Total Quality Assurance (TQA)

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ABSTRACT

TQA is a management philosophy that seeks to integrate all organizational functions (marketing, finance, design, engineering, and production, customer service, etc.) to focus on meeting customer needs and organizational objectives. TQA views organization as a collection of processes. It maintains that organizations must strive to continuously improve these processes by incorporating the knowledge and experiences of workers. The simple objective of TQA is "Do the right things, right the first time, every time". TQA is infinitely variable and adaptable. Although originally applied to manufacturing operations, and for a number of years only used in that area, TQA is now becoming recognized as a generic management tool, just as applicable in service and public sector organizations. There are a number of evolutionary strands, with different sectors creating their own versions from the common ancestor.

INTRODUCTION:

Human resource may be thought of as the total knowledge, skills, creative abilities, talents and aptitude of an organization’s work force, as well as values, attitudes and benefits of an individual involved.

Of all the ‘M’s in Management (i.e., the Management of materials, Machines, Methods, Money, Motive power), the most important is ‘M’ for men or human resources. It is the most valuable asset of an Organization, and not the money or physical equipment.

Human resources are utilized to the maximum possible extent in order to achieve individual and organizational goals. Total Quality Assurance management strategy that focuses on continuous improvement. This is a general process framework that grew out of the work of Deming in Japan after Second World War. The framework is focused on specifying the processes necessary to ensure incremental process improvement. Unlike most process frameworks, this one also provides a large number of intellectual tools to be used during process improvement and it also define some processes in considerable detail.

It is a management philosophy committed to a focus on continuous improvements of product and services with the involvement of the entire workforce. Much is said about Total Quality Assurance or TQA, but it seems little is ever explained in detail. TQA, in a nutshell, means that everyone within an organization is responsible for quality. To make the goal of quality easier to achieve, responsibilities are broken up into small pieces.

It doesn’t take a rocket scientist to understand that the lower the failure rate, the better the quality. All too often, however, the production and quality control departments are at odds. Traditionally, production personnel feel that quality control does nothing to contribute toward profit. Indeed, they sometimes believe the procedures overseen by Quality Circle (QC) actually lower profit. The QC managers, on the other hand, believe that production isn’t conscientious of the manufacturing process.

Quality Assurance has been defined in a variety of ways; meaning of quest of excellence. Creating the right attitudes and controls to make prevention of defects possible and optimize customer satisfaction by increasing efficiency and effectiveness.

Pfaun (1989) states that quality management is an approach for continuously improving the quality of goods and services delivered through the participation at all levels and functions of the organization.

Quality has been defined in various ways: According to ANSI and ASQC (1978) QUALITY is defined as ‘the totality of features and characteristics of products and services that bears on its ability to satisfy given needs’ customer satisfaction, employee satisfaction, and produced quality in all its stages.

JAPANESE to ENGLISH translation:
SEIRI: Putting things in order i.e.; remove what is not needed and keep what is needed
SEITON: Proper arrangement i.e.; place things in such a way that they can be easily reached whenever they are needed.
SESIO: Clean i.e.; keep things clean and polished no trash or trash or dirt in place.
SEIKETSU: Purity i.e.; maintains cleanliness after cleaning or perpetual clean
SHITSUKE: Commitment actually this is not a 4s but a typical teaching and attitude towards any undertaking to inspire pride and adherence to standards established for the four components.
TOTAL QUALITY ASSURANCE (TQA): (Originated by Deming in 1950’s)

An organizational undertaking to improve the quality of manufacturing and service. It focuses on obtaining continuous feedback for making improvements and refining existing processes over the long term.

Approach to quality that emphasizes continuous improvement, a philosophy of "doing it right the first time" and striving for zero defects and elimination of all waste. It is a concept of using quality methods and techniques to strategic advantage within firms.

TQA is the foundation for activities, which include:
Commitment by senior management and all employees, Meeting customer requirements, Reducing development cycle times, Just In Time/Demand Flow, Manufacturing Improvement teams, Reducing product and service costs, Systems to facilitate improvement, Line Management ownership, Employee involvement and empowerment, Recognition and celebration, challenging quantified goals and benchmarking, Focus on processes/ improvement plans and Specific incorporation in strategic planning.

Techniques of TQA Implementation
- Reengineering
- Empowerment
- Benchmarking
- Downsizing
- Learning organization

Latest trends in TQA
- Quality circles
- Kaizen
- 5S
- ISO
- Six Sigma
- Suggestion schemes

Japan was coordinated by the Japanese Union of Scientists and Engineers (JUSE).

