobs because they know key persons in the design firms, where the remaining 45% of the respondents confirmed that they found their current jobs at job centres and newspapers.
- 59% of the respondents mentioned that they did not fill an application form. 41% of them confirmed that they filled application forms.
- 75% of the architectural team members pointed out that they conducted two interviews, the first one was with the design firm management and the other one was with the head of the architectural section. 25% of them responded that they

conducted one interview with the principal of the organisation.

- 89% of the architectural team members pointed out that the questions of the interview were about personality, qualifications, past experience and projects designed, presentation and computer skills, managing abilities, what the candidate can do for the design firm, the new ideas and suggestions he can bring to enhance and improve the organisation productivity, and the job salary and other benefits. 11% of them mentioned that they were asked why they left their previous jobs or planning to leave.

- Personality and interest inventories test, job knowledge test, and job sample test were the answer of 84.96% of the respondents. 15.04% of them pointed out that they underwent cognitive tests.

- 90% of principals, partners, and human resources officers confirmed that their organisations perform human resource planning before hiring new team members. This way helps design firms utilising available resources and reducing the cost of hiring new employees.

- 87% of design firms management preferred to use overtime, make the job part-time' and sub-contract the work as an alternatives of recruiting.

- 77% of the design firms use private employment agencies and executive search firms as sources for external recruiting, where 23% of the interviewees use their relations with external team members to recruit new employees.

- All respondents agreed that they arrange for an initial interview of new employees and team members. 85.45% of the design firms concluded that they held one employment interview. 14.55% of them pointed out that they arrange for 2 interviews. In addition, all design firms agreed that they use employment tests.

- 75% of the respondents responded that they use personality and interest inventories test, job knowledge test, and job sample test. 25% of them pointed out that they use cognitive ability test.

- 60% of the respondents responded that they do not adopt checking references. 40% of the respondents pointed out that they adopt and apply checking references as a step in the selection process, and the most used way is checking by telephone.

- The government of the United Arab Emirates asks all employees in any organisation to undergo a blood test in order to check if they have HIV/AIDS virus. Any person who has positive result will not be issued a residence in the UAE.

- 75% of the design firms pointed out that the principals and partners take the final decision. 25% of them confirmed that the selection decision would be made by the principal, partners, head of human resources department and head of the architectural section.

- Observations of experienced team leaders stressed that most design firms face problems when their recruitment and selection processes are not based on job description and job specification. They added that many design firms do not arrange for enough interviews and tests in order to make sure that the candidate is competent for the vacant post.

- In addition, they mentioned that design firms prefer using recruiting alternative before recruiting new employees in order to minimize the recruiting cost and mentioned that external recruiting source is more desired than internal recruiting. They stated that the organisation has to promote its qualified employees and old team members to keep their loyalty to the design firm.

Training and Motivation of the Architectural Team Members

- All the architectural team members confirmed the important role of training programmes in enhancing their abilities and skills. 72% of the respondents confirmed that management training, technical training, and computer training are important programmes that can enhance their skills and abilities. 28% of them agreed that personality training and site training programmes have an imperative role in improving team members' skills in order to achieve the organisation objectives.

- 52% of the architectural team members pointed out that they did not participate in any training programmes or workshops during the last two years. 38% of them confirmed that they participated in one training programme, and 10% of the respondents stated that they attended two workshops last year.

- 75% of the respondents confirmed that salary increment, promotion and bounce are the most effective motivation techniques. 25% of them stated that recognition, praise, asking them to serve as a model to others, and asking them to teach their techniques to others are the best motivation techniques that encourage them to achieve the organisation objectives.

- The architectural team suggested to have (1) good working environment, (2) more collaboration and co-operation between team members and co-ordination between their team and other teams in the organisation , (3) new computer systems, design and presentation packages, (4) modern and up to date architectural libraries, (5) more training programmes and reward systems, (6) fair distribution of the workload, (7) participating in setting the goals and objectives of the team and (8) appreciation of old team members.

- The obstacles that constraints the team effectiveness are: (1) losing time in taking decisions, (2) no clear schedules for projects deliverables, (3) rewards are confined to some team members and are not based on performance, (4) some team leaders criticise architects or

architectural technicians in front each others, (5) careless from some architectural team members, (6) some design firms delay paying the overtime even after the project is finished, this force team members not to work more than the official hours even when they are asked to work overtime, (7) some principals and partners are not architects and they interfere and change designs without proper architectural experience.

- 60% of the design firms confirmed that the principal with the collaboration of partners, and human resources officers identify the problems of the organisation and how training programmes can be applied to overcome these problems. In addition, team leaders held periodical meetings with the architectural team members to assign the obstacles that hinder the work progress and identify the skills and knowledge required to help team members perform their job effectively.

- Table 2 shows the adopted training programmes for the different team members.

- 72% of the respondents confirmed that reaction, learning, and behaviour evaluations are the most used criteria for training evaluation. 28% of them agreed that results evaluation is the criteria used to evaluate training programmes.

- All design firms confirmed the importance of motivating team members to achieve the organisation objectives. 828% of the interviewees pointed out that monetary incentives such as increasing salaries, promotions, and bounce are the most used and effective motivators. 18% of them confirmed that intangible rewards such as thanking letters and praising is the most effective motivators.

- Observations of the team leaders showed that many design firms although they perceive the importance of training, they do not wish to spend money in training employees. Some of the architectural team members arrange for training programmes on their own fees in order to enhance their skills and find better jobs.

Table 2. Adopted training programmes for the architectural team members

Team Members	Training Programmes Offered
Principal and partners	Managerial programmes.
Architectural team leader	Managerial and technical programmes.
Project leaders	Mainly: design, presentation, and technical programmes. Secondary: leading, managing, and planning programmes.
Architects	Design, presentation, technical information, computer skills, site supervision, and management abilities
Architectural technicians	Drawing, presentation, and computers skills as well as new techniques of construction

- They referred that design firms have to review periodically its motivation and rewarding system to stimulate team members to increase their productivity. Some of the team leaders mentioned that it is dangerous to promote and reward the same persons every time even if their effort is impressive. The design firm should change the people to be rewarded from time to time.

13. CONCLUSIONS AND RECOMMENDATIONS

The rapid political, economical, legal, technological and competitive changes in the business environment necessitated the importance of adopting the teamwork approach as a cornerstone for achieving client's and organisation's objectives. Because of the important role played by the architectural team as the first line of contact with clients in the construction industry, design firms have to focus on building effective architectural teams. Building such teams begins with choosing the right people who perceive that working together is the best way to achieve both the client's and the organisation 's objectives. This could be accomplished through the accurate planning, recruitment and selection of the team members needed. Training programmes play an important role in improving their skills and enhancing their abilities to adapt to these changes and deliver successful projects. Selecting and applying the appropriate motivation techniques have positive impacts on increasing the firms productivity. Within this paper, results of an applied study on a selected sample of design firms in the United Arab Emirates are presented. The aim of this study was to investigate the perception of design firms regarding the team building approach and examine the practical implementation of recruiting, selecting, training and motivating the architectural teams in design firms. The research recommendation to the design firms could be summarized as:

- Adopt the team building approach as a continuous process and involve the team members in setting out the work goals.

- Select the team leader carefully and establish the team norms, roles, and effective communication systems as early as possible.

- Reduce recruitment costs and follow systematic steps for recruiting and selecting the architectural team members.

- Invest in training your team members and don't think that training is expensive or could be ignored.

- Select the appropriate motivation technique that stimulate and encourage your team members and increase the organisation productivity.

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