

Knowledge, Innovation and Organisational Effectiveness

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Abstract

This article deals with the indispensable role played by innovation and knowledge in improving the efficiency of an organisation. It discusses the methods used by an organisation to identify the wealth of knowledge deposited in its workforce and how it endeavours to hone their skills and abilities in order to create innovative products and services so that it (i.e. the organisation) steers ahead of its competitors.

The article further explains the advantages of outsourcing innovation and knowledge and goes a great length in emphasising the importance of collaborative research as a means of sharing knowledge and best practices. The relationship between knowledge, innovation and organisational effectiveness has been sufficiently encapsulated in this article, making it easy for readers to synthesize the benefits that could be derived from such a relationship in order to make viable and realistic decisions.

Key Words

Innovation, Knowledge, Information, Creativity, Competitiveness, Organisational Effectiveness.

Introduction

Innovation and knowledge are essential ingredients underpinning most successful organisations all over the world today. However, many organisations still find it extremely difficult to estimate the quantum of innovation and knowledge that have developed within their own workforce. They do not seem to take into account the amount of knowledge available to them outside the organisation. Some do not seem to have a way of identifying such knowledge which, if tapped into, will make a significant difference. Innovation can not occur in a vacuum, it must be based on some kind of thinking or conceptualisation which forms the basis of a revolutionary thinking in the organisation. The organisation may have to engage in the process of identifying and creating new services or products that customers would perceive as ground-breaking. (Kotler, Armstrong, Saunders and Wong, 1999).

In today's world of fierce competition among organisations, one would have thought that firms that are poised for survival, would source for innovation and knowledge at any cost. Forward-thinking organisations innovate in response to an existing or looming

competition or simply to be ahead of the competition. Sadly enough, some organisations do not place the required premium on innovation and knowledge. They rather still do things the old way and sit down to supervise the gradual and painful extinction of their organisations. According to the authors of this study, the effective management of knowledge and its application are essential ingredients in bringing about innovation. This, agreeably, is now a major driving force of organizational change and wealth creation. (Adcock, Bradfield, Halborg and Ross, 1993).

Literature Review

Innovation and knowledge have been defined in different ways by different people based on their experience, perception and current role in life. They all however, agree on very basic themes and metaphors which make the individual definitions somewhat similar.

Professor Charlan Jeanne Nemeth (1997) of University of California described innovation lucidly as, "the spark that ignites the workforce and allows the enterprise to respond readily to change". Nemeth stressed that despite the enormous benefits of innovation, most organisations would rather major on social control, loyalty, team work and consistent feedback to the detriment of innovation.

Foster (1987) observed that some perceive innovation as a process that is based on creativity as well as some measure of greatness. He also believes that it should be seen as a battle in the market place between organisations that introduce new ideas or change the order of things, defend and those which protect the old ways of doing things.

The afore-mentioned definitions bring to the fore, the significance of knowledge which in the opinion of the authors, is the driving force of behind innovation. In fact, it must be emphasised that, knowledge is of no significance unless it culminates into innovation or the addition of value to existing product or concept. Knowledge is defined by Armstrong (2001) as "information put to productive use". He contends that in order for an organisation to benefit from the wealth of knowledge available in the organisation, senior management must device a system to identify and manage knowledge proactively and consistently This will enable it to permeate every facet of the operations. Managing knowledge requires the gathering and collating of cogent information which must be processed and shared among the workforce. This presupposes that one should gain access to information in whichever way possible in order to learn more about the intricacies and details of a situation. This way, a dispassionate decision could be made or an independent opinion formed.

The authors of this project shall define knowledge as an accumulation of information about an object or a situation crystallising into the formation of tangible ideas or opinion. The Random House Dictionary of the English Language defined knowledge as, 'the acquaintance with facts, truths, or principles, as from study or investigation'. Knowledge is described by various individuals as information arising from occurrences or what the authors call, the-'know-how'. This is tacit knowledge which is inferred, implied or understood. The other type of knowledge is explicit knowledge and, it refers to recorded

information, perhaps optimized for effective communication. The former type of knowledge manifests itself in the “know-how” of an individual is very difficult or impossible to record and communicate succinctly. This is because it is only implied and the later being explicit knowledge, is obtained from learning or reading. (Beardwell and Holden, 1994).

