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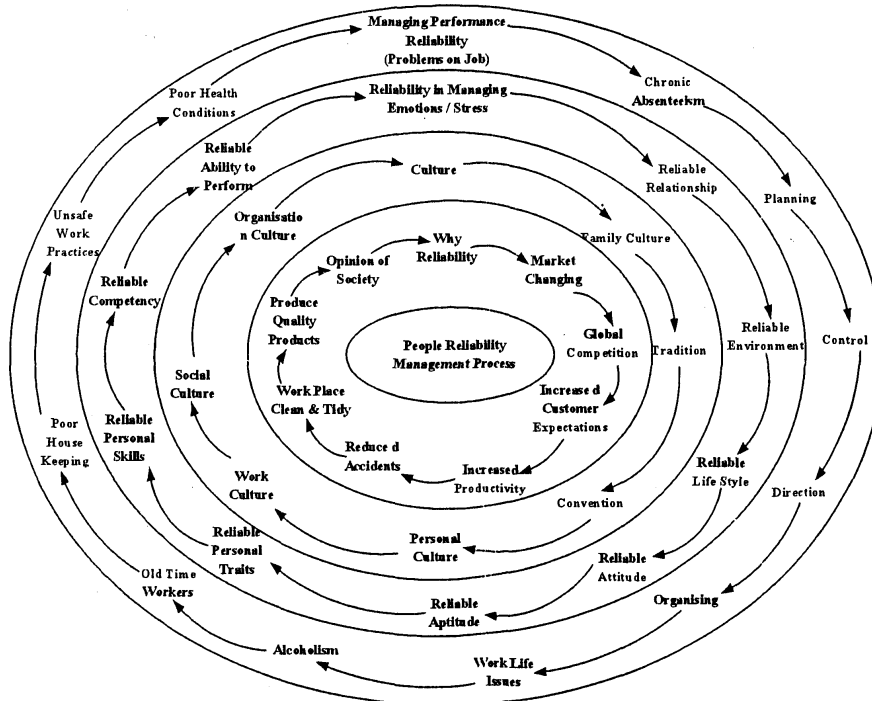
- ✓ Theme : "Quality people - Key to excellence"
- ✓ Sub : 6<sup>th</sup> ANQ Congress in Bangkok Oct 28\* to 31 Abstract accepted - Final Paper for Presentation
- ✓ Abstract Paper accepted : Human Reliability management for operational Excellence" (HRM for OE)

To  
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**Introduction - Main Objective**

Human capital being vital potential and a resource for any organisation, be it, manufacturing, service, or social organisation apart from being "Qualitative" is to be "Reliable" for continuous results. The nature of any organisation being heterogeneous in character, due to its employees drawn from different religion, faith, race, caste, region, country, language, gender, culture etc. reliability of people definitely takes an edge over Quality of products / Services for longer sustenance. Quality of products relate to fitness for use, while "reliability" of performance, hangers around the "fitness of people" constituting Market - Demand - Supply - Performance ratio of people in the industry. Reliability concerns about belief, trust, faith and confidence of both products and people involved, and opinion of others (society at large) about the utility value. Reliability also concerns about predictability of consistent performance / utility of products and services apart from the people involved. Human behaviour concerning, attitude, skills, learning, adaptability, acceptance of real situation, and coping with changes is generally unreliable. Though the employees of an industry may be Quality people, how far, are they reliable in performance and consistency in their vision / mission of their personal ideologies with that of the vision/mission/of the industry, will be the vital issue.

Keeping in mind quality and reliability are inseparable and have to be complimentary to each other, the author of this paper has attempted to invent and innovate a paradigm shift from Reliability Engineering of Products towards Quality, To Reliability Engineering of People performing and involved in the task of building organisation. Through Education and Training results/benefits that may accrue relate to improved attitude and aptitude of the employee, employees may be qualitatively good, but may become more reliable, employees performance standards will be more reliable, the ability / potentials may become more visible, emotion levels are very high and mostly unreliable, while involved in problem solving process, there may be the change in them, employees competency (Emotional Competency) will improve, employees would volunteer to become part of the team, employees relationship with colleagues may augur well for harmony in the industry, employees will improve their skills to perform the given task. Personal skills / technical skills. Keeping the above issues manifesting into vulnerability for non performance, if proper corrective measures are not taken, the author has invented a wheel viz "Human Reliability Management Process Wheel" - (otherwise would like to call it as Dr.N.R.Swamy Wheel). Detailed analysis of the issues relating to people reliability management will be projected in the full paper with the relative Training instruments and scoring.



**"Human Reliability Management Process Wheel"**  
 (Dr.N.R.Swamy Wheel)

# FINAL PAPER:- "HUMAN RELIABILITY MANAGEMENT FOR QUALITY EXCELLENCE"

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**A-IN-14 Dr.N.RANGASWAMY - " HUMAN RELIABILITY MANAGEMENT FOR OPERATIONAL EXCELLENCE" (HRM FOR OE)**

## **Introduction**

### **(i) What is reliability**

(a) Human reliability concern the people and about the predictability , belief, trust, faith and confidence and the consistent utility value. This relate to whatever area one is engaged, whether it is family life, work life, and social life. In this paper the author would like to mainly focus the people issues.

(b) Human behaviour concerning attitude, skills, learning, unlearning, adaptability, coping with changes is (invariably) "**unreliable**". The author of this paper has brought out the focus in the abstract Paper as to why '**Human Reliability Management**' forms the core area of **People management towards Excellence to Quality**. Relating to the theme "**Quality People**" the main ingredient applies to **Personal Quality and Reliability**.

(c) Reliability centres around one very are important aspect the term **efficacy**. This is what is called potential effectiveness. This relates to mainly knowing 'self'.

(d) Self efficacy "**refers to beliefs in one's capacities to mobilise motivation, the cognitive resources and courses of action to meet given situational demands**".

(e) Self efficacy has three important aspects inbuilt (a) judgement of one's **perceived** capability to perform a specific task. (b) This judgement is **not static** and can **change** with the **new situation** and information. (c) It involves mobilisation of component i.e. **differential performance**. This is where the employee's credibility reliability / increases by performing more effectively under different situations and hence the impact.

(f) Human reliability which has a direct impact on emotions can be intriguing and the main factors / areas that will touch up on reliability perspective may be:-

- Self awareness, self control, social skills, and awareness of others.
- Business relationship with customers or clients, staff, managers, share holders, suppliers the local community and competitors.
- The trust radius that people have between each other at work.
- The effectiveness of teams working together under pressure.
- The amount of initiative and the number of good ideas employees share with their company.
- Increasing positive affirmation which can create physical and mental well being.
- Giving and receiving negative feedback.

### **(ii) Why reliability :-**

(a) **Market changing** : The market with the supply / demand ratio not only relating to products / Services, does not remain static / constant but also to **human capital** in view of the enlarged scope of **heterogeneous character of people**. This is because of the fact that people / employees are drawn from different religion, faith, caste, region, country, language, gender and not the last but culture. Selection of right people for the right job with multi various skills has become the main job of the company / organisations.

(b) **global competition** :- Competition among industries to survive in the market has thrown open the flood gates of human resource, knocking the doors of employment, some with required skills, many without the competent skills. Retaining employees with abundant and reliable skills with the industry has become an issue currently bothering the owners of Business.

(c) **Reduced accidents** :- Quality of Products / Services by any organization can be sustained only if there are **no accidents**. People's faith, belief predominantly nurtures around safety of the employees. Reliability of the organization and employees working, has an impact on the ratio of the accidents. Reduced accidents and ensuring safety of the employees may augur well for **reliability**. Accident prone areas zones Machines etc have to be identified and the organizations have to impart necessary safety training for handling equipments / Machineries. The employees should cultivate as part of culture to adhere to safety practices while working. This will enhance their **reliability**.

(d) **Work place clean & tidy** :-To achieve reduction of accidents, it is mandatory for the organisation and the employees to ensure that the work place is clean & tidy. For this purpose, the employees are to be trained in concepts like 5 s, kaizens, Tpm etc which will certainly enhance their reliability.

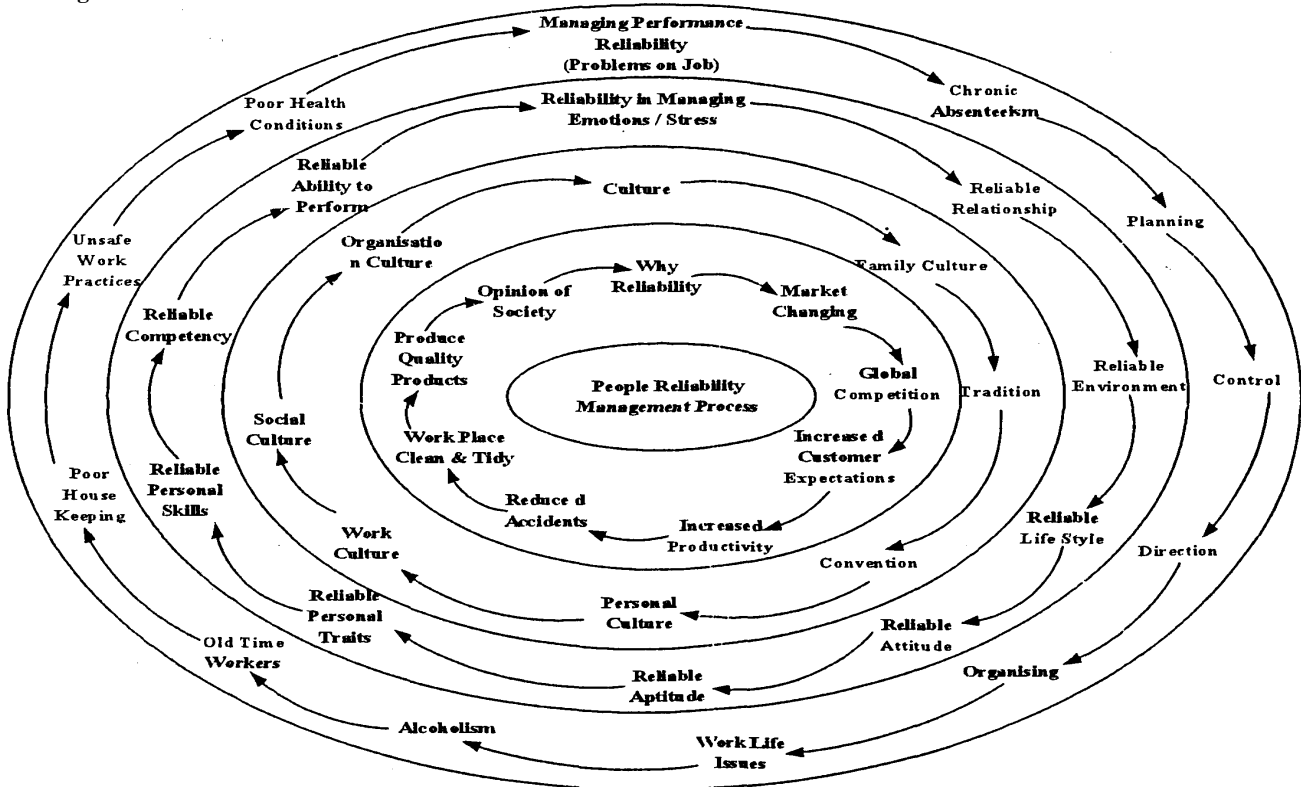
(e) **Produce Quality Products** :- Unless the organizations / Industries resort to consistency towards quality products / Services, the reliability issue is not addressed. For this purpose the people / employees who are involved, in the job should have adequate exposure towards quality.

