

Considering Participant Motivation In Knowledge Management Projects

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ABSTRACT:

Even though the majority of organizations have initiated Knowledge Management projects, turning them into successes still remains a great challenge. There is probably a variety of reasons why these projects fail, many being related to improper technology implementation. However, a major cause of failure has often been attributed to the lack of motivation of participants. In this paper, we lay out the principles underlying motivation theories and link them to more effective KM project management practices. Specifically, we explain how intrinsic and extrinsic rewards must be carefully planned and dosed depending on the type of project and the environment in which it is implemented. We also conclude that all KM projects can benefit from greater participant internal motivation, and therefore encourage the use of intrinsic rewards and a closer analysis of psychological work related factors.

Keywords: *Motivation, Knowledge management, KM project management, Rewards management*

1. Introduction

To date, many organizations have initiated at least one knowledge management (KM) project (Mann, 2007). Also, according to Rivard & Roy, at least 80% of large companies have undertaken initiatives to better manage their explicit knowledge (Rivard & Roy, 2005). Even though there are many expected benefits through KM improvements, results show that these improvements are not always observed (Peyman & al., 2005), some studies even suggest that KM project failure may be higher than 80%.

Given the importance of KM project objectives and their high failure rate, understanding the underlying success factors is critical. Many reasons have often been cited for the frustrating results: lack of updates, failure to integrate KM into normal working practices, complicated systems, lack of training, lack of time and the fact that users did not perceive personal benefits.

There is probably a variety of sources that may hinder these projects, many being related to improper technology implementation. However, a major cause of failure has often been attributed to the lack of motivation of participants (Semar 2004, Malhotra & Galletta 2003, Osterloh & Frey 2000). The involvement and motivation of the people participating in KM projects has a major impact on their willingness to create, share, learn and capture knowledge. Despite the fact that motivation is often pinpointed as an important success factor, the literature in KM has provided little guidance on how to take it into account and manage it.

The objective of this paper is twofold: First we discuss the underlying concepts that may relate motivation and success in KM projects. Then we propose ways in which managers of KM projects can develop motivation strategies that are adapted to participant needs as well as to business objectives.

2. Theoretical Foundations Of Motivation

2.1. Work Motivation

Simply put, motivation is the underlying reason for a person's actions (Wikipedia). Work motivation has traditionally been classified as either intrinsic (or having its source within the individual) or extrinsic (the source is external, such as salary or bonuses). The following sections describe these types of motivation and how they relate to behavior in the knowledge management process.

2.1.1. Extrinsic Vs Intrinsic Motivation

As mentioned, the type of worker motivation, whether extrinsic or intrinsic, is determined by its source. If a person is not motivated by a task in itself, but by other objectives related to the task, then the motivation is extrinsic. For instance, in the context of KM, an employee may be motivated by the bonus that comes with the successful completion of learning objectives, or by avoiding coercive measures associated with not participating. Or, on the other hand, an employee may be motivated by the idea of helping colleagues by sharing his or her experience. Since he or she is motivated by the task, it is intrinsic.

Intrinsic motivation at work has advantages and disadvantages: Curiosity, which often leads to creativity and learning, is clearly linked to it. Intrinsically motivated employees are often the ones which will actively search for information, approach situations in a novel ways, and be able to solve more complex problems. For the employer, there is also less effort required to discipline or reinforce these employees (Frey, 1997). Frey mentions that employees that are more active in solving complex problems require less supervision than those who perform simpler tasks. He also argues that extrinsically motivated employees will tend to do the minimum of tasks required to obtain their salary or avoid negative consequences.

However, it is possible that the personal objectives of an intrinsically motivated individual not be aligned with the business objectives (Osterloh & Frey, 2000). This situation would be a disadvantage for the company, and more difficult to change than extrinsic motivations. As a consequence, intrinsically motivated employees are more difficult to control or to guide (Frey, 1997). Table 1 summarizes the characteristics of intrinsic and extrinsic motivation.

