



Motivation of quality practitioners

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OVERVIEW

A job diagnostic survey of quality practitioners has revealed serious motivational problems. These are described and possible improvements are discussed.

THE PROBLEM SITUATION

The future of the quality movement lies in continuous improvement of people as well as processes. In this paper we planned to describe a motivation improvement program which would help quality practitioners to shape the future by improving the motivation of their internal customers, who are software developers. We were to include a short report on a survey of the motivation of quality practitioners themselves. The problems revealed by this survey are so severe that we have decided it is more important right now to alert the profession to its own motivational problems.

Throughout the journey towards total quality management (TQM), the quality practitioner is expected to be an agent of change. To start with, quality practitioners are responsible for changing attitudes, for introducing quality as an issue throughout the organisation. Later, work on conformance to procedures tends to cast them in the role of policeman. This makes it difficult to progress to TQM, working to change behaviours and shape the future.

Quality practitioners have the job of motivating for quality. They must sustain their own enthusiasm for quality in the face of disinterest, ambivalence and hostility from those who ought to change. Resistance to change can be used productively. Debate, even conflict ensures that proposed changes are viable.

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The challenge is to sustain an enthusiasm for quality and improvement while coping with the stress of designing and implementing change. For this we require highly motivated people. Where should this motivation come from? Figure one shows how the quality team OUGHT to relate to senior management and to its customers. Our survey indicates that IT quality practitioners lack support and recognition from senior management. They must rely on their personal conviction to sustain their motivation for quality.

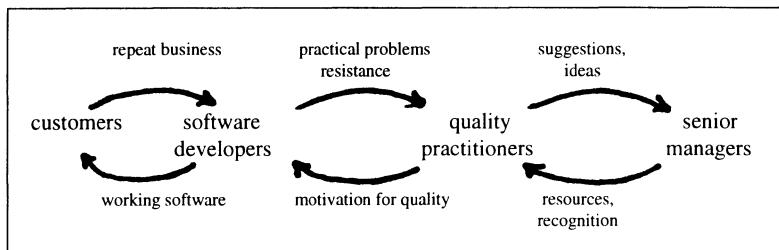


FIGURE 1 - RECOMMENDED RELATIONSHIPS

HOW THE SURVEY WAS CONDUCTED

This survey was conducted by Software Futures Ltd. for the Quality Forum[1], using the Job Diagnostic Survey (JDS) developed by Hackman & Oldham [1]. The JDS is not a psychometric test. Differences between people are not at issue. JDS asks very direct questions so it is important that the respondent is motivated to answer truthfully. This is achieved by guaranteeing confidentiality, reporting on groups rather than individuals.

Sixty-nine people from 43 organisations completed the questionnaire. Half were completed by members attending the Quality Forum's September 1994 conference, the rest by members requesting the JDS by post. Responses were analysed using STATGRAPHIC. The findings reported here as 'significant' have been compared with seventy-four UK software developers who were known to be demotivated, and with Couger & Zawaki's [2] data on US systems analysts and DP managers. These were severe tests of significance.

The JDS questionnaire has been used with several thousand people in many different professions. With such extensive calibration it is unlikely that there are any remaining problems with the instrument itself. The questionnaire provides 21 measures of an individual's motivational situation. These are defined in the appendix one.

THE HACKMAN & OLDHAM MODEL OF MOTIVATION

JDS derives from Hackman and Oldham's Job Characteristics Model [1]. This model (Figure 2) concentrates on the relationship between the person and the job. Six measures describing the motivating features of a job are called Core



Job Dimensions. They are aggregated into a measure called Motivating Potential Score (MPS). Two measures describe the person's motivational preferences. They are aggregated into a measure called Growth Needs Strength (GNS).

The match between a person and their job produces an internal psychological situation which is quantified by three measures, the Critical Psychological States. These in turn influence the outcome, a person's satisfaction with their working situation. Eight measures describe levels of satisfaction. If there is an optimum match between the MPS of the job and the GNS of the person, then the individual is likely to be satisfied and hence highly motivated.

