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**AN EXPLORATION OF THE RELATIONSHIP
BETWEEN
LEARNING ORGANISATIONS
AND THE
RETENTION OF
KNOWLEDGE WORKERS**

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**AN EXPLORATION OF THE RELATIONSHIP BETWEEN LEARNING
ORGANISATIONS AND THE RETENTION OF KNOWLEDGE WORKERS**

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AN EXPLORATION OF THE RELATIONSHIP BETWEEN LEARNING ORGANISATIONS AND THE RETENTION OF KNOWLEDGE WORKERS

ABSTRACT

Knowledge is an important asset and strategic resource which organisations need. Organisations face the difficulty that knowledge, which it seeks to harvest, is produced, held and applied by its employees, as knowledge workers (KWs). KWs are recognised as having different needs within their workplace which should be reflected in alternative HR practices. The job satisfaction (JS) literature indicates a relationship between high JS and low turnover intention (TI) which will reduce voluntary turnover (VT). It is posited that implementing learning organisation (LO) processes not only supports knowledge development, but also develops the employee-employer relationship in such a way as to increase JS and reduce turnover. This study examines the link between LO processes and KW retention.

From a survey of KWs there is overall evidence of a relationship between LO disciplines and TI. All LO disciplines discussed correlate to at least one of the six JS facets measured and TI, of which the JS facets, Reward and Challenge, exerted the most significant influence. The paper concludes that careful management of LO processes could increase KW retention by recognising their specific differences and needs within the workforce.

INTRODUCTION

It is widely accepted that knowledge, coupled with the potential to transform that knowledge into improved actions, can provide organisations with a competitive advantage (Drucker 1964; De Geus 1997; Drucker 1998). Personal know-how and tacit knowledge are not stored within the organisation, but are held by the employees (Drucker 1999) whose use and application of this knowledge will differentiate one company from another. This has revolutionised the employee-employer relationship as knowledge workers (KWs) can leave an organisation and remove a key asset (Drucker 1999). Retention of KWs is, therefore, vital for organisations operating in this knowledge era and great effort has been put into, firstly, developing systems which will increase the effective creation and utilisation of knowledge and, secondly, understanding the mechanisms and concepts involved in retaining KWs.

Turnover intention (TI), the last cognitive step employees make in the voluntary turnover (VT) process (Steel and Ovalle 1984) has been shown to have a strong and consistent relationship with VT (Mathieu and Zajac 1990; Tett and Meyer 1993) and is often the only antecedent directly effecting actual VT (Miller, Katerberg et al. 1979). The literature suggests that research should focus on the direct and indirect influences on TI rather than actual VT (Dalessio, Silverman et al. 1986). What interests HR Managers is establishing processes that increase job satisfaction (JS), thereby reducing the loss of valuable knowledge assets (Lee et al. 1999; Carsten and Spector 1987; Mobley et al. 1978).

We posit that the development of learning organisation (LO) capabilities should enable an organisation to support such efforts. LO models are attempting to harness a potential for change achieved through increased knowledge in order to achieve competitive advantage via

transformational, not purely incremental, learning (McGill, Slocum et al. 1992). In order to do this certain input elements are developed which, it is argued, will develop radically new outputs (Senge 1990; Garavan 1997; Pedler, Burgoyne et al. 1997). Not only does the concept include elements which are aimed at providing an organisation with the capability to learn, but these elements should also lower the level of VT in an organisation, by increasing employees' level of JS.

It seems logical that there should be a link between LO Models and retention because the achievement of some of the theoretical elements found in such models should be increased JS, particularly in such a group as KWs. Elements in the models that could be considered likely to increase JS include Personal Mastery (Senge 1990; Gephart, Marsick et al. 1996; Dobson and Tosh 1999; Holt, Love et al. 2000; Larsen, McInerney et al. 2002); Team Learning (Senge 1990; Franklin, Hodgkinson et al. 1998; Grievies 2000; Snell 2001) and Shared Vision (Pedler, Boydell et al. 1989; Senge 1990; Simonin 1997; Goh 1998). These elements aim to increase KW empowerment, autonomy and self determination (Flood 1999) which should lead to increased JS as they have a positive influence on the Comfort, Challenge, Relations with Co-Workers and Resource Adequacy JS facets (Warr, Cook et al. 1979; Warr 2002).