	Extrinsic Motivation	Intrinsic Motivation
Source	External to the individual	Internal to the individual
Advantages	Can be controlled by the employer	Helps to perform complex or creative tasks
Disadvantages	Does not facilitate the execution of creative or complex tasks	May go against business goals. Highly variable from one individual to another

Table 1: Characteristics Of Intrinsic And Extrinsic Motivation

The following sections describe the role of extrinsic and intrinsic motivation in the knowledge management process.

2.1.2. Motivation And Knowledge Sharing

There appears to be an important relationship between types of knowledge and the motivation to share it. First, it has been shown that scientific, creative, innovative, entrepreneurial or artistic services are more efficiently performed by intrinsically motivated individuals (Frey). Morello and Caldwell's (2001) model therefore suggests that intrinsic motivation is beneficial for task requiring tacit knowledge. Furthermore, Osterloh and Frey (2000) state that intrinsic motivation is necessary for the creation and sharing of tacit knowledge. We may therefore conclude that intrinsic motivation has a positive effect on tacit knowledge management in an organization. Figure 1 illustrates the interdependence between intrinsic motivation and tacit knowledge.

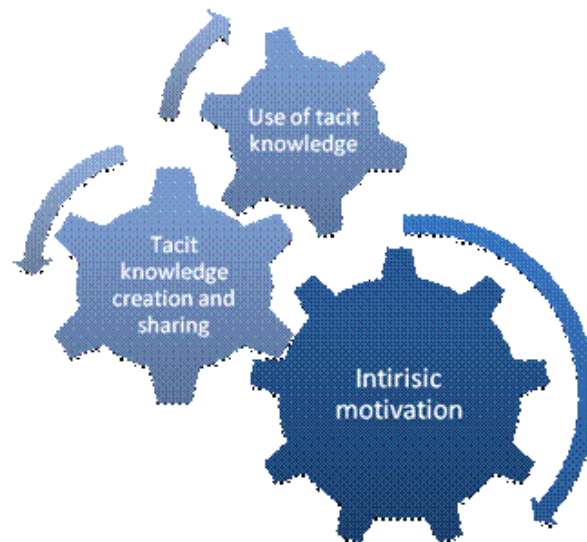


Figure 1 : Intrinsic Motivation And Tacit Knowledge

It is important to note, as is mentioned by Milne (2007), that individuals are often motivated to keep their tacit knowledge for themselves rather than share it. This situation can be attributed to the competition between employees for recognition and promotion. Organizations are now asking that their employees change this attitude for the benefit of others and to meet business objectives. In this context, taking into account the intrinsic motivations of employees is even more critical for KM success.

2.2. Rewards And Recognition

As we discussed earlier, there appears to be a significant link between motivation and knowledge sharing. Consequently, it will be important that the KM project manager find ways to motivate participants to achieve project goals. However, this can be a challenge, rewards and recognition have to be carefully planned out in order to take into account the dynamics of intrinsic and extrinsic motivation, and to prevent undesired behavior. In the following sections, we will discuss the different types of rewards and their impacts.

2.2.1. Types Of Rewards

Before discussing the types of rewards, it is important to define the concepts of rewards and recognition in an organizational context. A reward system is the deliberate use of financial resources in a process designed to encourage people to put effort in line with organizational objectives. A recognition system, on the other hand, generally is intended to emphasize the organization's appreciation for employees that have achieved a high level of accomplishment or competence according to criteria that may diverge from predefined objectives. Non-financial

prizes, mentioning good actions, thanking employees, are examples of organizational recognition. Recognition systems therefore can be independent of results and celebrate individual accomplishments, efforts, learning or commitment (Milne, 2007).

Rewards can either be extrinsic or intrinsic, material (financial and non-financial) or moral. Extrinsic rewards that are financial can be directly included into the pay system. They have the advantage of being variable, easy to control, and universal (Semar, 2004). However, they have the downside of being easily forgotten, as they can be viewed as being part of regular wages and not necessarily related to certain behaviors. Extrinsic rewards may also be non-financial, such as gift certificates, a variety of desired objects or trips. For an equal investment, these rewards have the advantage of maintaining their motivating effect for much longer than their financial counterparts (Center for concept dev., 2005).