From the series of definitions and explanations supplied in the preceding paragraph, it can be deduced unreservedly that, information gathering, collation, processing, management and diffusion could inevitably result in the acquisition of knowledge. Is then converted into ideas that can be implemented. The management of such knowledge otherwise known as ‘knowledge management’ by organisations is now incontrovertibly, the driving force behind change and the creation of wealth in organizations today. Skyrme (1997) argues that knowledge has made significant contribution to the development of organisations in many ways for instance, many products and inventions patented by organisations have revolutionised the way organisations operate and respond to market changes. It has been argued that knowledge must be made pervasive and accessible in businesses and it must be acquired or converted in the following ways:

- Tacit-to-explicit: (externalisation) – the conversion of knowledge into palpable form via dialogue.
- Explicit-to-explicit: making use of documented information and available data to acquire knowledge or convert information.
- Tacit-to-tacit: this is seen in individuals acquiring new knowledge directly from other people through socialisation.
- Explicit-to-tacit: This becomes real when one learns by doing something. It is the acquisition of knowledge through experience.

It must be re-echoed that, innovation and knowledge remain purely theoretical and become practically conceptualistic unless they are translated into viable programmes and projects for the growth of the organisation. (Nonaka and Takeuchi, 1995).

Looking at the pool of knowledge in organisations nowadays, there is no doubt that it is resulting in rapid innovation in many of them. Knowledge can be figuratively described as the pipeline which, if any part is broken or constricted, the flow or its benefits may be stalled or slowed down. That is why the authors stated that the management of knowledge by an organisation is one thing; but allowing it to flow continuously and consistently paid within every part of the organisation is another. This is how the organisation can add value to its products and services achieve its objectives and be able to respond to changes in its market and continue to remain viable and sustainable. Carlisle (1999) intimated that knowledge is dynamic and unlike information, it is subject to constant change. This suggests that organisations that want to lead in their markets and not follow, must invest in information gathering and interpret it in an innovative way. The Carlisle further explained that knowledge is a critical resource which has a correlation to all other resources in an organisation. The most important resource of the organisation is its human resource and it is this resource which is the embodiment and carriers of knowledge. Therefore, it must be motivated and developed to acquire

knowledge and innovate. The workforce will then be capable of critically analysing events, trends and sequence of events occurring in respective markets following which it can employ creativity, vision and ingenuity to set an unbeatable standard in the marketplace.

Factors Influencing Innovation

Whether from the perspective of the organisation or otherwise, the individuals who constitute the workforce are the primary vehicles or the embodiment of the organisation's innovation and knowledge. We cannot, thus, downplay the significant role played by such individuals in bringing about sustainable progress the organisation desperately requires to survive in the ever changing market in which it operates. Often, innovators and knowledge workers do not seem to be made to realise their full potentials; nor do organisations always exploit these potentials to their advantage. Organisations, therefore, must be able to identify their knowledge workers and develop for them a learning processes to increase the stock of knowledge needed for innovation and productivity.

The authors are fully aware that many organisations have set up systems of measuring competence of their human resources and have programmes for their further development to enable them to sustain knowledge and innovative capabilities of the organizations. However, we also know that, there are many more organization out there which consider their manpower as constraints or obstacles. The organizations that consider their manpower as assets, stand a great chance of leading in the markets. (Armstrong, 2001).

According to Drucker (1988) a knowledge worker is the one who works with information or who develops and uses knowledge in the organization. This can be achieved better through the organisation's ability to manage the knowledge pool available, whether a profit or non-profit making. When organizations begin to view its manpower as assets and not constraints, they would see them as the bulwark of development of the organization, and motivate them to release and stretch themselves beyond their comfort zones so as to utilize available knowledge to transform the organization in such a way that it will mark an epoch in organizational thinking and knowledge creation. There is even great scope for collaborative efforts amongst organizations to broaden the frontiers of knowledge and eventually of innovation. This can only be possible when respective organizations train their workforces appropriately in conformity with the demands of the markets and develop a strategy of sharing/complementing each other's knowledge base.

Bramham (1994), thus, rightly postulates that organisations that consider their workforce from the point of view of cost will end up having an expensive workforce that is an obstacle rather than an asset. People are the engine of growth and they can be ambitious, enthusiastic and productive provided the leadership and the management have a positive attitude towards them.

Innovation and Knowledge Revolution – Some major outcomes

There is a great explosion and revolution in innovation in this era of incessant competition imposing relentless desire on organisations to cut down cost and be at the fore-front of their industries. A major outcome of all this is the outsourcing of innovation and of simultaneously supporting the R & D departments both at home and abroad. This scenario also connects itself to the emerging economies which exhibit a high and rapid demand for new products that are often sophisticated. This creates a situation where organisations in all economies have to innovate to be ahead. In the case of the developed economies, outsourcing is an answer because it enables the organisations to be cost competitive.