This paper is based upon research undertaken by Hurst (2004) which sought to identify which practices and elements of LO Models are related to KW VT by looking for the links between each element and the potential it had for increasing JS. It is argued that once these links are established, an organisation can develop strategies which recognise the importance of the elements, not only for knowledge enhancement, but also knowledge retention. This research should enable HR managers to recognise the specific needs of KWs and enable them to address such differences.

METHODOLOGY

The research needed to gain data from KWs, thus the Financial Times was used to develop a sampling frame of companies in the computer, technology and internet, telecomms and health care and pharmaceuticals sectors. From these a random sample of 129 companies was selected, focusing upon companies that were likely to employ higher numbers of KWs. Contacts were sought within the companies who could deliver the questionnaire to the appropriate manager. .

The population sampled was that of KWs within the identified sectors, who, as the literature shows, have higher levels of education, change roles and employers often and tend to be younger than the total working population. Other qualities of KWs, such as high levels of computer literacy, were used in determining the data collection method. Criteria as to what was meant by the term 'KW' were outlined at the outset for each respondent in order to ensure that they fell within the chosen sample. 148 valid responses were obtained.

A closed electronic questionnaire was designed in order to allow KWs to respond most easily. The instrument was designed to explore the impact of LO disciplines upon JS and the importance of JS in determining TI. An extensive content analysis was performed on the literature devoted to Senge's Fifth Discipline Model. The key aspects of each discipline were identified and refined down to six items using a 5 point Likert scale to produce a set of scales per discipline. A measure for each LO discipline was obtained by taking the average response to the six questions covering that discipline. An average was taken from all valid responses. A measure for each LO discipline is calculated for each respondent with a value between 1 and 5.

For JS an instrument was sought which could be used to reliably measure total JS as a sum-of-facet measure (Table 1). The chosen instrument was first used to examine the quality of work in the USA through three surveys conducted by the Quality of Employment survey program at the University of Michigan in 1969, 1973 and 1977 (Quinn and Staines, 1979). Respondents were asked to state how true they considered each statement. The six JS facets were all measured using an unbalanced rating scale, measuring from ‘Not at all true’ (1) to ‘Very true’ (4) (Quinn and Staines, 2000:p16).

| | |
|----------------------------------|---|
| Comfort | This encompasses employee’s satisfaction with the working environment, the pressure they are put under and travel to work. |
| Challenge | This covers employee’s satisfaction with the nature of the work undertaken. |
| Reward | This encompasses the employee’s satisfaction with their remuneration and fringe benefits. |
| Relations with Co-Workers | This covers employee’s satisfaction with their colleagues. |
| Resource Adequacy | This encompasses employee’s satisfaction with the competence and adequacy of the resources provided, in four different areas: the help information and equipment available to the employee; the levels of authority and responsibility the employee experiences; the competence and helpfulness of colleagues, and the competence, helpfulness and friendliness of the employee’s supervisor. |
| Promotion | This refers to the employee’s satisfaction with the opportunities that arise for promotion and the fairness of handling. |

Table 1: Job Satisfaction Facets

A measure for each JS facet was obtained by taking the average of all valid responses for the questions covering that JS facet resulting in a value between 1 and 4. The overall measure of JS used is a sum-of-facets measure which is the average of all responses. Each JS facet was then assessed for the importance respondents gave it in determining TI. This was also assessed using an unbalanced rating scale, from ‘Not at all important’ (1) to ‘Very important’ (4), deliberately similar to that used for the JS facets to avoid confusion. Respondents were asked to state how important they considered each JS facet. Each JS facet had an average value of importance between 1 and 4 from the single-item scale.

