

Rationale for Entrepreneurship Training

Entrepreneurs perform a vital function in economic development. They have been referred to as the human agents needed “to mobilize capital, to exploit natural resources, to create markets and to carry on trade”. It might well be said that the entrepreneurial input spells the difference between prosperity and poverty among nations.

Many economic theories emphasize the significant roles played by individual entrepreneurs as they combine talents, abilities, and drive to transform resources into profitable undertakings. Joseph Schumpeter, the first major writer to highlight the human agent in the process of economic development, believed that the economy was propelled by the activities of persons. Who wanted to promote new goods and new methods of production, or to exploit a new source of materials or new market not merely for profit but also to the purpose of creating?

Likewise, Arthur W. Lewis contended that economic growth was bound to be slow unless there was an adequate supply of entrepreneurs looking out for new ideas, and willing to take the risk of introducing them. The relation between the self-sustained growth of an economy and entrepreneurship was further discussed by W.W. Rostow when he claimed that “economic growth was the result of an interesting process involving the economic, social and political sectors of society, including the emergence of a corps of entrepreneurs who are psychologically motivated and technically prepared regularly to lead the way in introducing new production functions in the economy”.

As it is, experts have variously described the entrepreneur as:

- A person who innovates
- One who allocates and manages the factors of production and bears risk
- One who has the ability to perceive latent economic opportunities and to devise their exploitation
- An individual, who conceives the ideas of business, designs the organization of the firm, accumulates capital, recruits labor, establishes relations with supplier, customers and the government, and converts the conception into a functional organization
- The supplier of resources, supervisor and coordinator, and ultimate decision maker

The importance of entrepreneurs to process cannot be more succinctly expressed than Zinkin’s statement: “No entrepreneur, no development.” Indeed, the inactivity or scarcity of entrepreneurs has, for sometime, been the factor seen by many Asian countries as major hindrance to economic development. The presence of abundant natural resources, skilled and unskilled labor, and capital in the form of cash or technology has not proven itself sufficient enough to result in a flurry of enterprising zeal among the people.

Louis Faoro of UNIDO notes that the dearth of entrepreneurs in developing countries is a political and/or social concern as much as an economic one. On the political score, policy-makers need to approach entrepreneurship promotion through various support systems in

government to stimulate indigenous enterprises. For social measures, the needs, values and motivations that constitute uniqueness of the culture that moulds people for or against entrepreneurship gain importance. Lastly, economic measures create a general business climate (opportunities and incentives) in the area conducive to entrepreneurship. In view of all these, an approach to entrepreneurship must necessarily be balanced to take into account all the above contributing factors.

Various Approaches to Entrepreneurship Development

In newly industrializing countries, small enterprises become the focus of various approaches to entrepreneurship development since they function as seedbeds of entrepreneurial and managerial talent. People from all walks of life are encouraged to set up their own small business, thus providing a wide base for industrialization.

Prevailing approaches to entrepreneurship or small enterprise development revolve around two basic sets of assumptions, regarding the reasons for the absence of entrepreneurs in a locality. One cluster of assumptions holds that potential entrepreneurs are individually deficient in:

- a. Skills for enterprise building and management,
- b. Motivation (desire or disposition) to get into business
- c. Knowledge or information about opportunities available in the area

These deficiencies are from within individuals, and the environment is viewed as generally conducive to enterprise. In other words, this set of assumption holds that if there are no entrepreneurs because no one has the necessary talent or personality to successfully carry out enterprise.

The other cluster of assumptions holds that the lack of entrepreneurs is caused by an unsupportive environment, rather than the lack of individual talents in this area. Firstly, it is assumed that the social environment, or the values and socialization practices held by the culture itself, may not produce individuals who are ready or willing to carry out enterprises. Secondly, it is assumed that the political and historical circumstances are not favorable to indigenous enterprise, such as when the economy is not of the “open market” type, and people cannot freely carry out buying and selling activities. To a certain extent, the country must be characterized by less monopolistic controls by individuals or corporations, less structured dependence on the international market, and low degree of protectionist tariffs by other countries if entrepreneurship is to flourish. To this end, a country must be liberated from the stifling clutches or the colonialist/neo-colonialist interest of the West as has been suggested by Phodes. Thirdly, it is assumed that the country may lack enough economic opportunities to be seized upon by potential entrepreneurs. Such opportunities may be in the form of capital accumulation (surplus value from production), technological improvements (new inventions, better equipment), demand for goods and services and availability of labor required by industry.

These two sets of assumptions are certainly not mutually exclusive, and both may together be seen as capable of explaining the lack of enterprises in an area. However, the extent to which development agencies see one or the other as the more pressing explanation of underdevelopment forms the basis for adopting any approach to the development of entrepreneurs.

Generally, the different interventions used to stimulate entrepreneurship consist of “training consultancy, sectoral development, incentives and changes in the educational system. Training covers:

1. Awareness development by which the role of entrepreneurship in economic development is emphasized, and by which the public gains a better understanding of the business environment and opportunities in the area through appreciation seminars and the mass media.
2. Achievement motivation, aimed at increasing the level of confidence and achievement orientation of trainees.
3. Management skills development, to provide the trainees with the necessary skills in running their business, like records management, internal administration, and production systems.
4. On-the-job or attachment training, wherein the trainees acquire experience in the actual situation and operation of the enterprise.
5. Training of trainers to develop trainers’ skills among extension offices.

Consultancy, as another intervention geared toward helping small entrepreneurs, is “the service provided by an independent and qualified person or persons in identifying and investigating problems concerned with policy, organization procedures and methods, recommending appropriate actions and helping to implement these recommendations.” Consultancy services provide guidance to small business ranging from production and technology, to product costing and finance, and labor management relations.

Sectoral intervention fosters entrepreneurship by developing a particular sector or industry based on its potential for growth and contribution to the economy with provisions for financing, training, marketing and technology. It is a means of providing low-cost delivery of consultancy with the setting up of industry desks manned by consultants who disseminate technical information (state-of-the-art reviews, market studies, feasibility or investment studies, ethics studies, laws and regulations, etc.) on the particular industry.

Entrepreneurship is also strengthened by support systems or incentives provided primarily by the government through policy measures. These come in the form of social incentives, like stable political condition, infrastructure facilities and adequate human resources; economic incentives such as liberal financing schemes and tax controls; and technological incentives in the form of research and development efforts regarding products and processes.

Lastly, intervention may be channeled through the educational system to orient the youth towards entrepreneurship by incorporating entrepreneurial concepts and values in the school curriculum.

