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Optimising the Use of Knowledge Management Systems to

Improve Organisational learning

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0.   Abstract

Globally, many large organisations have invested heavily in the creation of knowledge management databases and learning management systems. With knowledge management databases, workers are required to navigate through these stores of information and case studies with the intention of learning something which can be applied directly to their work.

Empirical evidence suggests that knowledge management databases do not fully interact with learning management systems. Knowledge management systems are therefore not being used or maintained as well as they could be, because they have been found to be static, one way communication vehicles that lack practical use.

The potential for organisational learning could be greatly enhanced if the people in organisations responsible for these two areas collaborated and worked together to explore the potential synergy of better integrating the two systems (knowledge management and learning management systems).

Modern learning management systems are designed to integrate with other system such as human resource systems and therefore the research has focused on finding out how knowledge management systems are currently used to support learning and to confirm any reasons that could be preventing the two systems interacting.

A number of academic research databases and professional journals and text books have been accessed to determine the relationship between the two areas to try to identify how knowledge management systems are evaluated and whether there are any barriers to strengthening the link between knowledge management and learning.

The analysis of available information has enabled the development of a methodology to optimise the use of knowledge management systems to support organisational learning and in particular the promotion of e-learning, for example, to close identified knowledge gaps with the direct promotion of blended learning solutions such as on line training programmes.

The scope of this report does not extend to an in-depth analysis of the methodology suggested due to time constraints, other than a comprehensive literature review that aims to look at the methodology objectively.

The findings confirm that knowledge management and learning are closely tied together within learning organisations. Information Technology is a key factor that drives the development of each system/process independently of the other. The individual nature of adult learning and the diverse focus and lack of awareness between IT departments (who are generally responsible for the knowledge management) and the Training/Learning Function are identified as the main obstacles to implementing the approach suggested.

1. Purpose Of Research

To define a methodology for optimising the use of knowledge management systems, to support organisational learning.

To determine how knowledge management processes could be extended to identify blended learning needs and promote e learning solutions to support the achievement of business objectives.

To define criteria to measure the effectiveness of learning solutions implemented as a result of knowledge management processes.

2. The Relationship between Knowledge Management and Learning

The Learning Organisation

Knowledge management and learning are described by Williams (2002) as 'close cousins' because a knowledge management strategy is deemed to be pointless to any forward looking organisation if it is not closely aligned to the organisation's learning strategy.

Williams, (2002) takes the definition one step further by introducing the concept of a learning organisation and linking the learning to business goals – ' a learning organisation is one which puts emphasis on learning as a key way to achieve commercial success'. The bottom line then according to Williams is that any organisation who invests money in knowledge management systems can only maximise value from this investment provided that they recognise the synergy that can occur by linking the goals of knowledge management to the goals of organisational learning.

Ronan Kneafsey, a Knowledge Management Consultant with KPMG in Ireland, (2002) emphasises and associates the users of knowledge management systems with learning organisations whereby learning is a key ingredient for the organisation survival and success. His research has identified the following interesting points:
- Learning organisations are renowned for their emphasis on knowledge management processes, which in turn depend for their success on the active participation of learners' who are encouraged to share their expertise. An aspiring learning organisation must therefore have a knowledge management strategy, which can be used to support the

achievement of its wider business goals including those for organisational learning.

- Knowledge management is now considered a main determinant of business success alongside traditional pillars such as capital, land, plant and labour. These learning organisations evaluate their core processes, capture insights about what they find, combine their skills and experiences, innovate and apply the newly refined ideas quickly. Therefore, only those organisations that are capable of sharing knowledge effectively can create sustainable competitive advantage.

Information Technology

Information technology is identified as a common denominator and enabler of knowledge management processes, with e learning suggested by Williams (2002) to be the 'killer application'. IT is viewed as another element that ties in a learning organisation and KM.