It should be noted that extrinsic rewards may lead to competition and hinder team work. Also, certain employees may hide problems in order to maintain their chances of obtaining these rewards (APCQ, 2002).

Extrinsic rewards may also be non-material. Semar proposes six characteristics for this type of rewards: They may be related to a career plan, the organizational culture, personal environment, leadership, work environment and qualifications (Semar, 2004). They generally take the form of opportunities provided by the organization such as promotions, training, flexible work schedule, etc. These rewards are often contingent on a particular situation, the perception of individuals, and are more difficult to control.

Intrinsic rewards do not systematically induce intrinsic motivation. Employees may not be motivated by the task itself, but be morally satisfied that the task is done. For instance, if an individual's actions are considered morally good, then he or she can expect recognition and admiration from colleagues. In the context of a KM, an employee that is about to leave the organization for retirement could actively share expertise and knowledge with coworkers, and consequently feel moral satisfaction that he or she contributed to the firm's well being. Table 2 summarizes the characteristics of rewards.

	Extrinsic rewards	Intrinsic rewards
Definition	Under the organization's control, external to the individual and universal.	From within the individual, and related to task achievement.
Nature	Material, financial or not, or non-material.	Non-material.
Advantages	Relatively simple to use, fair.	No cost for the organization.
Disadvantages	May be costly.	Under the individual's control.

Table 2: Characteristics Of Extrinsic And Intrinsic Rewards

2.2.2. The Impact Of Rewards On Intrinsic Motivation

Previously, we discussed how intrinsic motivation is beneficial for tacit knowledge sharing, and that rewards could be used to influence individual behavior. We will now examine the effects of rewards on individual's intrinsic motivation in KM projects, mainly on the basis of Frey's motivation crowding-out theory (Frey, 1997).

Frey's theory is mainly based on two others, Deci's cognitive evaluation theory and Rousseau's psychological contracts theory. Cognitive evaluation theory is founded on two precepts; first that motivation is not a stable state that is controlled by an individual, his or her needs and values. Rather, it is unstable and influenced by the individual's external environment, such as rewards. Individual motivation is therefore dependent on the context or situation. The second is that the perception and interpretation of a reward varies between individuals, and consequently understanding the impact of external rewards also requires the analysis of the social context (Lévy-Leboyer, 2006).

Cognitive evaluation theory stipulates that intrinsic motivation is maintained only when an individual perceives his or her work autonomy or competency. External interventions, such as rewards, may influence this perception either through information or control. If people see a reward as being related to their competency, intrinsic motivation for the task will be encouraged or maintained. On the other hand, if they see a reward as a way to control their performance, autonomy and intrinsic motivation would be decreased (Osterloh & Frey, 2000). Figure 2 shows the impact of information and control through rewards.