(f) **Opinion of society**:- Since reliability focuses both on quality of products and its good / consistent performance, which is the **value adding entity to society at large**, and customers in particular, the opinion of the society about the organization and its people or employees makes good ground for the standards and reliability.

**Main text:- This is the first, preliminary and comprehensive attempt and research made by the author towards "Human Reliability management for QE.**

## II. RANGA WHEEL

(a) The author of this paper, keeping in mind the quality and reliability are complementary to each other, has attempted to rationalize an "innovative wheel" depicting a paradigm shift from "Reliability Engineering of Products towards Quantity" to "Reliability Engineering of People" performing and involved in the task of building organization. This wheel which is appended below would like to be called as Ranga wheel"



"Human Reliability Management Process Wheel"  
(Ranga Wheel)

(b) Apart from this "Ranga HRM Wheel" the author of this paper has also developed and designed innovatively **three** more prescriptions.

(i) **EEPR- Employee Empowerment for reliability circle** (ii) **5H vis a vis 5 S for TQL Ranga TQL wheel**, (iii) **Ranga - RODA loop - Review - Opt, Decide - Act - for (Problem solving) process.**

(c) Some of the vital vagaries of variances that may reflect or affect reliability of people relate to :-

- (i) The attitude and aptitude of the employees being questionable a becoming questionable and
- (ii) Employees may be qualitatively good, but may not be reliable whose presence or absence to the industry is crucial.
- (iii) Employees performance standards are not up to the mark.
- (iv) The ability / Potentials are not known or are not on predictable lines.
- (v) Emotion levels of employees are very high and mostly unreliable, while involved in problem solving process
- (vi) Employees who do not want to be or are not part of the team.
- (vii) Employees relationship with peers, colleagues, subordinates do not augur well for harmony in the industry.
- (viii) Employees do not have the skills to perform the given task- personal skills/ technical skills.

## III . PEOPLE RELIABILITY MANAGEMENT,

(a) Few broad areas of Employee related management - "ERM", from amongst many, are appended. They relate to both organizational support and initiatives by the employees themselves. Main initiatives are :

- (i) Managing the mind for work life
- (ii) Managing culture
- (iii) Managing Emotions for promoting reliability
- (iv) Employee empowerment for reliability
- (v) TEI - Total Employee involvement
- (vi) 5H formulae for reliability / Total quality life.
- (vii) Combating Employee problems on the job.
- (viii) Total knowledge process management.

## IV. MANAGING THE MIND FOR WORK LIFE

(a) **Right attitude to work:-** Evidently mind management focuses on **Quality of mind**. So to combat the evils of negativism and appropriate one's skills and abilities, it is one's mind that plays a vital role. Therefore it may be otherwise called **work is worship**. Sincerity is the hall mark of all success.

(i) *Perseverance* :- The most essential quality is "**perseverance**" - **endurance**. Perseverance leads to progress / prosperity while endurance ensures safe approach to enhance quality of mind.

(ii) *Importance of work* :- The whole life is an experience, more so **work life**. When one realizes the importance of work and begins to work, material occupation combined with experience in work, an individual becomes aware of not only the progress made, but also of the progress remaining to be made.

(iii) *Abolition of ego sense* :- What would one say, if a temple built according to designs of some great artists, were to boast, "**admire my merits, am I not beautiful, well built, solid, and durable? Truly I am worthy of all praise**". Individual should not feel egoistic for what he or she has done and it is the "**attitude**" that makes the difference. There are other forces knowingly or unknowingly supplemental to one's performance, progress and purpose.

(iv) *Attitude and aspiration towards perfection* :- Whatever work an individual, he or she does, that has to be done "**Perfectly**" as far as possible. In work "**aspiration**" towards "**Perfection**" is spirituality. Modern management emphasizes focus on Management of externals, like people, organization, Material or environment, while eastern spiritual thinkers have perceived that right management of "**internal self**" is the key to successful management of the work, outer life and environment. Some one who cannot manage himself cannot manage others.

(v) *Meaningful Aim* :- An aimless work life is "**miserable**" Thinkers - (Sri Aurobindo) talk of "**Management by consciousness**" Aim should be understood, based on motives, impulses, forces for and against hidden or apparent.

(vi) *Acceptance of change* :- Change is inevitable in all walks of life, more so in work life. Hence the employees have to develop an attitude to meet the realities which are forced on profession.

(vii) *Quality of work*:- Work is viewed as a means of livelihood but it is otherwise a means of self development. Hence work should not **alone** be considered as a means of earning, but its purpose should be regarded as two fold - first to develop **ones nature** and '**Capacity for action**' and **Secondly** in proportion to physical means and **moral and intellectual** aptitude. Thus the emphasis is on **inner quality of mind and spirit**.

From an Overview of some of the perspectives relating to 'Quality of mind / attitude' it is imperative that organizations private or public / individuals / employee's aspiring for good will have to meticulously do a **swot** analysis for finding out the loop holes affecting progress / quality of work life.

**Points to improve reliability :**

(i) *Developing -feelings of Security* :- To identify insecurities within oneself and around. Some may be real and most of them imaginary. An individual has to workout solutions for the real ones and ignore the unreal ones.

(ii) Adequate and honest self evaluation :- Identify strengths and weaknesses vis a - vis - others. Accept weaknesses and overcome them.

(iii) Developing adequate Spontaneity and emotionality.

(iv) To be Spontaneous in all doings.

(v) Need not wait for a push or pull.

(vi) To be emotionally warm to others, when only emotional warmth will be returned.

(vii) To Develop adequate Self Knowledge, one should neither underestimate nor overestimate about self. **We are what we are, and not that what we think we are.**

(viii) *To Learn from experiences* : A burnt child dreads the fire but as he / she grows, he / she also learns the positive utilities of fires, Bad and good experiences occur to every body and hence everybody should try to learn from past experiences.

All the above initiatives, if appropriately nurtured and nourished, will undoubtedly add to the "**incremental promotions**" towards **Reliability**.

## V. MANAGING CULTURE TO IMPROVE RELIABILITY PERSPECTIVE

### (a) Changing social context

(i) Globally changes have taken place, where all country men throughout the world have interchanged their domicile for development of themselves vis-a-vis their countries. Gender bias, religion bias, language bias, country bias have all taken a back seat, when it comes to competition in their respective domain.

(ii) Many companies now consciously aim to recruit a higher proportion of people outside the old norms, but their effort apparently look to be wanting to translate into equal success for targeted groups. Poor retention, comparatively limited career progress, higher paddles of opportunities for challenges, low level of motivation, cultural incompatibility, discrimination in policy towards education and employment, gender bias, regional preferences, regional imbalance, still remain to stay **forbidding diversity on culture** to take place.

(iii) Owing to the emphasis forced on the companies to remain in the global market, an imperative need with a focus on **managing culture** becomes a new paradigm shift towards **Total Quality Excellence (TQE)**.

(iv) *Cultural development and change:*

(a) Both at home and in the international scale the ability to manage across different cultures has become an essential **business skill**. Successfully creating a **corporate culture** for diversity, however involves wholesale **change** at individual and organizational levels of management. It is centered around cultural development / management of change.

(b) What is culture?

Culture is **an intangible element** that is difficult to define and some do not accept that it exists at all, let alone how important it can be.

(c) *Culture is basically :*

★ It Culture is Shaped by out past & leaning, and

★ formed from a pattern of commonly held attitudes, values, beliefs and assumptions.

(d) *Culture manifests at three levels:*

(i) *Surface level*

Culture here is both enacted and reinforced through visible appearances and behaviors such as physical layouts, dress codes, organizational structure, company policies, procedures, programmes, attitudes and behaviors.

*Planning the future with uncertainty, which reflects change culture* : This is otherwise called as **Two by Four factors**.

(ii) *Two Attitudes :*

1. Accept the past, present and future and uncertain

2. Be positive about the uncertainty.

**(b) Four factors:**

- a) What you want culture / attitude.
- b) What you know culture / attitude.
- c) What you believe culture / attitude.
- d) What you do culture / attitude.

**(c) Further dividing these four factors :**

- a) Be focused and flexible about what you want.
- b) Be aware and wary about what you know.
- c) Be objective and optimistic about what you believe.
- d) Be practical about what you do.

**(2) Middle level :**

Second level culture is manifested through our **values**.

