A Quantitative And Qualitative Approach To Knowledge Management – Episodic Extraction, Enhancement And Creation Of Tacit Knowledge

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ABSTRACT

Capturing employee's knowledge is of prime importance to any organization. If the knowledge is captured after a completion of entire task, quality and quantity of knowledge obtained from the expert decreases as it is human tendency to forget after a long interval of time. We, in this paper have developed a model emphasizing the need for episodic extraction, enhancement and creation of the tacit knowledge which will increase the quality and the quantity of the tapped tacit knowledge. With this model, the organizations will be able to capture the knowledge of employees in phased manner so that when an individual leaves the organization, the loss incurred by the organization is minimized to a great extent.

Keywords

Phased extraction, enhancement, tacit knowledge, knowledge creation

1.0 INTRODUCTION

The employees in any organization possess the required knowledge about their field of work. Also, the stakeholders, outsiders, consultants might provide the required information to the organization. This means to say that both the employees and outsiders provide or possess the knowledge for the growth of the organization. But the major contribution is always from employees, rather than the outsiders. This knowledge which theemployees and the stakeholders possess may be of profound help for the organization to achieve its goals.

The knowledge can be acquired in any place, any location, any time and also every where. The knowledge is abundant, plentiful. This means to say that knowledge can be acquired by means of reading papers, articles, journals, digital libraries, discussions, chat rooms etc. But, this kind of knowledge, though plentiful, abundant may not be of real help to the organization, because of the simple fact that the organizations may not require this knowledge for reaching towards its goals, objectives.

The knowledge which the organization requires should be more specific, more related to the field of work they are dealing with. So it becomes mandatory for organizations to possess the right kind of knowledge at the right time. The right kind of knowledge and at the right time, because of the fact that, we live in the world, where the business deals are finalized in minutes and not in hours or days because of the intense cut throat competition. Thus the main sources of knowledge in the organization are the employees .Thus it becomes highly imperative to extract the available knowledge in that particular employee, who has the knowledge for completing a particular task.

However, many organizations provide training to their employees to build the necessary knowledge for doing the work effectively and efficiently. But there are more and increasing cases, where the employees acquire the skill in the present organization and implement this acquired knowledge to some other organization, meaning that they are no more working in the organization that provided training to build to perform a specific task. The implications of the employee leaving the organization may be enormous. Hence, the tapping of knowledge present in the employees is of prime importance. The figure 1 shows the contribution of the employees and also the stake holders for creating the knowledge in the organization.
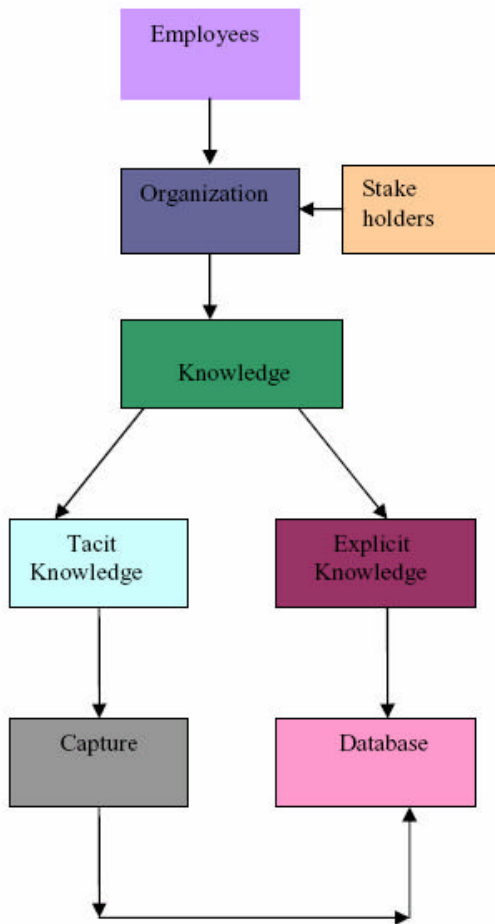
Figure 1: creation and capturing of knowledge in an organization

Now since we have established the need as to why the tapping of tacit knowledge is a necessity we should also know what the different types of knowledge are. They are discussed as follows.

The two types of knowledge are the explicit knowledge and the other being the tacit knowledge. The explicit knowledge is a knowledge which can be recorded and is easily accessible. Hence it is easier to capture this explicit knowledge and the organization can make use of this knowledge which is directly stored in the database for knowledge sharing purpose. The tacit knowledge is a knowledge which resides in the minds of the people. Thus this tacit knowledge should be captured and then stored in a database for the purpose of sharing the information in an organization and hence it is important to tap the tacit knowledge. This is shown in the figure 1.