Most prevailing approaches taken by development agencies have tended to emphasize largely on financial and physical facilities to assure the needed supply of entrepreneurs. Strategies adopted particularly by developing countries are often geared toward minimizing credit, marketing and technical know-how problems. The effectiveness of these methods by themselves, however, is still doubtful. For instance, financial support helps in creating a supportive environment for enterprises, but alone, is apparently not enough to motivate potential entrepreneurs. Economic measures are not sufficient to stimulate entrepreneurship unless prospective entrepreneurs learn to overcome fatalism about the future. It has been reported that in many developing countries, there exists a "poverty syndrome", characterized by a fatalistic attitude of many people towards the future and general lack of initiative and creative attitude. Many people hold to the belief that they cannot control their own destiny, hence, they become indifferent toward the future. Somehow, it insures them psychologically against failure, which they fear would destroy their ambitions. On the other hand, it hampers their personal responsibility, traits found to be strong among entrepreneurs. Most likely, the feeling of being unable to improve the environment hinders people from actively introducing or adopting change.

Even among those who do become entrepreneurs, the poverty syndrome manifests itself in many attitudes and practices, which do not further the goals of business. These include, among others, suspicion of outside assistance; belief in personal good fortune in business success; lack of interest in proper business procedures and principles and in keeping adequate business records; greater concern for current rather than future business problems; and belief that money solves all business problems. All these are obviously disadvantageous to development and unless these are dealt with, any intervention to promote entrepreneurship is bound to fail.

Indeed, experience has shown that environmental and economic considerations alone cannot induce change, and that individuals on their own, do not necessarily respond to incentives for change. In view of the influences that culture and personality have on the entrepreneur, approaches dealing with the neglected factor in development, the entrepreneur, must be given due emphasis. To this end, an understanding of the nature of the entrepreneur is called for.

Entrepreneurship Development through Training

What makes an entrepreneur?

Studies on the entrepreneur have revealed that both cultural or social factors and personality factors are related to entrepreneurial behavior. On the cultural and social aspect, for example, child-rearing practices, education, individualism and family-centeredness condition one's entrepreneurial character. Entrepreneurs are more likely to emerge from permissive, middle-class families. Closely knit and extended families tend to discourage mobility, self-reliance and

initiative, which are essential qualities of entrepreneurs. Furthermore, children of parents with business-related occupations, members of unstable families (those affected by divorce, separation or death) or upwardly or geographically mobile families have been found to have more entrepreneurial propensity. Likewise, entrepreneurs are usually eldest sons in large families or members of small families. Anxiety-producing experiences in childhood and association with friends with high career aspirations are among the other sociological factors that stimulate entrepreneurship.

On the other hand, personality factors distinguish an entrepreneur from a non-entrepreneur. Cross-cultural studies covering India, Japan, New Guinea, Malaysia, the Philippines, and Indonesia indicate that traits such as self-confidence, creativity, persistence, calculated risk-taking ability, determination, need for achievement, initiative-taking, flexibility, individuality, leadership, versatility, optimism, and liking for challenge characterize the entrepreneurial person.

Since there are cultural and personality factors which bear upon entrepreneurial behavior, entrepreneurship development policies and programs should be devised that individuals with latent potentials for entrepreneurship can be selected and trained effectively to tap such potentials.

It is in this regard that the training approach to entrepreneurship development comes to the fore. Experience in entrepreneurship development have led many to conclude that a significant increase in indigenous entrepreneurship can indeed be stimulated by a well-balanced training program, that is, including appropriate selection of both trainers and trainees, motivation, and techniques of enterprise building and management. As Buchele has pointed out, entrepreneurship can be “created and stimulated at a reasonable cost”. The costs are reasonable considering the direct benefits (in terms of increased employment and taxes paid), as well as the indirect benefits of providing impetus to the economy as a result of training. Training increases human productivity. Specifically, it provides the entrepreneur with a better comprehension of his environment as well as with a wider range of alternatives for decision-making. He learns to relate the developments in his surroundings with his business. Training further equips him for innovations. It therefore becomes a tool for entrepreneurship, complementing direct assistance such as environmental incentives.

The training approach addresses itself to two broad categories of people:

1. Those who are entrepreneurs in status whether by choice or circumstance, and
2. Those who are potential entrepreneurs but are engaged in non-entrepreneurial or non-industrial activities.

Training the first group is directed at improving business performance and raising aspiration levels higher, as indicated by greater readiness (and success) in expanding existing businesses and taking the risk of introducing change. Training the second group entails the convincing of

individuals of the social and economic advantages of industrial activity. People in less developed areas need to understand their potential contributions to society as they assume risks or break away from the bonds of tradition.

Who is an Entrepreneur?

If one wants to start and succeed in his/her business enterprise, he/she is required to play different roles at different stages of the enterprise. Some of the essential qualities entrepreneurs must possess are briefly described below:

1. *Entrepreneurs have strong desire to be a winner (need for achievement)*

Most people dream of success and achievement, but do not take any action towards achieving these dreams. Entrepreneurs, on the other hand, have a strong desire to achieve a higher goal and make their dreams come true. For them winning is achievement.

2. *Entrepreneurs have a quality of stick-to-it (perseverance)*

Once committed to a goal and a course of action, entrepreneurs become absorbed in it. They are not deterred by difficulties and problems that beset any project; they work hard until the whole project is successfully accomplished.

3. *Entrepreneurs prefer a middle-of-the-road strategy when they analyze a risky problem (moderate risk-taker)*

Entrepreneurs are not high risk-takers; they are not gamblers. They choose a moderate risk rather than play wild speculative gamble. They love a moderate risk situation: high enough to be exciting, but with a fairly reasonable chance to win.

4. *Entrepreneurs are alert to opportunities. They seize and convert them to their advantage. (Ability to find and explore opportunities)*

Entrepreneurial persons are quick to see and seize opportunities. They show an innovative turn of mind and convert difficulties into opportunities. But they are realistic too. They plan and anticipate carefully how to achieve their goals in realizing an opportunity.

5. *Entrepreneurs are unaffected by personal likes and dislikes while approaching problems (analytical ability)*

Entrepreneurs are realistic. They have a matter of fact approach about business undertakings. They are not likely to let personal likes and dislikes stand in their way. When they require assistance, they select experts rather than friends and relatives to help them. They generally do not take an emotional attitude towards their business or a problem.

6. *Entrepreneurs consider it important to know how they are doing when they work on a goal or a task (using feedback)*

Entrepreneurs like to have immediate feedback on their performance. They like prompt and accurate data and it does not make any difference whether the information they get is favorable or not. In fact, they are stimulated by unfavorable news to pour more energy into attaining their objectives.

7. *Entrepreneurs welcome tackling an unfamiliar but interesting situation (facing uncertainty)*

Achievement oriented people tend to be optimistic even in unfamiliar situations. The odds may not be clear but the circumstances may be appealing. Entrepreneurial people in such situations see no reason why they cannot win through their abilities. They go ahead undeterred, sometimes even without guidelines, and frequently make the best of whatever opportunities there are. As they begin to understand their environment, they begin to calculate their changes very closely. Thus, paradoxically, they present a picture of boldness in the face of the unknown, and prudence in the face of the familiar. They usually win by applying their special insight and skill.

