

**THE INFLUENCE OF TECHNOLOGY: FACTORS MOTIVATING PROJECT
MANAGEMENT TEAM SUCCESSFULLY**

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ABSTRACT

Interrelationship between projects is getting more complex day by day within a project network. Technology usage in each and every project levels is necessary and have profound role in motivating the whole team. This paper explored the relative importance of technology usage as one of the motivational factor concerning in the area of communication within the project team, team work and efficiency. Project success not only relying on organization process and structures, but technologies gives a higher impact that keeps the team motivated all the time. The aim of this study is to examine the mutual relationship between technologies impact and motivational factor. This study also aims to explore how these interrelated elements of technologies and motivation could be emphasized in every organization to reinforce and strengthen the project team from all level. The focus of this study is design oriented to address motivation factors in project management field.

Keywords: *Technology, Motivation factors, Communication, Team work, Efficiency*

1.0 INTRODUCTION

Managers in any organization have always used motivation as a technique to perform tasks and duties. Motivation of staff is a major issue for all organizations. Humans are motivated by many factors such as psychological needs, physiological drives, survival, urges, emotions, hurts, impulses, fears, threats, reward, possessions, wishes, intentions, values, freedom, intrinsic satisfaction, self-satisfaction, pleasure, dislikes, established habits, goals, ambitions, and above all, money. Beside all this technology usage in daily project task is one of the motivational factors that should be considered. In recent times, technology has become an ever increasing presence in the workplace and it is one of the hot topics among the business world. More and more businesses, large and small, are trying to incorporate the latest technology into their operations.

The appeal of the whole information technology arena is that it is designed to make people and organizations more knowledgeable, efficient, and profitable. It is certainly the case that the construction industry is starting to become more aware and familiar with the potential offered by what are referred to as 'Information Communication Technologies' (ICTs). Unfortunately, it also seems to be the case that available and often easily accessible technology is not being utilized to the full. This is reflected in both the literature and in practice.

Technology usage was also a core element whereby the overall goal was to eliminate layers of unnecessary middle management, increase their efficiency, and improve customer service radically. According to (Francis C. et al, 2011), empirical studies have shown that poor human relations at work, neglect of staff welfare programmes and lack of motivation are often the factors that cause industrial strife and declining productivity in the work setting. Accomplishing this goal would not have been possible without the technology implemented in their revised, centralized operations, (Kupfer, 2009). Many project departments themselves are also discovering that they can stimulate improvement in overall company performance by integrating information systems to internal structural change. To do so involve establishing self-directed work teams with more responsibility and freedom is needed, (Goff, 2004).

Employees are motivated intrinsically as well as extrinsically. Intrinsic motivation is crucial when tacit knowledge in and between teams must be transferred. Organizational forms enable different kinds of motivation

and have different capacities to generate and transfer tacit knowledge. Since knowledge generation and transfer are essential for a firm's sustainable competitive advantage, technology impact is one of the most important tool in project management, Margit Osterloh & Bruno S.Frey, (2000). Project manager must understand how to best motivate the diverse members on the project team as one of the way in meeting the project requirement. It is widely understood that modern technology allows employees to have access to extensive resources and timely information.

2.0 HOW MOTIVATION AND TECHNOLOGY ARE RELATED

Motivation is the set of forces that causes people to engage in one's behaviour rather than some alternative behaviour, Moorhead, G. and Griffin, W. (1999). Also Kreitner, W. (1995) have defined the concept of motivation "as the psychological process that gives behaviour purpose and direction an internal drives to satisfy an unsatisfied need and the will to achieve. So, the motivation is the inner force that drives individuals to accomplish personal and organizational goals.

According to Bay (2004), the usage of technology is efficiency savings: greater volumes handled, at greater speeds, with fewer resources. Effectively introducing technology is not the only cause of people becoming more motivated but the management process becomes more naturally organized. In any project, stakeholders need to work together. It is very important to have a teamwork that can complete successfully all tasks composing the project. Finding a good team is not easy, because a large number of factors have to be taken into account. Therefore, the aspect of technology plays and important factor that contributes to motivation factor in project management, Hamid Tohidi, (2006).