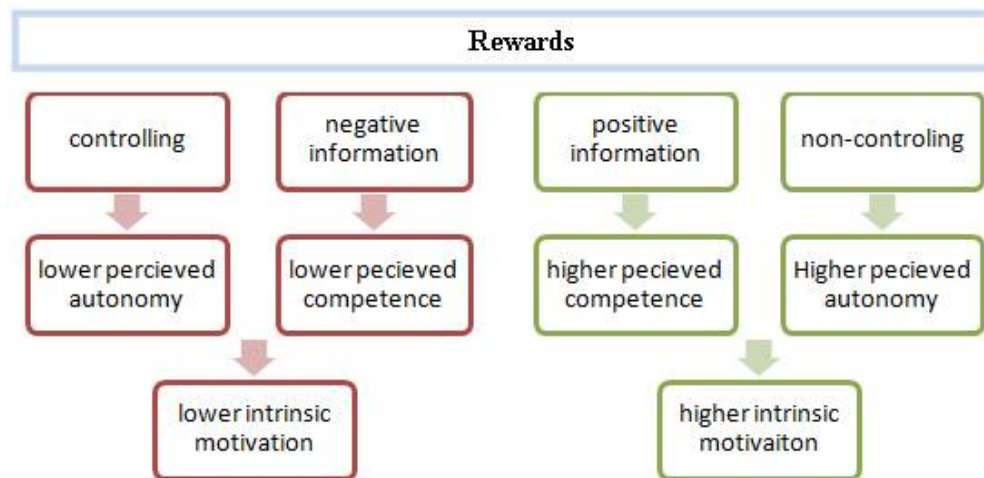


Figure 2: The Impact Of Information And Controlling Aspects Of Rewards

As an example of these impacts, let us consider the implementation of a Wiki in a KM project. To encourage its' use, the project manager may decide to give a salary bonus to individuals who contribute at least 20 new subjects. This reward has a positive controlling aspect, but a negative information aspect (since there is no consideration for the quality of the content and thus the competency of the contributors). In this case, we can expect that people will be less intrinsically motivated to use the Wiki, and that their main focus will be on producing a large quantity of subjects.

Frey and Jegen summarize Deci's description of the effects of external interventions on motivation (Frey & Jegen, 2000):

- ◆ Reducing autonomy: When people see an external intervention as reducing their autonomy, their intrinsic motivation is transformed into extrinsic motivation.
- ◆ Reducing self esteem: When an external intervention does not put value on people's competency, intrinsic motivation is reduced.

Rousseau's psychological contract theory is based on the premise that beyond the formal contract between employer and employee, there are psychological contracts. These contracts represent the beliefs, perceptions and informal obligations that unite the two parties. They also include a mutual appreciation of their respective intrinsic motivation. Formal contracts only generally define the responsibilities of the firm and its' participants (Psychological contracts, Wikipedia). If somehow the psychological contract between the employer and employee is broken, the relationship will become more formal and based on extrinsic motivations (Osterloh & Frey, 2000).

The perception that an employee is dishonest, inequitable or immoral may be one reason why psychological contracts are broken. For instance, in the context of a knowledge management project, a participant who creates 15 high quality subjects in a Wiki may find unfair that another participant who created 20 low quality subjects receive a bonus. The first participant's intrinsic motivation will therefore decrease. According to Rousseau, intrinsic motivation is therefore closely linked to the psychological contracts existing in the organization.

2.2.3. Motivation Eviction Theory

Based on the theoretical foundations suggested by Deci and Rousseau, motivation eviction theory predicts that intrinsic motivation may be hindered or reinforced by external interventions (Frey & Jegen, 2000). As for monetary rewards, economic theories predict they will have a beneficial impact on performance, because they increase the marginal cost of laziness and the marginal gain of harder work. Malhotra and Galletta also mention that monetary rewards can be associated with discipline (Malhotra & Galletta, 2003).

The major deficiency of economic theories is that they consider intrinsic motivation as being constant, and that all other motivational strategies will increase it or leave it unchanged. However, as suggested by Deci and Rousseau's cognitive theories, intrinsic motivation is influenced, sometimes negatively, by the external environment. We also mentioned that intrinsic motivation is a key success factor in tasks requiring the use or sharing of tacit knowledge. Therefore in these situations, using economic models may hinder non economic factors such as intrinsic motivation and psychological contracts (Frey & Jegen, 2000). Frey states that the eviction of intrinsic motivation by extrinsic motivation is often observed in situations where external interventions are not well perceived by employees (Frey, 1997):

- ◆ When rewards are given on the basis of performance standards determined only by the employer;
- ◆ When financial rewards are used, and employees expect that amounts they receive are based on their performance;
- ◆ When rewards are highly standardized, in public or large organizations for instance. Employees will lower their intrinsic motivation in order to match their performance with less motivated colleagues who receive similar rewards.