Though we know that the employees are the best means of providing the acquired knowledge to the organization, it does not mean that what ever is there in his or her head (employee's) will be of help to the organization. Human capital (knowledge and skills) is an asset that can be possessed only by individuals, not corporate entities. This asset has very unique

characteristics. For example, it walks out the door every day, carrying all corporate secrets with it, and it does not have to come back. Though, there is rapid advancement in the field of technology, the knowledge capturing has remained a mystery, which means to say that it is next to impossible to capture the knowledge in the brains of humans, by means of using technology. Technology can be used only as a medium for capturing the knowledge residing in the human brain. Here, we don't mean to say that, there are no other means to extract the knowledge. So there is the tacit knowledge and explicit knowledge extractions. Capturing the explicit knowledge is relatively easier when compared to the extraction and the capture of the tacit knowledge.

We, in our paper titled "Quantitative and Qualitative Approach to Knowledge Management - Episodic extraction, enhancement and creation of the tacit knowledge", have emphasized and epitomized on the extraction of the tacit knowledge with a special emphasis on the quality and also the quantity of knowledge. In this paper, we stress the need for capturing the tacit knowledge from the employees in the organization, who have experience in a particular field. The employee who has knowledge may leave the organization any moment. Thus there is a need for extraction of the tacit knowledge episodically, rather than in an entirely conventional, traditional manner, i.e., capturing the tacit knowledge after completion of a task.
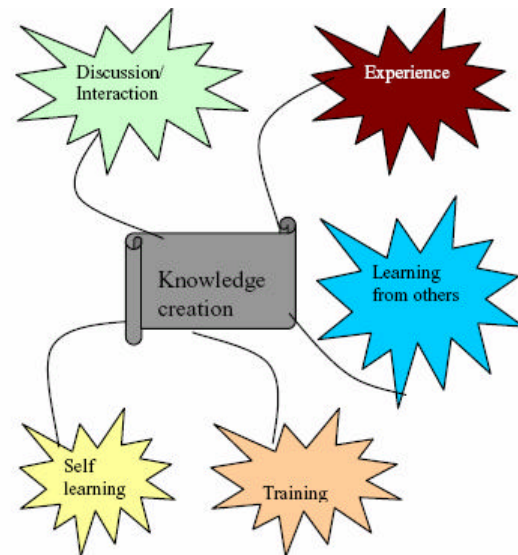

Figure 2: Different ways by which knowledge is created.

In any organization, the employee plays a crucial and important role. This is said so, because the employee is the person who performs various activities to complete the task assigned by his or her higher authorities. So, in any organization the knowledge possessed by the employee plays a significant role for the growth of the organization. But the knowledge is something one has to acquire, but cannot be stolen from some other person

who possesses the knowledge. There are many ways to acquire the required knowledge to perform a specific task in an organization. The various ways in which the knowledge acquisition can take place is as shown above in figure2. The different means of acquiring the knowledge, for the individual to contribute in the organization are by self learning, discussion, experience, learning from others and training.

Self learning is a concept where the individuals learn independently, individually without the formal guidance.

Discussion also plays an important role in the knowledge creation where in large number of employees in the organization come together to discuss on a particular matter. This provides a platform for an individual to contribute and gain, the knowledge each one possesses in an organization.

Training is a process in which the individual gains practical knowledge by the trainers who have gained specific knowledge pertaining to their field.

Experience as a general concept comprises of a skill in or observation of something or some event gained through involvement in or exposure to that thing or event. The concept of experience generally refers to know-how or procedural knowledge rather than propositional knowledge. Experience makes an individual to be more creative. More the experience in a particular field, the better it becomes to take decisions.

Suppose, if a person does not know about a particular topic in the organization, he/she may acquire that knowledge from other employees who know it. This is the concept of learning from others.

2.0 INTRODUCTION TO THE MODEL

Organization today takes up various projects in which employees play a very important role to complete that particular project. The employees complete the project based on their knowledge. However this knowledge is present in the heads of the employees of the organization. Because of the various other better opportunities available, the employee may leave the organization at any point of time. Hence it becomes imperative to capture the knowledge from the employee which can be subsequently shared among the other employees or the successor to that particular project and start working at the point where the employee had left the job, thus significantly reducing the cost to the organization. At the same time, capturing of the knowledge which resides in the head of the employee is difficult to extract.