Today, speed of development in the field of Information Technology is such that most thinkers look at it amazed and try to assess and measure and distinguish its boundaries of influence. Although the impact of this technology booms in different fields of science and has an indescribable prosperity to scientific interactions of the world but has also followed concern in different fields of social and human resources. Certainly those who work and are active in this area and offer the use of this technology to others are themselves concerned by these fast changes and necessarily need to consider ways and new strategies to improve performance and avoid possible risks and must provide correct and applicable solutions for planners and managers of organizations, for decision-making and policy-making. Nowadays models of project management are fully professional and give emphasis to quality and creativity, Hamid Tohidi, (2010). It is clearly emphasized while reviewing some of the challenges in the field of information technology and human resources, factors affecting the success of projects such as the need to redesign jobs, team work and communicating motivates to personality characteristics of individuals in the process completing any project task.

Steven L. Chan (2000) defines technology as "... the convergence of computing, telecommunications and imaging technologies" The author goes on to point out that "in its various manifestations, IT processes data, gathers information, stores collected materials, accumulates knowledge, and expedites communication" are much easier with the usage of technology.

3.0 TECHNOLOGY AS A MOTIVATION FACTOR IN PROJECT MANAGEMENT

Motivation is essential to learning and performance, particularly in technology-mediated environments where team must take an active role in their job task by being self-directed (Lee, 2000). Technology aspect is needed as one of the motivation factor in project management team. Advancement of technology could motivate project teams in terms of communication, team work and work efficiency. Adopting new technologies is crucial to sustained competitiveness for many organizations. In construction, manufacturing and service industries, new technology can lead to product and process improvements that produce tangible market advantages.

Theories of organizational learning suggest that some organizations are more able to learn than others. (Garvin, 2000), which may include making changes required for successful adoption of new technologies that threaten organizational routines. The cost of ineffective communication challenges appear when there is no proper communication tool to communicate within the project team.

Technology is needed to bridge the communication gap between the stakeholders. This is to make sure the accurate information flow among the stakeholders being shared equally. Therefore, every project team should use proper communication mechanism in order to motivate the team to work in a most conducive environment. The team should not feel being lack out of information because this could lead to conflicts that delay the project development. There is a need for communication technology to support teams because many teams are non-collocated, or virtual. Technology in the workplace allows businesses to develop fast and efficiently. Business technology such as video conferencing, social networks and virtual office technology has removed workplace

boundaries that previously limited business expansion. With business technology, companies can aim a wider customer base and grow to higher levels and demotivate employees too.

Building a good team is the one most important thing a project manager can do to achieve a successful project. With the right technology, a team will overcome almost any difficulty to succeed in its goals. In most projects there will be times when only the determination of the team can overcome the difficulties and carry the initiative through to success. Even when there is no pressure, the team's spirit and enthusiasm will be reflected in the quality of the through technology usage. Technology keeps the communication flowing among peers and between team members and management. Once the team get used to the quick and casual feel of technology they are likely to feel more comfortable using them. They seem to demand a response faster, and employees are likely to progress better. The use of technology can also impact a firm's relationship within the whole team. Today's employee is more knowledgeable and connected to information like ever before. The employee will not be motivated by a simple poster, meaningless words or money. Motivation, and the avoidance of de-motivation, will take work. A leader needs to know what motivates the employee and through two-way communication and actions, align the employee's goals with those of the organization. This is not a one-time task but a process that needs to be continuously functional, updated and modified over the life of employment. Not only does the employee need to be appropriately motivated to do what needs to be done, but the leader also needs to be motivated to help the employee, and, therefore, the organization, reach its goals. The ability to gain information from others up or down a process or distribution channel makes having control over that process or entity less of an issue. The ability to share information among the project team and the ease of transferring designs can also lead to an increase in outsourcing, which is a growing trend as companies try to reduce their own workforces and may find themselves working in the most conducive environment. Technology is important in the field of project management because it improves communication in the workplace. Office workers are not limited to phone calls or inter-office mail to interact with one another anymore. Electronic mail allows workers to send messages instantly without interrupting the recipient. Business technology also improves communication with clients and business partners because information can be passed through multiple channels almost instantly.

Meanwhile, technology plays an important role in motivating team work. With the best interconnection of immediate latest technologies, project team can able to connect the best ideas for the planned projects. This not only increases the project performance but innovates from each part of team as well that add value throughout the organizations. Besides that, project team will be able to get immediate feedback from all the departments that are working together. Technology impact could also create stability among the stakeholders that are associated with the rate of efficiency improvement using the new technology. The tasks that project team perform within an organization are being drastically affected by the increased mechanization and application of technology as a part of the production process. In many settings, tasks previously performed directly by human operators are being automated, changing the human's task to one of supervisory control. Now the expectations of an average employee in such an environment has to change, because they are no longer performing repetitive tasks, but rather must be able to recognize and react to problem situations. Such progress will only develop with the help of latest project equipment and technologies. Team work always helps in increasing workplace productivity since there is more input in the form of more ideas and minds at work. Working alone is not always the happiest situation either, especially in the field. Successful team building and working together with technology is bound to bring out the best out of the employees who may also then compete with each other ensuring the business is the success.

