The effect of introducing working practices consistent with the concepts of organisational learning on employee motivation

Richard Remedios and Nicolas Boreham, University of Stirling, Scotland

Introduction

Although theorists have argued that organisational learning is beneficial to employees because it increases feelings of inclusiveness and autonomy (for example, Senge 1990), little direct evidence exists to either refute or support this claim. Researchers in the field of intrinsic motivation provide some indirect support in that they have consistently shown a positive relationship between perceived autonomy and measures of self-reported interest and enjoyment and persistence (for example, Swann and Pittman 1977). The current study took place in a UK petrochemical company where new working practices consistent with the practice of organisational learning had been implemented. However, some of these new working practices also contained an element of performance whereby employees had to attain either a personal or an industry-defined standard. Research has shown that anticipating evaluation undermines intrinsic motivation (for example, Harackiewicz, Manderlink & Sansone 1984). Thus although the new working procedures contained elements that theoretically enhanced autonomy they also contained elements that potentially created a pressure to perform well. To examine how the new working practices affected employees, they were interviewed to elicit their experiences.

The subsequent analysis adopted a hypothesis-testing approach. To assess overall motivation, interview comments were categorised as positive, neutral or negative. Frequency counts of these statements were used to determine whether statement categories significantly differed from one another. Also, using the concepts of autonomy and pressure as guidelines, each working practice was a priori assigned a motivational ranking. The frequencies of positive and negative statements were matched to examine how well actual statements matched the hypothesised ranking.

Background to study

The study formed part of the three-year European Framework V research project ORGLEARN in which the practice of organisational learning in petrochemical companies in four European countries was researched. To enhance knowledge sharing and continuous improvement, a company in the UK (Company A) had implemented a series of organisational learning initiatives. A summary of these working practices and their potential motivational impact is as follows.

In the *Systematic Approach* (SA), employees are encouraged to work independently in teams to solve problems encountered in the workplace. Any employee can initiate the SA whenever an incident occurs or an employee encounters a difficulty. When this happens, the employee calls a meeting with all employees involved in the task or situation concerned. In this meeting, the employees identify the source of the problem and agree a new set of procedures. The introduction of SA was intended to replace the following of fixed procedures by a more pro-active and participatory approach, so that if employees felt that there was a problem, they would be empowered to try and solve it. In our study, SA was assigned the highest motivational ranking because it afforded high autonomy and low pressure to perform well.

The Procedures and Competence Development Methodology (PCDM) initiative was brought in to engage process operators in writing the standard operating procedures which specify how major tasks are to be carried out, for example shutting down a part of the plant. The methodology for PCDM is highly structured and, in a similar fashion to SA, the initiative is triggered whenever an incident occurs or any employee recognises an error in procedural protocol. The crucial difference (in terms of motivation) between SA and PCDM is how stringently PCDM protocols are applied. Once a specific operating procedure has been adopted, it then becomes potentially a disciplinary matter not to follow it. Thus, whilst PCDM does encourage employees to use their own initiative, the stringency of application of the protocols may potentially undermine motivation. PCDM was assigned the second highest motivational ranking because there was the possibility that the stringency with which these procedures were applied may undermine autonomy.

Tasks and targets (TAT) was an initiative in that the line manager sets each employee a range of individual objectives in addition to his or her regular duties (for example, promoting safe practice in a particular field of activity across the site). These targets were linked to pay so that the more targets the employee reached the more they were paid. TAT was assigned the second lowest motivational ranking because, although these targets may be negotiated, individuals may feel some pressure to attain their targets.

Benchmarking is the practice whereby company A matches its performance against industry standards internationally. This initiative had the lowest motivational ranking because the global industry norm against which the employees' performance was matched was highly competitive.

Hypotheses
- Overall, because the SA, PCDM and TAT were broadly autonomy supportive, it was hypothesised *a priori* that workers would make significantly more positive statements than neutral or negative statements.
- Our *a priori* ranking for the various initiatives would match the actual rankings of positive and negative statements
- Overall, statements would be largely based on autonomy rather than competence.

Methods
Participants   18 employees at company A were randomly selected to take part in this study. Average working time at company was 24.8 years. Ages were not recorded.

Design and Procedure   In the first stage of the analysis, two researchers from the ORGLEARN research team conducted semi-structured interviews with employees. Although several topics were covered, four specific questions in the interviews related directly to the four working initiatives – for example, 'Company A has introduced the Systematic Approach/PCDM/Tasks and Targets/Benchmarking. Can you tell a little about your experiences with these methods?' All employees signed a consent form to allow the interviews to be taped and agreed that the results could be published anonymously.

The statements from the interview transcripts were grouped by initiative (SA, PCDM, TAT or Benchmarking) and classified in terms of whether they represented a positive, negative or neutral experience. These statements represented the measure of motivational satisfaction. Statements were also categorised as either regarding autonomy or competence. All statements were included in the analysis even though this meant that if one participant made several responses to an initiative, all these responses were included in the final tally. The frequency of each response was entered into a grid. These frequency scores were then analysed using the appropriate non-parametric statistical tests to determine whether there were significant differences in employees' motivational responses to the various initiatives.