8. *Entrepreneurs have a dislike for working for others (independence)*

It is found that most entrepreneurs start off on their own because they do not like to work for other people. They like to be their own masters and want to be responsible for their own decisions.

9. *Entrepreneurs are flexible in their decisions (flexibility)*

Most successful people, after weighing the pros and cons of a decision, tend to change if the situation so demands. They do not hesitate in revising their decisions. Successful entrepreneurs are persons with an open mind.

10. *Entrepreneurs think ahead, plan for future and then work to make it come true (planner)*

Most successful people tend to set a goal for themselves and plan to achieve that goal in a certain time limit.

11. *Entrepreneurs are comfortable while dealing with people at all levels (interpersonal skills)*

An entrepreneur is a person who, during the course of his activities, comes across many types of people with whom he has to deal with. He has to make them work for him, with him, and help him to attain his objectives. Hence, he should be a person who likes working with people and has skills of dealing with them.

12. *Entrepreneurs can influence others (motivator)*

In the course of their career, an entrepreneur will be required in many situations to influence people and make them think in his way and act accordingly. He motivates people to act.

13. *Entrepreneurs are capable of working for long hours and tackling different problems at the same time (stress-taker)*

As a central figure in the enterprise, entrepreneurs will have to cope up with many situations at the same time, and make right decisions which may involve a lot of physical and emotional stress. All these can be done if they have the capacity to work long hours and keep cool under a lot of tension.

14. *Entrepreneurs are aware of themselves (positive self-concept)*

AN achiever directs his fantasies towards accomplishment of worthwhile goals and sets standards of excellence in what he is doing. This is based upon the awareness of his strengths and weaknesses. He uses positive knowledge to support his thinking. He is rarely negative.

15. *Entrepreneurs tend to think ahead (orientation to the future)*

Entrepreneurs show a high level of future orientation. They do not allow the past to obsess them. They are oriented towards the present and future. "So it was, but now what to do?" this is their usual response.

An individual may not have all these qualities, but most of them will have many. So the first step for a person aspiring for entrepreneurship is making an inventory of the traits he possesses. This self-awareness and analysis will help define his strengths and help overcome his weaknesses.

Process of Setting Up a Business Enterprise

In the days of competition, it is of utmost importance to ensure that the project is implemented in the shortest possible time. If however, you have planned all the activities well in advance and evaluated the resources required thereof, you should be able to implement the project in a minimum possible time. The first and foremost step to initiate the process of planning is identification of suitable project.

Project Identification:

There are no set rules for this. Identification of a suitable project is a very crucial decision, as the ultimate success of the venture greatly depends upon the selection of the right type of product. It is therefore advisable not to take hasty decisions. It has also been observed that most of the prospective entrepreneurs follow the herd mentality in selection of a project. If in a particular area/region, some people have ventured into a specific field or line of manufacture, others also follow suit. This is no a healthy attitude since one's success in a particular project does not necessarily guarantee success for others. In fact, while identifying a suitable project, you should make a proper SWOT analysis of your own strengths and weaknesses in respect of the resources that you have at your command.

Having selected the idea of manufacture, the next step you have to follow is to collect all possible information in respect to these projects. Apart from other information, that which requires immediate concern is the information on the market potential of the items selected by you. There are several ways of doing this. You may go for a basic desk survey, a snap survey, or a detailed market survey.

Business Plan: A Forecast Plan

You will thereafter, be required to prepare the feasibility report covering all activities and the resources needed for the project. The feasibility report broadly would contain the following:

- a. The background of the entrepreneur(s) and the constitution of business
- b. Market potential and marketing strategy
- c. Selection of location
- d. Requirements of land and building
- e. Manufacturing process
- f. Requirements of plant and machinery
- g. Requirements of utilities
- h. Requirements of raw materials
- i. Estimated cost of the project
- j. Proposed means of finance
- k. Cost of production and profitability
- l. Break-even point

- m. Cash flow statement
- n. Internal rate of return and economic viability

Requirements to Start a Business

Selection of Location: A Vital Decision

The location of the project is a very important factor. Normally, in case of small-scale projects, the entrepreneurs are found to have a predetermined location. Ideally, the location should be decided on the basis of the proximity to the sources of raw materials, consumption centers, availability of infrastructure facilities, and availability of necessary skills in the surrounding areas.

Infrastructure Facilities: The Basic Requirements

While considering infrastructure facilities, questions regarding the availability of land and building should be addressed. For smaller projects, you may select a ready build-up shed developed by the infrastructure agency of the government.

Land and Building: Make Correct Assessment

Depending upon the requirement of various facilities proposed to be installed, a plant layout may be prepared and on the basis of this, you may assess the requirement of land. Similarly, depending upon the plant layout and facilities proposed to be installed, you can decide upon the nature of construction, and thereafter estimate the cost of the building. The fees of the architect will also have to be included under this head.

Select the Right Manufacturing Process

For the purpose of production of the commodity, suitable manufacturing processes have to be identified. Some products may require a suitable manufacturing process depending upon the availability of raw materials and the prices thereof, as well as the quality requirement of the end product. A detailed flowchart, if possible can also be drawn with all the operating parameters.

Balance the Plan and Machinery

Based on the manufacturing process, you will have to chalk out the list of plan and machinery required for installation. Depending on the proposed installed capacity of the project: you should work out the quantity of each set of machinery. In other words, you should balance the plan and machinery corresponding to the proposed installed capacity of the project, as all the financial projections are based on the installed capacity of the plant.

Miscellaneous Fixed Assets: Provide Bare Minimum

Miscellaneous fixed assets are not directly related to the production of any article but are required for day-to-day working of the factory. They include: furniture, fixtures, office equipment, typewriters, delivery vans and vehicles, etc. Therefore, while estimating the cost of any project, you should provide for a minimum requirement of miscellaneous fixed assets.

P&P Expenses: Make Adequate Provision

Preliminary and pre-operative expenses are those that do not form any tangible assets, but at the same time, are essential in order to convert the project from paper to actual commercial production.

It has been observed that quite a few entrepreneurs either miss these expenses or do not make adequate provision in the project cost which ultimately puts them into great deal of hardship at a later date. It is therefore advisable that you should, while calculating the project cost, make proper evaluation of both the preliminary and pre-operative expenses.

Contingencies: A Cushion against Exigencies

As the various components of project cost at this point are merely estimates, there is always a need to provide adequate cushion in the capital outlay of the project, to take care of unforeseen expenses, price fluctuations, change in government policies, etc. There are no definite norms about the amount of provision for contingencies. However, you may consider providing for the same ranging between 5-10% of the cost of fixed capital assets depending upon the firm and non-firm nature of the cost.

