

A Knowledge Container To Build Erp Competencies In A Corporate Environment

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ABSTRACT: The knowledge economy nowadays is popularized the concept of knowledge management. Such programs do manage the process of creation or identification, accumulation, and application of knowledge or intellectual capital across an organization. The knowledge so gathered is very critical for developing competencies among the employees. This discusses the design of a knowledge container, which supports the management of the ERP domain training content which has proved useful in building competencies in a corporate environment.

I. INTRODUCTION

With globalization, KM is recognized as a powerful engine through which it is possible to improve learning and teaching performance [1]. Uncertainty is always there in the any form in the universe. It is also in an economy. The only certainty is uncertainty. The only guaranteed source of lasting and lifelong competitive advantage is nothing but the knowledge. When markets shift, technologies proliferate intern competitors multiply. The products in the market become obsolete almost overnight. The successful companies are only those that consistently add, modify and create new knowledge. It disseminates it widely throughout the organization. It builds appropriate competencies. Then it quickly involves and bind it in new technologies, projects, processes and products. These activities define and call the 'knowledge-creating' company. It's always, every time, sole business is continuous innovation [2,3]. Such Knowledge Management-KM programs attempt to manage the process of creation or identification, accumulation, and application of knowledge or intellectual capital across an organization. KM is a successful means to deliver knowledge to learners, improve knowledge sharing among users and thereby build competencies in the required areas. One of the most important

functionalities of KM is that it should be possible to access the right knowledge at the right time [4].

There are three stages for accessing or retrieving the knowledge i.e. before, in between and after the knowledge concerned activities. For example, individuals undertaking a new project for an organization need to have the entire team fully equipped with the right skill set. For this they are required to undergo training and carry out sufficient hands on practice. In addition, other information resources will enable them to learn best practices and lessons from similar projects undertaken previously. They have to access concerned and related data also processed data again during the project implementation. It seeks advice on issues encountered during the project. It gets then relevant data (information). It is used afterwards for advice on after-project actions and review activities. Systems, repositories, and corporate processes are offered by Knowledge management practitioners for encouraging and formalizing these activities. Henceforth, before the project implementation, knowledge is retrieved, captured and recorded. This gives the chance to the project team to learn lessons in the tenor of initial project analysis. Similarly, lessons learned during the project operation may be recorded, and after-action reviews may lead to further insights and lessons being recorded for future access [5, 6]. Knowledge sharing among employees can be considered as a one of the key organizational KM challenges [7].

Based on the above discussion, it would be useful to develop a knowledge container that consolidates all the knowledge and helps trainers and participants to access the right content. This also helps them to save the duration on crux and complex tasks like searching and they can concentrate more on training and learning. We have developed such a Knowledge Container. It intends for backing up the following functions: (1) ERP Domain framework (2) Course Content

framework. These two hierarchical tree structures define all the technical and functional trainings carried out for ERPs like SAP and Oracle in a corporate environment.

The paper is structured as follows. In section 2 we give a brief overview of the ERP domain with specific focus on SAP sub domain while in section 3 we focus on the competency build process practiced in a corporate scenario. In section 4 and 5 we explain the architecture and implementation of the Knowledge container for the ERP domain. The future work is discussed in section 6 and finally we end the paper with concluding remarks.

II. ERP DOMAIN OVERVIEW

Enterprise Resource Planning (ERP) domain encompasses solutions for software that address the enterprise as it needs to take the process view of an organization and company to meet the organizational defined goals and objectives by tightly and closely integrating all functions of an enterprise. In other words ERP gives facilities with respect to company-wise, combined and integrated information systems covering all needed functional areas. The major advantage of any ERP is enterprise wide information sharing, provide online communication between Suppliers and Customers, eliminate dependency on Human Resources and to top it all it requires only customization most of the time. Apart from SAP, the other ERPs commonly available in the market are Oracle, PeopleSoft, JD Edwards etc.