The items in the scales assessing the LO disciplines were formative measurements aimed at mapping the disciplines. The items measured different processes, attitudes etc. only related through Senge's Fifth Discipline Model. There is no reason why items within formative measurements should correlate. As such, construct validity was assessed by checking face validity (Ghauri and Grønhaug, 2002) and determined it to be valid.

Where there were scales with three items or more in the JS scale, Cronbach's alpha was calculated to test internal validity (for example Challenge (.6851) and Resource Adequacy (.6678). However, several scales had fewer than 3 items and so the reliability was assessed by checking the face validity (Ghauri and Grønhaug, 2002).

In order to test for the relationship between LO disciplines and JS facets, non-parametric Spearman rank order correlation tests were used as the Kolmogorov-Smirnov statistic was significant for all variables indicating a violation of the assumption of normality (Pallant, 2001). Testing the importance of JS in determining TI was measured by examining the mean score of all responses. A mean value of 2.5 would indicate an even distribution of scores across the scale. In line with existing instruments a value of three for the mean score was set as the point at which the JS facet is seen as being highly important to the respondent.

FINDINGS

The first stage of the research examined the relationship between each LO discipline and each JS facet. Figure 1 gives the statistically significant results of the Spearman's Rank Order Correlation tests giving the correlations between each LO discipline and each of the JS facets. Overall there are enough positive relationships found to state that there is a relationship between the LO disciplines and the JS facets.

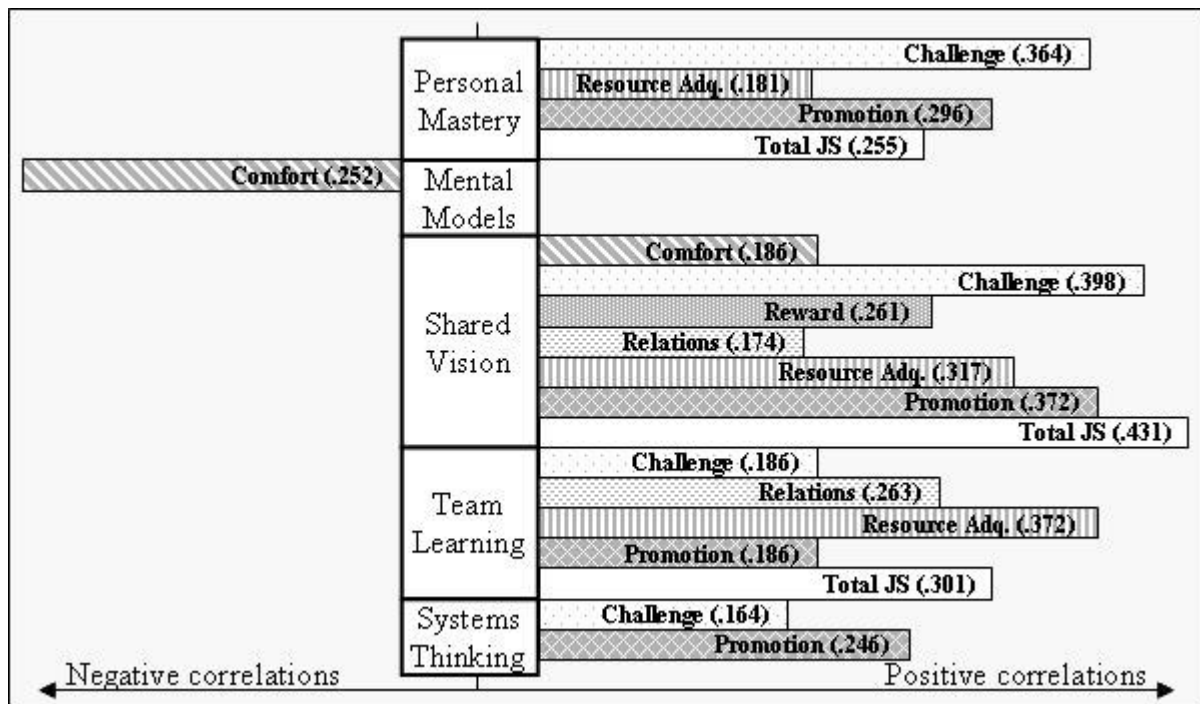


Figure 1: Statistically Significant Correlations between LO Disciplines and JS facets ($p < .05$).