Margin for Working Capital: Make Adequate Provision

For running the day-to-day affairs of the industrial unit, you need working capital broadly. Working capital would consist of the requirement of funds for meeting the expenditure incurred on procurement of raw materials, stock-in process, finished goods, outstanding debtors, working expenses, etc. Therefore, it is essential to work out the requirements of various components of working capital and examine the adequacy of the same.

Project Cost: An Estimate of Funding Requirements

After having worked out the cost of various components forming the part of the project cost, we are now in a position to estimate the total cost of the project as under:

- Land and land development charges
- Building
- Plant and machinery
- Technical know-how fees / design and engineering charges
- Miscellaneous fixed assets

- P&P Expenses
- Contingencies
- Margin for Working Capital

Financial Viability: A Crucial Part of Project Evaluation

After having examined the technical feasibility of the project, you must also evaluate the project from the point of financial viability. In simpler terms, financial viability means whether the resources employed for the implementation of the project are able to generate adequate cash to repay the cost within a reasonable time frame, over a period of project life, or not.

Means of Finance: Meeting the Funding Requirements of the Project

After determining the cost of the project, a question that has to be answered is how the project cost estimates can be met. In order to ensure continuous and effective participation on the part of the entrepreneur, financial institutions insist on adequate back-up of the entrepreneur's own stake in the project. This could be in form of proprietor's contribution or partners' contribution.

Projected Profitability: Reflecting the Payback Capacity of the Project

It is the common nature of human beings to expect some kind of reward for carrying out an activity. This logic could also be applied to the projects. The project has to be profitable so as to generate sufficient returns to pay back the cost within a reasonable period of time. The profitability, therefore, can be worked out by taking into account all the costs, i.e. fixed costs and variable costs, such as cost of inputs including raw materials, wages and salaries, utilities, repairs and maintenance, stores and spares, administrative expenses, selling expenses, interest, depreciation, etc.

Break-Even Point: No Profit, No Loss Situation

It is very necessary to find out the point at which the project has break-even. Break-even point in simpler terms is the point at which the sales revenue of the project equates the cost of production. If the project is operating below the level of break-even point, it will end up in losses. If the project is operating above the break-even point, it will make profit, which will be utilized in meeting the financial liabilities of the project.

Cash Flow: The Financial Plan

The cash flow statement represents the sources of funds and disposition of funds in a particular year. Normally, cash flows are prepared at least for the period of current loan. This helps to find out whether it should be possible to discharge the financial liabilities including the repayment of loan with interest of the project satisfactorily, or not. Cash flow gives a clear position of inflow and outflow of cash.

Government Formalities and Procedures

The process of planning, as mentioned earlier, also includes the planning for various government formalities that are needed for setting up any project. For setting up business enterprises in the manufacturing/service sector, you may consider the following:

Procedures for Industrial License, Tariff Exemptions and Registration

1. Submit Industrial License application form duly completed, together with a copy of passport/CPR to the Licensing Section of the Industrial Development Directorate (IDD) of the Ministry of Industry and Commerce.
2. The license application will be reviewed and a report will be submitted to the Industrial Licensing Committee for a decision.
3. After the approval by the Committee, the directorate will issue a preliminary license valid for three months and renewable.
4. The applicant should decide on the location of the project in one of the existing areas or another suitable location. Thereafter, the IDD will write to the following authorities for their approval.
 - a. Central Municipal Council
 - b. Ministry of Health (Directorate of Public Health)
 - c. Environment Protection Committee
5. After obtaining approval from the above authorities, a final license with a validity period of one year will be issued.
6. The applicant should then obtain a Commercial Registration Certificate from the Ministry of Industry and Commerce, which will allow him/her to commence the business.

Procedures to Obtain Tariff Exemption and Protection

1. After starting commercial production, the investor may apply for a reduction of electricity tariff from BD 0.016 per kilowatt/hour to BD 0.012 per kilowatt/hour. The application should be submitted to IDD.
2. In order to obtain tariff exemption on raw materials, machinery and equipment, the applicant should apply to IDD at least two months before the expected arrival date of the items to the Kingdom of Bahrain. The duty exemption will be subjected to the approval of the National Industrial Committee of Protection and Support, as per the law.

Procedures to Obtain Tariff Exemption to Other GCC States

In order to obtain custom duty exemption on exports to other States, the following condition must be met. Submitting for this exemption should be after one year of operation, and when the company presents its first audited financial statement.

- 51% of the capital should be nationally or GCC owned
- A minimum of 40% value addition in production must be achieved.

In addition, the applicant should fulfill the following:

- a. Submit a copy of the prescribed application form duly completed/certified by the company's auditor
- b. Provide certification of the application form by the company's accountant
- c. Submit a copy of the audited accounts of the company
- d. Submit a copy of the company's Industrial License
- e. Submit a copy of the commercial registration and memorandum article of the association of the company
- f. Submit copies or notices for purchases of the raw materials of national origin.

Further, the applicant must employ at least 20% Bahraini labor, as per the laws governing industry in the Kingdom of Bahrain.

Industrial Registration

All licensed industries apply for industrial registration two month after production startup. The application in the prescribed form should be submitted to the Registration and Industrial Information Section of the IDD. This registration must be renewed every year. The purpose of this registration is to compile updated statistics on the industries in the Kingdom of Bahrain.

Acquisition of Infrastructure Facilities

If you plan to locate your project in one of the industrial estates promoted by a government agency, you may apply either for the ready build-up shed or a plot of land. Once the shed/plot is offered, you can start with other activities. In case of allotment of a plot, you can start building one the building plans have been approved. In either of these cases, after the allotment, you to apply for power to the Electricity Directorate, as well as for water to the concerned authority.

Constitution of the Business

Decide in accordance with the size of the operations. Simultaneously, you should also decide on the constitution of your business, whether it should be a proprietorship, a partnership or a

company. Having decided the constitution of your business, you may now undertake necessary formalities such as registration of partnership firm, incorporation of a company, etc.

Arrangement of Finance for Fixed Assets and Current Assets

After obtaining the above clearances, you should apply for term loan, with a techno-economic feasibility report including market survey, as well as all documentary evidence justifying your claim for the techno-economic feasibility of the project. After the approval is received, you may have to execute necessary legal documents mortgaging the assets. Only after the permits are received can you begin with the actual implementation of your project.

Whom to Approach for What?

It is important for new entrepreneurs to know where to go for particular information to avoid running around. And for that, they must know what they are looking for as clearly as possible.

Some new entrepreneurs may be completely uninformed and some may have knowledge about the marketing or production or finance area, etc. Those who are completely unaware and do not have an idea about their enterprise will require initial deskwork and personal discussions with knowledgeable persons. This will help them in getting considerable idea about the type of venture they want to undertake.