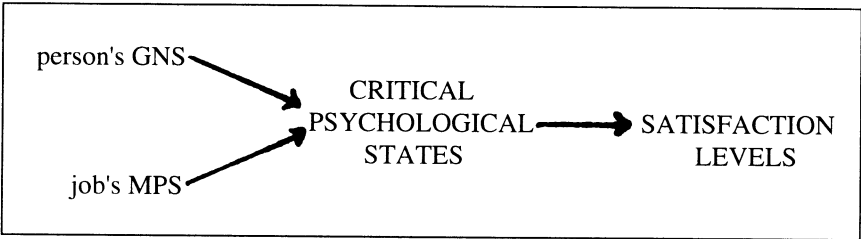


FIGURE 2 - JOB CHARACTERISTICS MODEL (after Hackman&Oldham)

As with the instrument itself, the conditions for optimum match have been carefully calibrated and have remained robust over many years. The strength of this model is that it is simple enough to be used effectively whilst being comprehensive enough to detect a wide range of motivational problems.

SURVEY RESULTS

Job Match

The average growth needs strength of quality practitioners was high, though it varied widely between individuals. IT staff are known to have the highest growth needs strengths of any profession. The average value for the motivating potential of their jobs was not particularly low, but this average tells us very little about the motivational situation of the individuals concerned because there was such a wide range of motivating potential in the jobs.

Figure 3 shows the relationship between the motivating potential scores (MPS) of the jobs done in the quality function and the growth needs strengths (GNS) of the quality practitioners doing them. Each cross on the graph represents one person. The results show a fairly uniform spread of values along both axes.

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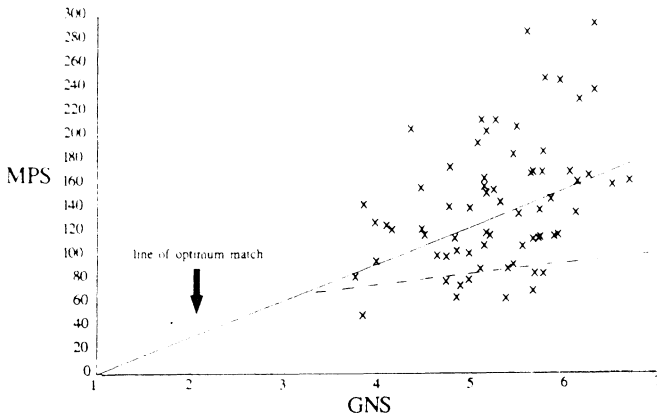


FIGURE 3 - MPS VERSUS GNS FOR QUALITY PRACTITIONERS

If person and job are well matched, the cross is near the line of optimum match. Those well above the line find their job too demanding. Those well below are usually demotivated because their job is not demanding enough. In our experience people below the dotted line move to another job within the year. Ideally people with high growth needs strength would do jobs with the higher motivating potential. No correlation between MPS and GNS was found. Around 30% of the quality practitioners surveyed found their job too demanding, while 28% found their job to be not demanding enough.

Autonomy and Feedback

Autonomy contributed more than usual to the motivating potential of the quality practitioners' jobs yet task significance, job feedback and people feedback were low. The freedom of choice which we associate with autonomy is only desirable if people know how to use that freedom. To make good choices and enjoy making them, we need to know what is important and to learn which actions are effective (through feedback from people, or from some aspect of the job itself). The results suggest that although quality practitioners have autonomy, many need more information to help them decide what to do and how to do it.

Job Security

Satisfaction with job security was extremely low. Figure 4 compares a representative sample of quality practitioners with software developers, many of whom were known to be demotivated. These fears about job security were uniformly spread over all demographic groups. No one company contributed significantly to the result and so we are not looking at the effect of impending reorganisation. Half of the quality practitioners were so concerned about job security that they were outside the normal range for this measure.