The second stage of the research was to explore the potential relationships between those factors linked to JS and their link to KW retention. Table two depicts the relative importance of JS to TI.

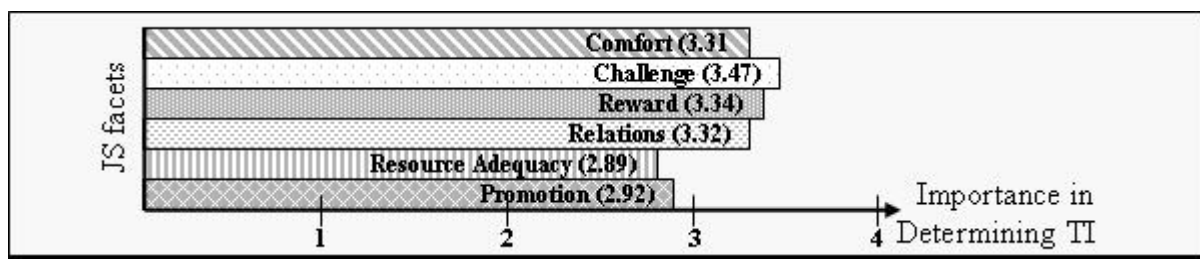


Figure 2: Relative importance of each JS facet in determining TI.

The 6 JS facets measured were all shown to have varying degrees of importance. When a relatively high threshold was taken, promotion and resource adequacy failed to make the threshold, thus leaving comfort, challenge, reward and relations as the four remaining significant facets. The results can be seen in Figure 2.

Just under half respondents rated comfort as being a very important factor in determining TI. The majority of respondents rated challenge as being very important in determining TI and almost 95% of respondents regarded challenge as being somewhat or very important. No respondents rated Reward as 'Not at all important' in determining TI and almost 88% of respondents regarded Reward as being somewhat or very important. As it is seen as being 'somewhat' to 'very' important by the majority of respondents the JS facet reward is important in determining TI. Significantly more respondents rate relations with co-workers as 'somewhat' rather than 'very' important in determining TI, but few rate it below 'somewhat important'. Almost half of the respondents rated resource adequacy as 'somewhat important', but more rate it as of 'little importance' than 'very important'. the JS facet resource adequacy is not important in determining TI. Promotion was rated as 'somewhat' important by almost half respondents, but as many rated it as less important than as rated it as more important. The JS facet promotion is not important in determining TI. From this it can be seen that the most important facets are comfort, challenge, reward and relations with co-workers.

Combining the above results shows personal mastery, shared vision, team learning and systems thinking are all positively correlated with challenge, which is the most important JS facet in determining TI. Mental models is negatively correlated with comfort, which is important in determining TI. Shared vision is additionally correlated with reward, comfort and relations with co-workers, all of which are identified as important in determining TI. Team learning is also additionally correlated to relations with co-workers. At least one correlation has been found between each LO discipline and a JS facet that is seen as being important in determining TI; thus, there is some relationship between the LO disciplines and TI.

In the literature, employee attitudes (including organisational commitment and JS) are considered to be the main determinants of TI, (Mobley 1977; Hom and Griffeth 1991). The higher the JS and organisational commitment, the lower the likelihood of TI. However, an

employee may have very low JS in a particular facet and low overall JS, yet, he/she does not seek alternative employment because of the level of organisational commitment towards the company. There can be many other factors impacting the connection between TI and VT, e.g. if changing employer means moving house then an employee may not change jobs. The literature highlights many other factors impacting TI, e.g. employee values and their attainment (George and Jones 1996) and employees' moods, such as emotional exhaustion (Wright and Cropanzano 1998). These vary for each employee and highlight difficulties in clearly defining the relationship between TI and VT. It is this gap that this research is partially filling by exploring the relationships for KWs. By discussing each LO element it can be shown that by specifically considering their impact, HR managers can develop ways of managing TI.