- (a) Human values:-** The values that affect people. In terms of corporate culture or governance, this is more pronounced and genuinely acknowledged by Japanese, focusing on '**people management**'. What are the values that matter to individuals as human beings and also in certain circumstances? How are people being treated? What is the likely impact on human values of changes? What is the existing stage of these values? There is a huge range of human values. It can be through one's own experience special circumstances.
- (b) Organisational values:-** This means, values related to the purpose of organization in business. This would be profitability and ultimately, service and sacrifice. There are also values involved in the actual running of the organization, cross control, budget control, infrastructural facilities, purposes of existing in business, vision, mission etc.
- (c) Quality values:-** The values are in the intended direction. What are the values of the product, service or function in level of what organization is trying to do. If it is tea, is it good quality? The focus is towards **quality culture**.
- (d) Customer values :-** The values the customer perceives are what is received by the customer. If such perceived values are less than the true values, then there is need for communication.
- (e) Conflict of values :-** Some times there may be conflict of values. Pursuit of other values can harm or reduce the Quality value, for example, cutting cost may hurt some times customer value.
- (f) Environmental values:-** What are the impact values in the environment on the **community on others**. Focus is on environmental culture.
- (g) Perceptual values:-** How does this appear, what would be the impact and response, how it might be seen, whom it will affect, will it be real. **Perception is real** even when it is not reality Perception can also generate lot of negative values.
- (h) Risk culture:-** Meaning compatibility vs. competence, resulting in conflict management.

**(3) Deepest level:** The third level is the deepest level.

- (a)** Here culture is manifested through **basic assumptions**. Our long learnt automatic responses and established opinions. Basic assumptions are usually rooted in our infancy, early family life and social context. Assumptions shaping our behaviour can be related to national and global context. Western society as a whole for example we take it granted, that human beings have an individualistic nature, but in other societies like Japanese society it is different. Individualistic nature / culture is less pronounced vis-a-vis collective wisdom. Organisational culture, work / Employee culture have to go hand in hand.

## VI. MANAGING EMOTIONS FOR PROMOTING RELIABILITY

**(a)** India does not lag behind other countries to retain its global perspective, despite the fact that competence is becoming increasingly diabolic. However, the run-out to meet the challenges thrown open by the market demands, has made many Organisations taking to re-courses through many initiatives to increase the level of Competencies of its employees. One such initiative for Organisations to grow is through "**Quality Circles**" which will result in enhancement of "**reliability**".

**(b)** The issues Concerning **Competency** cover, work re-organisation, involving front-line workers in decision making, upgrading workers skills, improve efficiency etc., Quality circle, being a Constituent of team Collaboration focused on "Problem Management" within the work area of the employees, need an extraordinary power of intuition. Intuition relate to both intra personal & inter personal, areas culminating towards, **managing emotions**. This also relates to anger management. Anger and emotions are complimentary to each other, and as such these two constituents of human management play a very important role "relating to solving problems through "**Quality Circles**". Thus, to sustain reliability through QC, inter personal & intra personal relations have to be managed effectively. This poses a question relating to "**emotional management**."

**(c)** Quite simply, Emotional Intelligence is the intelligent use of emotion. One has to intentionally make emotions, work for by using them to help, guide, behave & think in ways that will enhance results. For eg., let us say that an individual has an important presentation to make. Self awareness, being an instrument of SWOT, (a Component of emotional intelligence) that individual will be feeling extremely anxious. His emotional intelligence then leads him to undertake a number of action that might take charge of any destructive thoughts, use relaxation to diminish his arousal, and cease any counterproductive behaviours such as pacing time, heading about techniques, other environmental issues required for making a good presentation with confidence.

**(d)** Again an individual has to navigate through large areas which go to balance emotions. Emotions as it is, play an important role in the **work place**. "**From anger to elation, frustration to contentment, ego to equilibrium, etc.,**" emotional intelligence helps to guide these factors while facing problems. Emotional imbalances whether at home, work place, or society can cause irreparable damage.

**(e)** A few tips strictly not exhaustive are given here to elucidate how emotions can be managed. **Emotional intelligence is nothing but the ability to understand feelings of one, with those of others**, a very important building block relate to self-awareness. This becomes the main focus while a person deals with others in a problem situation. Three elements helps one to develop high self awareness.

**(f) The elements are**

- a) Examine how you make appraisals about you and about others.
- b) Tune into your Senses.
- c) Get in touch with your feelings & those of others.
- d) Learn what your intentions are.
- e) Pay attention to your actions
- (g)** Managing emotions while dealing with problems in the work, with the team members, may result in a set of "**Hate-Agree situations**" coming out, which may either be **forced** on or to go for a **Compromise**. However, before sitting onto resolving problem issue, it is suggested

that one makes a list of emotions that he or she, is likely to experience in the work place. Some of **them are anxiety, anger, joy, contentment, resentment, depression, Oppression, enthusiasm, fear, Confidence, Sadness, frustration, etc.,**. These are the main issues concerning self-awareness which will affect one's behaviour towards good or bad and ultimately **reliable attitude**.

(h) The second issue concerns 'reframing of/ or **change perception style**'. One of the difficulties in a problem situation is that we tend to look at them with tunnel vision. We get stuck-up with our usual mode of dealing things & then we can't find a solution. Given under are some reframing thoughts or change your perception style.

(i) The real problem is not who is involved, the real problem is how I respond.

a. The real problem is not what is done that bothers me, the problem is how I feel.

b. The real problem is not how it happens, the problem is when I deal with it.

c. The real problem is not why it happens, the problem is why I respond the way I do.

(j) From an overview of these reframing of thoughts, the effective tool for dealing with problem situation is "**brain storming**". Brain Storming is one of the most useful methods for coming-up with a number of creative solutions. In brain - storming, "Storm is the key word, just let the torrent of ideas flow, unedited & unsensored. Here only members, or colleagues, or co-workers **tend to outburst, to become impulse, surcharged, enraged, which might lead to the situation going out of gear**. Emotional Intelligence coupled with effective **communication, adopting positive feelings, motivating one-self will certainly** mitigate the impact of equilibrium going out of control and to a great extent help maintain '**Reliability**'.

(k) Emotional Intelligence helps, build better human relations, particularly with subordinates superiors, & colleagues. Some of issues churning out are :

i. People like to help others, Take their opinion & assistance.

ii. People like to feel important. Show grace & pay attention.

iii. People like to feel needed. Accept & acknowledge their Contribution.

iv. People like to be encouraged. Encourage & motivate them.

v. People like to be heard. Be a good listener.

vi. Praise publicly, Admonish privately.

vii. Be gracious in giving Compliments.

viii. Recognise individual dignity.

ix. Criticise Constructively.

(l) Building an "Emotionally Intelligent Organisation" to meet the never ending demands of employer - employee - customer relationship is the hall mark of focus in the current global competitive scenario, which will help "reliability"

(m) Managing emotions envisage a large area of inbuilt, protective and productive thoughts of human science, emanating, from instincts, for achieving success, — and these have to be gone into greater analysis, which the author feels, unable to deliver in this paper.

## VII. RELIABILITY THROUGH EMPLOYEE EMPOWERMENT/INVOLVEMENT

### *What is - Empowerment'?"*

(a) Empowerment, is a successful way to motivate employees in today's work place, to empower, is the power that could go to judge, act and command. Empowerment is the process of giving employees more power to exercise control over and take responsibility for their work. Empowerment is all about engaging both the hearts and minds of people so that they can take the opportunities available to them for greater responsibility. Jobs are so structured that individuals can plan, execute and evaluate a complete operations in the "**total process personality.**" (TPP)

### *(b) Why empowerment*

? Empowerment can speed up decision making processes and

? Accelerate the response time to meet the changing needs of the customer.

? Release creative skills of employees.

? Provide for greater job satisfaction

? Provide for motivation and commitment

? Give people more responsibility and accountability.

### *(c) Empowerment has three phases*

**I Phase :** The first phase of empowerment is to build good judgement. Empowered employees, don't rise from the dust. They are from a work environment rich in a number of qualities and information is one of them. The more information, the employees have about the company and its goals on a daily basis, preferably, the more they feel, they are part of the company and the better, they are able to judge.

### *(d) Levels :*

(i) goals, History, Mission, Market

(ii) goals of the Dept, employees are working

(iii) Persons job description and the goals for that position.

**(e) II Phase :** The second phase of empowerment, to lead the employees do the task. Judgement is in the place of **good information and skill level**, and now it is time to act. Job has been described and the performer takes off the way. The superior can follow the previous check-list thoroughly and understand the performance and try to re-inforce.

**(f) III Phase :** 10 Qualities employees want in a Job : Most organizations today are moving away from '**making people fit the job**' and towards '**making the job fit people**'. Jobs are becoming more flexible. Work places are becoming more responsive to workers needs. All Jobs have 2 levels of **job competence**.

(a) One assesses the "**threshold competencies**" which represent **minimum skill** needed to carry out the task, associated with the given situation.

(b) The second kind of job competence relates to '**distinguishing competencies,**' the capabilities that sets star performers, apart from average ones, these are the competencies, people already in a job need, in order to perform superbly. Here, comes in the process of empowerment.

