

Knowledge Management in Higher Education Institutions: A Framework to Improve Collaboration

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Abstract - The reason for this paper is to introduce a system that increments information sharing and cooperation in Higher Education Institutions. The paper talks about the idea of information the board in advanced education establishments, introducing a systematization of information practices and apparatuses to connecting individuals (understudies, instructors, analysts, secretariat staff, outer elements) and advancing the information sharing across a few critical cycles and administrations in an advanced education organization, for example, the examination processes, growing experiences, understudy and graduated class administrations, managerial administrations and cycles, and key preparation and the executives. The structure purposed in this paper intends to further develop information practices and cycles which work with a climate and a culture of information cooperation, sharing and disclosure that ought to describe an establishment of advanced education.

Keywords: Information Management, Knowledge Rehearses, Information Devices, Advanced Education Foundations

I. INTRODUCTION

Advanced education Institutions (HEI) play out a significant job in the information based economy. As learning associations, they will actually want to expand information abilities, produce top quality alumni, improve advancement and innovativeness and contribute really to the information creation and licensed innovation advancement [1], [2]. The increment of information resources is itself the seeds of advanced education and it obviously adds to the eventual fate of financial and social turn of events. Truth be told, information the executives (KM) is acquiring acknowledgment in the scholarly area over the most recent couple of years, when obviously colleges play a significant part to play in the information economy, bringing new difficulties for HEI [2], [3],[4].

Agreeing a few creators [4], [5], we can recognize two points of view of information in advanced education foundations: I) scholarly information, coming about because of learning and showing exercises, the basic role of colleges; ii) authoritative information, which alludes to information on the general business of an organization: its assets, shortcomings, systems, basic element of progress, associations with research focuses, and so forth. These two viewpoints of information could be upgraded by a bunch of KM practices and instruments that work with the

advancement of a climate of information creation, cooperation and sharing [3], [8]. Due the presence of new information makers in the advanced education, an ever increasing number of colleges are investigating de plausibility of applying corporate instruments. Advancements are essential to work with KM exercises, like revelation or procurement (research), dispersal or offer (instructing), application alright information and their protection (libraries, storehouses) [7], [3], [9]. Then again, these issues miss their significance in the event that the foundation doesn't have a procedure and a bunch of institutional practices which lead to making, sharing and working together between the different entertainers across the association [7], [8].

In this paper, the creator talks about the idea of information the board in HEI, trailed by a systematization of information practices and devices to connecting the few entertainers (understudies, educators, analysts, secretariat staff, outside substances), and advancing the information sharing across a few vital cycles and administrations in a HEI, for example, the exploration processes, educational experiences, understudy and graduated class administrations, regulatory administrations and cycles, and key preparation and the executives. The paper likewise presents and examines a system to further develop information sharing and cooperation in a HEI, cultivating a climate of nonstop learning and disclosure, finishing for certain ends and future work.

II. KNOWLEDGE MANAGEMENT IN HEI

KM is turning into a vital issue in advanced education, which drives the capacity of gather and investigate data, change information and apply oddities [3], [12]. It is important to bring up the significant information, make a strategy for getting and merging information, to perform spread of information among the understudies and staff, and to create new information and development through information sharing [4], [12]. Bloch [12] contends that information has turned into a vital key asset, important to flourishing and intensity.

HEI will encounter heightened pressure, impacted by the information economy and furthermore the globalization,

with additional interconnected substances and where information, imagination and development are the fundamental components for seriousness [19].

Kidwell *et al.*, [6] contend that KM is imperative to HEI, carrying pivotal advantages to instructive foundation cycles, for example, research, educational program improvement, understudy and graduated class administrations, regulatory administrations and key preparation. The test is convert the information that right now dwells in each individual/administration, and makes it broadly and effectively accessible to any employee, staff individual or different entertainers. Bushry and Ranjan [3] pointed that the principal challenge in HEI is to establish an information climate, and the acknowledgment of information as scholarly capital. Compelling KM requires tremendous change in the way of life and values, hierarchical designs, practices and frameworks. Moreover, a few examinations uncover the incipient idea of KM in HEI and the critical need to embrace data advancements that address the requirements of the drives and practices [3], [17], [18].