In many cases, team working is seen as the 'great solution' to communication, decision-making and efficiency problems. At the project management level, in particular, it is accepted that propounding 'high-energy' team effort will offer enormous benefits to overall organizational effectiveness. Teamwork as a concept has grown over the last 20 years. However, teamwork success is not automatic but it could be enhance with the help of technology tools and advancement. Teams have to be established for the right reasons. Team member selection is very important, as is ensuring that the team purpose is clear and motivated with the work progress.

Motivation drives the work efficiency factor from the usage of technology. Efficient electronic equipment with no connectivity issues and breakdowns will help to save precious time. Originally, project managers had to travel to companies to give presentations or contract with organizations to speak at conventions, plus they had to hire professional stakeholders to start on the new construction projects. Today they can work from home offering teleseminars, webinars, boot camps or mentoring programs. Technology has made that easier and made it a more equal playing field. Multiple task completion and information can be done accurately and fast. Team are much more motivated because technology makes it possible to telecommute, work from virtual offices and communicate with businesses and individuals across the globe. Thus the idea is to have devices that enhance efficiency and subsequently productivity at the work place. The devices help to reduce the response time,

improve customer service and cutting costs, all imperative for workplace productivity. Office technology saves times by speeding up the work flow process. Digital filing systems save space, paper and printing costs. The use of computer systems allows corrections to be made instantly all the time. Resources like electronic files and access to information technology are available with the click of a button. Flexible work schedules are popular