### *(g) The Empowering Organisation*

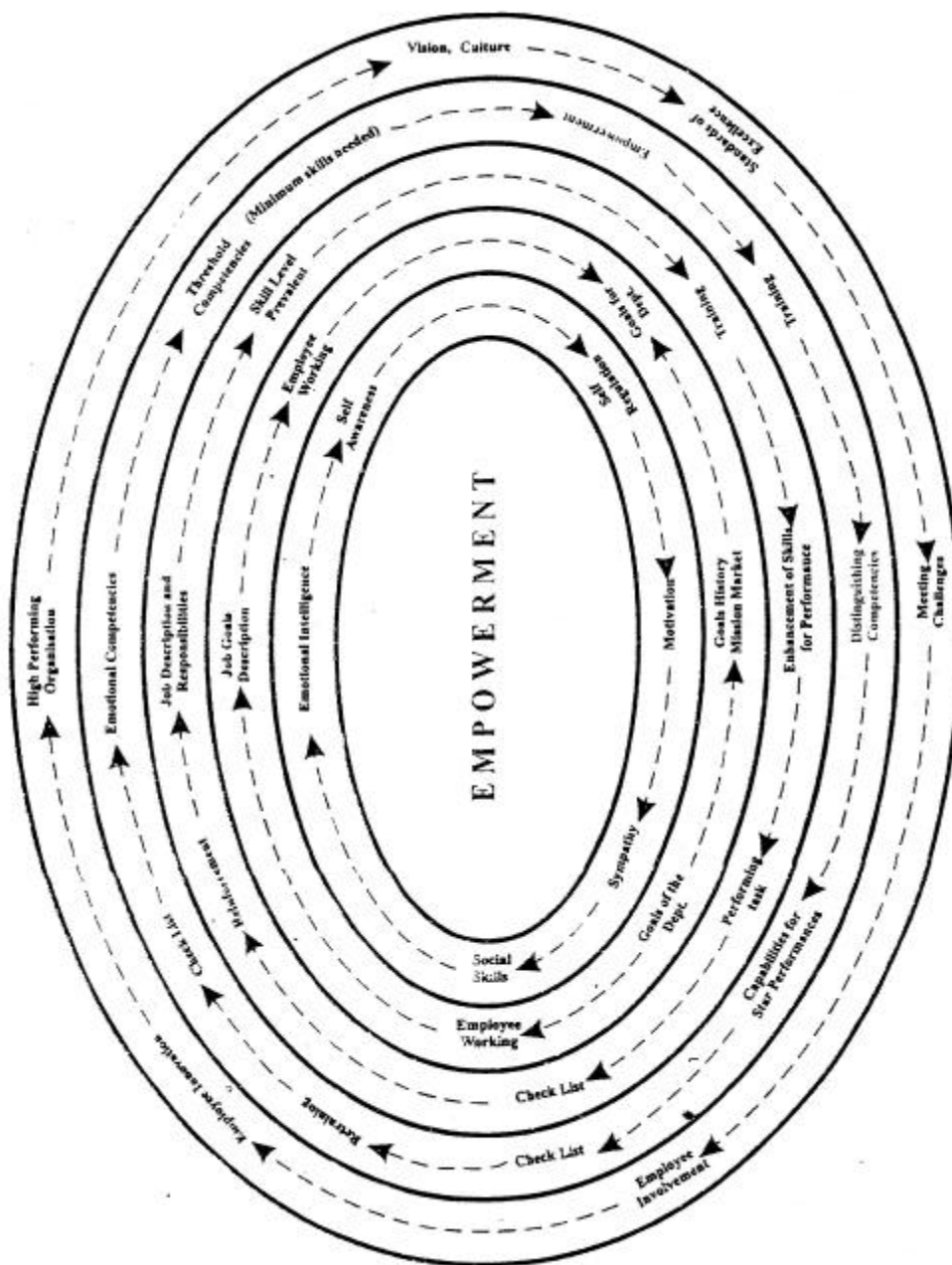
Notwithstanding the impact of the organizational capabilities, producing the star performers, the relative standards and check- lists between an empowering organization on the one side, and the disempowering organization on the other are formatted below :The empowering organization is one dedicated from the top down to building leadership in the ranks. That is a stated objective at the highest

levels and it is carried out every day by every supervisor. When this happens wonderful things take place. Long-term goals are reached far sooner than expected. The extra mile becomes standard and loyalty goes unbelievably high. People shine and stretch.

(h) Here is a comparison between an empowering organization on the right and the dis-empowering organization on the left. Where does yours stand?

- |                    |                    |
|--------------------|--------------------|
| Blame              | Responsibility     |
| Information - poor | Information - rich |
| Environment        | Environment        |
| Fear of mistakes   | Love of job        |
| Territoriality     | Cooperation        |
| Suspicion          | Trust              |
| Protectiveness     | Sharing            |
| Cover-ups          | Openness           |
| No risking         | Risking            |
| Low morale         | High morale        |
| Absenteeism        | High attendance    |
| Low Productivity   | High productivity  |
| High turnover      | Low turnover       |
| Low loyalty        | High Loyalty       |

**Empowerment leads to Employee Involvement which will culminate to enhancing 'Reliability'**



*Employee Empowerment Process Circle - Ranga EEP Circle*

## VIII. TOTAL EMPLOYEE INVOLVEMENT (TEI)

- ? Total Employee Involvement brings groups act as social units in '**work performance**'.
- ? Employee involvement foresee mental and emotional involvement.
- ? Employee involvement motivates peoples to contribute towards a goal.
- ? It is a two way social exchange among Employees rather than imposing ideas from above. Its great value is that it uses the creativity of all employees.
- ? It is a social process by which people become self involved.
- ? Involvement helps employees become responsible Employee- Citizens rather than non-responsible Machine like Performers.

### VIII. (a) POSITIVE MENTAL ATTITUDE (PMA) FOR TEI

- ? Don't blame God for your lack of success.
- ? You can develop a burning desire to succeed.
- ? How? Keep your mind on the things, "You should and do want", and "Off the things you shouldn't and don't want".
- ? Every adversity has the seed of an equivalent or greater benefit.
- ? Definiteness of purpose with PMA is the starting point of all worth while achievement.
- ? "Necessity is the mother of invention"
- ? Inviolable standards of integrity are fundamental to all worth while achievement and are an integral part of PMA.
- ? Anger is self poison.
- ? "Anger begins in folly and ends in repentance" - Pythagoras
- ? "Hope is the magic ingredient of motivating yourself and others".
- ? "People persist in believing that things cannot be done! No sooner is one impossible thing accomplished than the cannot-be-done" skeptics points to the next impossibility"
- ? If work gets delayed ask yourself, if any of the following factors revolve round.
  - a) Priority (too low)
  - b) Inadequate information
  - c) Unleashed time
  - d) Fears (of failure of success)
  - e) Feelings

The initiatives for TEI both interms of self involvement and techniques are very exhaustive and hence not covered in this paper.

## IX. RELIABILITY- 5H VIS -A- VIS 5S FOR TOTAL QUALITY LIFE

(a) Human life is precious and making it joyful, qualitative, purposeful, or sorrowful remains with the individual concerned. The five elements that revolve round into the system of mankind relate to **5H** formula. The **5H** formula again relate to I) **Humanity** ii) **Head** iii) **Heart**, iv) **Hurt** v) **Hatred**. These five elements spread to three areas of life, a) Family life, b) Work life, c) Social life. To make life qualitative and reliable a blend of three areas of FL, WL, & SL with interlocking the elements of 5H need to be addressed.

(b) **Problem solving VIS-A-VIS-5S Techniques 5 H formulae.**

(i) When a PSP is taken up by a group of people, may be thro' qulaity circles, QIP teams, CF teams or Kaizen teams etc, TPM teams by using, Quality tools, People tend to focus on persons but not on issues. This can also relate to with the three areas of life. That is why the three areas of life FL, WL and SL are linked to the 5H formulae, Humanity, Head, Heart Hurt and Harted.

(c) **Human Implications:**

(i) Elaborating a little on the **5H** formulae, the **first H** relate to **Humanity**. (**Seiri**) and This can be related to **Is**. Employees after learning from the experiences of Quality Circle and othe forms of teams and problem solving techniques, would have developed human approach, on issue based and not on person based. Personal bias can be considerably removed to become humane to a greater extent, understanding his/her own strengths and weaknesses, paving way for reliable attitude - **Retaining strengths - Release weaknesses (R&R)**.

(ii) The second H relate to **Head**. The employees tend to learn through the PSP skills, what matters are to be taken to the head and what are not to be taken. The stress here is emphasized on retaining what is required for the head, **and eliminate** what is not required, the **ills**. This is called **cleansing of mind, 2S, (seiton)** when talked in terms of **5S techniques** while solving problems in the work place, (place for every thing, that thing in that place)- **good feelings**.

(iii) The **third H** relate to **Heart**, which is again related to **3S (seiso) cleansing the heart**. Every matters taken to heart makes one stressful and will lead to personal acrimony and animosity among employees. Once at the head level problems or issues are stream lined, by retaining, what is required and eliminating what is not supposed to be taken to heart, gives less **pressure to the heart**. This will be an added relief to the individual, E& E - Eliminate and extricate) - (**clean & clear exposure**)

(iv) The **fourth H** relate to **Hurt**. If the first 3 H concepts referred to above **are not applied adequately and practiced**, then an employ becomes his own victim resorting to **hurting himself and hurting others** thro action, verbal, non verbal, and other modes of unpleasant reactions. No one on earth has got a right to cause injury to the other person mentally, leave alone physical injury. This is otherwise called hurting, other man's feelings- This is related to **4S** namely **Seiketsu**, that is if other persons are not **hurt** or injured, **high standards** of feeling are maintained.

(v) The **fifth H** relate to **Hatred**. Hurting results in "**hatred**", ultimately. Hence invariably if one is not hurt physically - or by any other means, **then developing hatred is reduced. Reduction in hatred feelings will increase the scope for reliability**. This is related to **5S-Shit Suke**. The individual gets tuned to **good habits** through perpetual practice of not developing hatred against people. The author has thus contemplated new avenues for 5H Vis-a -Vis Japanese techniques of 5S, realising the importance of **personal qualities** for leaning towards Reliability.

(vi) The Problems or issues arising out of the psychological factors do play a very critical role and hence, when the employees learn the ^skills related to problem solving while working as a team / certainly mitigate counter reactions and add value to "**Reliability**"

(d) **Psychological Contracts** :- Employers and Employees of any organization are mutually independent apart from being interdependent in the areas relating to each others goal or vision. Hence there remains an **unwritten contractual obligation** on both sides to bring out results to society at large, and to the self in particular.



