IMPLEMENTING A VIRTUAL LEARNING ENVIRONMENT (VLE) IN A HIGHER EDUCATION INSTITUTION: A CHANGE MANAGEMENT APPROACH.

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ABSTRACT

Many universities around the world are investing in implementing different Virtual Learning Environments (VLEs) to support the teaching and learning process. However, without an effective implementation, many objectives and advantages are unachieved. Therefore, a well designed strategy to follow is vital to the success of an effective implementation. There has not been that much attention in the literature of how to support and manage the change to a successful implementation of such technologies. This paper presents a suggested framework of an implementation plan for a VLE in a higher education institution. Discussion focuses on the need for an effective approach to change management that is flexible and able to vary in pace according to the needs of users. The framework is developed based on the e-learning change management literature and that and on the review of the literature which is based on the experience of a number of universities around the world. The paper also presents an investigation and identification of the main reasons behind resistance to change to the acceptance and adoption a VLE in higher education institutions.

Keywords: *VLE, E-learning, Change Management, Higher Education, Change Resistance.*

1. INTRODUCTION

The rapid exchange of information, and networking in addition to the great advances in information technology have encouraged most universities world-wide to deploy ICT technologies in their own strategies. There have been several developments of a number of tools and web services in order to accomplish the objectives of publishing the course content, facilitating communication and in answering institutional daily needs in order to support learning flexibility and cost efficiency. In fact, contemporary ICT technologies have provided many supports and facilities to enhance modern learning settings [1].

One of the popular options world-wide in higher education institutions is the Virtual Learning Environment (VLE). The VLE provides a unified platform for content delivery, communications, assessment, and course management; with managed interfaces linked to the institution's central information systems and resources [2, 3]. It also helps to improve students' skills through engaging them in online learning activities and communication [4]. Unfortunately, however, without effective implementation, many features and tools of the VLE are left unused [5, 6].

For any university that aims to implement a VLE successfully, it will be a great challenge that needs strategic planning to ensure the efficient acceptance and facilitation of effective implementation. The pure installation and integration of the system across the university without addressing cultural changes through strategic planning and programmes could lead to a failure in the adoption [7, 8]. Research surveys suggest that higher education institutions lack coordinated strategies for implementing new e-learning technologies, and are typically relying on evolving local initiatives [5].Therefore, a well designed programme of change management is required to prepare the users for the VLE, reduce their resistance, gain their acceptance and involvement and then ensure an effective use. In fact, the development of strategic

plans that address change management, supporting staff, and establish a technical infrastructure is a key success factor that is needed to keep up with current higher education requirements and challenges [9].

This paper suggests a framework that is based on a change management approach that is derived from the evidence emerging from the literature, for a successful implementation of a VLE in higher education Institutions. Discussion focuses on the need for a framework that consists of multiple tasks and is flexible and able to vary in pace of adoption based on the needs of individual staff and departments.

In the remainder of this paper we will give background information of VLEs in higher education institutions followed by a review of the research literature with regard to change management towards VLE adoption in higher education institutions. Moreover, an investigation and identification of the main reasons behind the resistance to change to use a VLE is presented. Finally, a framework for the successful implementation of VLEs in higher education institutions is proposed followed by a conclusion.

2. THE VIRTUAL LEARNING ENVIRONMENTS (VLES)

A Virtual Learning Environment (VLE) is a learning management system that is designed to support teaching and learning in an educational setting over the network from remote locations. It enables the delivery of course contents and management. It provides the ability for users to communicate easily [2, 4]. It also integrates the student information systems and authentication protocols to control who access what via user name and password [10]. A VLE could be linked to the university administrative systems enabling the access to students' records ensuring accurate student data [11].

Different VLEs are commonly used recently. There are several available VLE software systems in both forms, commercial such as Blackboard; and open source such as Moodle, Sakai and ATutor [12].

VLEs have presented radical pedagogical change in the learning experience. Using VLE could reinforce and support face-to-face traditional teaching and learning in higher education. It adds many options for both learners and tutors [1]. Moreover, it encourages collaborative learning through online engagement between students and their tutors or peers [3, 4, 13]. The focus is on the enhancement of the student learning experience, rather than the adoption of technology as the key driver of change [3].