2. Kaizen: - Focuses on Continuous Process Improvement, to make processes visible, repeatable and measurable. A philosophy that sees improvement in productivity as a gradual and methodical process. Kaizen is a Japanese term meaning “change for the better”. The concept of Kaizen encompasses a wide range of ideas: it involves making the work environment more efficient and effective by creating a team atmosphere, improving everyday procedures, ensuring employee satisfaction and making a job more fulfilling, less tiring and safer.

Japanese term for Continuous Improvement. Kaizen budgeting incorporates expectations for continuous improvement into budgetary estimates. Kaizen costing determines target cost reductions for a period, such as a month. Thus, variances are the differences between actual and targeted cost reduction. The objective is to reduce actual costs below standard costs. The cost-reduction activities associated with the Kaizen approach minimize costs throughout the entire product life cycle. Therefore, it has the advantage of being closely related to the entity’s profit-planning procedures.

3. 5S - 5S is a reference to five Japanese words that describe standardized cleanup:

Seri: tidiness, organization. (Refers to the practice of sorting through all the tools, materials, etc., in the work area and keeping only essential items. Everything else is stored or discarded. This leads to fewer hazards and less clutter to interfere with productive work.)

Seiton: orderliness. (Focuses on the need for an orderly workplace. Tools, equipment, and materials must be systematically arranged for the easiest and most efficient access. There must be a place for everything, and everything must be in its place.)

Seiko: cleanliness. (Indicates the need to keep the workplace clean as well as neat. Cleaning in Japanese companies is a daily activity. At the end of each shift, the work area is cleaned up and everything is restored to its place).

Seekers: standards. (Allows for control and consistency. Basic housekeeping standards apply everywhere in the facility. Everyone knows exactly what his or her responsibilities are. Housekeeping duties are part of regular work routines.)

Shinseki: sustaining discipline. (Refers to maintaining standards and keeping the facility in safe and efficient order day after day, year after year).
Often in the west, alternative terms are used to disguise the Japanese origins of the methodology. These are “Sort, Straighten, Shine, Systemize and sustain” and “Safety” as a 6th optional S. These were arguably derived to prevent 5S from being perceived as yet another.

Japanese improvement process in an era when western industry was already being overwhelmed by strategies to combat foreign business.

Alternative Americanization’s have also been introduced, such as C A N D O (Cleanup, Arranging, Neatness, Discipline, and Ongoing improvement). Even though he refers to the ensemble practice as “S5” in his canonical work, 5 Pillars of the Visual Workplace, Hirano prefers the terms Organization, Orderliness, Cleanliness, Standardized Cleanup, and Discipline because they are better translations than the alliterative approximations.

Additional practices are frequently added to 5S, under such headings as 5S Plus, 6S, 5S+2S, 7S, etc. The most common additional S is for Safety mentioned above, and James Leveler writes that Ailment adds Security as the seventh S. Purists insist that the other concepts be left out to maintain simplicity and because Safety, for example, is a side-benefit to disciplined housekeeping.

4. ISO Organization acting as a central clearinghouse for industry standards drafted by National Standard Setting Organizations. The American National Standards Institute is the U.S. Representative of ISO.

5. Six Sigma: at many organizations simply means a measure of quality that strives for near perfection. Six Sigma is a disciplined, data driven approach - and methodology for eliminating defects (driving towards six standard deviations between the mean and the nearest specification limit) in any process - from manufacturing to transactional and from product to service.

The statistical representation of Six Sigma describes quantitatively how a process is performing. To achieve Six Sigma, a process must not produce more than 3.4 defects per million opportunities. A Six Sigma defect is defined as anything outside of customer specifications. A Six Sigma opportunity is then the total quantity of chances for a defect. Process sigma can easily be calculated using a Six Sigma calculator.

The fundamental objective of the Six Sigma methodology is the implementation of a measurement-based strategy that focuses on process improvement and variation reduction through the application of Six Sigma improvement projects.

Quality assurance, or QA for short, refers to planned and systematic production processes that provide confidence in a product’s suitability for its intended purpose. It is a set of activities intended to ensure that products (goods and/or services) satisfy customer requirements in a systematic, reliable fashion. QA cannot absolutely guarantee the production of quality products, unfortunately, but makes this more likely.

Two key principles characterize QA: "Fit for purpose" (the product should be suitable for the intended purpose) and "Right first time" (mistakes should be eliminated). QA includes regulation of the quality of raw materials, assemblies, products and components; services related to production; and management, production and inspection processes.