Those having some knowledge about marketing or production or finance, etc. will require specific information. It is very useful to list out various activities that require to be completed for setting up their enterprises. By doing this deskwork, they will get a clear idea about the assistance and information they need for the fulfillment of the required activities.

There are various developmental agencies to assist entrepreneurs:

- Some agencies provide only general information and the specifics of information must be checked by the entrepreneur himself.
- Some agencies provide technical/marketing expertise in specialized areas
- Some agencies provide guidance in technical and financial matters, and also take up turnkey responsibilities (implementation assistance).

But government formalities and procedures will have to be completed in all cases by the entrepreneurs themselves for which they can contact the concerned departments/offices for information.

While collecting such information from various sources, it is advisable to retain only relevant information or data, as otherwise, it will create confusion. Relevant information must be kept at a proper place so that it is readily available when required. The compilation and segregation of information will need table work, and the information so compiled should be compared with the

list prepared earlier in order to ensure whether all necessary data have been collected before commencing the work.

Expert guidance will help in decision-making process. It will be useful to make personal visits to the institutions to acquire first-hand information so as to get a clear picture about the whole exercise.

Entrepreneurial Competencies: A Synoptic View

1.0 Introduction

1.1. The success of a small scale industrial venture depends on the following major factors:

- Inherent viability of the product, i.e. technical, organizational, financial, and commercial viability.
- The way a project is planned, i.e. decisions regarding various project parameters such as where to locate, what technology to use, what should be the capacity of the machineries, etc.
- The meticulousness with which a project is implemented
- The way a project is managed

While one can add certain other factors to this list, including the environmental factors, the said factors appear to be major ones. Let us focus our attention on the last three factors mentioned above, i.e. project planning, implementation and management.

In a small-scale enterprise, it is the promoter of the project, i.e. the entrepreneur, who does most of the functions of project planning, implementation and management. If the size of the project is big enough to call for employing professional managers, it is the entrepreneur who acts as a driving force behind performance of these three aforesaid major functions. To be effective, an entrepreneur needs to possess certain knowledge, skills and appropriate personality profile. All these put together could be termed as *competencies*. Let us first understand the concept of “competency” before dwelling upon the details of entrepreneurial competencies.

2.0 Competencies: A Conceptual Framework

2.1. What is a competence¹?

A competence is an underlying characteristic of a person, which results in effective and/or superior performance in a job. A job competence is an underlying characteristic of a person, in that it may be motive/trait/skills or aspect of one’s self image, or a body of knowledge which one uses. The existence of these characteristics may or may not be known to the person. In this sense, the characteristic may be unconscious aspect of the person. In this sense, competence is a combination of a body of knowledge, which is a

¹ Skill competencies are those which do not constitute “professional know-how” and are functionally interchangeable. Example: ability to persuade others to get things done, skillful use of influence strategy, orientation towards seeking information, orientation to do things faster and cheaper, etc.

Reference: Soft skill competencies by Lyle M. Spencer. Scottish Council for Research in Education (Lindsay & Co. Ltd. Edinburgh)

set of skills and cluster of appropriate motives/traits, which an individual possesses to perform a given task effectively and efficiently. In order to understand more about competencies, let us understand the meaning of knowledge, skills, traits and motives, which form various components of entrepreneurial competencies.

2.2. What is a body of knowledge?

Knowledge means collection of information and retention of facts that an individual stores in some parts of his brain. Let take for example, swimming: one could be in a position to describe how to swim, which would mean that one possesses the knowledge of swimming. But this alone will not enable one to actually swim unless one has something more than the knowledge which is necessary for performing the task but not sufficient. In real situation, one may find various examples wherein people possessing adequate knowledge have failed while performing the task. Besides knowledge, an individual should have skills to translate the knowledge into action.

2.3. What is a skill?

Skill is the ability to demonstrate a system and sequence of behavior that are functionally related to attaining a performance goal. Using a skill is not a single action. The relationship among specific actions is such that each contributes under some direct manner to the capability of people to function effectively or ineffectively in a given situation. Since skill is the ability to demonstrate a system and sequence of behavior, it must result in something observable, something that someone in the person's environment can "see". For example: planning ability is a skill. People who have this skill can identify sequence of action to be taken to accomplish a specific objective. They can identify potential obstacles to those actions. People with this skill can identify sources of help in avoiding obstacles or overcoming them when they interfere with the action sequence. None of these separate actions constitutes a skill, but the system of behavior does. People who have this skill can apply it in a number of situations/contexts.

Going by the example of knowledge of swimming, if one has to be in a position to swim, one needs to have the skill to. Knowledge could be acquired by reading, listening, visuals, etc. while skill can be acquired only through practice; which enables the individual to demonstrate the system and sequence of behavior that are functionally related to performing a task.

In other words, knowledge related to swimming could acquire by reading, talking to experts and so on, whereas the skill to keep oneself afloat on water can be acquired by practicing on a number of occasions. Thus knowledge, as well as skills, is required to perform a given task effectively.

2.4. Motive and traits

A motive is recurrent concern for a goal state or condition appearing in fantasy, which drives, directs and selects behavior of the individual. Motive includes thoughts related to a particular goal state. For example, people who think about improving their own performance and competing against standard of excellence are said to have “achievement motivation”. When people with a high achievement motivation encounter a situation which their performance can be measured and a goal can be stated, their achievement motivation is aroused. Once aroused, the motivation thoughts direct and select their behavior, i.e. they will choose to do things that help them get feedback on their performance and engage in activities that may result in improved performance.

Coming back to the example of swimming, the knowledge on how to swim followed by practice which could help an individual to acquire skills in swimming would lead to the individual acquiring capability to swim. But then this does not lead him to becoming the best swimmer with a given reference group. The individual's urge to do better and better leading to a desire to become the best swimming could be terms as a concern for excellence – in other words, achievement motivation. It is this concern which would help the individual to constantly practice swimming, look out for ways and means of increasing the speed, thereby ultimately increasing the possibility of becoming a good swimmer.

A trait is a dispositional or characteristic way in which the person responds to an equivalent set of stimuli. A trait includes thoughts and psychomotor activities related to a general category of events. For example, people who believe themselves to be in control of their future are said to have the trait of efficacy. When people with this trait encounter problem or issues in any aspect of life, they take initiative to resolve the problem or understand the issue. They do not wait for someone else to do it nor expect that luck will take care of it. The thought pattern and resultant behavior occur in response to any general set of events, which allow the trait to be expressed.

Thus, to perform any given task including that of launching an industrial venture and managing it successfully, a person needs a set of knowledge, skills, motives and traits which could be together labeled as competencies.