On the other hand, if a motivated employee positively perceives external interventions, he or she can be over-motivated. In this case, if one source of motivation is sufficient to perform, then internal motivation may be put aside. Motivation eviction almost always costs more to the company. Financial rewards also have a tendency to lose their motivating potential, so these must be increased regularly.

Frey indicates that in certain contexts, intrinsic motivation may be stimulated by well perceived external interventions:

- ◆ When rewards are determined on the basis of criteria determined by employers and employees together;
- ◆ When non monetary rewards are used, but with a value that cannot be related to a performance level, such as gifts.

3. Implications For Knowledge Management Practice

As we have discussed, participant motivation is often, if not always, a KM project success factor. Based on motivation theory, we can infer a series of implications on effective KM project management:

3.1. General Recommendations

According to theoretical concepts previously stated, the impacts of rewards on intrinsic motivation may be evaluated in the following context:

- ◆ Tacit knowledge is considered highly valuable for the organization.
- ◆ For employees, sharing and internalizing tacit knowledge requires intrinsic motivation.
- ◆ The employer has the latitude to influence intrinsic motivation through intrinsic or extrinsic rewards.
- ◆ Rewards have the potential of reducing motivation.
- ◆ Project success is uncertain.

In these conditions, experts have expressed opinions on the best practices to adopt. According to Osterloh and Frey, the effect of motivation eversion is greater if monetary rewards are used. Consequently they should be avoided in KM projects (Osterloh & Frey, 2000). Furthermore, they suggest that employee participation in the formulation of project objectives will sustain their feelings of autonomy and consequently increase their intrinsic motivation.

Team work is another suggested practice. Based in Rousseau's psychological contract theory, personal relationships developed by team members will stimulate their intrinsic motivation to achieve common objectives. Furthermore, Osterloh and Frey mention that the complexity related to tacit knowledge sharing makes it almost impossible to define the tasks in a more formal contract.

In a 2007 report published by Gartner (Mann, 2007), Mann list a series of good practices for KM projects. First, they mention that the most important participants' motivation source should be their own individual benefit. Participants do not have to be extrinsically motivated, but they must clearly see that their contributions will be beneficial to them as well as to the organization. Plus, the benefits associated with their participation should be integrated into the organization's culture. Gartner also mentions that being informed on how the captured knowledge will be used can also be motivating. In all cases, good communication between management and participants will stimulate motivation.

The Gartner report also suggests that non monetary rewards, intended to recognize individual competence, are often better motivating strategies than monetary ones. This recommendation concurs with Deci's theory, according to which individuals need to perceive that their internal motivation and competencies are recognized. Gartner also mentions that monetary rewards not

only can reduce internal motivation, but can also promote the transfer of unimportant knowledge. Milne (2007) indicates that rewards can inform participants on the importance of knowledge sharing, but run the risk of stimulating expectancies towards rewards for behaviors that should be normal and routine.

3.2. Contextual Recommendations

The previous discussion on motivation theories clearly shows that it not possible to formulate a universal reward system. In KM projects, managing rewards effectively will depend, among other things, on the project’s objectives, the participants’ needs and the organization’s resources.

One approach is to adopt strategies that are adapted to the existing motivation sources, the organization’s culture and the type of knowledge involved in the project. Morello and Caldwell (2001) offer a model that may guide managers in defining categories of workers, the knowledge they need and their motivation. Figure 3 presents a modified version of their model based on motivation theories:

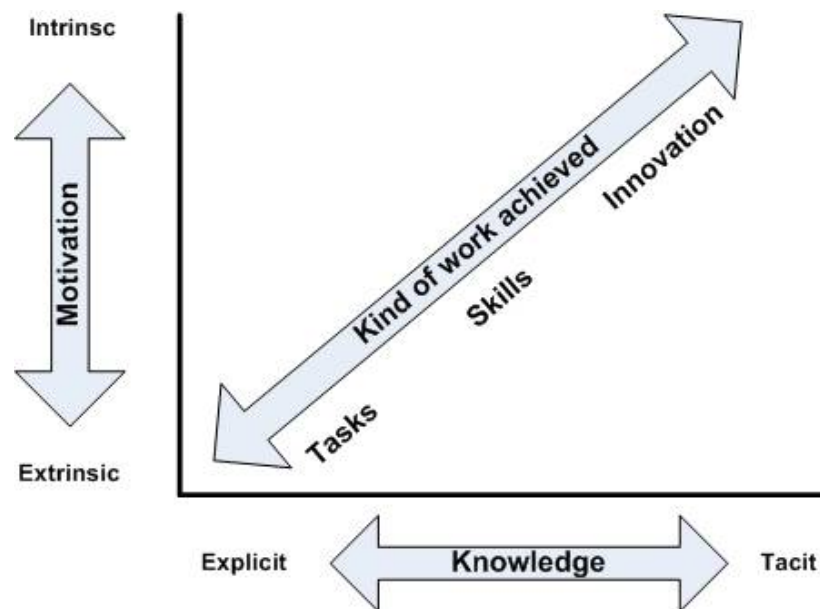


Figure 3: Adaptation Of Morello And Caldwell’s Model To Motivation Theory

The type of work performed by KM project participants will dictate the type of knowledge to manage and the motivation sources required to share it. The four possible quadrants of classification are presented in figure 4.

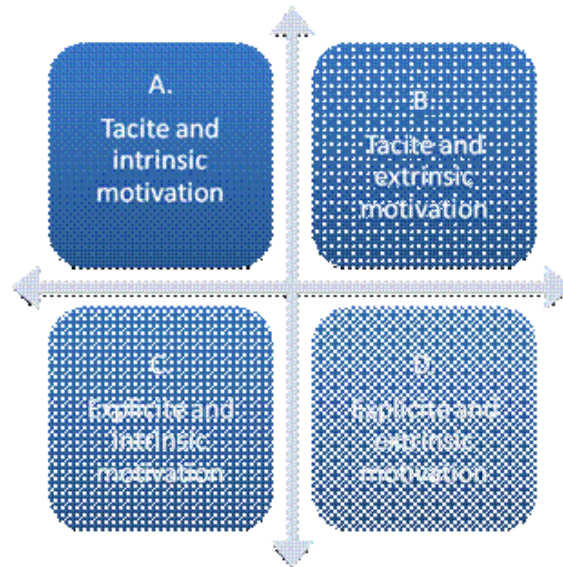


Figure 4 : Different Contexts Of A KM Project

Situation A : Tacit knowledge management with intrinsic motivation.

This situation is optimal for a KM project involving tacit knowledge. As mentioned previously, intrinsic motivation is necessary for tacit knowledge sharing. The manager's role will be to support the participants in their objectives of sharing and learning, rather than try to influence their behavior or use rewards. For instance, the manager can encourage and support the emergence of a community of practice, by providing all the tools necessary for knowledge transfer (electronic forums, meeting rooms, learning tools, etc.).

When participants are motivated intrinsically, extrinsic rewards should be avoided. Management can, however, consider implementing other intrinsic rewards. This approach is explained in the following section.

Situation B : Tacit knowledge management, extrinsic motivation

Even though this situation is not desirable, it is not necessarily a lost cause for a KM project. It is to be expected, however, that knowledge sharing and learning will be harder to achieve. In this case, the motivation strategies should be more structured and formal, and related to the organizational reward system. For instance, the KM project manager could set up more formal practical training sessions, involving experts and teachers. Imitation, observation or listening to experts will help participants internalize tacit knowledge. The manager can also organize structured discussion groups, which unlike communities of practice, are more formal and animated by paid experts. Subjects of discussion are determined based on their relevance to the project objectives. Participation in the training sessions and discussion groups should be part of the employee's workload.