It is important to realize also that quality is determined by the intended users, clients or customers, not by society in general: it is not the same as ‘expensive’ or ‘high quality’. Even goods with low prices can be considered quality items if they meet a market need.

TOTAL QUALITY ASSURANCE IN INDIAN ORGANIZATIONS

➢ To implement quality control for an organization, you need to identify the steps of the quality assurance process. Some of the major steps of this process are discussed below.

➢ First and foremost, the project manager of the company has to create a team dedicated for quality control. This team will be responsible to evaluate and report on the evaluation regarding every part of the business. The team will be working neutrally and independently having authority and freedom of work, at each point of their operation. This team will be reporting to the senior management of the organization and keeping all results in safe file storage.

➢ Once the team is formed, the main responsibility of the team will be to define the tasks and assign them to respective persons. Some of these responsibilities are to review the products, tools, services as per the requirements, standards and guidelines, audit project processes, suggest various methods, standards or tools to be used in the project, report the outcome of the evaluation etc.

➢ The quality control team then defines the plans for the quality assurance process. Depending upon the nature of business the details of the plan might change, however the basis of the plan remains common for most of the businesses. Mostly the list includes quality objectives, defining the tests and verification activities, process evaluation, defining the individual responsibility of the team member,
identifying training requirements, budgeting and funding for quality control jobs, scheduling all activities, documenting and tracking etc.

- **The next step of this process** is to generate the testing procedures, checklists and related activities to explain the way quality control will be performed.
- The quality control team now has to perform according to the plan to ensure the next step of quality assurance process. By acquiring the resources to perform the procedures, the team starts evaluating the project. Tools required for this evaluation are identified depending on the nature of the project. Any non conformance with the standards or requirement are notified and reported to the appropriate department. The problems are then corrected and again sent for testing to the quality control team. This way, testing and correcting goes on, till the project is proven to be in conformance with the standard.
- The next step of quality assurance process is to identify the training requirement for the team members to perform the evaluation processes as specified in the quality control plan.

- The performance of the quality control team should be monitored regularly by the project manager against the quality control plan, schedule and budget. In case the progress of the quality control team does not satisfy, then corrective actions should be taken.
- The quality control activities and results are reviewed by the senior management of the organization and their stakeholders on regular intervals. Any non compliance or unsolved issue for the quality control procedure is taken care of by the senior management at this point of time.
- The team collects review information from various sources. Suggestions for improvement at any step of quality assurance process is accepted and implemented in the next session, if it satisfies the various limitations. Recommendations are accepted from any level of business for future use.
- The team refines the total process to give it a defined structure with quality control process descriptions, templates and checklists. This structure can be reused as a model for future or might become an example to other organizations.

### KAIZEN SHEET

<table>
<thead>
<tr>
<th>Kaizen Theme</th>
<th>Area &amp; MIC name</th>
<th>Kaizen initiator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem</td>
<td>Results before &amp; after implementation of counter measure.</td>
<td></td>
</tr>
<tr>
<td>Root cause</td>
<td>Before</td>
<td>After</td>
</tr>
<tr>
<td>Idea</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Counter measure</td>
<td>Scope for Horizontal Deployment</td>
<td>Kaizen no:</td>
</tr>
</tbody>
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SUGGESTION SCHEMES

Anybody working in the organization can give suggestions, but only those suggestions are considered and care is taken to rectify if there is any problem persisting in the specified area.

Suggestions may be regarding the work environment, any obstacles that affect the work or anything which employee feels wrong.

To motivate the employees, price money of Rs.10 is given.

To suggest or Evaluation of the suggestions will be done by an independent committee.

Evaluation methodology:
Suggestion box is provided in communication center
The suggestion forms are taken out on daily basis by HRD and an acknowledgement will be issued to the concerned employee on daily basis.

If suggestion is found feasible and beneficial, it will be recommended for implementation with or without the involvement of suggest or. The affected/concerned department shall implement the suggestion.

CONCLUSION:

Most of the employees in Indian organizations are satisfied working environment as they are provided with separate cabins. Certain percentage of employees feels that atmosphere does not affect as long as company has good and positive atmosphere and are maintaining internal source which help them to maintain the quality the areas they have to excel. They develop themselves personally through the programs conducted by the organization.

It clearly shows that quality enhancement program taken up in the organizations definitely have lifted the work life of the employees. Employees agree that the appreciation of the superiors have given them recognition and also motivated foe the better performance at work. Most of the employees are satisfied by the training program by the company which helps them to give better performance and are satisfied with job rotation opportunities which are helpful for career development.

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