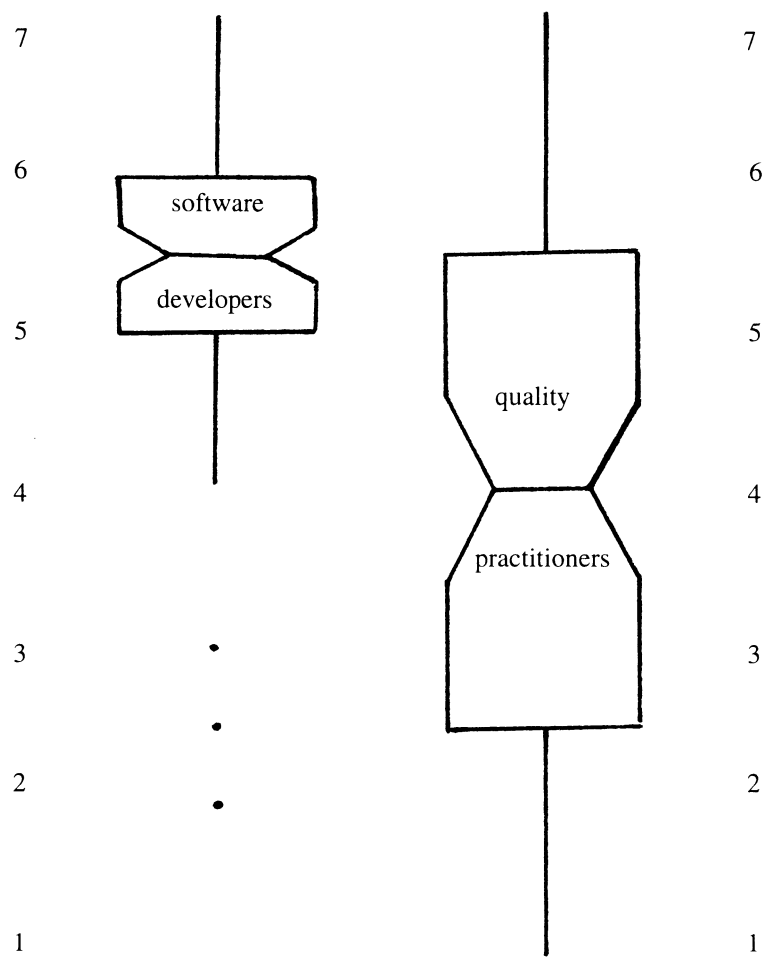


FIGURE 4 - BOX PLOT OF JOB SECURITY, COMPARING QUALITY PRACTITIONERS WITH SOFTWARE DEVELOPERS

Demographics

The following demographic data was collected:

- AGE | 20-29 | 30-39 | 40-49 | 50+ |
- EDUCATION | school or further education | first degree | higher degree
- GENDER | male | female |
- MARKET SECTOR | financial | IT services | public manufacturing | other |
- POSITION | undefined lanalyst/consultant | manager |



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Each demographic variable was examined to see if it had an effect on any of the twenty-one motivational measures.

Level of Education

There was no significant difference between the measures for those with or without a first degree. Skill variety and people feedback were both significantly higher for those with a second degree, while task identity was significantly lower.

Age

Age was significant for several motivational measures. Quality practitioners in their twenties were different from those in their forties. Results for the younger group showed:

- jobs with lower task significance,
- people with greater would-like growth needs,
- resulting in lower experienced responsibility.

Those in their forties experienced more meaningfulness than those in their twenties or thirties.

Market Sectors

In general the motivational situation was uniform across market sectors. The only exception to this was that pay satisfaction was significantly lower in the IT services sector. Perhaps people in this sector have higher expectations with regard to pay, or perhaps the problem lies in the differentials, quality practitioners in IT services comparing less favourably with other IT staff in their organisation.

Gender

Men and women were not significantly different in the motivating potential of the jobs that they did, or in their growth needs strength. Women reported significantly greater satisfaction from their dealings with others, which is as expected.

Management Responsibilities

Managers were not significantly different from analysts and consultants except that the managers reported significantly higher skill variety in their jobs. This result is not surprising.

THE WAY FORWARD

If they have senior management support, quality practitioners are not aware of it. Job security and the motivation for quality would be resolved if a quality policy were deployed as described in TICKIT. It is not enough to state the quality policy on page one of the quality manual. Where there is a quality

culture, quality practitioners are valued. Clearly deployment does not always happen or quality practitioners would not be so concerned about job security.

Obtaining BS5750 accreditation should be just a milestone on the journey to the type of advanced total quality management described by the European Federation for Quality Management. The emphasis on training for quality practitioners should shift from procedures to people. Quality teams cannot be expected to progress this journey unless they have the tools to make deeper changes. The JDS is one such tool. An implementation is described in appendix two.