The second crucial point to note is the shortage of technologists, scientists, researchers and well trained technocrats around the world currently. They are the brains behind innovation and knowledge management. As a result, they have the propensity to move from one company to the other. These knowledge workers are able to develop very good user friendly softwares. They are able to create very easy ways of communication, monitor markets around the world, and circulate the feedback to various organisations within a very short period. This high technology and knowledge-based analysis of world events reduces the cost of production and investment-related risks substantially. Retaining them i.e the workers, in the organisation would, therefore, be essential to remain competitive and innovative. An effective motivational knowledge management strategy is thus called for.

Outsourcing of Innovation

In outsourcing for innovation, it is essential to realise that no one organisation can rely on its internal research and development alone in order to achieve anything meaningful. They have to do so in collaboration with other agencies that are specialised in various aspects of the innovation pipe line. Therefore, we must consider outsourcing innovation, which would obviously take us beyond the confines or the limits of the organisation and its environment.

Many industries would have collapsed and suffer total extinction had it not been for the pursuit of strategic outsourcing of innovation, that has led to the restructuring, re-engineering, and removal of operational inefficiencies. This is evident in the existence of the manufacture of automobiles, aeroplanes, computers, telecommunications, pharmaceuticals, chemicals, health care, financial services, energy systems and software.

According to Quinn (2000) leading organisations have managed to beat the cost of innovation and risks from 60% to 90%. At the same time, they have decreased cycle times. This has had the leveraging the impact on their internal investments, by tens to hundreds of times. The level of innovation in the pharmaceutical industry is phenomenal. The discoveries that take place via research motivated by innovation and the desire to liberate mankind from predicaments and illnesses cannot be over emphasised.

With the advent of globalisation, outsourcing has become a common feature nowadays. Care has to be taken however, not to outsource core competences rather, that area that the organisation needs more expertise than what it has available within the organisation. This should add value to the organisation's output.

Ramirez and Dickenson (2006) discovered, in their study of the labour markets and knowledge flow in the Chinese National Innovation system that, the Chinese information and communication technology (ICT) firms have developed in the last 20 years into a highly competitive international players. Through the innovation of new products that are highly competitive in the world market. This study revealed that, despite the fact that the country is still very poor in terms of per capital income, they have made a breakthrough which other developed countries have not been able to achieve. This, they suggested, is because of the mobility of knowledge between academic and business institutions. The study of such mobility of knowledge presents an interesting area to be researched into.

A post-mortem into the operations of successful global organisations like General Motors, Philips, Sony, Toyota and many others will reveal the sophistication in the designs and inventions which make their products and brands as strong as they are. Most of it depends largely on the development of software by knowledge workers. The manufacturing world relies very much on sensitive electronics equipment. The use of the computer, for example, in innovation, enables the innovators to go through mere 15 sequences of software combined in more than 10trillion ways, each creating a potentially new product or process.