(i) Faced with an array of changes happening out in the work place, individual employees have had to employ a range of coping strategies in order to survive effectively. This is at what cost ? Here comes the **value of Human Cost** which makes both the employers and employees obligatory to form an unwritten psychological contract.

(1) **Therefore the questions that may arise relate to :-**

- a) What have been the implications for individual at work.
- b) What kind of impact has work change brought to their lives.
- c) Is it better to be a flexible generalist or a specialist in one particular field.
- d) What type of skills are required to mitigate the problems arising out of the above?

The solutions to this are discussed as under :-

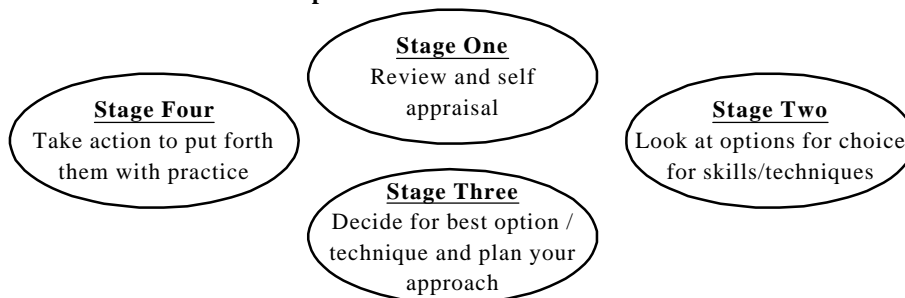
(2) **Willingness :**

- a) Participation in Quality movement lays the foundation for the employees.
- b) To retain their best.
- c) To become flexible by equipping to handle change and multiskilling.
- d) To manage careers and become self managed.

(3) **Quality of work life will certainly become incompatible if these are not addressed effectively. Hence the need for demand for higher skills arises because :-**

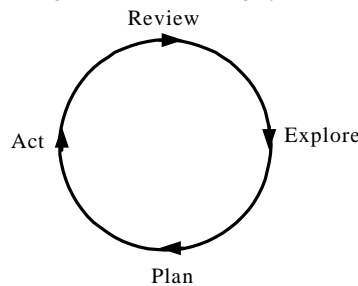
- i) Increasing technological complexity of the work and workforce.
- ii) The need to remain competitive in the face of international business competitions.
- iii) The desire for greater flexibility on the part of employees.
- iv) Hopes for gains in productivity and achievement arising from a better skilled and qualified workforce.

(4) These two paradoxical components of necessity that influence Quality of work life are depicted as under. This could be otherwise called as **RANGA RODA LOOP - "Review - opt - Decide - Act"**



**RANGA RODA LOOP**

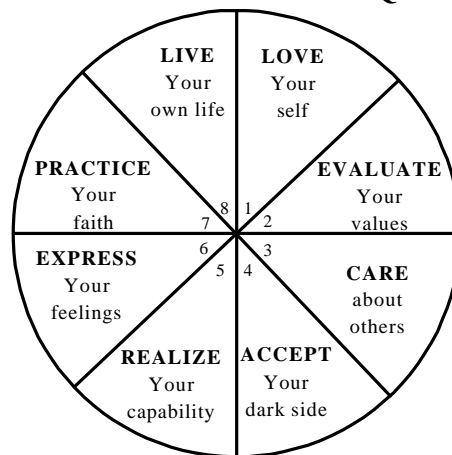
Alternatively the stages of influence can also be projected through an REPA learning cycle.



**REPA Learning Cycle**

Finally the combination of the above two paradigms into one of involvement, by aptly learning problem solving skills and applied in the **5H formula and three areas of FL, WL and SL**, as depicted in the preceding paras, will make employees to lead a **"Total Quality life"**.

**"EIGHT STRATEGIES TO TOTAL QUALITY LIFE"**



**"Ranga TQL Wheel"**

## **X. RELIABILITY REVOLVES ROUND COMBATING EMPLOYEE PROBLEMS ON THE JOB**

(a) Not going into greater detail into performance management as such, the author has attempted to draft out a few issues that may basically / personally affect **"reliability" vis -a-vis performance**.

### **(b) Whose responsibility is problem solving**

Some managers are experts in a particular phase of the business; as engineers, scientists, or accountants they may work alone and supervise no other persons. But usually the more important role of a manager is to see that results are achieved **through people**. The manager's technical expertise should be used to guide the employee in successful completion of work assignment. Technical expertise is important, but it is people expertise that is often lacking. Managers by the very nature of their titles are problem solvers-or should be. When a worker has a problem that **"affects work performance"**, the manager should be interested and get involved. At times the supervisor's patience will be tried, but he or she should try to define the issue, investigate the circumstance, take appropriate corrective action, and follow through to see that the corrective action is working. That sounds like a simple formula and, if carefully followed, it can work.

### **(c) Alcoholism**

(i) **Nature of the Problem** : Alcohol is bad, that can impair the person's judgment, coordination, retention, and memory reflexes. A person under the influence of alcohol may not be able to operate a motor, vehicle or machinery safely. Alcoholics may avail excess absenteeism, late coming, or extended lunch periods, restlessness, erratic behavior, etc. Chronic alcohol dependency can result in medical conditions such as liver damage, hepatitis, altered brain cell functioning. Gastritis, and impotence.

(ii) About 10 million persons in the United States are classified as alcoholics. It is estimated that five percent of employees in any industry have a drinking problem. More than 40% of all traffic fatalities involve persons under the influence of alcohol or other drugs.

(iii) **Points for Consideration** : Alcoholism is a personal health condition and the confidentiality of medical information has to be protected. The Organisation has to identify such persons and provide help whenever, & whenever necessary to add value for employees performance reliability.

(iv) Organisation, who suspect an alcohol problem with a worker should consider the work performance aspects of the problem:

- ★ How is job performance affected by the suspected alcohol problem? Are there deteriorating problems such as absences from work, lowered productivity, poor quality, or inability to communicate with managers and co-workers ?
- ★ Has the employee disclosed to the manager that he or she has a drinking problem ?
- ★ Does the immediate supervisor or the employee's co-worker cover up for the alcoholic employee by doing the employee's work ?
- ★ Does the company have a formal policy prohibiting the use of alcohol on the job or on company premises ?
- ★ Does the employee have access to an employee assistance program (EAP) through the company or in the community ?

(v) **Positive corrective steps**: Supervisors should consider the following steps when managing an employee with a suspected alcohol problem:

- ★ Focus on the performance problem - what on the job is not going right. To repeat : The emphasis should be on work performance and the deterioration that is caused by a problem.
- ★ Management should be concerned with the individual's job performance. The diagnosis of the ailment should be left to professional health care providers. Supervisors should insist that production, quality, and safety standards be met by all employees.
- ★ If the employee has admitted to an alcohol problem, then employee commitment is the key to recovery. The motivation to recover must be with the employee and continue with the employee through recovery. Organizations such as Alcoholics Anonymous and any local employee assistance program can help.

### **(d) Anger Management**

(i) **Nature of the Problem** : Everyone has feelings of anger from time to time that are not violent or considered out of control, but uncontrolled anger is a powerful force that can intimidate others and make them upset.

(ii) Anger often develops when an employee feels that someone is treating them unfairly, that another person is taking advantage of them or they feel the impending threat of some kind of loss.

(iii) An angry person can disrupt the workplace and lower morale. Productivity and safety can be affected.

(iv) For the angry person, the emotion can lead to severe mental and physical conditions, including depression, heart attack, and stroke.

(v) The angry worker is difficult to manage, and getting the person to perform assigned duties may, in the minds of some managers, be more trouble than it is worth. The problem has to be faced.

(vi) **Issues to consider** : Anger that is allowed to continue unmanaged can evolve into a long, drawn-out series of destructive thoughts and actions, in assessing this problem, managers should consider.

- ★ What can the employee do about controlling anger ? If the employee knows that controlling anger is a problem, he or she may realize that a "time out" for themselves - a chance to walk away from the worksite for a few minutes to cool off-is necessary.
- ★ What is the effect of the anger on co-workers? If anger persists it involves damage to products or equipment or an attempt at physical harm to a manager or other employees, it must be handled immediately.
- ★ (vii) **Positive corrective steps**: Managers who encounter chronic anger employees should first make a major effort to "keep their cool" before talking to the upset worker. Then they should consider these steps:
- ★ What has provoked the anger ? Allow the person to vent his or her feelings. Be patient. Allow enough time so that the angry person expresses everything.
- ★ What can be done to modify the employee's thoughts and actions? Listening to the person's concerns should allow the manager to focus on the emotions and the reason for them. Focus on the negative emotions and try to find out what can be done to turn them around into energy - producing, positive efforts.
- ★ How can anger be managed in the future ? After employer has found out what's wrong and, it is hoped, corrected the problem, then he or she should have a basic idea how to forestall out-bursts in the future. What does the employee suggest to correct the problem? If the employee understands what is wrong and what to do to correct the wrong, then the employee is more likely to control excess emotion.
- ★ Alleviations of chronic anger may require referral to a health care professional, an employee assistance program, or community health agency.

### **(e) Attitude Problems**

(i) **Nature of the Problem** : "Poor attitude" is a subjective assessment of a person's outlook and is often difficult to document, but negative employee attitudes can translate into trouble on the job and create performance unreliability and harm morale among other employees. Attitude problems can result from poor health, family problems, money stresses, or poor motivation towards the jobs and company.

(ii) **The key point:** Is there a performance problem as a result of the personality trait or attitude? A person who is indifferent and has negative attitudes may perform well on the job and not have a harmful effect on the productivity of other workers. Organisations should be concerned when unsatisfactory attitudes start to affect the employee's work performance or that of co-workers.