To understand our knowledge container we briefly explain SAP ERP. SAP (Systems, Applications, and Products in Data Processing) are a leading ERP software package. SAP applications provide an environment where "transactions are synchronized throughout the entire systems, meaning a sales-order entry triggers action's within each application that relates and is relevant to the transaction." The heart of the SAP system is the various application modules related to the business processes or so called functional areas. A career in SAP implies competency build in particular technical or functional area. The SAP technical area encompasses good hands on experience on ABAP-Advanced Business Application Programming language to customize SAP screens as per user requirements. Functional expertise is classified on the basis of business processes. It encompasses various modules like Financial Accounting, Controlling, Workflow, Industry Solutions, Sales and Distribution, Materials Management, Production Planning and Human

Resources. On the other hand system administration is done through Basis- operating system which integrates with the SAP application. Any IT industry, which provides EPR customization services would focus on competency development in these areas for their employees to improve business prospects.

III. CORPORATE COMPETENCY BUILD PROCESS

In a corporate environment, it is often difficult to get the right competencies when a project is started. Also fresh joiners require focused training in specific areas which will enable better productivity. Hence, once the project Work Breakdown Structure (WBS) is prepared, the project lead and the Resource Manager start the identification of resources. Some of them may include those released from other projects while some others may be lateral hires. In critical cases, if the project team lacks a sufficient skill set, the training activity is immediately initiated to get the resource competencies built within a predefined schedule. The project pressures are high and the deadlines tight. This is where our knowledge container comes handy. It is managed by the training coordinator and provides continuous, convenient, immediate, fast access to knowledge by assuming the highest priority for such competency development requirements. Our Knowledge Container consists of a repository of ERP domain training material segregated for quick access and appropriate for the type of competency build in terms of ERP type and class training along with course content. Once the training is conducted and evaluated, the resource is ready to work independently on the allocated tasks.

IV. KNOWLEDGE CONTAINER ARCHITECTURE

The knowledge container which we have built is a computerized repository of knowledge related to the ERP domain. It is built over a period of two years with newer versions and advanced technologies, but is quite robust as of today. The container architecture consists of two levels: ERP Domain Tree and Course Curriculum Tree [8, 9, 11]. We know that there is a need for classification of the ERP domain and each course curriculum, and hence we present both in a tree structure. From the top down process, the training coordinator can identify the appropriate requirements as per the needs. By the bottom-up structure, The trainers and participants can grasp the concepts, skills and learning progress of the curriculum and training more quickly.

❑ **The ERP Domain Tree:**

As the name suggests, the ERP Domain Tree shown in figure 1 illustrates an overall view of the areas in which we are building competencies. It is four level hierarchical structures. At the highest level, we define 'ERP class' like SAP and Oracle. The next level, the specific ERP is classified into 'Course Type' as Technical or Functional area and subsequently followed by each 'Course title' at the last hierarchical level.

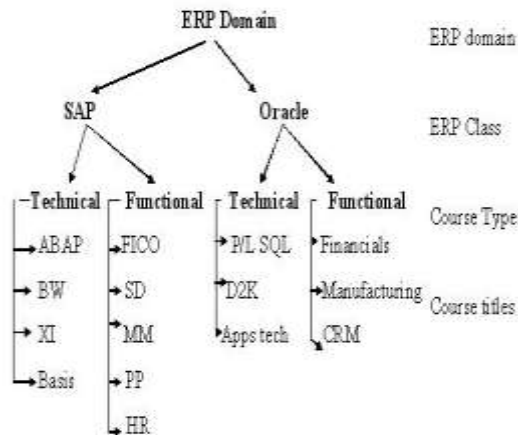


Figure 1: ERP Domain Tree structure

❑ **Course Curriculum tree**

The Course Curriculum tree allows the trainer and participant to navigate within the entire course.

