

Research into the behavioural aspects of performance measures

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Abstract

This paper describes research that has been carried out to investigate the relationship between workplace behaviour, performance measurement and reward systems. One of the outcomes of the research is a charting technique that can be used to assist managers in improving the workplace environment to support functional behaviour. The chart was constructed using a number of theoretical models that relate the alignment of the performance metrics, rewards and organisation purposes to the behaviour of individuals or groups. It includes a motivation model which is used to assess the motivational force of the individual in the particular situation. Experimental work is continuing to examine the effectiveness of the chart and an early case-study investigation inside a manufacturing company is described in the paper.

Keywords

Performance measures, behaviour, motivation, consequences chart

The original version of this chapter was revised: The copyright line was incorrect. This has been corrected. The Erratum to this chapter is available at DOI: [10.1007/978-0-387-35321-0_72](https://doi.org/10.1007/978-0-387-35321-0_72)

1. INTRODUCTION

The paper is based upon research supported by the Engineering and Physical Sciences Research Council concerned with the behavioural consequences of performance measurement. The research forms one third of a larger project concerned with the design of performance measurement systems and is collaborative with the Universities of Strathclyde and Liverpool who are researching the organisational and informational aspects of performance measurement. In the research the primary concern was with performance goal directed behaviours that involved a set of physical actions carried out in the workplace. A task approached from a performance goal orientation involves individuals primarily concerned with demonstrating their competency either to themselves or others by behaviours that will result in or exceed expected standards of performance. This research was not aimed at behaviours directed to a learning goal orientation, Dweck (1986). For performance goal directed behaviours we considered that the performance measures and targets define the direction and organisational expectations of the behaviours. Once the individual has completed the tasks they may get some re-enforcement by extrinsic rewards provided by the organisation or intrinsic rewards depending upon some internal value system.

There are many possible ways that behaviour can be dysfunctional and similarly many causes of the dysfunctional behaviour. In this research we have grouped these causes into three types of system variables. The first is concerned with the efficiency of the organisational performance systems and how the organisation has constructed their measurement, rewards and purposes to be mutually supportive of each other. The second is concerned with the situational variables that influence the individual or group in the workplace. The third part is concerned with how the individual or group interprets the situational variables and organisational systems and then chooses to behave. This third part of the model makes use of motivation theory.

In this research we have tended to place more importance to the situational factors such as job requirements, feedback mechanisms, role clarity etc and also the organisational systems rather than individual personality characteristics. In the workplace we often see groups of people behaving in rather similar ways. For example, in a manufacturing company 'Pacing' is common; this is where a deliberate slowing down of the work output takes place to maintain the image of being busy. If a group of people with different personalities are exhibiting some common behaviour patterns it seems likely that their organisation is giving them a particular message about what they should do, and/or the situation the people are in is encouraging a particular pattern of behaviour.

To assist the organisation analyst we have developed a simple chart that we call the consequences chart. It acts as a stimulant for thinking enabling the behavioural analyst to gather information from people and groups to determine if there is some mismatch between the way the management and the individual or group are interpreting their working environment.

It is not difficult to change behaviour patterns in the organisation by means of the performance control system although there are dangers because many subsidiary and unexpected behaviours can result as the consequence of a change. For example, in our case study company a reward system was attached to prompt timekeeping in cell based teams. Time-keeping was monitored by a coloured dot system that was easy for everybody to understand and was very visually displayed in the cells. The rewards for good attendance and the resulting punishments for poor attendance greatly increased the good time keeping behaviour but at the expense of some alienation which resulted in other less satisfactory behaviours.

2. THE THEORETICAL MODELS

The misalignment between measures, rewards and company purposes has been researched by Hopwood (1974) and subsequently by Otley (1977). In their model the behaviour formally measured by the performance control system in an effective system will be congruent with and part of a set of behaviours to achieve the organisation purpose. It is possible that the measured behaviours are not aligned to purpose then the behaviour that results will be dysfunctional from an organisation perspective. The individual or group in the organisation will have their own goals and will carry out behaviours to meet these goals. The set of behaviours rewarded by the performance control system pulls the individual or group behaviour so that only the individual behaviours valued by the organisation will be rewarded. According to Otley the most effective system is where the behaviour actually carried out is formally rewarded and controlled and is in alignment and congruent with the behaviour required to meet the purpose of the organisation.