Since participants are extrinsically motivated, intrinsic and extrinsic rewards can be used without risking an eviction effect. Following are some examples of possible rewards:

- ◆ Giving out certificates for participation;

- ◆ Offer time off for experts who share their knowledge;
- ◆ Publically recognize exceptional contributions;
- ◆ Offer some type of compensation when training sessions are not included in regular workloads;

Situation C : Explicit knowledge management with intrinsic motivation.

For the KM project manager, this is an ideal situation for sharing explicit knowledge. Once business objectives have been identified, employees can participate in articulating solutions without needing tight project management mechanisms. As mentioned previously, explicit knowledge acquisition can take the form of structured training, performed by internal or external experts. Tools and resources can also be provided for explicit knowledge sharing, as for example document management software, Wikis, audio and video capsules, etc.

Proper support to use and develop these tools will help avoid the de-motivating effects of having to perform trivial tasks. Rewards are to be avoided because of the risk of motivation eviction.

Situation D : Explicit knowledge management with extrinsic motivation..

This situation is typical in the context of explicit knowledge sharing. For instance, it may involve that experts capture and share their knowledge in order to obtain recognition, or employees are paid to get training or to study a certain topic. Strategies suggested in situation C are valid in this case, but rewards will also be required to meet the project's objectives. Since monetary rewards tend to lose their impact on motivation with time, non monetary rewards such as those mentioned in situation B are more appropriate,

Globally, solutions for situations where employees are intrinsically motivated can also be applied to the ones where extrinsic motivation is predominant. However, they will be less effective and probably require other interventions in order to meet project goals. The opposite, however, is not true, as we have discussed earlier. The project manager must pay close attention to use a strategy that is adapted to the project context.

4. Emphasizing Internal Motivation

As we have discussed earlier, all KM projects can benefit from greater participant internal motivation, and therefore the use of intrinsic rewards and a closer analysis of psychological work related factors.

Cognitive evaluation theory suggests that intrinsic motivation is influenced by feelings of autonomy and competency. Thomas adds two more factors, the feeling of progression and accomplishment (Thomas, 2000). The following sections describe the intrinsic rewards that can be used to increase these factors and the implications for KM project management.

4.1. Feelings Of Accomplishment

Thomas (2000) suggests that a task will induce feelings of accomplishment when it is easy to concentrate on, and meets the worker's values and passions. There are many ways to induce value in a KM project. First, the climate must be favorable to sharing feelings of enthusiasm

towards the project. It may also be beneficial to identify common interests and passions among participants in order for them to form a positive vision and perceive its' potential for accomplishment.

Feelings of accomplishment will also be nourished by eliminating low value tasks. For instance, if blog participation requires entering metadata, these must be reduced to a minimum. Also decomposing a project into stages with milestones will help workers to identify their contribution more easily.

4.2. Feelings Of Autonomy

Feelings of autonomy are nourished when people perceive that their opinions are taken into account or that they are responsible for decisions that may have an impact on project success. In these conditions, an autonomous and responsible employee will feel pride in contributing to meeting project objectives. Thomas explains that one approach to increase feelings of autonomy is to delegate authority, avoid micro-management and be confident in participants' capacities. For instance, the KM project participants may discuss and decide what the information architecture should be and subjects that would be interesting to conserve in the organizational knowledge base.

Feelings of autonomy also require that people feel secure, so management should leave room for honest mistakes in the first phases of the project. Delegation of authority should be adapted to individual capacities; too little may have no effect whereas too much may induce high levels of stress. Furthermore, managers should provide an appropriate amount of information to facilitate the participant's decision making process. Using the previous example, managers may provide information on the importance of defining a good classification architecture and on quality standards.

4.3. Feelings Of Competency

These feelings are related to the pride in accomplishing tasks, being able to demonstrate one's expertise and mastering work related elements. Managers can set a proper environment to stimulate employee competency by providing all necessary information and training for optimal participation. For instance, this can be training on the use of extranet tools, best mentoring practices, proper syntax to be used in wikis, etc... Or managers may preach by example, e.g. being one of the most active participants in a blog. Management appreciation of work should be provided regularly.