We have developed a model by which the knowledge can be easily extracted. Projects in organizations are

done in phases. So it is easier to capture the tacit knowledge of the employees in each of the phases. The main advantage of capturing the tacit knowledge in a phased manner is that the quantity and the quality are enormously increased. With this model maximum tacit knowledge can be extracted. The model consists of various employees who undertake various projects identified by the organization. This is shown in the model as project 1, project 2 and project 3 with project 1 being handled by A team , project 2 handled by B team and project 3 handled by C team. The knowledge engineer captures the knowledge present in each of the projects at various stages namely the initial phase, implementation phase and the reporting phase .The extractions of the tacit knowledge at each of these phases are explained in detail below. The obtained tacit knowledge is then stored in the database as shown in the model below (figure 3).
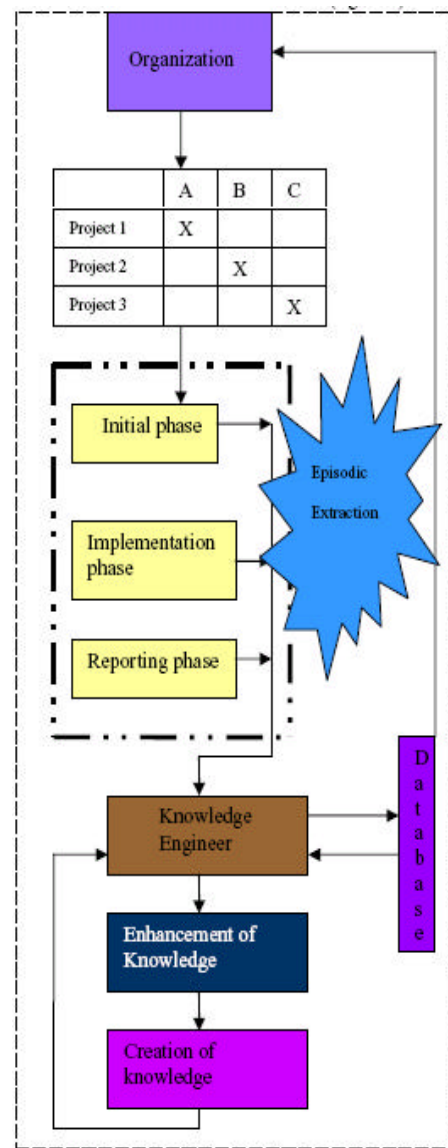

Figure 3: Episodic extraction, Enhancement & creation of tacit knowledge

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We have also discussed the ways in which the knowledge is enhanced. The tapped tacit knowledge by this model is further helpful for the creation of the knowledge which will be of immense help to the organizations. Figure 3 shows the episodic extraction, enhancement and the creation of the tacit knowledge.

2.1 Initial phase

This is the phase where people working in the organizations start the project or a particular job. Since the project or the work obtained is new to everyone (including the expert as it is not the same job every time), this phase involves more of acquiring knowledge about the particular topic. Since this is new to everyone, the knowledge can be acquired on that particular topic by reading materials related to it, discussions with the seniors or other employees.

However, since the team wouldn't have had experience on this particular project, there are only little chances of knowing the difficulties which would come while working on the project. Internal and external training programs can be employed for enhancing the knowledge of the employees which help them to do the work effectively and efficiently and then the tacit knowledge acquired can be extracted from the expert by the knowledge engineer by means of giving questionnaires, tests, which will help in tapping the tacit knowledge at this stage.

2.2 Execution/ Implementation phase

This phase is the second phase where, the organizations have got a good start from the initial phase and already a part of the tacit knowledge of the expert is already tapped in the initial phase. In this phase, the employees working on a particular project in any organizations have a clear role and gained the required knowledge for the execution of the project. During this phase, the team members will function for a particular project as a team and this is the phase where the actual situation in terms of benefits, problems the employees faces.

In this phase, the employee will have gained knowledge on what ever they have worked. For the purpose of capturing the tacit knowledge from the employee, the organization should encourage their employees to consult their seniors, in order to get the suggestion regarding the execution of the project. If the employee is struck in a problem, the seniors should help those employees. This phase is the phase where the tacit knowledge in the employee is more when compared to that of the initial phase. Since, in this phase the employee would have gained particular knowledge, it becomes imperative to capture this tacit knowledge in the employee by means of having meetings, discussions and presentation. The internet can also be used as a tool for capturing the tacit knowledge as during this phase video conferencing, chatting can be used and these can be stored in the database.