The pulling effect in the Otley model we have represented on our chart as a motivational force and the outcomes obtained by behaving to meet the measures should hopefully have high 'valence' for the individual or group. The force driving behaviour in a particular direction has been defined in a variety of motivation models. Typical well known models have been defined by Vroom (1964) and Lawler and Porter (1967). One meta-model, combining the features of many other models, based upon negative feedback loops, has been derived by Klein (1989). We have used this model as the basis for defining the situational variables influencing the force to complete a task and achieve the desired results. The situational variables that we have used are defined in Table 1.

In many respects these variables will be added to and may be modified as we gain more experimental experience. Each situational variable, in itself, is complex usually existing in many forms. For example, there are many forms of rewards from size of the office to a complement from a manager to an internal feeling of having done a good job. We are primarily concerned with what the individual or group perceives as the most significant rewards and the consequences chart is a checklist of issues and questions to help us in gaining this understanding.

In the Klein model people behave in some way to meet a performance goal that has a desirable end result. There is then a comparison of the achieved performance

against some standard probably defined in terms of performance targets. Depending upon the comparison process the person may judge the value of achieving the goals, may ignore the error, or may make some unconscious scripted response compatible with historic learnt patterns of behaving. Alternatively the person may intensify behaviour to raise the performance standard. The model is shown on the chart as a flow diagram and it is used by the analyst to determine the individual's preferred pattern of behaving in response to their interpretation of events.

When all these variables have been collated together what sort of behaviour patterns can result? Researchers such as Ashforth and Lee (1990), Jaworski and Young(1992), Merchant (1985) and Porras and Hoffer (1986) have grouped repeating patterns of behaviour, particularly those considered to be inappropriate organisational behaviours, into descriptive families. Many managers recognise these patterns. As described previously a typical one is 'Pacing'. A list of desirable and undesirable behaviour classifications have been prepared in this research and by using the literature and case study material the situational variables that could contribute to these behaviours have been identified and recorded.

3. USING THE CONSEQUENCES CHART

One of the first case studies using the chart in an industrial environment was carried out in a company that employs 350 people and manufactures engineered products on an engineer-to-order basis. The consequences chart was applied in one business unit of this company, the Spare Parts Division. This consisted of three teams, with six to eight people in each team. They were self-contained teams each accountable for their own performance and with good control over the inputs and outputs to the tasks. The membership of the teams was long established and there had been few new members during the previous five years. In addition, the manager of the division was seen as relationship focused and was a highly respected people-manager. Each team had very clear performance targets and pay was related to the achievement of the targets. The reason for selecting this business unit was to gain some impression of the predictive capability of the consequences chart in terms of individuals in the teams and business unit as a whole and to see whether the chart contained all or most of the important situational variables influencing behaviour.

The results showed that the targets were very important to the team membership and rewards and measures were closely aligned to targets. Everybody was very clear about what they were expected to do. However, there was a perception in some managers that there was relatively little innovation in the Division. There was something missing in this alignment, because certain positive behaviours that we suspected would really be important to meet purpose were not

Table 1 The variable used on the chart.

| Variable | Situational Variables | Perceptions |
|---|--|-------------|
| 1. Control over Performance [COP] | Does the person feel in control over their own performance? | |
| 2. Clarity of Role [COR] | Does the person know what they are supposed to do? | |
| 3. Ability and Knowledge [A&K] | Does the person have sufficient knowledge to complete the task? | |
| 4. Motivation Factors [MF] | Does the person feel highly motivated and do they have a high drive to succeed? | |
| 5. Hygiene Factors [HF] | Are the physical conditions appropriate to the behaviour? | |
| 6. Recognition for Performance [RP] | This is similar to MF but is aimed at determining if the person feels recognised. | |
| 7. Sanctions for Poor Performance [Sanction] | How does the person feel they are treated if their performance is considered below standard? | |
| 8. Speed of Feedback [Timing] | Is feedback rapid and related to the tasks carried out? | |
| 9. Feedback from Task [FT] | Does the person get intrinsic feedback from the task itself? | |
| 10. Feedback from Peers of Managers [FM] | Who gives the feedback and what type of feedback is given? | |
| 11. Task Variety [TV] | Is the tasks varied and making good use of skills? | |
| 12. Task Identity [TI] | Can the person identify with the work? | |
| 13. Task Significance [TS] | Does the person perceive that their work has significance for themselves and the organisation? | |
| 14. Autonomy [A] | Can the person exercise some autonomy and do they value autonomy? | |
| (variables 9-14 were derived from Hackman and Oldham's (1971) research) | | |
| <u>In addition the following organisation variables are determined</u> | | |
| Management Style | What does the person perceive the style to be of the individual giving rewards? | |
| Organisation Culture | What does the person think the organisation culture is? | |
| Sub-Culture | What does the person perceive to be the culture of the group they belong to? | |

being encouraged, due to the rigidity of the targets which only resulted in a narrow definition of functional behaviour.