King (2003) in his work identified that companies can create knowledge using a number of methods including learning, and that the knowledge gained from learning must be placed into a format that can be distributed. He claims that KM has fantastic tools at its disposal that are not being used to their maximum, whilst many organisations are unsure how to use technology to enhance learning. This could be considered as good news to the many e learning vendors who continue to pitch for both new and sustained business. This is because if the IT infrastructure is in place, then surely the challenge is finding new ways to demonstrate to organisations just how they can optimise and leverage their investments in existing knowledge management systems to facilitate business success.

According to King, (2003) organisations should be applying manufacturing theory in knowledge based industries. A company that competes on their expertise must aim to formulate the knowledge created from areas such as problem solving, experimentation, past experience and <u>learning from others,</u> and find ways to make it accessible to all workers.

King, (2003) does not define learning in this context and it could therefore be ambiguous. For example, 'learning from others' should not exclude learning about effective learning solutions themselves. King, (2003) fails to state this factor and this could mean that the majority of organisations with knowledge management systems are not placing enough emphasis on spreading the news about learning that was deemed to be relevant, motivational and helpful to their own employees.

Knowledge management systems are more likely to feature in larger organisations where people tend to do similar job roles such as project and program managers, therefore it is sensible to presume that if an individual experiences an effective learning solution, for example, a particular on line training course, then one could make an assumption that there is a reasonable probability that the course would be wholly appropriate to another person doing a similar job role. Employees in charge of learning and

knowledge management should at least try to facilitate a process whereby multiple learners could at the least have the opportunity to research the course aims and objectives, discuss them with their manager and then decide whether to register and undertake the learning. This could be further enhanced with a mechanism to publish individual reactions to solutions such as e learning – with a view to sharing good news about the effectiveness or otherwise of the particular program concerned.

This suggestion is of course not without some risk as it is acknowledge that learning is a very individual process and what is motivational and helpful to one person may not be so to another. However, decisions on learning solutions will always be needed – especially when the employers are paying the bill, and so the views of a co-worker/similar job holder could provide some valuable insights provided the final decision to register/proceed with a course is subject to some for of attendance filter that could further assess the suitability of a particular candidate to a specific learning solution.

King, (2003) states some interesting suggestions which could potentially support optimising the process of integration between both knowledge management and e learning:

- Firstly he highlights that modern software environments should provide managers with a view of the competencies that employees are certified to, and that they should also allow for employees to gain this expertise with the minimum of effort and inconvenience. Hence, if you need to know how trained/ready you are for a specific job role, then you should be able to determine this easily. A knowledge management system could be linked to an LMS which provides 'knowledge and skill' audits by job role.
- Secondly given that there may be a knowledge gap, the employee will need to gain the necessary skills and knowledge in the shortest time frame. He recognises that to be able to deploy training and evaluation over the web should not be seen as the only answer – the software should allow companies to blend both internal and external bodies of knowledge and get rapid return on investment. In other words, look for new ways to up skill and meet knowledge management strategy.
- Finally, he emphasises that today's professionals are increasingly dependant on developing their skills from both an internal and external body of knowledge. The knowledge itself can and should be formalised and verified. Employers should be able to ascertain whether employees have understood the knowledge and how it can be applied in the work environment. One way of doing this is to compare the knowledge sought or gained to the job competencies and training directory which should be designed to match the training needs of the workers with the demands of their job role.

Technology has proved to be a powerful enabler for learning and knowledge management. Knowledge management represents an opportunity to derive additional benefits from the organisation's existing investments in computers, databases and networks by integrating them to support

knowledge management objectives. ICT can support knowledge management in a number of ways, for example:

- Sharing knowledge and working together in virtual teams over internal and external communication networks.
- Brainstorming with the help of advanced applications that provide process and technique support to group and individual creativity
- Finding an expert or a recorded source of knowledge by using on-line directories and searching databases. (Kneafsey, 2002).