(iii) **Issues to consider:** Employees are entitled to have feelings and attitudes about a host of things that affect them on the job. A manager should be concerned about only those attitudes that affect **job performance / Reliability**. Managers who feel an employee has an attitude problem should investigate further and ask:

- ★ Are the employee's attitudes affecting their own work performance or the productivity or quality of the work of other employees? That should be the determining factor - its effect on job performance / Reliability.
- ★ Is the unsatisfactory attitude caused by the company's culture or the job?
- ★ Are employees asked for their opinions and input on plans and decisions affecting them? Involvement tends to generate enthusiasm and interest in activities, including job activities,

(iv) **Positive corrective steps:** Here are some suggestions for managers faced with an attitude problem of an employee':

The best option for handling what appears to be depression is to refer the worker to the facility medical department or to an employee assistance program. Supervisors should confront an employee and let them know that there is a work-related problem and that something needs to be done. Supervisors have to be careful but assertive when trying to persuade an employee to seek help.

- ★ In some cases, written job instructions may lessen distractions on the job; modifying the work area to minimize distractions can also help.
- ★ If reasonable accommodations are required, consult with the employee for suggestions on what might help.
- ★ It may be helpful to provide sensitivity training for co-workers to develop support and acceptance of their fellow workers with problems, care should be taken to prohibit employee handling with heavy machinery and this will however vary from person to person.

#### (j) **Old Workers**

(i) **Nature of the Problem:** Workers aged 40 and over are the largest percentage of the American workforce today.

(ii) The problem of performance among older workers is usually the decline in **personal capacities** of persons as they get older. Sometimes hearing, sight, reflex actions, stamina, and physical strength start to decline. These declines can affect productivity, quality, and even safety for the older employee and co-workers, apart from reliability.

(iii) However, studies have shown that older workers are **less prone** to accidents than younger persons, and that learning ability, intelligence, and motivation do not decline with age. **Older workers bring maturity, experience, and good judgment to the job scene.**

(iv) Younger managers must be prepared to handle the occasional awkwardness associated with supervising older workers. Younger supervisors should recognize that older worker's social and work experiences are different from theirs and respect those differences. Each person has something unique to contribute to the workplace.

(v) **Issues to ponder:** Managers encountering a problem with an older worker should analyze the reasons for the problem and try to get at the cause. In many cases the causes are easy to address - an eye examination may reveal a solution for declining sight, work efforts can be redirected, job, equipment / Machine handling can be exchanged with due training.

(vi) **Action steps:** Experts offer these suggestions that can help make older workers continue contribute to the company's success:

- ★ Older workers tend to rely on ways that worked well for them in the past. This is usually good thinking, but new work procedures may dictate the need for supervisory follow-up on the job, redirection, or retraining.
- ★ Good workplace lighting will help all workers perform the job and minimize the danger to trips or falls, a common hazard for older persons.
- ★ A manager who feels that an older worker has a performance problem, he should speak to that employee without referring to age. He has to try to develop a performance improvement plan. Friendly guidance and redirection can go a long way to help an older worker adapt to new directions at work.
- ★ Use the best qualities in older workers. Top-performing older workers can be asked to help as trainers and mentors of younger workers.

#### (g) **Personal Health Conditions**

(i) **Nature of the Problem:** Personal health problems can quickly result in a decline in employee work **performance / reliability**. Some personal health problems may be chronic, including conditions such as diabetes, high blood pressure, migraine headaches, epilepsy. Signs of physical distress include nausea, headaches, dizziness, slurred speech, disorientation, or stomach problems.

(ii) **Issues to ponder:** Managers trying to cope with an employee's health problem that is affecting work performance should consider the following issues:

- ★ Does the employee need medical attention? Supervisors may suggest that the employee seek medical evaluation and treatment, but remember:
- ★ Does the employer have a sick leave plan, It should be ensured that employee's income is atleast to certain extent during illness, protected. Does the employer have an **employee assistance program (EAP)** or is there access to a community medical referral service? Remember that not all employees have a **family doctor**. In larger facilities, an in-house medical department usually offers basic treatment for nonoccupational injuries and illness and can act as a referral service to community health care providers.

(iii) **Positive help:** Any employee who is not feeling well should seek medical assistance. A company-sponsored medical plan will relieve worries about covering the cost of medical treatment. Confirmation of an employee's health condition should come from a licensed health care good documentation of the reason for the leave is essential.

#### (h) **Poor Housekeeping on the Job**

(i) **Nature of the Problem:** **Good housekeeping is regarded as a neat and clean workplace.** Good housekeeping on the job adds to workplace safety, a clean product, or better-provided service to customers. For employees who practice a neat and tidy work area, it's a sign that they care, and become "**reliable**"

(ii) Poor housekeeping affects safety, quality, productivity, and morale and presents the risk of slips, falls, and fire. Most of the workers want an organized, safe work environment. When Co-workers leave the work place in a mess, especially in a shift environment where the next shift has to clean up the mess left by the preceding shift.

(iii) **Issues to ponder:** A manager facing a problem with an employee who keeps the individual workplace untidy should consider:

- ★ What does management want in terms of housekeeping? A top management directive on neat, clean, and safe workplaces can do a lot to carry the message of good housekeeping down to lower levels in the organization. Take an unannounced walk through the facility and rate the level of cleanliness and house keeping.
- ★ Do managers practice good housekeeping? Is the manager's office neat and tidy? Do managers bend over and pick up refuse on the floor and put it in the trash? Are spills cleaned up promptly?

- ★ Is there a place for everything? Has management provided enough storage space-items such as a scrap bin near each machine to accumulate rejects, devices to remove trim from material at each stage of manufacturing, storage racks for ladders, bins for electrical tools and extension cords, lockers for employee's personal possessions
- ★ Are floor surfaces clean, free of oil or grease ? Are stairs clear of tripping or falling hazards ?
- ★ Are raw materials and finished goods stacked neatly and pallets of finished goods strapped neatly and safely ? Are containers provided for scrap or rework items ?
- ★ Do employees understand their individual responsibility for tidiness of their own work station ? Custodians and cleaners may be responsible for general areas such as, locker rooms, and break rooms, but most companies require individual employees to keep their work station neat and orderly.
- ★ Is the eating of food allowed in the work area or restricted to the cafeteria or break rooms ?
- ★ Improperly discarded cleaning rags can become a fire hazard and present dangers of tripping and slipping.
- ★ Are work clothes clean? Are uniforms supplied? Do Employees wash up promptly after removing work clothes.
- ★ Is waste and rubbish removed from the facility on a frequent basis ?

(iv) **Positive and Protective steps** : Managers should realize that good housekeeping is everyone's responsibility In enforcing a housekeeping improvement activity, they should consider :

- ★ Management and individual managers should set a good example. If poor housekeeping conditions are observed, they should arrange to correct them promptly.
- ★ Every work item should have its own designated storage place, and the items should be returned to those places promptly when not in use. The old maxim "A place for everything and everything in its place" should be preached and practiced.
- ★ Each employee should understand that he or she is responsible for tidying his or her own work area. This basis principle should be publicized, encouraged, and enforced where necessary.
- ★ Train employees to report potentially unsafe conditions-the torn carpet edge, damaged stair steps, protruding objects, damaged tools, or any other conditions or equipment that could be hazardous.
- ★ Valuable items should be locked up. Mechanics and technicians should be required to lock up company tools at the end of their shift.
- ★ Computer access should be restricted with passwords and limited file access, Access codes should be changed regularly. Restrictions on each employee's computer access should be defined clearly.

(i) **Unsafe Work Practices**

(i) **Nature of the Problem** : A small number of employees (estimated at less than 5%) perform their jobs unsafely, despite various laws / regulations and company safe working policies that mandate safe work practices. Unsafe work practices may injure the employee or other workers, give a poor example to co-workers, and damage company equipment. There are several obvious indicators of unsafe work practices:

- ★ Training in the safe way to perform a job is offered, but a few employees dont practice what they learn.
- ★ The employee fails to wear the prescribed personal protective equipment such as eye or hearing protection.
- ★ Machine guards are bypassed.
- ★ Poor maintenance routines, such as neglecting to check out an electrical cord or a ladder before use, are practiced.
- ★ The employee's immediate work area is in a mess, due to poor house keeping.

(ii) **Issues to ponder** : A manager who observes employees engaging in unsafe work practices should ask these questions:

- ★ Has the organization established safe work practices for each job? Preparation of a job safety analysis for each job will help pinpoint safe - and - unsafe - work practices.
- ★ Are employees trained initially and retrained, if necessary, in safe work practices ?
- ★ Do managers and / or team leader set a good example and correct any unsafe work practices observed ?

## XI. MANAGING KNOWLEDGE POTENTIAL FOR RELIABILITY

(i) Knowledge driven society has come to occupy the globe, lest development of the industry, profession and the nation at last has to suffer. Knowledge is the only instrument of production that is not subject to "Diminishing Returns".

(ii) J.M. Clark Economic Professor Columbia University

- a. Knowledge is **POWER** and is a **CAPITAL** enlarging scope for reliability
- b. Knowledge management has two variables, one knowledge assets and the other, how to manage and make use of these assets to get maximum returns. The challenges for deploying knowledge assets has become crucial because.
  - The market place is increasingly competitive
  - The rate of innovation is rising
  - Customer expectations constantly changing
  - Customer requirements are also fastly getting varied
  - Quality of products/ services to keep pace in with customers needs
  - Cost economy.
  - Change in demand and supply ratio.
- c. Knowledge assets are the knowledge gathering regarding markets, products, technologies, and organizations, that a business owns or needs to own and which enable its business process to generate profits, add value etc. This is vital for climbing the steps to **reliability**"
- d. Knowledge management is not only about managing these knowledge **assets** but managing the **process** that act upon the assets. These process include developing knowledge, preserving knowledge and sharing knowledge.
- e. Knowledge can be diversified into two kinds, one is **Explicit Knowledge** which can be expressed in words and numbers and shared in the form of data, scientific formulae, product specifications, manuals, principles and so far. This kind of knowledge can be readily transmitted across individuals formally and systematically. Westerners place more emphasis on explicit knowledge.
- f. Tacit Knowledge is highly personal and hard to formalize. Subjective insights, intuitions, creative imaginations embracing experience, ideals, values, emotions and mental models which also relates to wisdom context, are the main ingredients of **tacit Knowledge**. Tacit Knowledge place emphasis on the concept **knower** and **the known, mind and body subject and object**. Attributing tacit knowledge to one relating to mind boggling and thinking self -embriogo, it relates to whole personality complementing knowledge conversion process working through emotional intelligence.
7. This means the employees basically want to work under knowledgeable superiors and that they are ready to either share knowledge or expect others to do so.