Over the most recent couple of years, huge work have been done in the field of KM in HEI, centering rehearses, instruments, drives, assets and structures to oversee authoritative information, expanding its spread and its utilization [2], [3], [4], [10], [11]. A few systems have arisen with the point of improve KM in HEI. These systems center an assortment of points of view, as indicated by a short writing survey [3], [4], [6], [10], [20]. A few creators highlight the execution of data frameworks, others allude to informal communities, information rehearses, work process frameworks or hierarchical philosophies, to deal with the creation and transmission of organized and unstructured information. Then again, practically these systems involve a bunch of information cycles to help and improve information exercises and assets.

Sedziuviene and Vveinhardt [4] incorporate the information cycles of ID, creation, stockpiling and sharing information in their structure. Alavi and Leidner [8] allude to information creation, capacity/retrieval, information move and application. The European Guide for good Practice in KM [14] alludes to the information cycles of creation, stockpiling, offer and use, as well as different creators. Nonetheless, it ought to be noticed that new methodologies point that information is indistinguishable from its holders and its improvement addresses a nonstop cycle in light of the schedules and exercises attempted by people [12].

The creation and sharing of information includes social cooperation and up close and personal correspondence and joint effort [3]. By and large, these cycles suggest picking up, noticing the cycles (advancing by doing), commitment by and by and social communication. In this situation, KM is inherently connected with ideas like nonstop learning, development, correspondence, coordinated effort, and culture of sharing [12], [13].

Agreeing a few creators [1], [4], [21], HEI have numerous particularities and specificities, which ought to be thought about, since they sway the information the board issues.

1. An enormous number of understudies, with various objectives, various interests and heterogeneous profiles. The massification of advanced education and the rising versatility of understudies on trade programs, underscored this heterogeneity.
2. Understudies from various nations, with particular societies, dialects and abilities;
3. The variety of preparing offer, with a few courses that try to foster abilities and skills in various subject matters;
4. The requirement for understudies to take an interest in examination, advancement and development processes, and the attention on instructing and learning for new students and learning for new objectives.

This heterogeneous and logical nature which is found in real advanced education, has acquired various difficulties to information the board the HEI. To address these difficulties, a wide assortment of information the executives rehearses have been proposed by specialists and experts, to improve the cycles alluded previously. These practices might be seen as an organized arrangement of exercises that add to KM, upheld by innovative instruments, additionally called information the board frameworks.

III. KNOWLEDGE MANAGEMENT PRACTICES

Kim [5] states that KM rehearses intend to draw out the inferred information that individuals have, what they heft around with them, what they notice and gain for a fact, as opposed to what is generally unequivocally expressed. As indicated by certain creators [16], information rehearses comprise on exercises directed to the advancement of learning associations, empowering a culture of information obtaining, sharing and use. Kidwell [6] states that information the board practices can prompt outstanding upgrades in sharing information, helping different key cycles and administrations in an advanced education establishment, for example,

1. The exploration interaction;
2. Growing experiences;
3. Understudy and graduated class administrations;
4. Authoritative administrations and cycles;
5. Vital preparation and the executives.

A wide assortment of authoritative practices has been proposed by specialists and professionals, yet it is many times hazy how these practices connect with each other in their commitment to hierarchical execution. In view of a writing audit, a classification of information the executives rehearses in advanced education was made [3], [5], [6], [12], [14]. Table I shows the most addresses rehearses found in a writing audit.