Cross Functional Communications

Sadler cited by Williams (2002) is a Director of IBM Mind Span Solutions suggested at a 2002 Online Europe Conference that the people within organisations who are responsible for knowledge management and learning should talk to one another. This could imply that the people responsible for each of these functions tend to operate independently of each another and are potentially missing out on a golden opportunity to fully utilise the development which each can offer to the other. The following questions highlight some of the 'common ground' areas that could be used for discussion between the two functions:

- Does the training department offer training in the knowledge management system/ processes? If not, why not?
- How are the existing 'levels of knowledge' assessed amongst the organisations employees? How formal is this process?
- How is knowledge management tracked?
- What are the 'hot topic' areas for knowledge management systems? Are these audited and aligned to internal training solutions/ external training solutions, for example a specific online learning course or appropriate instructor led course?
- How are any knowledge gaps identified? Do they inform the identification of organisational and occupational training needs?

3. **The Potential Benefits of Strengthening the Link Between Knowledge Management and E Learning**

Cost Reduction

By promoting e learning via knowledge management systems, the result could mean a significant take up of e learning, resulting in savings from the training budget on areas such as spend for hotels, classrooms and time spent away from the workstation or office. A CIPD report on e-learning usage within the high tech sector provided some statistics from Cisco Systems (builder of the Internet Infrastructure). Cisco employ upwards of 10,000 sales staff in 150 countries. The cost of taking these people out of the field to train them on new products in the classroom costs $24 million a week. In one year the training for sales staff moved from being 90 per-cent class room based to 80 per cent online. Because the sales staff can become familiar with new products immediately from their laptops, it is believed to save millions of dollars in staff time with the added advantage that staff are up to speed on

new products a lot faster than having to possibly wait to attend a training session.

However, the report does acknowledge that for companies outside the high tech world, there are some basic obstacles to overcome in order to achieve the potential cost savings:

- Knowledge management systems and learning management systems require a major investment in technology. This means that before integration can be contemplated, an investment will be required in basic systems. However, a business case could seek to incorporate the projected revenues of a fully integrated system which has the potential to generate an even greater take up of e learning as described previously with the projected cost savings underscored.

- Any potential for systems optimisation/integration will not work without the commitment of senior management. This underlines the need for management support of cross functional working which would be required to realise the benefits of a fully integrated knowledge management system.

- The quality of many online courses remains considerably poor. This could be another reason why it would be an even greater benefit for companies to have their own employees assessing e learning and sharing their feedback on it's suitability, ease of use, relevance etc via a knowledge management system.

- The number of people who do not have access to a computer is surprisingly high with six out of 10 people in financial services still not knowing how to use one. Organisations who aspire to become learning organisations should recognise the need for ease of communications and the potential benefits to the organisation of all employees to both contribute to knowledge databases and learn from them.

Leverage Investments in Information Technology Infrastructure

Many organisations need to look for ways to leverage their investment in IT architecture to gain good return on investment. For example, look at ways to ramp up their e learning capabilities by investing or upgrading their 'Learning Management Systems (LMS).

An LMS uses internet technologies to manage the interaction between users and learning resources. A learning management system is essential for creating an environment where employees can plan, access, launch and manage e-learning on their own. (Rosenberg, 2001).

A modern LMS has the capability to integrate with other enterprise resource systems such as 'People Soft' and SAP and importantly can be used to integrate knowledge management resources.

Increased Knowledge and Skill Level

The 'democratisation of learning' is used by Williams (2002) to highlight the ease at which individual learners have the choice to take advantage of

online learning opportunities. Access to the Internet is suggested to equal access to learning, which in turn should result in a 'hiking up' of skill levels amongst the workforce, and enhance the value of employees and their skills base.

In essence, if it is easy to access on line learning resources, there is a high chance that people will actually learn new knowledge and skills. However, this may not necessarily be the case for the following reasons:

- Not everyone is motivated to learn using technology based training solutions e.g. Computer Based Training, Online Learning.
- There is considered to be a significant proportion of e learning with poor instructional design.
- A lack of collaboration which is considered essential to the 'constructivist' theory of learning.
- Lack of assessment and evaluation for the various levels to measure the amount of learning transfer.