8. Collaborating the knowledge management strategies to practical areas of KM initiatives, the following areas can be attributed to the learning platform, when these are assimilated, practiced, through REPA learning cycle, (Review, Explore, Plan and Act) projected earlier in this paper, may certainly help validate, **Reliability perspective.**

- TCK - Total Cultural Knowledge
- TPK - Total People Knowledge
- TPK - Total Product Knowledge
- TPK - Total Production Knowledge
- TPK - Total Process Knowledge
- TPK - Total Plant Knowledge
- TPK - Total Performance Knowledge
- TPMK - Total Preventive Maintenance Knowledge
- TTK - Total Technology Knowledge
- TSK - Total System Knowledge
- TMK - Total Methods Knowledge
- TPSK - Total Problem Solving Knowledge

(SQC, SPC, Group Dynamics, FMEA, 5S Kaizen, Genba, Daily work management etc.,

**Reference** :- (Journal on KM - Karl mwiig 1993 vol 3 lesson from Japan thr'o internet Jakeuchi.)

## XII. CORE SKILLS CHECKLIST

\* An awareness Training Instrument which may help / guide towards 'Reliability Scale = 1 to 5, 1 = not at all like me , 5 = very like me.

### **Working Creatively**

- |                      |   |                                   |   |
|----------------------|---|-----------------------------------|---|
| designing            | • |                                   |   |
| visualizing          | • |                                   |   |
| generating new ideas | • | Your total for working creatively | • |
| performing           | • |                                   |   |
| making artifacts     | • |                                   |   |

### **Handling Numerical Data**

- |                     |   |  |   |
|---------------------|---|--|---|
| Calculating         | • |  |   |
| estimating costs    | • |  |   |
| budgeting           | • | Your total for handling numerical data | • |
| accounting          | • |  |   |
| valuing and pricing | • |  |   |

### **Working With Text**

- |                    |   |                                  |   |
|--------------------|---|----------------------------------|---|
| Writing            | • |                                  |   |
| reporting          | • |                                  |   |
| editing            | • | Your total for working with text | • |
| translating        | • |                                  |   |
| ability to precise | • |                                  |   |

### **Relating to People**

- |                        |   |                                    |   |
|------------------------|---|------------------------------------|---|
| listening              | • |                                    |   |
| interviewing           | • |                                    |   |
| showing understanding  | • | Your total for relating for people | • |
| working co-operatively | • |                                    |   |
| coaching others        | • |                                    |   |

### **Communicating**

- |                        |   |                              |   |
|------------------------|---|------------------------------|---|
| explaining facts       | • |                              |   |
| presenting information | • |                              |   |
| expressing ideas       | • | Your total for communicating | • |
| making proposals       | • |                              |   |
| providing advice       | • |                              |   |

### **Practical Competence**

- |                           |   |                                     |   |
|---------------------------|---|-------------------------------------|---|
| using equipment           | • |                                     |   |
| working with materials    | • |                                     |   |
| working with plants       | • | Your total for practical competence | • |
| building / constructing / | • |                                     |   |
| assembling components     | • |                                     |   |

### **Problem-solving**

- |                       |   |                                |   |
|-----------------------|---|--------------------------------|---|
| analyzing information | • |                                |   |
| lateral thinking      | • |                                |   |
| finding solutions     | • | Your total for problem-solving | • |
| interpreting charts   | • |                                |   |
| and diagrams          | • |                                |   |
| diagnosing faults     | • |                                |   |

### **Organizing**

- |                       |   |                           |   |
|-----------------------|---|---------------------------|---|
| arranging events      | • |                           |   |
| working to deadlines  | • |                           |   |
| setting priorities    | • | Your total for organizing | • |
| managing meetings     | • |                           |   |
| scheduling activities | • |                           |   |

### Carrying Out Research

- Seeking information •
- analysing data •
- observing / recording •
- interpreting findings •
- sampling •

### Core Skill Score Sheet

Under the following headings, fill in the total for each of the skill headings. When all the scores, are entered, rank order the skills in order from the highest to the lowest scores and assess the implications of your skill scores in the box as to what additional skills, the individual has developed and what skills are to be developed. This may add value for improving reliability perspective.

	Total score	Rank order
working creatively	•	•
Handling numerical data	•	•
Working with next	•	•
Practical competence	•	•
Problem-solving	•	•
Organizing	•	•
Carrying out research	•	•
Relating to people	•	•
Influencing	•	•
Communicating	•	•

Additional skills I have developed
On reflection, skills I would like to develop further.

**Reference:-**Assessing carrier / personal skills - (Ben ball 2000 The British psychological society published by Universities press (India) Limited)

## XIII. CREATIVE DECISION MAKING

### How healthy are you mentally

Compiled by : Dr. N RANGASWAMY

1. I am not confident about my abilities  
Always / Most of the time / Sometime / Never
2. Small problems easily upset me.  
Always / Most of the time / Sometime / Never
3. I am worried about my future.  
Always / Most of the time / Sometime / Never
4. I lack the ability to take decisions.  
Always / Most of the time / Sometime / Never
5. I have mood fluctuations.  
Always / Most of the time / Sometime / Never
6. I suffer from feelings of insecurity  
Always / Most of the time / Sometime / Never
7. Others have to help me take decisions.  
Always / Most of the time / Sometime / Never
8. Even when in a group I do not feel secure.  
Always / Most of the time / Sometime / Never
9. I feel that I am losing self-respect.  
Always / Most of the time / Sometime / Never
10. I cannot reach a decision even when I want particular thing.  
Always / Most of the time / Sometime / Never
11. I have a feeling that some calamities may be with me.  
Always / Most of the time / Sometime / Never
12. I cannot finish tasks in one go.  
Always / Most of the time / Sometime / Never
13. I am unable to solve my problems myself  
Always / Most of the time / Sometime / Never
14. I feel that my future is not well-planned and defined.  
Always / Most of the time / Sometime / Never

15. I shirk away from responsibilities.  
Always / Most of the time / Sometime / Never
16. I am not able to take quick decisions on any matter.  
Always / Most of the time / Sometime / Never
17. I feel that this world is very hostile.  
Always / Most of the time / Sometime / Never
18. I need a conducive work environment  
Always / Most of the time / Sometime / Never
19. I am unsatisfied with my life.  
Always / Most of the time / Sometime / Never
20. I become hopeless when I fail in any task.  
Always / Most of the time / Sometime / Never
21. I do not get along well with the people in my locality.  
Always / Most of the time / Sometime / Never
22. I feel depressed and dejected.  
Always / Most of the time / Sometime / Never
23. I suffer from feelings of inferiority.  
Always / Most of the time / Sometime / Never
24. I am enraged even by the slightest unfavourable talk.  
Always / Most of the time / Sometime / Never
25. I feel my life is a burden for others in my family.  
Always / Most of the time / Sometime / Never
26. Minor difficulties disappoint me.  
Always / Most of the time / Sometime / Never
27. I lack concentration while working.  
Always / Most of the time / Sometime / Never
28. I build castle in the air.  
Always / Most of the time / Sometime / Never
29. I do not have a flexible approach.  
Always / Most of the time / Sometime / Never
30. In adverse circumstances I act without keeping real facts in view.  
Always / Most of the time / Sometime / Never

After you have marked your response give 1 point to every Always you have ticked; 2 points to every Most of the time; 3 points to Sometimes and 4 points to Never. Total up the points obtained. If you score between 91-120 you have a very good mental health. If your score lies between 61-90 your mental health is good or average. Between 31-60 it is poor. Between 0-30 it is very poor.

#### **XIV. EMPLOYEE INVOLVEMENT**

Is your job a career? Or just a chore? Do you simply want the appointment? Or do you possess the right attitude? To evaluate your involvement with your job, please attempt this.

1. Do you state your case frankly and openly whenever you realize that you are the target for any injustice by your seniors?  
Yes      ?      No      ?      Sometimes      ?
2. Do you invariably feel responsible and try to do something about the wastage of time or material in the office, plant, or place where you work?  
Yes      ?      No      ?      Sometimes      ?
3. Do you look-out for even more efficient and better organized ways of doing your job - as well as that of those around you?  
Yes      ?      No      ?      Sometimes      ?
4. Do you feel interested in your work as well as the progress of the business even though you do not share the profits of the company?  
Yes      ?      No      ?      Sometimes      ?
5. Do you find that you make friends easily in the office or at your place of work, that you go out of your way to make even newcomers feel at home?  
Yes      ?      No      ?      Sometimes      ?
6. Do you accept criticism of what you have done as being constructive and helpful, and use it as learning tool to improve your work?  
Yes      ?      No      ?      Sometimes      ?
7. Are you always able to see new and improved - ways of re-organising things at the office, but are afraid to vocalize your views?  
Yes      ?      No      ?      Sometimes      ?
8. Are you able to keep office secrets to yourself?  
Yes      ?      No      ?      Sometimes      ?
9. Are you jealous of those who work alongside you, seeing them as competitors out to undermine your chances of landing that all-important promotion?  
Yes      ?      No      ?      Sometimes      ?
10. If you see a need for it yourself, or are asked to do so by your boss, will you work late hours overtime without extra pay or complaining?  
Yes      ?      No      ?      Sometimes      ?
11. Are you the kind of person who has the ability to get along with his immediate superiors without making colleagues feel he's sucking up to them?  
Yes      ?      No      ?      Sometimes      ?