3.0 Identifying Competencies: Alternate Approaches

3.1 What it takes to perform a task effectively?

The task could be that of manager, a supervisor or an entrepreneur. One aspect that leads to effective performance is the “hard skill” of the performer. By hard skills, we mean those related to a given profession and acquired, generally through academic education as also through hands-on experience in performing a task. Taking the

example of a “design engineer” engaged in designing gears as a part of a complex machine, the technical knowledge/skills of designing is the hard skill that would contribute to his performance. However, between a successful design engineer and a not so-successful one, the difference could be in terms of “soft skills”. A successful design engineer could, having prepared a preliminary design of a gear, imagined himself to be a gear that he has designed and think of “where I would hurt when the gear is fitted in the machine?” Such an imagination could lead to improvement in design. An ability to go through such a cognitive process is a “soft skill”. Other soft skill competencies that contribute to success of a designing engineer in our illustration could be problem-solving approach, tendency to gather information from various sources so as to perform the task effectively, and the like. Such soft skill competencies are functionally interchangeable. For example, someone who possesses problem-solving skill – a soft skill competence – can apply it in any situation other than one’s profession.

- 3.2 Having understood that both hard skills and soft skills are necessary to perform a task effectively, how one can decide what it takes to perform a task effectively?

The answer could come from a “theory” reflecting someone’s thoughts on what characteristics an individual must possess to perform the task effectively. It may emerge from personal experience of individuals that needs to decide what it takes to do a job well. For example, one may conclude based on one’s experience that to perform X task effectively, one needs characteristics such as dedication, hard work, thoroughness, etc. Such approaches identifying what it takes to perform a task effectively lead to listing out such qualities which are vague and seldom tested systematically against performance.

- 3.3 The best way to understand what it takes to perform a task effectively is to find out what good performers actually do, how they approach a given situation and compare the same with those average performer do. The process, job competency assessment is based on the following premises:

- In every job, some people perform more effectively than others. These people also approach their jobs differently from average.
- These differences in approach relate directly to specific characteristics that are often absent or weak in average performers.

The approach towards job competency assessment involves:

- Determining performance standards, i.e. factors indicating top performance and using this information to identify superior performers.
- Analyzing performer characteristics and behavior
- Developing a top performer in terms of observable, behaviorally specific characteristics and deriving a validated competency model that directly relates to

critical aspects of the job. A similar approach has been adopted for identifying entrepreneurial competencies as described in what follows:

- 3.4 Subsequent to Prof. David C. McClelland (a well known behavioral scientist and Harvard University professor) and experiments in Kakinada and Rajmundri of Andhra Pradesh during the late 60's, "achievement motivation" was considered as the central theme in the personality of a successful entrepreneur. In simple terms, achievement motivation is an urge in an individual to excel, to do better and better, to compete against self-set standards, to be unique or to perform unique tasks, and to be involved in long-term career goals. Experiences of two decades in adopting achievement motivation theory for identifying and developing entrepreneurial potential has led to the need to understand with more clarity what contributes to success as an entrepreneur. Accordingly, Prof. McClelland and his associates, with the involvement of EDI, initiated a research project. The emphasis was on identifying entrepreneurial competencies using competency assessment approach.

The research project that was spread over three countries – India, Malawi and Ecuador – involved the following steps:

Identifying top performers, i.e. entrepreneurs in small-scale sector, who have performed well and a matching sample of average performers operating in the same product line and in the same environment. Such samples were identified in various parts of India and other countries using certain established sampling techniques. Entrepreneurs so identified were interviewed in depth, covering their early life, point of entry into the entrepreneurial career, and their experiences thereafter related to their business.

Entrepreneurs were specifically asked to recall and narrate high points and low points. In narration, they were probed to understand their thoughts, feelings and actions in a given critical experience. Based on the same, a list of characteristics/competencies that a top performer has, was involved and compared with that of an average performer.

The list of such competencies, i.e. competency model was tested on a second set of samples of top and average performers for statistical validation.

- 3.5 The said exercise has led to a competency model that distinguishes top and average performers, i.e. entrepreneurs. It is interesting to note that background and technical expertise at entry level have emerged as being neutral to success as an entrepreneur. Earlier, there used to be a firm belief that those persons with business family background could become successful entrepreneurs. Subsequently, there was a belief that individuals need technical know-how for being successful in an industrial venture. The experience, as also the findings of the said research project, has clearly indicated that what it takes to be a successful entrepreneur is a set of competencies. A descriptive list of such competencies follows:

Entrepreneurial Competencies

1. Initiative

Takes action that go beyond job requirements or the demand of the situation

- Does things before being asked or forced to by events
- Acts to extend the business into new areas, products, or services

2. Sees and Acts on Opportunities

Looks for and takes action on opportunities

- Sees and acts on opportunities available: business, educational, or personal growth
- Seizes unusual opportunities to obtain financing equipment, land, work space, or assistance

3. Persistence

Takes repeated or different actions to overcome obstacles

- takes action in the face of a significant obstacle

4. Information Seeking

Takes action on own to get information to help reach objectives or clarify problems

- Does personal research on how to provide a product or service
- Seeks information or asks questions to clarify what is wanted or needed
- Personally undertakes research, analysis or investigation
- Uses contacts or information networks to obtain useful information

5. Concern for High Quality of Work

Acts to do things that meet or beat existing standards of excellence

- States a desire to produce a high quality of work
- Compares own work or own company's work favorably to that of others

6. Commitment to Work Contract

Places the highest priority on getting a job completed

- Makes a personal sacrifice or expands effort to complete a job
- Accepts full responsibility for problems in completing a job for others
- Pitches in with workers or works in their place to get the job done
- Expresses a concern for satisfying the customer

7. Efficiency Orientation

Finds ways to do things faster or with fewer resources or at a lower cost

- Uses information or business tools to improve efficiency

8. Systematic Planning

Develops and uses the logical, step-by-step plans to reach goals

- Plans by breaking a large task down into sub-tasks
- Develops plans that anticipate obstacles
- Evaluates alternatives
- Takes a logical and systematic approach to activities

9. Problem Solving

Identifies new and potentially unique ideas to reach goals

- Stitches to an alternative strategy to reach a goal
- Generate new ideas or innovative to reach a goal

10. Self-Confidence

Has a strong belief in self and own abilities

- Express confidence in own ability to complete to task or meet a challenge
- Sticks with own judgment in the face or opposition or early lack of success
- Does something that he says is risky

11. Assertiveness

Confronts problems and issues with others directly

- Tells others what they have to do
- Reprimands or disciplines those failing to perform as expected

12. Persuasion

Successfully persuades others

- Convinces someone to buy a product or services
- Convinces someone to provide financing
- Convinces some to do something else that he would like that person to do
- Asserts own competence, reliability or other personal or company's qualities
- Asserts strong confidence in own companies or organization's products or services

13. Use of Influence Strategies

- Acts to develop business contacts
- Uses influential people as agents to accomplish own objectives
- Selectively limits the information given to others
- Uses a strategy to influence or persuade others

14. Monitoring

- Develops or uses procedures to ensure that work is completed or that work gets standards or quality
- Personality supervises all aspects of a project

15. Concern for Employee Welfare

- Takes action to improve the welfare of employees
- Takes positive action in response, i.e. employees personal concerns
- Expresses concern about the welfare of employees

Problem Solving: A Matter of Attitude and Skill

All of us experience problems of different order and magnitude at different times. In our daily life, problems come so often that we do not even notice their occurrences. This is because our experience and desire to solve these has equipped us with spontaneous reactions, which usually result into solution. However, sometimes when we face unusual or difficult problems, we get stuck as our usual reaction fail to produce a solution. In such cases, various approaches and ways have to be tried.