LEARNING ORGANISATION ELEMENTS AND TURNOVER INTENT

Personal Mastery

As one might expect, there is a positive correlation between personal mastery and challenge and it confirms the fact that KWs need to be supported to develop their skills and be able to implement new ideas as challenge is rated as very important in developing TI. Employees with high levels of personal mastery continually learn more about their work, clarify and deepen their personal vision, focus their energies, develop patience, and develop an apparently rational view of reality (Senge 1990). As a result of this employees increasingly understand what is happening across the organisation and should understand how they fit into the organisation and, therefore, recognise the results of their work. For this to be possible the organisation must be structured in a way that enables such clarity across the functions and jobs.

There is also a positive correlation between personal mastery and promotion which may be due to the managers' personal mastery which includes 'self-mastery' and 'people mastery' (Hacker and Roberts 2002). People mastery includes understanding employees' attitudes, behaviours, beliefs and assumptions, plus developing skills in handling group dynamics (Hacker and Roberts 2002). This may help managers handle opportunities for promotion better so employees understand it better. Thus a causal link between personal mastery and promotion can be argued. It is also to be expected that, where KWs are working in an autonomous manner they would value promotion which recognises their contribution. If promotion was seen as unlikely or, more importantly, unfair, this is highly likely to increase TI (Hurst, 2004). Linking these to areas it can be argued that an important aspect for HR is to recognise that, whilst KWs often work independently by choice, they also need to be recognised for the achievements in some way if they are to remain content.

Mental Models

Mental models are a means by which individuals create and share meaning, thereby enabling the development of knowledge (Flood, 1999). The negative correlation with comfort was seen to be potentially the most important result, suggesting that as the levels of the LO discipline increased, so JS decreased and potentially led increased TI. This possibility may emerge as the Unfolding Model (Lee and Maurer 1997; Lee and Mitchell 1994; Lee et al.1996; Lee et al. 1999) suggests that 'shocks' cause employees to reconsider the mental models that they hold and, if they no longer fit, they think of quitting. However, these shocks are also highlighted as being necessary to change mental models and make them more flexible and aligned across the organisation.

The importance of this finding is that comfort is seen as important in reducing TI, yet creativity often arises through stimulating discussion and ‘thinking outside the box’ which may be limited if all KWs had aligned mental models (Blackman and Lee-Kelley 2003). Thus a balance needs to be struck between enough alignment to develop comfort, whilst not reducing the KW contribution.

Aligning employees’ mental models takes time which inevitably reduces time for other tasks. Unless employees’ workloads are reduced, tasks may not fit into the working day, so employees may report that they have excessive amounts of work to do. If this work is required by different people then employees may experience conflicting demands, thereby reducing the level of comfort JS. It can be seen that this will be an important area for HR to focus upon, as the conflicting needs of comfort for the employee versus change for the organisation need to be managed.

Shared Vision

Shared Vision was linked with each JS facet, suggesting it may be the most important LO discipline in relation to TI. As KWs value fellow professionals, contact networks and peers above their employer (Despres and Hiltrop 1995), the alignment of the vision throughout the organisation is very likely to reduce TI as the sense of belonging to a community-of-practice (**ref**) that is valued by the KWs is increased.

Resource adequacy assesses four areas. JS in the area of help, information and equipment is likely to be increased by practices encouraging employees to develop their own personal vision and align it with the company vision. In relation to perceived authority and responsibility, if the employees’ vision and company vision are truly aligned, the employee

would be likely to be given more authority, as managers have greater trust in such employees. The perceived competence and helpfulness of colleagues and supervisors may increase if all employees share a vision, as fewer misunderstandings regarding work are likely. Moreover, increased competence of supervisors may lead to better handling of promotions, including the perceived fairness of the handling of promotions.

