

PROBLEM-SOLVING SKILLS ACQUISITION FOR HUMAN CAPACITY BUILDING FOR TECHNOLOGICAL ADVANCEMENT

Abstract

Human capacity building is a subset of personnel management. Personnel management is the supplying and developing of relevant employee skills in accordance with business aims of line while capacity building includes manpower and human power development. Human beings are faced with diverse problem cases and problem situations that need definite and unequivocal stance as a challenge. Diverse categories of problems are mentioned. The steps to problem-solving are highlighted. Fundamentals to problem definition and diagnoses are explained. Yardsticks for information evaluation are stated and the problem-solving skills are expatiated. Certain recommendations like partnership of institution with industries to create training and re-training opportunities for human capacity building for technology advancement are given.

Keywords: Capacity building, personnel management, problems, Problem-solving skills, technology advancement.

Introduction

All human endeavours, either profit making or non-profit making is made up of man, machines, money and material resources. The crown of all creation is man and man is responsible for the co-ordination of all other resources. It is people that determine the wealth and development of a nation.

Human capacity building is a subset of Human Resource Management or Personnel Management. Personnel Management is the part of management which is concerned with people at work and their relationships within an enterprise. Personnel Management aims to achieve both efficiency and justice. It seeks to bring together and develop into an effective organisation, the men and women who make up an enterprise, enabling each to make his best contribution to its success. It seeks to provide fair terms and conditions of employments, satisfying work for those employed. (Institute of Personnel and Development, 2000).

Notable aspect of this definition are its reference to justice as well as efficiency, implying a caring role for the management in its relationship with its employees, fair terms of employment, satisfying work, implying management's responsibility for enabling employees to experience job satisfaction.

Cole (2002) defined personnel management as the supplying and developing relevant employee skills in accordance with the business aims of line units, and providing a framework for pay and conditions that achieved competitive advantage. Oyedeji (1998) also viewed personnel management as a process of developing, applying, stimulating, maintaining, creating and evaluating policies, procedures, methods and programmes, relating to individuals in the organisation with a view to achieve organisational objectives. It is the effective use of human resources in an organisation through the management of people and related activities.

Merriam–Webster’s Dictionary (2006) refers to capacity as “legal qualification or fitness” while Oxford Dictionary (2006) also defines capacity as the maximum amount in terms of skills, attitude, natural ability, aptitude and appropriateness” Eburujolo (2005) perceived capacity building as a basic way of thinking and its consequences which must be adhered to wherever creation and extension of institutional and human capacities on a sustainable bases is envisaged.

Summarily, human capacity building includes manpower and human resource development as an important component of building quality manpower for technology. It is the development of competency qualities in the human assets of an organisation in order to achieve the maximum organisational goals.

Problem

Human beings are faced with diverse problem cases and problem situations that call for definite and unequivocal stance. These problems could be questions raised for consideration, an intricate unsettled matter or issues that could be a source of perplexity or vexation at work. Problems could arise within the organisation at individuals or group level, institutional system level (legal, political, economic and administrative framework).

The nation in striving for excellence in governance and resource management, priority must be given to its most valuable resource, the people especially in managing problems. In science, technology and education, as well as other areas of human endeavours, employees and employers are faced with intricate and complex problems that

surpass capabilities and capacities to address them. Hence, the need for human capacity building for quality manpower to successfully address these problems is an ever-present challenge. Moreover, capacity building is not defined through the instruments used but through its goals to enhance the capacity of people and institutions, sustain and improve their competencies and problem-solving capacity through the acquisition of the relevant skills.

Different Categories of Problems

The types of problems managers and other employees deal with range from the relatively common and well-defined ones to the unusual and ambiguous ones. Below are categories of problems as classified by Ayodeji (1998).

(i) **Policy problems** which are concerned with organisations major goals with long term effects on units and individuals. (ii) **Operating problems** related with the way activities and events are being carried out on daily basis. (iii) **Managerial problems** that focus on issues related to organizing and decision making, planning, controlling, staffing and motivation, directing and coordinating of the internal affairs of the organisation. (iv). **Automatic/memory problems** based on biological mechanisms especially where mechanical tools are used. (v) **Cognitive problems** that are based on acquired knowledge and experience.

On the other hand, Garrison & Noreen (2003) postulated other types of problems such as (i) **Strategic problems** that are concerned with plans and objectives of the organisation so as to attain an advantageous position over the opponents. (ii) **Tactical problems** which are routineous and usually contain alternatives. They are related to the economic use of resources. (iii) **Organisational problems** affect the role of an official in an organisation and usually reflect its policies. (iv) **Personal problems** that affect individuals but not as a member of the organisation. (v) **Basic problems** are unique, involving long-range commitment of relative permanence such as diversion of investment or production. (vi) **Routine problems** such as late-coming to work by staff. (vii) **Programmed problems** that are already reflected in organisational code of conducts. (viii) **Un-programmed problems** that are unusual or exceptional problem. No matter

the tag of a problem, right decision must be taken to solve the issue. A wrong handling could lead to a great consequence on the organisation.

Steps to Problem–Solving

The seven steps to problem solving as recommended by Ilesanmi (1997) includes:

- i). Define and diagnose the problem.
- ii). Set goals.
- iii). Search for alternative solution.
- iv). Compare and evaluate alternative solution.
- v). Choose among alternative solutions.
- vi). Implement the solution selected.
- vii). Follow-up and control.