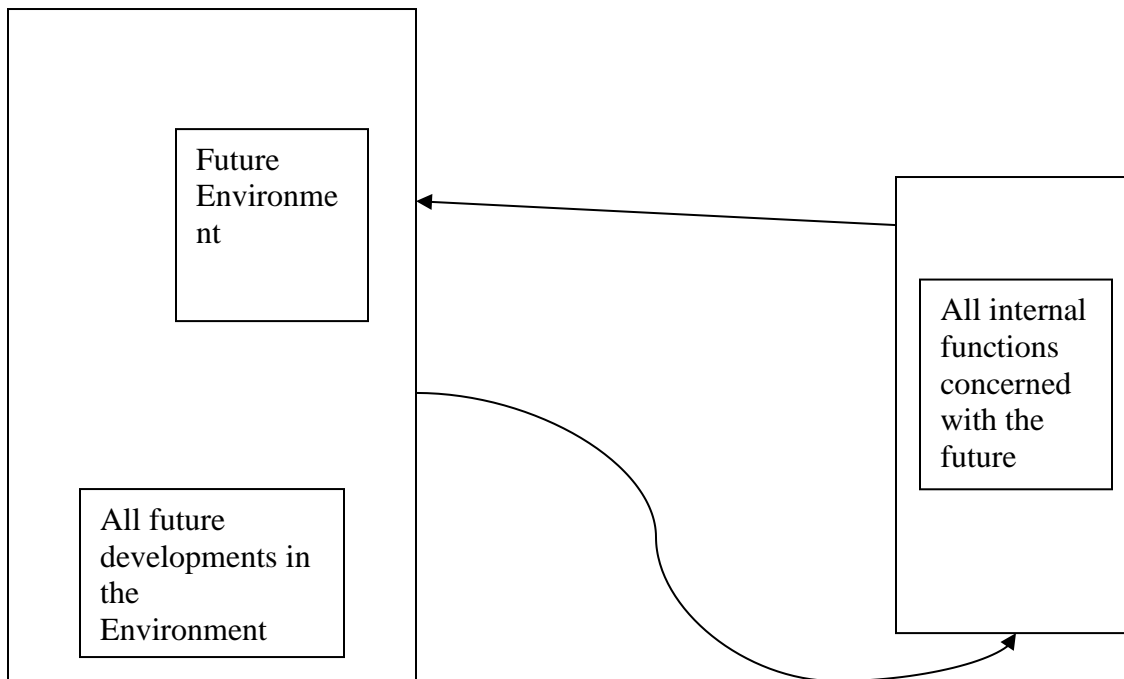
Those huge companies with internal Research and Development cannot solely depend on their own designs that are created by the computer. To succeed, compete, and expand market share in a competitive environment, companies need to have strong and unconditional links with external researchers and agencies that have specialised in creating innovation and knowledge. Innovation gives birth to a state of the art products and services and also, leads to continuous innovation, knowledge management, documentation, evolution and cross-fertilisation of ideas that will keep companies at the frontiers of their industries (Quinn, 1999).

Focus on Core Activities

A critical look at the aircraft manufacturing industry reveals the large number of external companies involved in manufacturing the parts required by a company in order to complete the manufacturing of one aircraft. It will be an arduous task for any one company in the industry to match the knowledge and innovative work that these external enterprises bring on board. One major advantage of the companies that are outsourcing

innovation is that, they are able to focus on their core activities since, they do not have to be saddled with trying to produce every little parts required to complete the aircraft.

Leonard (1999) pointed out that knowledge organisation must focus on the future as well as the present activities they are engaged in. This is due to the fact that, the environment in which knowledge workers thrive is turbulent and also, unpredictable. As a means of dealing with the myriad future uncertainties, he proposed the use of Beer's Viable System model which is seen as a powerful descriptive and diagnostic tool for mapping capacities and engenders viability. Part of the model which is of interest to the authors is System Four as illustrated below.



System Four

System four synchronises all the activities that engage with the future of the organisation, which must be in constant cohesion with each other in order for the organisation to create a knowledge bank of the future environment so that, innovative ideas could be generated to circumvent occurrences that have the propensity to stifle the progress of the organisation . From the diagram, one can infer and understand that a look at the future environment may reveal potential threats and opportunities which will be fed into the internal processes of the organisation so that strategies would be formulated and structural adjustments made to eliminate and overcome obstacles to growth.

Goal Setting and Commitment

Cooper (2007) advocates that, product innovation begins with the company's goals in the sense that, the overall strategy should encapsulate the goals of the business as a whole. The organisation should explore the role played by innovation in achieving the objectives of the organisation.

For a company to successfully source for innovation and knowledge, it must set realistic goals and exciting vision, which will stimulate both internal R & D and external innovation and knowledge agencies to strive to reach the goal and actualise the vision. This is crucial because knowledge workers often look out for places where they can find job satisfaction and excitement. The best and prudent thing to do, is to develop these goals and visions jointly with the workers as well as the stakeholders in order to create a sense of belonging, and team work in breaking the innovation barriers. It is imperative to solicit for the views of customers, employees, shareholders, the community and other stakeholders who happen to be the end users of the innovation efforts.

These days many organisations are experiencing cultural and operational diversities via mergers, buy-ups, acquisition etc, but before a company concludes a contract regarding expansion, it is essential to ascertain the other partners orientation with specific reference to innovation and knowledge. Because if both companies have very different attributes and attitudes towards the issue of innovation and knowledge management, the relationship might not work for their mutual interest.

Innovation and Change

Innovation brings about change and, change in the organisation has to be carefully managed to avoid intractable bottlenecks in operation and stalemate in decision-making. It is time that some companies develop a palpable sense of energy, vision and excitement when it comes to implementation of the anticipated change. Both partners must get the relationship right without any ambiguity. For any joint venture to be successful both parties must have a common agenda, common purpose, common goals and common ambitions.