12. Are you a stickler for safety, always abiding by the security regulations as laid down in the rulebook, and on the alert for infringements by others?  
Yes ? No ? Sometimes ?
13. Can you honestly say that you find the work that you are at present engaged in both financially remunerative as well as intellectually stimulating?  
Yes ? No ? Sometimes ?
14. Would you accept a temporary transfer to another job, even though you're pretty sure you don't know enough about it, simply because the company needs to fill that slot?  
Yes ? No ? Sometimes ?
15. Is your relationship with your superiors the kind where you can air your views about where the organization might have gone wrong, freely and tactfully to them?  
Yes ? No ? Sometimes ?
16. Are you suitably dressed for the work you do?  
Yes ? No ? Sometimes ?

**The Interactive**

This interactive consists of 16 queries that judge your attitude and involvement towards your job. Each question is followed by three possible replies: yes, no, sometimes.

No alternative is right or wrong although, in each case, there is a desirable, less desirable, and an undesirable response. Examine each carefully and tick off the one that truly illustrates your behaviour on the job.

Then, tally your reactions with the scoring key that measures the appropriateness of each response. Tot up the number of answers and check out how attached you are to what you do. Before somebody decides to detach you from your desk.

**The Scores**

1.	A: 0	B   1	C: 2
2.	A: 2	B   1	C: 0
3.	A: 2	B   1	C: 0
4.	A: 2	B   1	C: 0
5.	A: 2	B   1	C: 0
6.	A: 1	B   0	C: 2
7.	A: 0	B   1	C: 2
8.	A: 2	B   0	C: 1
9.	A: 0	B   2	C: 1
10.	A: 2	B   0	C: 1
11.	A: 2	B   1	C: 0
12.	A: 2	B   0	C: 1
13.	A: 1	B   0	C: 2
14.	A: 2	B   0	C: 1
15.	A: 2	B   0	C: 1
16.	A: 2	B   0	C: 1

**The Rating**

**0-9 Points**

The only possible reason you have, may be, your job must be that you are part of the boss' family without much motivation.

**10-17 Points**

You are one of those who believe that they mustn't do an iota more than they are paid for. Remember: such people rarely get paid more than the minimum either.

**18-25 Points**

Your CEO has some doubts about you - there are times when you are discouraged - but, on the whole, you're well-liked. With some soul searching, you could be an asset.

**6-32 Points**

Undoubtedly the perfect employee, you're comfortable consorting with your colleagues, as well as your bosses. With this kind of attitude, you may well be too good to be true.

**Source:-** (a portion picked The ultimate Quiz from book : edited and compiled by kristy Lee - Lancer Publishers - Delhi)

**V. AWARENESS TRAINING INSTRUMENTS FOR EFFECTIVE LEADERSHIP FOR RELIABILITY**

The amount of time I devote to this task is :

	Planning Tasks	Too Little	About Right	Too Much
1.	Develop work schedules			
2.	Develop the budget			
3.	Develop the vacation schedule.			
4.	Work with my upline manager to develop the unit's annual goals and objectives			
5.	Work with my direct reports to develop their individual goals and objectives.			
6.	Work with my upline managers to develop my goals and objectives.			
7.	Develop the preventive maintenance schedule for equipment.			



8.	Develop annual training plans for each employee.			
9.	Make plans for acquisition of new equipment.			
10.	Think about where the work unit is going in relation to the goals of the enterprise.			
11.	Focus resources on activities that have the highest payoff.			
12.	Build a skilled, balance work team that will meet the unit's future needs.			
13.	Plan to obtain materials, tools, and equipment in a timely manner.			
14.	Schedule operations to utilize machinery at optimum capacity.			
15.	Schedule operations to utilize people at full capacity.			

**The amount of time I devote to this task is :**

Leading Tasks		Too Little	About Right	Too Much
e				
1.	Communicate a vision			
2.	Inspire a sense of mission in others.			
3.	Embody organizational values and instill them in others.			
4.	Treat others with respect.			
5.	Represent follower's points of view to others.			
6.	Keep the work unit's activities aligned with the goals of the enterprise.			
7.	Let team members know what's going on in the organization.			
8.	Stay current in my profession or trade, and help other to do this also.			
9.	Spot trends, assess threats and opportunities, and share the information with others.			
10.	Bring about change.			
11.	Encourage creativity and innovation			
12.	Sell ideas.			
13.	Foster desired behavior in others by rewarding their efforts.			
14.	Practice good personal time-management habits.			

**The amount of time I devote to this task is :**

Controlling Tasks		Too Little	About Right	Too Much
1.	Communicate performance standards to employees.			
2.	Place limits on an employee's authority.			
3.	Observe employee works habits and methods.			
4.	Give employees day-to-day performance feedback.			
5.	Conduct periodic formal performance reviews.			
6.	Praise or otherwise reward quality work.			
7.	Discipline an employee for violating a rule.			
8.	Establish budgets.			
9.	Review the unit's expenditures regularly to stay within budget.			
10.	Make sure accepted safety practices are being followed.			
11.	Check production records to see if an acceptable quantity of work is being turned out on schedule.			
12.	See if preventive equipment maintenance is being performed regularly.			
13.	Investigate an equipment malfunction.			
14.	Make sure that materials are not wasted.			
15.	Make sure that tools are not stolen.			

**Source** :- ASTD Training manual on effective supervision (by Williamson)

**Note** : Based on the employees chosen attribute, wherever the items on which too little time, or too much time indicated, these have to be identified for further analysis and appropriate action taken for modulating performance towards reliability. Action man was to be developed to mitigate the unpleasant response.

These are only generic training instruments on awareness. Suitable instruments have to be diaganised depending upon the industry, employees requirements, nature of jobs and other needs of training.

## XVI. CONCLUSION

The author in this paper has proposed only the Initiatives which are to be taken by the organisation as well as the employees towards managing "**Human Reliability**". To ensure building up employee reliability, quality training activities can be considered, the elements of which should be.

- a) That ensure training is part of quality policy and
- b) The policy should conform principles and goals to provide a frame work within which training activities may be planned and operated.

Education & training occupies a predominant role in promoting **quality and reliability**. Training programmes focusing on attitude, aptitude, personal skills, Technical skills, Team Management, Quality circles, House keeping, Safety Management, Emotional Management, Stress Management, Counselling, Health hygiene etc. may **help employees develop reliability perspective towards quality Excellence**. The author has broughtout this paper with his personal experiences and the research work done earlier on the various topics, and further research is being done in this area of **reliability**, and the journey continues.

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## **BIOGRAPHY OF Dr.N.RANGASWAMY**

Dr.N.Rangaswamy is a Post Graduate in Economics, with degree in Bachelor of Law. Apart from this he holds three PG Diplomas in a) Business and Industrial Management, Personnel and Industrial Relations, Training and Development.

Fighting against all odds, he obtained his Ph.D. in Management Science (**1st in India**) in the dissertation "**Total Employee Involvement in the year 2002**, a module developed and designed with personal his work experience, towards TQM-Total Quality management.

Has over 40 years of varied experience in organisations Govt of India, multinational companies in the field of personnel/IR, Human Resources Development. After coming out of service from Govt and as a Corporate Manager HRD from MNCS', he has settled in the field of HRD and Training. He is currently the Director of Institute for Knowledge Potential Management (IKPM) a centre for imparting training/workshops thro "**Experiential Learning**".

**Achievements** Considered to be renowned '**Trainer**' and has trained more than 20,000 employees covering all levels Operatives, Executives, Sr.Executives etc. Covering many corporate companies, small and medium enterprises.

- Specialist in Organisational Behaviour, and his pioneer programmes include Total Employee Involvement, Strategic usage of Emotional Intelligence for effective supervision / Team Building, other OD interventions.
- Has conducted over 200 workshops / training programmes for MNCS' corporates and SMES, Institutions Supported Programmes, Colleges.
- Has presented many innovative Research Papers in National and International conventions, on matters relating to HRD towards TQM.
- Visiting Faculty for Anna University, Chennai, Tamil Nadu.
- Visiting Faculty for SRM University, Chennai, Tamil Nadu.

The last Research paper was for the ANQ at New Delhi in 2004 on Total knowledge Management for TQM. (TKM for TQM) Has published many research articles for Journals on matters relating to HRD/TQM.

**Recipient of the following awards** in recognition of his services rendered.

- (1) Life Time Achievement Award from United Writers Association, for the excellent services rendered in HR towards National solidarity given by Dr.Rakesh Mohan then Director of ICRE-Min of Finance Govt. of India.
- (2) Managerial Excellence Award in recognition of services rendered in the field of HRD given by Dr.Arun Nigavekar, Chairman, University Grants Commission, New Delhi.
- (3) Rashtra Prathiba Award from Integrated Council for Socio Economic Progress, New Delhi, recognizing outstanding services, achievements, excellence in the chosen field.
- (4) Rajiv Gandhi Excellence Award from International, Peace and Friendship Society, Bangalore, India for outstanding achievements (Excellence in HRD & Training given by Hon. Minister of State for Planning, Govt. of India, New Delhi.
- (5) Noble Achievers of India Award from 21st Century Publishers, New Delhi recognizing matchless contributions, laudable services achievements / Excellence in the sphere of HRD/Training.

### **Fellowship:**

Fellow of National Institution of Quality & Reliability, Chennai, Tamil Nadu, India.

Member of the 'Advisory Board for Centre of Excellence in Total Quality Management SRM University, Chennai, Tamil Nadu, India in collaboration with Takai University of Japan.

Executive Member and Member of many professional bodies like National Institutions for Quality reliability. HQ, Chennai, Tamil Nadu, India, Quality Circle Forum of India, Chennai, Tamil Nadu, India, Indian Society for Training & Development, Chennai, Tamil Nadu, India, HRD Network, Chennai, Tamil Nadu, India, National Institute for Personnel Management, Chennai, Tamil Nadu, India, Madras Productivity Council, Chennai, Tamil Nadu, India.