An entrepreneur is likely to face a variety of problems in the course of implementation and management of his small-scale enterprise. In an appropriate system, the entrepreneur develops approach and methodology for solving problems. It will help him to manage his affairs smoothly and he would not remain under stress and tension when he encounters problems.

There are various qualitative and quantitative approaches developed in management services, which help us in solving problems. The basic objective of this paper is to suggest a non-quantitative approach based on common sense and experiences in dealing with small-scale entrepreneurs and their problems.

In fact, the right strategy would be understood in one's own environment, resources, capabilities, limitations, strengths, and weaknesses in order to design an appropriate approach for solving problems. However, the approach suggested here will help you, initially, in working on problems and at a later stage, in formulating your own strategy for solving problems. The following steps are suggested for developing problem-solving attitude and problem-solving mechanism.

Build a Problem-Solving Attitude

We all have certain skills, traits and motives. Our psychological make-up tells what traits and motives we possess. These traits and motives can be identified and developed. Some people do have traits and motives to work with the problems and they always make attempts to solve them, while some do not have traits and motives to do this. Therefore, they sometimes unconsciously try to avoid problems. I will give you an example of an entrepreneur I dealt with for a fairly long time.

Mr. Sikand was the owner of a small restaurant. Once he got a notice from the department of food administration. In his restaurant, necessary provisions were not made as per requirements and for which he received a notice. When he received the first notice, he read it and filed it without taking any action. After a few days, he got another notice. This time, unconsciously, he decides not to open the envelope and did not read the contents of the letter received from the food department. Subsequently, he started receiving notices frequently and kept doing the same thing. After approximately a year, a team from the department came to the restaurant and locked it. The department suspended the license for the entrepreneur for not responding to the

notice, and thus failing to take corrective actions. Mr. Sikand's psychological composition directed his actions for problem-avoidance.

You must have experienced this attitude in some of the department where people try to avoid taking decision in solving problems. I would like you to go back to your past and identify some situation where your behavior was comparable to what is stated above.

If you identify many incidents like this, you must take note that you are in the process of developing a personality which is prone to avoid problems. But do not get stuck here. There is a way to change your attitude. What you need to do is to be "aware of this fact", of your personality and to make conscious efforts to seek solutions rather than succumb to your tendency to avoid problems.

Recognize the Problem and Its Seriousness

If you have a clear understanding of what is a normal situation, you will be able to identify the deviation and therefore, a problem. For example, if you know that standard production level of your unit should be one ton per day, and if it is $\frac{3}{4}$ of a ton, you know that there is some deviation, and therefore, there must be a problem.

Since some problems will be of a quantitative nature, it may be always possible to find out the deviation in terms of number. For example, you may experience that relationship in your plant is not harmonious, but you may not be able to quantify the problem. Therefore, it is very important for an entrepreneur to continuously observe the entire situation that he encounters.

Once you have recognized the problems, your next steps are to examine the seriousness, growth trend, and urgency for the problem. The seriousness of the problem will help you decide whether you need to work on the problem for solution right away, or you can wait for some time. It will also help you decide about some temporary solution, until you complete the study of the issue and come out with a course of corrective action. Let us understand the whole process with the following example:

Universal Products, a small manufacturing enterprise, after two years of its operation, started experiencing approximately 30% rate of absenteeism in its factory. The owner immediately realized that the problem was serious and needed immediate action. First of all, in order to meet the customers' demand, he made arrangements for additional workers while he studied the cause and decided about the possible remedies for the absenteeism problem. His understanding of the seriousness of the problems helped him to take temporary corrective action, which avoided the occurrence of another problem in sales. If Universal Products had not made arrangement for temporary staff in order to sustain the production level, they would have probably faced the problem of marketing, sales might have dropped and they might have lost a few customers too.

The growth trend of this deviation is also important. If the intensity of a problem is increasing then one will have to not only worry about the interim solution but will have to work for a preeminent solution immediately. The same is also true in case of urgency of a problem.

Specify and understand a problem

If one can clearly identify, the deviation or specify the problem, he is well on his way to solving the problem. The important step is how to specify the problem. Many of you must have consulted a physician for a physical problem. I would like you to think about one of your meetings with a physician and the discussion you had with them about your illness. When you go to a physician, he will usually ask you questions about what is happening, where it is happening, when it is happening and the extent to which it is happening. The physician will also ask you what is not happening, where it is not happening, etc. A physician does this to in fact be able to understand the problem.

Develop possible cause

Let us go back to the physicians' examination process. The physician gets an idea of whether the fever is "Influenza", "Malaria", or "Hay Fever". Once he identifies the type of fever, he starts to work on developing causes of the fever such as cold, a virus, an allergy, etc. In the same way when you are face with a problem you must try to develop relevant possible causes. In the case of Universal Products, the following problems cause a higher rate of absenteeism in thought by the owner.

1. There is high proportion of Muslim workers in the factory. Fridays is a day of social prayers for the Muslims and so they make be absent on that day.
2. It is the company's policy to give out salaries on Thursday. If the workers receive their wages on Thursday, it is likely that they will be absent on Friday as they are already loaded with money.
3. New films come out in the cinemas every Friday. If there is a high proportion of young workers, it is likely that some of them may like to catch the first show and therefore they may be absent on Fridays.
4. Perhaps the supervisor in-charge of the shift on Fridays is tough and not well-liked by the workers; it is likely that they will be absent that day.
5. Saturday, being a holiday, results in a usually a higher work load on Friday because all shipments for customers must go out on Friday evening. Therefore some workers may be absent on that day.

The owner developed many such possible causes. It is not important how many causes you are able to develop but how relevant they are. The objective here is to get more insight on possible reasons for the occurrences of a problem. Once you have a developed and explained the possible causes, you have completed the analysis of the problem. After developing the causes, you should test these causes – not as we test substances in a laboratory – but through analysis, reasoning, data and intuition.

Test possible causes

The process of testing the developed causes calls for intuition, creativity, analytical skill, and reasoning. An individual with these qualities will be able to test cause without using a laboratory type approach.