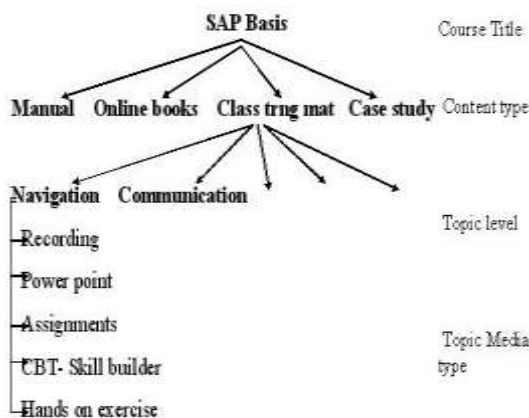


Figure 2: Course Curriculum tree structure

Figure 2 shows the hierarchical Course Curriculum Tree structure. The hierarchical Course Curriculum Tree is having four levels: 'Course Title level', 'Content Type level', 'Topic level', and 'Topic Media type level'. The Course Curriculum is messed up with Content Class and

same with Content and Topics, Topic and Topic Media. We define the 'Topic Media' as the bottom level of a course curriculum tree and each component here is the curriculum smallest unit. This is the unit accessed by trainers and participants alike. Based on the requirement, batch size, and location of the participants the components of the Course curriculum tree are selected. Both the tree structures show the relations and give an overview of the whole ERP domain concept to training coordinator, trainer and participants. Trainers and Trainees find this helpful to get the plan for their learning path. By the tree structure, they can make a part of one complex concept into many small portions orderly and learn with an appropriate learning flow. The trainee can observe, see their own performance through regular quizzes, and it motivates him to self-regulate the learning process [10].

V. KNOWLEDGE CONTAINER IMPLEMENTATION

The Knowledge container is managed at the ERP Domain level by the Training coordinator. His/ her main role is to identify the type of training required, depth needed and corresponding learning content. The next step is to identify the trainer who will be able to carry out the competency build process, whether float/ on the bench or lightly loaded or on a project. This resource provides mentoring to the participants. The batch size could be anywhere from one to twenty depending on the project needs. Many times the coordinator would hardly get two days to plan this entire activity. In such cases this Knowledge Container proved very helpful. Once the course title is decided, the coordinator, trainer and the project lead access the Course Curriculum Tree to identify the depth, duration and type of delivery technique to be used. After this meeting the training activity is initiated. A typical competency builds process flow in terms of training is shown in figure 3.

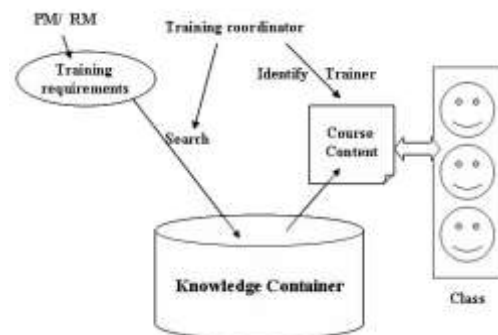


Figure 3: Competency builds process flow

In this paper, we have explained the architecture of Knowledge Container, to build ERP competencies in a corporate environment. The purpose of this container is to help the training coordinator to identify the right course, depth and methodology for training, to make the trainers to systematically schedule, arrange the curriculum more as per the needs and convenience, and to make the participant to understand the learning flow without any confusion. Currently, we have already finished the system architecture, design and implemented a major part of the Knowledge container. At present the training coordinator does the ERP domain Tree and Course Curriculum updates manually.

VI. FUTURE WORK

In the future, it is decided to port this Knowledge container onto a Portal. This will enable online access to self learning content, even from on site, a location anywhere across the globe. What we would need is Internet connectivity at the locations from where this container will be accessed. This 24X7 connectivity is already available to most corporate employees.

We are also in the process of converting many Courses to self study, by including recorded sessions followed by intermittent tests. This will enable learning anytime from anywhere, thus keeping us ahead of our competitors. We are also improving the quality of individual course content by segregating based on depth, media and evaluation levels.

VII. CONCLUSION

Knowledge is available in plenty and would hence require repetitive efforts to search and identify the right content for the competency build process. We have developed a Knowledge Container which is a repository of training content in the ERP domain consisting of a variety of course materials. We have conducted one to one survey and found that this container has helped the training coordinator, trainers and participants to access the right content immediately, thus reducing the time and efforts needed for search and identification of required content. This KM scheme has proved very successful in reducing training coordination time, training content preparation time and the learning time for the trainees. Such KM containers would definitely help to consolidate, classify knowledge and use it effectively for required competency building programs in a corporate environment.

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