Results
Motivational satisfaction
Motivational statements towards the different working initiatives were firstly categorised as positive, neutral and negative. The total number of statements was 71 and the break down by training initiative appears in Table 1.

Table 1: Number of positive, neutral and negative statements made about the training initiatives employed by Company A.

	Systematic Approach	PCDM	Tasks and Targets	Bench marking	Totals
Positive	14	10	9	4	37
Neutral	3	5	4	3	15
Negative	1	5	7	6	19
Totals	18	20	20	13	

Table 1 shows that similar numbers of statements were made about each of the training initiatives. The first research question we addressed was whether or not employees made significantly more positive statements about the initiatives relative to neutral or negative statements. Using the totals as frequencies, a chi-square analysis revealed the difference in the frequency of the three statements to be highly significant ($\chi^2(2) = 11.61$, $p < .005$)[i]. We next examined the difference between the number of positive statements and firstly neutral statements ($\chi^2(1) = 9.31$, $p < .005$) and then negative statements ($\chi^2(1) = 5.78$, $p < .05$). Both were significant.

Table 1 also shows that our hypothesised ranking of the four initiatives by positive statements matched the ranks of the actual number of positive statements. To examine this statistically, because our sample size was so small, we used Kendall's τ-b procedure. Although there was a 100% match across ranks, with only n=4 this relationship was just significant ($r = 1$, $p < .05$). For the negative statements, as expected, the SA yielded the fewest negative statements. However, there were as many negative statements about PCDM as there were about Benchmarking. Unsurprisingly, the relationship between negative statements and ranks was not statistically significant.

Motivational category
We also wanted to examine what types of statement employees were making about the initiatives. Our hypothesis was that organisational learning should create greater feelings of autonomy so this should be reflected in the nature of employees' statements. Disappointingly few statements were observed (n = 26) and the break down of these appears in Table 2.

Table 2: Motivational category by training initiative.

	Systematic Approach	PCDM	Tasks and Targets	Bench marking	Totals
Autonomy	3	3	4	1	11
Competence	1	1	5	8	15
Totals	4	4	9	9	

Table 2 shows that, contrary to hypothesis, there were more statements about competence than autonomy, though the difference was not significant.

Discussion
In terms of the four *a priori* hypotheses, the results revealed the following. Firstly, in line with hypothesis, employees did make significantly more positive statements about their working practices relative to neutral and negative statements. Secondly, the hypothesised ranking by working initiative for positive statements was supported but the hypothesised ranking for the negative statements was not. Thirdly, for the comments about autonomy and competence, contrary to expectations, there were more comments made about competence than autonomy but this difference was not significant. We deal with each of these findings in turn.

Overall motivation
Our broad aim was to examine motivation and in this regard the results supported a conclusion that employees were generally content with the new initiatives, especially SA and PCDM. Moreover, analysis of the statements suggest that employees were making statements of intention, that is, they were talking about an activity not just as something they have used in the past and enjoyed/valued, but something they *will* use in the future and are happy to do so. The exception was Benchmarking where comments were of the type: *You do get a bit fed up of listening about Benchmarking, because they just seem to move the goalposts to suit whatever they want. It's a Benchmark. That's the way it comes over to me.* [Employee 3].

Note that with these statements, there is still the intention to meet the company's objectives of using the practice of Benchmarking, but employees seem resentful of having to do so. Thus, whilst they are operationally

compelled to use the practice, motivationally, the attitude is more 'because we have to' rather than 'because we believe it is a good system'.

Motivational responses by working initiative

The second set of hypotheses concerned the *a priori* ranking of the training initiatives by positive and negative statements. This hypothesis was supported for the positive statements but not for the negative ones. Another way to examine these rankings would be to consider the ratio of positive to negative statements. This would result in the following: SA (13/2 = 6.5) TAT (10/7 = 0.7), PCDM (9/5 = 1.8) and Benchmarking (4/5 = 0.8). Viewed in this way, SA remains by far the most positively received initiative, with PCDM second and TAT becoming as popular as Benchmarking. Thus, it is not so much that the Systematic Approach was received positively, it is more that both PCDM and Tasks and Targets were experienced negatively as well as positively.

So what were the causes of the negative statements? With PCDM, whilst there was the acceptance that it was good, there was also the exasperation that everything had to go through the process of PCDM (*You could have PCDM for going to the toilet, so it's lost its edge because it's everything.* [E9]). It was not that it was a bad procedure, it was just that employees' perceptions of this initiative were not always something they 'wanted to do' but seemed to be something they 'had to do'. The same explanation applies to TAT. Whilst employees accepted that these goals helped give direction, what was problematic was these goals were really goals the company *had* to give employees and employees *had* to accept (*But ... targets is slightly different, I think people see those just a burden* [E6]).

For Benchmarking, as hypothesised, employees generally disliked this practice. Although the statements were generally focused around being evaluated, the main complaint seemed to be that comparing Company A to an international standard was not a fair comparison (for example, *We're stretched now. How are we ever going to get to Division 1? Are these guys playing with the same ball, by the same rules?* [E5]). Thus it was not so much that the performance measure was pressurising, but that the standard was simply unfair.