Gain Competitive Advantage

Multi skilled employees are able to generate productive hours of many types.

4.   **The Barriers to Strengthening the Link between Knowledge Management and Learning**

- Traditionally knowledge management leaders and training management do not collaborate within their job roles and they appear to have a different focus. This is probably explained by the fact that the knowledge management function usually comes within the remit of the Information Technology Department.
- Knowledge management and Learning Management Systems do not come cheap. It is usually only the larger organisations that can dedicate resources to both these initiatives. The majority of small to medium sized businesses may not get the opportunity to participate until providers of the technical architecture can make their products more accessible.
- Bandwidth limitations are a significant factor across Europe, with few companies – even large – enjoying the flexibility and speed of surfing the Internet can bring.
- Organisations do not measure knowledge management in the same way as training spend, and it is therefore more difficult to build a sound business case that could be very powerful if the projected revenues from each system were combined.
- There are issues around protection of knowledge assets.
- Lack of Chief Learning/Knowledge Officer to champion creative ways of accessing and promotion of a variety of blended learning solutions.
- Training is perceived as something that is 'done' to you and therefore learning needs to be repositioned to drive the organisation culture towards that of learning.

- Cost of measuring anything. This continues to be a problem to businesses as metrics for training and systems are perceived to be difficult.
- The costs of tailored e learning e.g. such as for a bespoke knowledge management system may be difficult to cost justify.

5. Future Work

Empirical evidence suggests that organisations may not be integrating knowledge management systems efficiently to further improve organisational learning. This is because knowledge management processes tend to integrate learning solutions in a one dimensional way.

Blended learning solutions appear to feed knowledge management processes but not the other way around i.e. knowledge management processes do not tend to promote the identification of learning needs, nor do they deliberately point a worker in the direction of a suitable learning opportunity.

Knowledge management processes feature heavily within learning organisations and is an area that will become increasingly important for businesses as the competitive nature of global markets continue to grow.

A well-defined link between knowledge management processes and learning resources offer individuals and organisations enormous practical benefits. This is because the opportunities to provide well-targeted training which learners require, at the right time, increases.

In order for knowledge management systems to provide good economic returns on investments, organisations must not only be able to identify their own knowledge assets, but also have a clear understanding of how and where knowledge is developed throughout the company and to ensure that knowledge gaps are being closed in an efficient and effective manner i.e. organisations must not overlook the opportunity to use knowledge management to direct people to appropriate learning solutions.

Knowledge Management processes create a forum to share and gain invaluable knowledge from experienced colleagues and this is further made possible by optimising the use of collaborative learning objects to promote all kinds of learning whether sourced from within or external to the organisation.

Technology offers enormous potential to speed up the learning process, but this will only happen if learning groups gain intelligent support from other people. Facilitators of learning need to continue to find ways of motivating and rewarding learners through human contact. The facilitation and co-ordination of learning is a key role for the smooth implementation of knowledge management processes.

Organisations continue to rely on IT as a driver and tool that can enable a fast and effective way of deploying knowledge to improve organisational

learning. The internet offers enormous potential to organisations with the ever increasing range of e learning products that can be used to disseminate and reinforce knowledge.

The World Wide Web has the advantage of being able to connect learners with other learners and their tutors anywhere and at any time. It therefore allows users to ask questions, just as they would in face-to-face situations. The web also provides fast and easy links to other relevant sources of information.

The Learning Organisation Model needs to be updated to more closely reflect the synergy that is possible between knowledge management processes and an organisations learning strategy.

Learning Management Systems should be designed and presented to create a clear point of access between knowledge management systems and an organisations training directory that could include both internal and external training solutions.

Future Work:
- To define a detailed set of criteria to measure the effectiveness of learning solutions implemented as a result of a knowledge management process.
- To arrange for existing users of knowledge management systems to critiques my proposal.
- To aspire to carry out a structured survey of users in the future.

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