TABLE I KM PRACTICES

KM Practices	Description
Communities of practice	Communities of practice are formed by people who engage in a process of collective learning in a shared domain of human endeavor: who deal with a common organizational process, who have interest in solving similar problems, who works in the same project, etc.
Best Practices	Identifies and incorporates the practices considered most suitable to each task. It may result from benchmarking or incorporation of Best practices among organizations.
Learned lessons	Represent the acquired and validated knowledge, as a result of the development of a Particular projector activity
Formal training	Structured sessions with instructional material designed to support the processes of teaching and learning about a particular subject; it can include seminars, conferences, workshops
Social interaction	Collaboration, social bookmarking, chat rooms, discussion forums
Competence maps	It consists in the representation of knowledge and skills/competences available in the organizations
Corporate Education	Strategy to develop and educate employees, customers and suppliers, in order to align them with business strategies

IV. KNOWLEDGE MANAGEMENT TOOLS

The reason for KM devices is to help the authoritative cycles and works on, empowering a climate that works with the information sharing and creation, and furthermore the correspondence and cooperation among the association. Beyond what innovative frameworks, these apparatuses could be seen as virtual spaces that advance information change among express and inferred elements of

information. Notwithstanding, it is essential to take note of that without a procedure and a hierarchical culture in light of consistent picking up, sharing and coordinated effort, the information devices get not many advantages to information the board general, and HEI in especially.

Table II sums up a bunch of information instruments tended to by the writing audit as being helpful in supporting KM cycles and practices, in a HEI [3], [9], [16], [17], [18].

TABLE II KM TOOLS

KM Tools	Description
Knowledge repositories	Document management; edition collaboration; versions control; documents sharing; support for all content types (text, audio, video, graphs, xml, web, etc.); searching and retrieval advanced mechanisms.
Knowledge maps	Categorizing and indexing knowledge in taxonomies; creating knowledge maps; pointing to organizational knowledge; inserting tags and labels in documents; alerting to relevant information.
Work flow tools	Business processes automation; support automated flows of activities, tasks and information; support documental flows
Learning system	Evaluation and progress tracking: exercises quiz and tests; collaboration tools; reusable learning and object libraries; support different types of contents: text, audio, video, etc.; classes' workgroups; authoring, scheduling and Reporting tools; searching and matching tutorials
Corporate portal	Environment personalization; filtering relevant information; search and retrieval advanced mechanisms; news, activities, tasks and calendar management; unified access environment to other tools: documents management, workflow, knowledge maps, groupware, etc.; integration with other applications
Collaboration tools and web 2.0 applications	Interaction, collaboration, participation of people: blogs, wikis, social bookmarking, tagging, content sharing, virtual meetings; instant messenger, video conference; real-time conversation; grouping calendar and scheduling, etc.
Ontologies	Categorize or group the information knowledge. Used in the web semantic to assimilate and codify knowledge, defining the relationships between the concepts of a particular domain (or area of knowledge).

V. FRAMEWORK FOR KM IN HEI

With the plan to improve and work with the KM practices and cycle in an advanced education foundation, we reason the accompanying structure, introduced in Fig. 1. The

system looks to lay out a connection between the normal KM practices and cycles, and the innovative apparatuses that can use these issues, advancing a climate that expands a culture of information coordinated effort, sharing and revelation in the few center exercises of instructing,

learning, research and authoritative administrations and cycles in an advanced education foundation.

The structure introduced in Fig. 1 is coordinated in three primary layers: i) mechanical foundation; ii) information framework; iii) information the executive's works on, advancing the cycles of information creation, capacity, sharing and application.

The mechanical framework includes network offices, data sets innovation and a few other data and correspondence advancements, for example, messaging and canny specialists, for instance, which permit correspondence and joint effort between the various entertainers (understudies, teachers, analysts, secretariat staff and outer elements).