The cause of absenteeism as indicated earlier in the Universal Products could be tested in the following manner:

The cause “higher proportion of Muslim employees could be tested by going through the list of employees

After verifying the profile of the employees working in the production department, the owner found that there are Muslims in this department but they remain absent on Friday.

Therefore, there is no reason for him to worry about this or to take a corrective action affecting this segment of work force.

- Regarding his wages, he found that the factory had fortnightly wage payment system and therefore this could not be the possible cause of the problem.
- Although new movies were coming out ever Friday, it was found by personal inquiry that the workforce was not movie-oriented
- The profile of the superior was studied in detail and the owner learnt that the supervisor was very competent but tough in handling people. He was particularly tougher on Friday as he was responsible for loading goods to customers – Friday being the last working day. After getting detailed information about the supervisor’s way of handling people, the owner determined that this was the only cause which determined the absenteeism taking place. He did not have to explain the remaining course.

Develop alternative solutions

Once a cause is determined the next step is to look for a solution, since everyone possesses different levels of information, knowledge, skills, traits and motives, it is likely that everyone will come up different solutions to the problem. Each solution will have some degree of merit. Therefore there is no right or wrong solution to any problem. The solution that fits into your objectives, resources, strengths, limitations, constraints, etc is the best solution under the circumstance. Therefore, I suggest that once you determine the cause of the problem that is facing you it will worthwhile develop various solutions and relate them with your objectives.

Establish objectives

Once various alternate solutions are developed, it will be necessary to establish your objectives. Your clarity regarding your objectives will help you to classify them in relation to the problem to two categories:

1. Results to be produced
2. Resources to be used

In the case of Universal Products the entrepreneur clearly indicated the following objectives:

Results to be produced

- a) The rate of absenteeism must be brought down to 8% which is normal in such an industry
- b) The workload cannot be reduced as we must cater to the needs of our customers and must ship the goods on Friday
- c) We cannot remove the supervisor because he is our best guide

Resources to be used

- a) Cannot spend more than \$100 per week to solve the problem
- b) Cannot put more than four extra persons to complete the task
- c) Cannot use Incentive payment system
- d) Cannot provide over-time to the workers

After establishing his objectives he classified them into three different categories

“Must, Desirable and Ignorable”

Such a classification of objectives about the results to be produced and resources to be used helped in selecting appropriate solutions that were thought off.

Compare solutions

When there is more than one solution, it may become a problem to select the best solution; therefore we get caught in another problem. In such a situation, the right way will be to compare the various solutions in terms of result produced and resources used. Those do not mean that that one will have to experiment with each solution and decide. The best course of action would be to see your reasoning, judgment and intuition, to decide the advantages and adverse consequences of each solution

The analysis of the effect of each solution should be quantitative wherever it is possible. Certain non-quantifiable effects such as the effects on the worker's morale, human relation etc should also be thought of. Once all solutions have been compared, one would be able to find the ideal solution. But remember one might not be able to solve the problem completely. You can only reduce the magnitude of the problem and perhaps create another problem but of a smaller

magnitude. In the case of Universal Products, the entrepreneur implemented the solution of employing 3 to 4 more workers on Friday, but he created another problem of generating resources of paying extra wages to this ideal man power.

Summing up

The above analysis can be summarized as follows:

1. Create a desire to solve a problem
2. Recognize the problem
3. Develop possible causes
4. Specify the problem
5. Test each cause
6. Explain each cause with minimum assumptions
7. Verify your explanation
8. Determine the causes
9. Establish objectives about the resources produced and used
10. Classify objectives into “Must”, “Desirable” and “Ignorable”
11. Generate alternative solutions
12. Compare each solution in terms of positive and adverse consequences
13. Make a decision to implement
14. Be ready for a problem of less magnitude
15. Internalize the process
16. Be creative

Be a good problem solver

Problem solving process

The steps of problem solving process are:

- Defining the problem
(what is it?)
- Diagnosis
(why has it happened?)
- Generation of alternatives
(what can be done?)
- Choice process
(what will be done?)
- Detailing
(what tasks? Who will do it?)

Defining the problem

Problem definition is very critical to this situation:

- It is wasteful to solve a problem wrongly defined
- Better to get wrong answers to the wrong questions than to get the right answers to the wrong questions
- There is one correct definition
- Many times the problem is to define the problem

Problem analysis

- Problem analysis is looking at it in a systematic way
- Problem analysis is when “what is” falls short of or exceeds desirable/expected/acceptable level
- Problem analysis is understanding of
 - ✓ Nature (what?)
 - ✓ Extent (how much? How frequently?)
 - ✓ Timing (when?)
 - ✓ Area (where?)
- Problem analysis helps in definition and diagnosis

Cracking hard nuts

- At times one comes across the problem, which baffle and defy definition
- Here are some useful hints
 - ✓ Shift the areas of attention
 - ✓ Change the entry point
 - ✓ Break up the problem
 - ✓ Work backwards from the desired results

Help in diagnosis

In defining problems following techniques can be helpful:

- Examine the nature of the problem. Is it goal-blocking or unwanted interference?
- Verbalize
- List the components / symptoms
- Sketch the history of the problem
- Do not hesitate to use analogy/comparisons

Diagnosis

- Lost possible variables
- Measure various aspects of the problem in light of its definition
- Analyze data in terms of components, relationships, classifications and position of paradoxes
- Listen to the perceptions of people connected with the problem
- Do not hesitate to use analogy/comparison with people who have similar experience

Back to definition

- It happens that while diagnosing one perceives that the problem needs redefining
- This is not wrong. Remember that there is no one correct definition.
- Some people prefer defining problems in alternative ways

Generation of alternatives

- Generation of ideas can be left to chance. One should wait till the idea dawns.
- This is a passive approach
- Instead of waiting one can
 - ✓ Seek exposure
 - ✓ Seek outside help
 - ✓ Borrow from others
 - ✓ Develop one's generative skills
 - ✓ This is as active and is advised
- All in all, developing skills is productive

Choice process

- Choice process is concerned with selecting from among alternatives.
- Firstly, it involves assessment of alternatives from the viewpoint of their workability
- Further, assessment of workable alternatives has to be done in terms of
 - ✓ Cost
 - ✓ Convenience
 - ✓ Time
 - ✓ Uncertainty
 - ✓ Related to benefits
- Choice in addition to rationality can involve intuition and judgment

Detailing

- Finding a solution to the problem is not the end, it has to be implemented
- Implementation would resolve the problem and test its validity and adequacy of the selected solution

- Implementation need spelling out of solution in terms of
 - ✓ List (Action needed)
 - ✓ Sequencing (What come before and after)
 - ✓ Scheduling (What will done when)
 - ✓ Assigning (Who will do what)
 - ✓ Logistics (What support)
- These should result into a blue-print of an action plan