JS may also be boosted by the alignment of company and personal visions as sharing a vision may increase understanding of why employees are promoted and rewarded. Increased promotion opportunities may arise though employees sharing the company vision as they may have an advantage over external candidates. If promotion favours internal candidates, then job security may be increased increasing comfort. A company vision that employees wish to be associated with may be regarded as a fringe benefit with employees experiencing pride or even an increased sense of worth when communicating the shared vision to others. However, it is also important to remember that shared vision is, in itself, a mental model (Blackman, 2004), thus the negative correlation between mental models and comfort might also affect shared vision if KWs feel a 'shock' between their espoused vision and that of the company.

Interestingly, despite being rated by some as 'very important' in determining TI, the facet reward is only correlates with shared vision. This small positive correlation with comfort is most likely due to the company vision being shared with colleagues. A vision shared between colleagues should reduce conflicting demands. Alignment of the employees' personal vision and company vision may also make employees happier to work more as they are working towards something they too wish to achieve. Employees may willingly work longer hours or accept more work to achieve this vision, and, therefore, feel asked to do excessive amounts of work less often.

Relations with co-workers may be improved as employees have something extra in common, the shared vision. Friendships may develop between employees more readily leading to a friendlier workforce. Employees sharing the company vision have a personal interest in achieving that vision. Any work to achieve that vision is likely to interest employees and the results are more likely to be visible to employees. Employees sharing the company vision may be given greater autonomy, freedom to determine how to work and opportunities to develop their own special abilities, as managers are likely to trust them more. The shared vision is likely to result in employees wanting to do things which are good for them and the company to attain the vision which also explains why challenge resulted in the largest correlation with the shared vision discipline. This will link with the ideas outlined in personal mastery where, because the KWs see their role and value within the organisations they strive to improve themselves and their contribution.

Team Learning

Simply being a team member rather than just an individual may give some employees greater JS. If the team-mates are colleagues and supervisors then greater resource adequacy JS is likely explaining the highest positive correlation. Team-mates are more likely to be helpful, friendly and willing to share information and equipment. Teams are more likely to share authority and responsibility, thus increasing the level an individual employee experiences. As the team focuses on learning, so the competence of all team-mates should increase. It is perhaps surprising that this correlation was not larger, but it should be remembered that KWs have been shown to prefer to develop their career externally rather than through employers' initiatives (Despres and Hiltrop 1995). The independent nature of KWs is also reflected in the low correlation with relations with co-workers, although they value their colleagues their reward does not come from being with them. For HR managers this is important as it shows that team working may not come naturally to KWs. Moreover, the relatively low

correlation with challenge supports the notion that KWs see development and learning as a personal thing. If team working is a vital element of the work this will need to be managed carefully.

Systems Thinking

Systems Thinking includes developing an understanding of the organisation as a highly interconnected system (Senge, 1990)., This should allow enabling employees to see the results of their work better. This may elicit greater interest in the work from an employee. Systems Thinking increases the employees' capability to understand the effect of their actions on everything else (Senge, 1990). This may result in managers trusting employees more and giving them greater autonomy, freedom to decide how to work and opportunities to specialise in preferred tasks, producing greater JS.

However, this is the LO discipline that has the least apparent impact but there is a positive correlation with promotion. The level of systems thinking of those making the promotion decisions may explain this. Managers utilising systems thinking may make better choices because of their better view of the organisation and the consequences and implications of their actions. Employees with this good overview of the organisation may be more readily promoted and are perhaps better able to judge the fairness of promotions. This awareness of the system is reflected in the other correlation which is with challenge. This implies a link between systems thinking and personal mastery as, in order to attain the system understanding, and employee will need to develop their understanding of self and others.

IMPLICATIONS

The results provide empirical evidence of a link between the LO disciplines and JS facets and between the JS facets and TI which implies that organisations must aim to manage these elements and supports the arguments for introducing LO disciplines. Four JS facets in particular are considered to be important, namely: comfort, challenge, reward and relations with co-workers. All of these are affected in one way or another by the LO elements and so we suggest that three initial strategies should be focussed upon by HR managers in order to reduce TI. The areas to be considered are: linking shared visions, challenge and systems thinking together via personal mastery; being more critical of which mental models are developed and shared and developing team learning systems throughout the organisation.