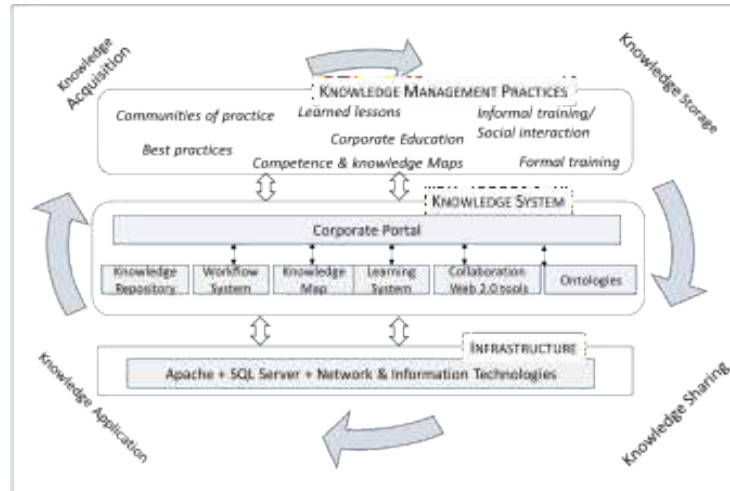


Fig. 1 Framework for KM in Higher Education Institution

The structure has been executed as a feature of a temporary job program of an undergrad understudy. We utilized a bunch of open-source devices to execute the system introduced in Fig. 1, for example, Dspace (information storehouse), Alfresco (work process framework), XMind and Cmap (information guides and ontologies) Moodle (learning framework), XWiki (cooperation) and Joomla (corporate gateway).

The stage is accessible for this organization to only three months. Right now, the archive is essentially utilized for logical distributions of educators, while the learning framework is broadly used to help the acts of formal preparation. Strangely, the work process framework had an exceptionally intriguing adherence, specifically with respect to methodology laid out by the standards of value. Cooperation devices have been utilized essentially in casual preparation conditions and in the abundance of different networks of training. Some information maps have been delivered, basically attempting to plan the abilities of the different individuals from every office. Were additionally created guides of information focused on certain tasks done by the foundation. The subsequent stage is to carry out information maps zeroed in on key cycles and basic information for understudies. The corporate entryway fills in as point of admittance to different instruments, additionally giving news, occasion schedule, and so on.

Information procurement includes the improvement of existing items and the age of new information, in particular in exercises related with innovative work and furthermore

learning exercises. Cooperation apparatuses can work with collaboration as well as friendly communication, casual preparation and networks of training. This practice plainly contributes do information creation and revelation. Joint effort instruments (groupware) and web 2.0 applications additionally work with de improvement of authoritative practices, for example, learned illustrations and best practices, which are amazing means for finding and conveying information.

Information archives permit information, frequently scattered among an assortment of maintenance upholds, to be successfully put away and made open. Information guides and work process frameworks additionally give information portrayal/characterization and work with the recovery to authoritative information. Then again, corporate entryways with search and recovery progressed instruments expands the admittance to information, and frequently elevate admittance to context oriented information, contingent upon the profile and the movement of every client [16], [18].

Cooperation and work process frameworks are, per greatness, instruments that empower information sharing and scattering. They support correspondence, coordination and joint effort both concerning authoritative administrations and vital administration, as at the degree of instructing, learning and examination exercises. A corporate entryway contains, often, groupware and work process functionalities, so it upholds information move. Cooperation instruments advance formal and casual

association, essential to information sharing and disclosure. Information maps work with the comprehension of the abilities held by association, comprising in an extremely visual method for arranging ideas and comprehend who holds specific capabilities or abilities. Capability maps are extremely helpful in a few center exercises as exploration, learning or educating. Learning frameworks are normally a central question in a HEI, working with information sharing, information securing and application, and supporting formal and casual preparation. Information practices, for example, corporate training are fundamental to extricating the essential worth of information, scattering the way of life, values and mission of the HEI.

VI. CONCLUSION

The proposed system looks to adjust the mechanical apparatuses to authoritative practices and cycles, in the particular setting of a HEI, in Portugal. These days it is being tried only three months, so there is relatively few information or decisions about its likely worth. Future work will center around the system assessment, looking to distinguish their assets and shortcomings. This should be possible playing out an examination according to the point of view of a contextual investigation, which will assist with assessing and work on the structure.

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