Alternative explanations

Our motivational analysis suggests that in general, the working initiatives designed to promote organisational learning did motivate employees. However, it could be argued that the employees we interviewed were those left after a considerable downsizing exercise by Company A and thus it would only be reasonable to expect them to praise the new initiatives. This objection would be valid if there were very few negative statements but this was not the case. In addition, employees were not uniformly satisfied with the different initiatives; our analysis suggests a clear discrimination between SA and the other working initiatives. One possible way to assess the effects of being selected to remain at Company A would have been to also interview a selection of former employees who had also experienced the different new working initiatives.   Even using this procedure, however, differences between the groups could be accounted for on the basis that the non-selected group was unnecessarily negative.

Implications for knowledge sharing and knowledge enhancement in the workplace

So far, we have linked organisational learning and motivation, but we have yet to make the link between motivation and knowledge sharing. What evidence exists to suggest that a motivated workforce will engage in knowledge sharing?

Our claim is that by identifying how much enjoyment (in terms of positive statements) employees report towards the various initiatives, then this also reflects the likelihood they will engage with or pay attention to those initiatives in the future. Given that SA and PCDM are knowledge-sharing activities, high frequencies of positive statements would suggest that employees are more likely to use those activities in the future. For example, if an employee observes a non-optimal practice, their decision to address it via SA or PCDM may depend on how compelled or motivated they are to go through those sets of procedures. Reluctance to do so will result in their personal perception and the knowledge that could be generated by SA or PCDM not being shared. The same case can be made for TAT. TAT is an initiative where individuals take on extra tasks that

inevitably improve their knowledge of the business as a whole. If employees are not motivated to take on these targets, then they will lose the opportunity to learn.

However, our results suggest that it is not the autonomy or pressure afforded by a procedure that determines motivation, but the way the procedure is implemented. For example, the number and nature of the positive comments made about the SA suggests that promoting knowledge sharing using this approach was both popular and accepted. But why did this procedure prove to be more popular than PCDM? Our analysis suggests that the answer lay in the amount of procedural stages involved in PCDM. Employees praised PCDM almost as much as SA – the difference in number of positive statements between the two initiatives was non-significant – but what our analysis suggests is that the implementation of PCDM seems to have been applied, at times, too dogmatically. We suggest that this difference probably reflects the degree of 'want to' versus 'have to' emphasis on the two initiatives.

What is clear is that employees seemed comfortable with the SA and PCDM approaches and enjoyed disseminating and releasing their knowledge to others. In this sense, both these working initiatives were valuable in contributing to the knowledge-sharing capacity of the company.   However, removing some of the autonomy the PCDM procedure afforded compromised the potential success of these initiatives. To reiterate, we suggest that it was not the initiative that undermined autonomy, but how it was implemented.

The initiative of Benchmarking was the least positively received initiative. One of the criteria for judging an organisation a learning organisation adopted by the ORGLEARN project is that ' Learning from the environment is encouraged and systematically evaluated' (see Boreham and Morgan 2002 pp. 101). Boreham and Morgan (*ibid*) reported that 'Management are learning about the company's performance through extensive benchmarking...' (pp. 101). What our analysis suggests is that while management were able to assess the performance of Company A using an international benchmark, the effect this was having on employees was generally negative. What this suggests is that one person's learning may not always be beneficial to another person in the same company. Learning systems are not always independent and companies need to consider how the different systems may interact with other learning initiatives. Again, companies need to make a cost-benefit decision, in this case, was the cost of achieving more information beneficial to the workforce overall. Our analysis suggests that at the motivational level, it probably was not.

Conclusions

Our analysis of SA, PCDM, TAT and Benchmarking suggest that these initiatives did promote knowledge sharing and learning but that the degree to which these outcomes were likely were underpinned by the *way* the initiatives were presented. Intrinsic-motivation theory has provided a considerable literature that has identified the fragility of human experience in terms of feelings of autonomy and competence. Aligning these findings with operational procedures should help to ensure continuing employee motivation and concomitant benefits to knowledge sharing and learning.

References

Deci E L (1975) *Intrinsic Motivation*, New York, Plenum Press.

Boreham N and Morgan C (2002) 'Cases of organisational learning in company U (United Kingdom)' in Fischer M and Roben P (eds) *Cases of organisational learning in European chemical companies: An empirical study* University of Bremen: Institut Technik+Bildung(ITB) pp. 95-101.

Harackiewicz J, Manderlink, G, and Sansone C. (1984) 'Rewarding pinball wizardry: The effects of evaluation on intrinsic interest', *Journal of Personality and Social Psychology, 47,* pp. 287-300.

Senge P. (1990) *The fifth discipline: The art and practice of the learning organisation,* New York, Doubleday

Swann W B. & Pittman T S. (1977) ,'Initiating play activity of children: The moderating influence of verbal

cues on intrinsic motivation', *Child Development,* 48, pp. 1128-1132

---

[i] Because some cell totals were less than 5, we could not conduct chi-squared analysis to examine the interaction between initiative and motivational satisfaction.