Link Challenge, Shared Vision and Systems Thinking via Personal Mastery

The lack of importance of promotion is of importance for HR managers as it means that reward and recognition can be separated and strategies developed via LO disciplines which reflect the JS facets seen as more influential. As a result it is the LO discipline of Personal Mastery that we contend should be most carefully addressed by HR managers in the first instance.

A recurring theme throughout the discussion is the need for KWs to understand their role within the company, to feel their work is appropriate to them and to be recognised for what they do. As a result development systems need to be set up to support, not only the enhancement of KW skills and the enhancement of their specific role, but also the enhancement of the ability of the KWs to maintain a holistic view of their role. Two issues will need to be considered here: firstly, that the KWs will need to feel ownership and involvement with the development systems being developed as they will have to have a

positive attitude towards them if they are to adopt the learning; secondly, the development will need to reflect the current job of the KW, but it will also need to reflect the more general knowledge related to the job in order for the KW to be able to feel recognised by peers and those within their community of practice more generally. Thus, traditional appraisal systems focussed around the job description and future roles may not be applicable for KWs if they are to reduce TI. HR will need to develop knowledge based appraisal systems that will impact upon the task but not be driven by it. This will also help to ensure that the KW's role as a knowledge source within the organisation is recognised and should support more open and flexible mental models which, as will be outlined next, will increase comfort.

Identify and Support Appropriate Mental Models

Work on mental models has shown that they can not only enhance, but also stultify organisational effectiveness (Blackman and Lee-Kelley 2003). Moreover, it has been shown that appropriate mental models, in the form of a clear output focused vision for the team, enable disparate teams to succeed, whilst inappropriate mental models, in the form of input focussed beliefs about the role of the team, led to team failure (Blackman and Davison 2004). Thus the role for HR managers will be to try to ensure that there is alignment to a mental model and/or vision which permits flexibility of input beliefs whilst having a clear picture of the role of the KW within the organisational framework. This should reduce the potential for shock. Such a mental model can be developed and supported via the personal mastery and challenge notions outlined above. What will be fundamental for success will be for the currently held mental models to be accurately identified via the attitudes, stories and symbols displayed by the KWs.

Developing Team Learning Systems

There is great emphasis placed upon the role of teams within organisational structures at present. It is argued that this will support and sustain team learning (**refs**). However, the outcomes of this study imply that KWs will not automatically work well in teams and may not automatically share their ideas and knowledge. HR managers will need to identify the role and reason for team structures to be put in place and, if there are real reasons for needing organisational learning via teams, they will need to have team skills development as a part of KW support. Moreover, the teams will need to be rewarded as teams in order to provide the need for reward, appropriate relations with co-workers and recognition identified as key JS facets reducing TI.

CONCLUSION

This paper demonstrates that there is a relationship between the LO theory and the potential to retain KWs. This can be achieved by understanding how LOs elements are related to the JS facets of comfort, challenge, reward and relations with co-workers which are important in determining TI. These findings were not surprising given the literature; however, the way they were obtained was novel. This quantitative study gives empirical evidence of the relationships investigated. It emphasizes that HR Managers must recognise specific relationships between LO elements, JS facets and TI as they emerge for KWs.

Previously, most studies have taken an overall JS measure and considered the LO as a whole; by breaking down the elements it not only provides managers with a better insight into the way the LO disciplines impact KWs, but also allows better planning and management of the changes organisations will need to undergo when adopting the LO disciplines. The paper suggests that HR managers need to concentrate on the implementation of certain elements and that it is the interaction of such elements that will impact upon TI. Adopting such strategies should lead to increased retention of KWs and their knowledge. What will be of interest is to replicate this study for other types of workers in order to establish whether there are differences in the relationships between LO disciplines and JS facets for different groups. When the specific issues of reward, mental models, comfort and challenge are reflected upon for KWs it seems likely that other groups will be different.

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