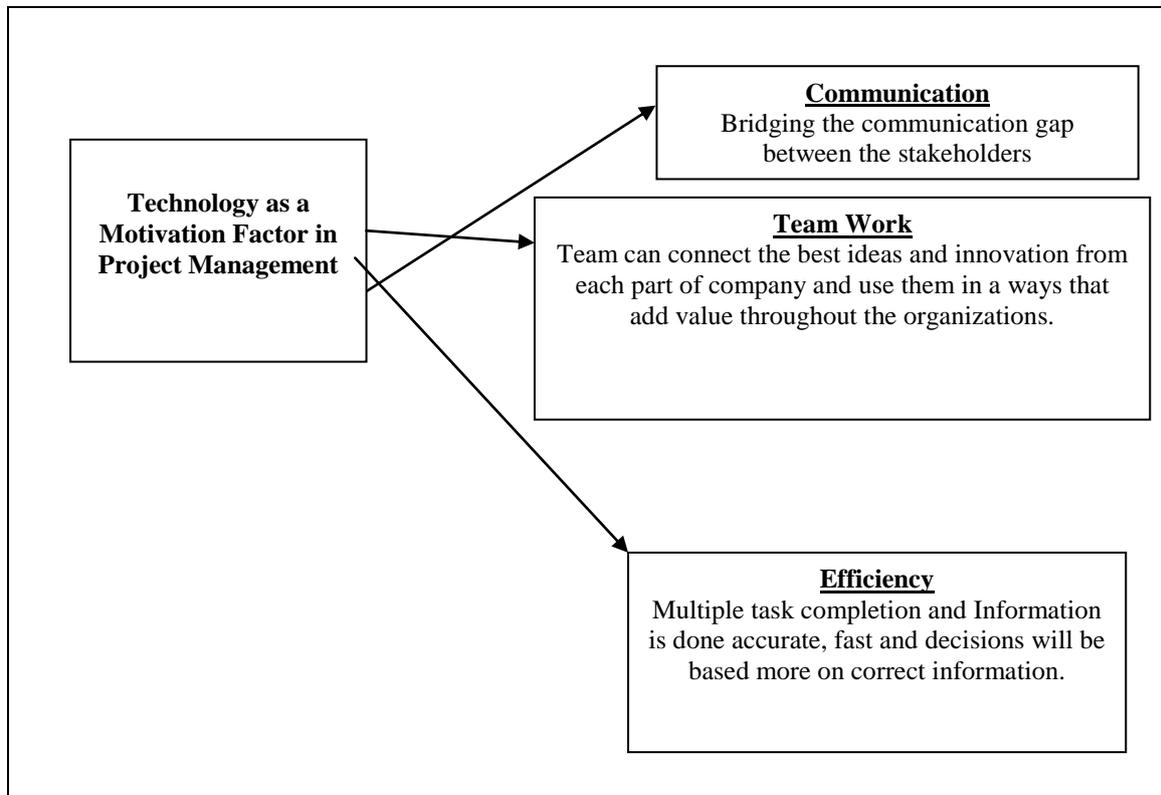


Figure 1: Technology usage as a Motivation Factor in Project Management

because so many duties and responsibilities can be accomplished. Technology motivates team creativity by influencing emotion, goals, and beliefs. Besides that technology fosters capability and receptivity beliefs necessary for creative action. Thus, a key advantage of technology is to be able to simplify organizational structures. Although they served a purpose at one time, the benefits of improved coordination and increased supervision in the organizations. In fact firms with well-developed technologies lend themselves to a move towards flat structures. When employees are saddled with slow and inefficient equipment, they get frustrated and so does the customer. Investing in state-of-the-art technology, similar to the product line for consumer dealings and customer data collection is essential to keep loyalty across your workforce.

4.0 CONCLUSION

Integrating technology into project management process could be one of the best ways that contribute to project success. When team members see their test results and work progress immediately, they are more likely to be interested and motivated towards the outcome. In order to acquire and retain the best talent and work progress, organizations must understand the technologies that the new workforce expects and then find a way to support their employees. If project managers do not support their preferred technologies throughout the working progress, this could lead to project failure and delay as well. Project managers need to be aware of their project technology preferences and provide the tools and equipment to the project team as they can be more motivated. Implementation of technological systems can either act as a medium for change or be the means of achieving a desired change in a project. A properly integrated technological system ideally will take into account the impact on the organization as well being one of the motivating factors for the whole project team. From this discussion and the examples given, it is clear that technology is a critical element of organizational transformations. While it is generally viewed as progressive and a means to increase the efficiency and overall performance of a project, this can only happen if it is done as part of a larger change effort, regardless of whether the change is driving the technology, or technology is driving the change. Companies that are able to successfully undergo such changes will be better prepared for the future, since there is no doubt that the emphasis on increased use of information technology and advanced automated systems will continue.

The function that technology plays for the business sector cannot be taken for granted. If we were to take away that technology trade and commerce around the world will come to a standstill and the global economy would collapse. It is nearly impossible for one to conduct business without the aid of technology in one form or another. Almost every part of business is deeply influenced by technology. Technology has become very important that it has become a huge industry itself from computer hardware manufacturing, to software design and development, and robotics. Technology has become a billion dollar industry for a number of individuals.

REFERENCES

- Bay Jordan. ((2004). *Lean Organizations Need Fat People*, Wynot Books: 2nd Edition, Texas: USA.
- Chan, S. L. (2000) Information Technology in Business Processes. *Business Process Management Journal*, (3), 224-237.
- Francis C. Anyim, Cyril Oseloka Ikemefuna and Samuel E. Mbah. (2011). "Human Resource Management Challenges In Nigeria Under A Globalised Economy" *International Journal of Economics and Management Sciences* 1 (4).
- Garvin, David A. (2000). *Learning in Action*. Boston: Harvard Business School Press.
- Goff, Leslie, "Smart Staffing" *Computerworld*, Vol 28, October 31, 2004, pp. 99-100.
- Hamid Tohidi. (2010). Human Resources Management Main Role In Information Technology Project Management. *Elsvier: ScienceDirect*. 925–929.
- Kreitner, W. (1995). *Motivation and Leadership at Work*. (6th ed.). London: McGraw-Hill.
- Kupfer, Andrew, "An Outsider Fires Up A Railroad" *Fortune*, December 18, 1989, pp. 133-146.
- Lee, C. Y. (2000). Student Motivation In The Online Learning Environment. *Journal of Educational Media & Library Sciences*, 37(4), 367-375.
- Margit Osterloh and Bruno S.Frey.(2000). Motivation, Knowledge Transfer, and Organizational Forms. *Journal of Organizational Science*, Vol. 11
- Moorhead, G. and Griffin, W. (1999). *Managing People and Organizations*. (6th ed.). NY: Houghton Mifflin.