Positive feedback is certainly more profitable to induce feelings of competency. Effective management will therefore involve avoiding negative comments, encouraging learning, and recognizing individual contributions.

4.4. Feelings Of Progression

Apart from the intrinsic rewards employees receive, their motivation will also be affected by feelings of progression, i.e. the perception that their efforts lead to positive results. KM project managers should first of all make sure that participants are not competing among each other, but collaborating to obtain a high quality knowledge base. Then, they provide milestones to facilitate regular self evaluation, celebrate the fact the milestone objectives have been met and provide their appreciation of positive consequences, be it service quality, more effective knowledge sharing, shorter production cycles, etc. Figure 5 summarizes management practices that provide the four types of intrinsic rewards discussed above.

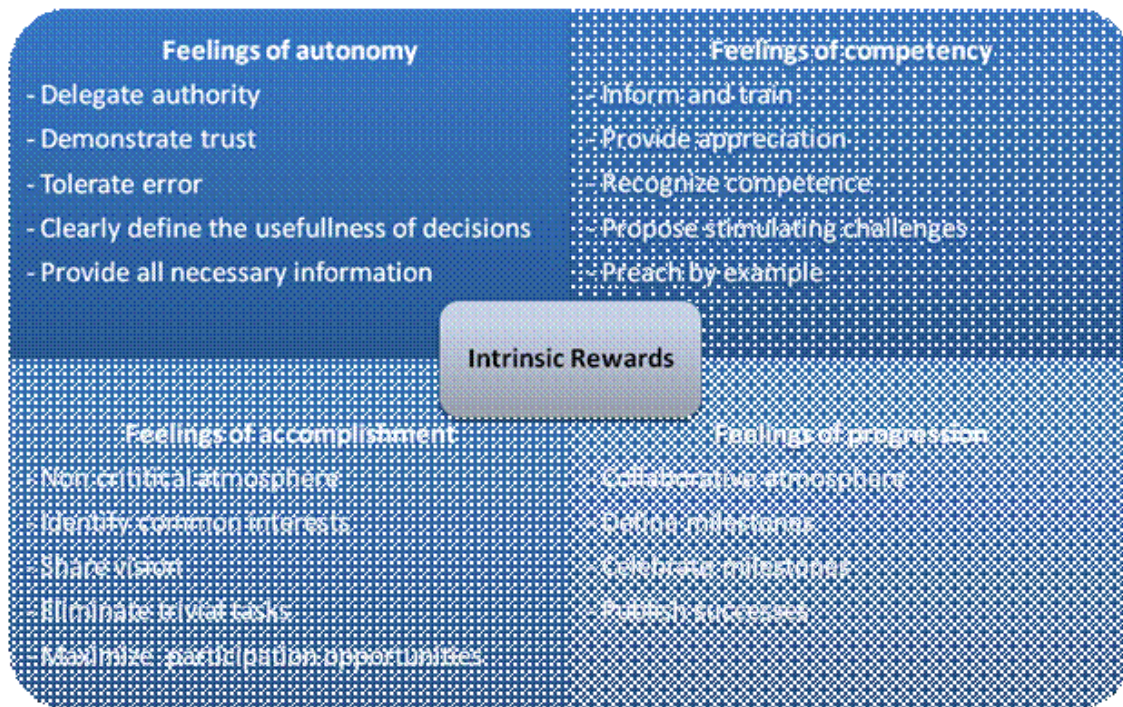


Figure 5 : Four Types Of Intrinsic Rewards (Thomas, 2000)

5. Conclusion

KM projects are often risky endeavors, and considering participant motivation may be one of the determining factors in making them successful. In this paper, our objective was to lay out the theories related to motivation, then to discuss their implications for effective KM project management. The guidelines we offer are mainly dependant on the context in which the projects are implemented, although we argued that intrinsic rewards are beneficial in most cases involving a knowledge creating process.

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