Fundamentals of Problem Definition and Diagnoses

Fundamental to problem definition and diagnoses is the asking of numerous ‘questions’. The usage goes beyond the dictionary meaning of “an act or instance of asking”. The following meanings are expressed by creativity experts:

- A question is an institution to creativity.
- A question is an unsettled and unsettling issue.
- A question is a beginning of adventure.
- A question is a disguised answer.
- A question is pokes and prods that which has not yet been poked and prodded.
- A question is a point of departure.
- A question has no end and no beginning.

Asking a variety of who, when, how, and why questions, individuals and team will improve the odds of effective problem definition and diagnoses. When a problem is well defined it is a great achievement. Welrich and Koontz (2005) posited three steps in problem definition and diagnoses.

- (i) **Noticing**, that is, the act of discovering a problem which should initiate action promptly rather than ignoring it. This would then lead to questions and questioning. (ii)

Interpreting, referring to the assessment and filtration process in order to determine the real causative agents. (iii) **Incorporation level** which is the fusing of the interpretation given into real life situation.

If these steps are haphazardly carried out, the individual or team is likely to get a poor solution.

Yardsticks for Information Evaluation

Information is acquired knowledge. Salient informations are needed for efficient and effective problem solving and decision making. Maximum information is not needed but pertinent ones. Too much information results to overloading. Information should be a value-added resource hence the following parameters for evaluation as recommended by Hilton (2001).

(i). **Quality** in its accuracy in portraying reality. The degree of quality required is a function of the needs of the users. The more accurate, the higher its quality. (ii) **Relevance** in terms of its usefulness to the search. It is the extent to which it directly assists decision-making exercise. (iii) **Quantity** of information is the amount available when people need it. Extra information is irrelevant and costs time and money while overloading can cause stress and ineffectiveness. (iv) **Timeliness** is the promptitude in the receipt before it ceases being useful for problem solving. Information must successfully pass through these milestones to be accepted for problem-solving.

Needed Skills in Problem-Solving

In order to be effective, various skills such as technical, human, conceptual, design, analytical and problem solving skills are needed as aids to certain personal characteristics. In acquiring problem-solving skills there must be readiness to receive information, decode the symbols unto thoughts and comprehend the exact meaning. The following skills were recommended by Hellriegel, Jackson and Slocum (2005)

- i. **Listening skill** that rates face-to-face discussion as highest. Listening involves paying full attention without prejudice. Understanding the semantics. Not talking but being mindful of the verbal and non-verbal cues. Listening to news through audio and

- audio-visual medium, meetings, conferences and seminars of utmost importance. It should be done appreciatively, comprehensively, evaluatively and not impulsively.
- ii. **Reading skill** includes reading of letters/memos, formal written documents (print outs, reports), and textbooks are reliable sources. Skimming and scanning are technical skills that should be developed to enhance covering of many pages within a limited time.
 - iii. **Plucking the Grape Vine skill** is an informal communication based on social interaction but not the organisation chart. This should be carefully distinguished from gossip and tale bearing.
 - iv. **Use of Management Techniques** such as Management By Walking Around (MBWA) where he picks information casually. So also is Management By Exception (MBE) where attention is given to exceptionally good and bad cases. Delphi–Technique and Brainstorming can also be of help.
 - v. **Use of Committee** which may be permanent or standing, temporary or ad hoc to look into issues and recommend. A committee is usually an odd number with a term of reference to work with.
 - vi. **Data Analysis skill** for research, interviews, observations, questionnaires, anecdotal records, tests and so on to arrive at empirical solutions.
 - vii. **Skill in the Use of Computer** in this age of Information Communication Technology (ICT). Proficiency in the use of internet which is a network of networks often called information super-highway. Internet access provides (1) electronic mail (e-mail) to send, forward, receive and reply messages from all over the world. (ii) Telnet to log into remote computers and interact (iii) File Transfer Protocols (FTP) to move files and data such as magazine, books, documents, software and such likes from one computer to another (iv) World Wide Website (www) is a set of standards and protocol used to access data and information.

Recommendations

The following are recommended for effective human capacity building viz-a-viz problem-solving skills acquisition

- ❖ Partnership of institutions with industries should create training and re-training opportunities for human capacity building in technology.
- ❖ The (Student Industrial Work Experience Scheme) SIWES programme and practical teaching for students of technology should not only be physical and mental work but should include some administrative involvement.
- ❖ Students should be involved in problem solving situation while on campus on issues that can cause unrest in a practical form as problem arises at every face of life.
- ❖ The art and skills of problem-solving should be included in a latent form in the curriculum of every course since problems appear in every facet of life.
- ❖ Conferences and seminars of this like should be organized for the governing politicians at all levels for exposure and skill acquisition

Conclusion

Human capacity building is an excerpt of personnel management. Personnel management was defined in several ways but depicting it as the effective use of human resources in an organisation through the management of people and related activities. The need to acquire the skills to solve the intricate and complex problem that surpass capabilities and capacities to address them were mentioned. Diverse kinds of problems were stated and the steps to solving the problems. The parameters to evaluate the gathered information were spelt out and the problem-solving skills were expatiated. Certain recommendations were postulated like the need to be in partnership with industries for training and re-training opportunity for human capacity building for technology advancement.

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