Quality practitioners are responsible for providing the information which their internal customers need to assess the quality of their work. Equivalent support is required for quality practitioners so that they can assess the quality of their own work.

Many quality practitioners are concerned because their job is unduly demanding. Many are worried about job security. We cannot expect people who face such serious motivational problems to push the drive for quality until we achieve total quality management. In the words of the guru Demming [4]: **'Drive out fear.'**



APPENDIX ONE

JDS MEASURES DEFINED

MEASURES OF MOTIVATING POTENTIAL

Motivating Potential Score (MPS). A score reflecting the potential of a job for eliciting positive internal work motivation on the part of the employees. Motivating Potential Score is derived from the following six Core Job Dimensions.:

Skill Variety. The degree to which a job requires a variety of different activities in carrying out the work and which involve the use of a number of skills and talents of the employee.

Task Identity. The degree to which the job requires the completion of a "whole" and identifiable piece of work - that is, doing a job from beginning to end with a visible outcome.

Task Identity. The degree to which the job has a substantial impact on the lives and work of others - whether in the immediate organisation or in the external environment.

Autonomy. The degree to which the job provides substantial freedom, independence and discretion to the employee in scheduling his or her work, and in determining the procedures to be used in carrying it out.

Feedback from the Job Itself. The degree to which carrying out the work activities required by the job results in the employee obtaining information about the effectiveness of his or her own performance.

Feedback from People. The degree to which the employee receives information about his or her performance effectiveness from supervisors or co-workers.

MEASURES OF GROWTH NEEDS

Growth Needs Strength (GNS). This scale taps the degree to which an employee has a strong versus weak desire to obtain growth satisfaction from his or her work. It is derived from the following two measures:

Would-like Growth Needs. An individual's preference for individual motivational elements in his or her work.

Job-choice Growth Needs. An individual's choice between different motivational elements.

MEASURES OF CRITICAL PSYCHOLOGICAL STATES

Experienced Meaningfulness. This scale is a measure of how worthwhile or important the work is to the employees.

Experienced Responsibility. This scale measures the employee's beliefs that they are personally accountable for the outcomes of their efforts.

Knowledge of Results. This scale measures the employee's beliefs that they can determine, on some fairly regular basis, whether the outcomes of their work are satisfactory.

MEASURES OF SATISFACTION WITH A MOTIVATIONAL SITUATION

General Satisfaction. An overall measure of the degree to which the employee is satisfied and happy in his or her work.

Growth Satisfaction. The degree to which the organisation meets the needs of the employees to grow and develop as people.

Internal Motivation. The degree to which the employee is self-motivated to perform effectively in the job.

Pay Satisfaction. The degree to which the employee believes that his or her pay is equitable.

Security Satisfaction. The degree to which the employee feels secure in the organisation.

Social Satisfaction. The degree to which the organisation meets the needs of the employee to interact with other employees.

Dealings with Others. The degree to which the job requires the employee to work closely with other people, whether other organisation members or the organisation's clients.

Supervisory Satisfaction. The degree to which employees are satisfied with their supervisors.

APPENDIX TWO

USING JDS TO MOTIVATE OTHERS

As we move towards TQM, the quality practitioner is increasingly required to consider people as well as processes. The Motivation Improvement Program (MIP) developed by Software Futures Ltd. is one of the tools used to address human factors. MIP uses an enhanced version of the JDS to work with teams of IT staff. Analysis is focussed on identifying vicious circles where several problems interact to prevent people from achieving permanent improvement.

MIP is split into four phases:

1. Survey and analyse the current motivational situation.
2. Diagnose problems and discuss feedback with the team.
3. Design and implement a motivation improvement plan.
4. Follow up after six months to assess improvements and make adjustments.

In phase one the main task is to convince team members that their responses to the JDS are kept in the strictest confidence. JDS should not under any circumstances be used for staff appraisal.

Initially people are skeptical about the likelihood of such a method discovering the source of their motivational problems, let alone making real improvements. By the end of phase two they are already making their own improvements in advance of an official improvement program. This seems to happen because they now have the language and the permission to discuss motivation in more concise terms.

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