2.3 Reporting phase

Reporting phase is a third phase, where the employee should have finished the implementation or the execution of the project. Thus, this phase is a crucial phase where the employees have to be bound to produce the report in the text format. Thus, by making use of the opportunity provided by this phase, the organization should make a rule of using a fixed reporting format, which should aim to find out the problem as to what problem they have faced during the execution of the project and also about how they overcame that problem along with the details of the people who have guided when there was a problem during the implementation of the project. Taking this phase as an opportunity, the organizations should conduct a viva to the employee after having the report which helps the organization to capture the tacit knowledge there by increasing the quantity and the quality of knowledge present in their employees. This will definitely get the tacit knowledge out of the employee. Also, this will act as a best way of collecting the tacit knowledge that might be left from the other phases. Then this would act as a winwin situation for the employees, because the viva would fetch them something which might be increase in salary, perks, incentives, benefits and also increase in other facilities. For the organizations, this would definitely help because of the fact that the tacit knowledge can easily be captured and because of which it can be used for future growth of the organization.

Thus these three phases have to be considered for effectual capture of the tacit knowledge. This means to say that the tacit knowledge has been captured from the employee in the organization. Extracting the tacit knowledge in the phased manner has several important advantages when compared to that of the conventional extraction of the tacit knowledge (which has been done till now). The important advantages of this episodic extraction implies that, though the employee might leave the organization any time after acquiring the knowledge from that organization, the knowledge which the employee possesses has already been captured. So the organizations will be in a safer position even when a deep smart walks out of the organization.

The knowledge is thus extracted in a phased, episodic manner. The advantage of the capture of tacit knowledge in the episodic manner is that both the quantity and the quality of knowledge are increased. We argue that the quality of the captured knowledge increases as the comprehension increases. The comprehension increases when the knowledge is tapped and extracted at particular intervals, rather than

capturing it as a whole. The major advantage of capturing the tacit knowledge in the episodic manner is that the impact of the expert leaving the organization is minimized, as knowledge is captured till where the work is done. The tapping of the tacit knowledge is done by knowledge engineer.

Further more, organizations are forced to take up the complex tasks which cannot be performed by a single person. We argue in this paper that, it makes no sense to capture only the knowledge of the expert. Though the expert's knowledge is vital, it does not mean that it will give a complete picture of the work done. The present day knowledge capture does the same thus not giving the entire picture. Even if a single block is not present, then the picture is not worth to have a look at it. Also, the present organizations work as a team. Hence it becomes imperative to also capture the knowledge of other team members who have contributed to accomplish a particular task. So, this means that the captured tacit knowledge can be further enhanced by the contribution from the entire team. At this stage, the creation of the tacit knowledge also takes place.

After the phase wise extraction, the organization will come to know what it has. But the organizations should also know what knowledge it may not have. Now, in order to know what it does not have, knowledge engineers should arrange a meeting for all the team members after the extraction of the tacit knowledge in an episodic manner. The entire team member should review the knowledge which has been captured until then. During this meeting, the team members should talk about their individual contribution to that project and since the material was already reviewed by the individuals, identification of the knowledge not captured can be clearly identified. This is done by each and every member, thus enhancing the previously captured tacit knowledge. Proper incentives should be fixed for the employees who are sharing the knowledge and this motivates others who are not willing to contribute their knowledge. The creation of the knowledge is as important as the capture of the knowledge. How will the organization use this knowledge? The technology provides us with a helping hand. Knowledge creation takes place with intensive discussion. Brain storming, group discussions, paper presentations play a vital role in knowledge creation in an organization. However, good incentive should be given for encouraging employees. Essay competition related to this particular topic play an important role. Discussions should be held as to how this knowledge can be applied for the other applications. We strongly believe that with this model the extraction of the tacit knowledge will be qualitatively and quantitatively superior thus helping the organizations in many ways.

3.0 CONCLUSION

Large amount of investment is required in terms of IT infrastructure such as video conferencing, online forums, chat rooms, knowledge base repository. Our approach provides a security for the organisations in terms of retaining intellectual capital in the most efficient manner. This paper proposed a structured approach & using different technologies at different steps there by making process more efficient. Also with this, there will definitely be reduction in the redundancy of knowledge in database. Finally, we have given greater emphasis on externalization which is challenging.

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