Duck (1993) argues that for change to take place in today's organisation, employees must have a sense of newness, must think and act differently. Since the organisation is treading a new way, it requires managers to think outside their comfort zones. Leadership must not apply mechanistic model to manage innovation and change in their organisation because, it is easy for people to employ familiar approach to managing a new initiative since in that case, they do not have to stretch themselves and spend sleepless nights formulating new strategies. Innovation in a company may lead to a total reinvention of the company which brings in its wake an unimaginable change in operations and an organisational paradigm shifts in order to compete in its market. This may involve selling off part of the business that can not meet the challenges of the future, downsizing the work force, outsourcing knowledge and taking a gamble with new products that can beat competitors and increase profit. (Goss, Pascale and Athos, 1993).

For an organisation to succeed, it must anticipate changes in its environment and plan ahead to redevelop its structures and manage its resources and knowledge to respond decisively should that change occur. Challenges are bound to occur in any dynamic and competitive market not only from competitors but also, government, civil organisations and pressure groups which the leadership must foresee and train or outsource knowledge in order to meet them. Meeting the challenges may call for the acquisition of new equipment, new technology in IT or a major re-engineering of the entire organisation. The success of this process depend largely on visionary leaders who will not hesitate in taking the lead in innovation rather, they would accept the challenge and prepare the workforce adequately for that. (Mullins, 2005).

Leadership Role in Innovation and Knowledge Worker

In getting the organisation to embrace innovation and knowledge creation, the corporate leadership can be an obstacle or a catalyst depending on their orientation. More often than not, when the initiative stems from employees agitations, some leaders either become adamant or apathetic in carrying it through however, if it flows from top-to-bottom, it has a strong propensity to sip down to the bottom.

Lock and Farrow (1991) gave credence to the argument that, the chief executive and indeed the corporate leadership has the responsibility to direct the affairs of the organisation and they undertake this function by defining strategies, formulate methods, provide resources, prepare detailed programmes and plans and also manage the entire organisation to ensure that the objectives set are achieved. In the light of this, it becomes incontestable to say that innovation will remain a creative idea and knowledge will remain a dream if the leadership is not enthused about pushing it forward. Because knowledge of the market and the potential competition may require an organisation to restructure itself, retrain the workforce, refine its processes, diversify its operations or even recreate itself. This must involve everyone in the organisation.

Behn (1995) suggests that innovation must engage the attention of everyone in the organisation in order to move the organisation forward. The chief executive is the one who creates conditions that will encourage frontline employees to be innovative therefore, it is imperative that they themselves become innovative. It must be emphasised that for knowledge and innovation to permeate the fabric of an organisation, middle managers and frontline staff must be convinced by leadership. Corporate leadership must organise training, seminars and meetings at various levels to disseminate the ideas and ensure the employees have grasped the fundamental philosophy and logic behind the new knowledge and innovation. In every proactive and efficient organisation there is a psychological contract between the leadership and the employees to deliver and achieve a common objective. Consciously or unconsciously, each level of the workforce is monitoring to ensure that the other party fulfils its part of the contract.

Conclusion

The authors are advocating that innovation and knowledge should be at the forefront of strategic planning since they are two most important and indispensable elements that can make and unmake the organisation. They must be maintained and harnessed if companies are to remain viable and vibrant. Many companies have underestimated the impact of outsourcing knowledge and innovation and, have therefore paid dearly with their profits and resources.

However, those who saw the need to direct sufficient resources towards research and development both internally and externally, are now the leaders in their respective industries. In today's competitive world, one cannot shy away from innovation and employment of knowledge workers because, they are the engine of growth. Take them and live, leave them and die. It is a make or break affair. It is common knowledge that, carefully diffused innovation within a company yields tremendous results. Companies must therefore value its knowledge workers who often research and gather information that help to keep the company ahead of rivals.

Outsourcing is an area that has generated much debate due to the seemingly negative effects it has on local economies. However, it has become a strategy that many organisations find profitable and expedient in cutting cost and saving them from liquidation. For companies to succeed, its knowledge workers must be developed proportionally to the growth of the organisation.

Research Limitation

There are many more areas of innovation and knowledge that could be looked into more vividly but, due to time constraint, the researchers could not do so. Some of the information provided may require further verification as an attempt to update the information.

Future Research

There are many more interesting issues about how certain companies have developed irrespective of the fact that, they did not outsource innovation and have constantly failed to retain their knowledge workers. A research into such a scenario could prove interesting.

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