In this first case study attitude also seemed to be very important. Secord and Backman (1969) have defined attitude as certain regularities of an individual's feelings, thoughts and predispositions to act toward some aspect of the environment. It appeared that the situational variables were more important in defining an attitude set to performance related behaviour that was influencing the behaviour in the current task.

We have included a typical consequences chart for one of the teams in the Parts Division in Figure 1. In Figure 1 the shaded blocks represent the presence of the variables in the averaged team response. The chain lines on the process section shows the predominant decision path used by individuals in the team and at the bottom of the diagram the shaded area shows the predominant behavioural style in the individuals in the teams.

In the Parts Division interviews were held with the manager, the team leaders and two thirds of the membership of all the teams. The interviews were carried out over two days and were recorded, the tapes being later converted into transcripts. Most of the team members identified the important parameters that they felt influenced their behaviour. The combination of variables was as follows:

Management Style: The management style of the divisional manager was described by team members as 'participative and selling' rather than directing.

Culture: Each participant described the culture in the Part's Division as a team culture. This was unusual in the overall business. The most common description by team members in other parts of the business was that the teams were in a power culture. In Parts they perceived that everybody in the team was equally involved in its work programmes.

Measurement and Reward System: The measurement system consisted of financial targets which were then transformed into orders taken (input) and sales delivered (output). The targets primarily related to the overall team performance and individuals within the teams were not measured. However, each team member was well aware of their contribution to the overall performance of the team. The team members had been together for a considerable time and were experienced and knowledgeable in the work. The interrelationship issues had primarily settled into some steady pattern only slightly disturbed when new members entered the teams - which was rare. The targets were set by the host company and were seen as being difficult but not unachievable.

Feedback: Feedback was received daily in terms of the performance in meeting the input and the output measures and the gap in meeting the targets was displayed on the board. The other main source of feedback was from the twice weekly meetings to discuss the targets. The meetings discuss ideas for improving current work and new ways to increase sales.

Job Design : The teams work together very closely and all the participants felt that they had high levels of autonomy and variety in their job. Although none of them was responsible for a complete programme of work they could each see how everyone contributed to a sale and therefore to meeting the targets.

4. CONCLUSIONS

In our interviews with company personnel we have found that the behaviour of the individuals in response to targets, measures and situational variables may be functional in that the targets are met but may still be dysfunctional because the targets are not aligned to a useful purpose of the company. People in the Parts Division teams worked single-mindedly towards meeting the targets, sometimes without question. They knew that their ability to meet the targets determined how they were perceived in the company. The question whether these targets are right and have been correctly defined wasn't raised by the team members.

From the early discussions in the Part's Division we can draw some conclusions related to the variables shown on the consequences chart, namely:

- If there is alignment between measures and rewards then it produces a consistent message to the individuals about what the organisation values. The desirable direction of behaviour from the organisations perspective is formally set by the measures and the reward system- emphasising the achievement of those measures. The magnitude and type of reward is most commonly perceived through the action of the manager or appraiser of the individual or team.
- Most of the variables shown on the chart are important influencers. However, in the Parts Division study personality factors that may have resulted in other behaviour patterns did not appear. The clear performance targets ruled out direct and obvious alternative ways of behaving.
- The behaviour can be desirable in that it is meeting the demands of the formal measurement system and role expectations but undesirable in corporate financial or strategic terms. This is particularly true if the targets are not aligned or supportive of the overall business strategic aims. For example, a target may be to maximise production which ends up simply as increasing the stockholding in the company.
- In the Part's Division the managerial style was delegating and selling in nature and reflected the fact that the team membership had been together for a long time and was highly experienced.

This is an early experiment, more will be carried out in the near future in particular concentrating on perceived dysfunctional teams. The consequences chart is now about to be tested at other industrial sites to determine its predictive capability.

The tests will be to further refine the chart and simplify its use if possible. Eventually we hope to be able to use the chart in two different ways:

1. To determine if the situational and organisational variables are mutually reinforcing.
2. To determine the state of the variables helping to identify the sorts of behaviour patterns occurring in the company.

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