Most higher education institutions are using or planning to use a VLE, for one reason or another, whether for distance or blended learning [14] .VLE offers a range of learning tools and functions that aid in delivering, communicating, and managing the course. For instance, communication facilities such as e-mail and discussion board; announcements and a bulletin board facility; assessments and testing facilities; scheduling/calendar; assignment submission; integrated web 2.0 tools such as wikis, blogs, whiteboard, and authoring tools; polls; and many other features. It also allows the sharing and reuse of resources [4, 10, 13].

Modern mass higher education presents many challenges for both learners and educators as it has brought larger classes, more diverse students, and higher interest in teaching quality and graduate attributes [15]. Many research papers conclude that students and academics in higher education institutions around the world were positive towards VLE. They found that VLEs are very useful and had made a significant contribution to the learning experience adding significantly to the learning opportunities of 21st century students [3, 14, 15].

3. CHANGE MANAGEMENT TO ADOPT VLES

The implementation of VLE in any higher education Institution requires a well planned strategy to guarantee success. However, even great e-learning strategy and systems are not enough to guarantee success. Without a clear and well-thought out implementation strategy and plan, the implementation efforts will most likely fall to achieve the institutions' goals, learners' needs, and the management expectations [7].

The real value of a VLE, not only lies in its ability to deliver and communicate to anyone, anytime, and anywhere; but in its ability to deliver the right knowledge to the right people at the right time [8]. Research studies show that any university wishing to successfully implement a VLE should have to adopt and implement tactics that have the capacity to overcome existing social and cultural constraints. A framework of change needs to be established. The move towards implementing a VLE requires a well prepared program that is designed to enable smooth implementation and effective use. However, the process of change management to implement e-learning in general has been inadequately investigated in the literature and needs more attention [16, 17].

Simply purchasing or developing a VLE does not necessarily lead to success. The acceptance and effective use of features is critically dependant on how these technologies are implemented. Successful implementation of such technologies requires among other things a human resource strategy to develop the necessary stakeholders' skills and engage them in the process [18, 19]. Change and evolution do not only affect the technological aspects [16] but people will be affected too, therefore, major attention should be dedicated to them.

Taylor [19] argued that any e-learning development needs proactive human intervention that benefits from the implementation of explicit change management strategies. Nevertheless, there does not appear to be a single clear and ready model that ensures that a VLE will be implemented successfully. However, the institution's context is crucial to the choice of tactics and strategies that probably lead to success. Expanding the use of any e-learning technology in an institution requires a clear analysis of the organization's strengths and weaknesses viewed against its strategic goals. Therefore, the consideration of institution context is essential in the planning of any change programme [6]. Strategic management techniques should be created to allow the institutions to balance the pressures of change, continuity, and availability of resources [20]. Clear strategies of applying any new e-learning technology should be in place and should not be left for emergent local initiatives [5].

Sharpe et al. [6] noticed that without effective implementation, the use of the VLE was relatively unsophisticated and focused on content delivery and administrative information [5]. They mentioned that patchy implementation, evidenced by missed deadlines and targets, influenced academic staff perceptions of the real value of e-learning. The results of ineffective use are loss of quality and much frustration; as no VLE will ever be enough in itself to create better learning experience; it needs appropriate, well-supported and focused human intervention, good learning design or pedagogical input and the sensitive handling of the process by trained tutors [14].

The introduction of a VLE within higher education represents a change in teaching practices which needs to be carefully managed [17]. Therefore, when a university introduces a VLE, it is sensible to control change by applying a change management approach that involves different activities, together with evaluation of the environment, measuring the performance gap, diagnosing organizational problems, recognizing sources of resistance, diminishing resistance, implementing change, and following up on the changes [15, 20].

Applying e-learning technologies lead to significant savings in investment in the delivery and support of courses, if combined by strategic transformation within institutions [21]. Beckton [11] pointed out that adopting any VLE will represent a significant investment on the part of the University, so it must be "sold well" for staff to use it properly. Success is crucial because an unsuccessful effort to implement the VLE will be clearly reflected in terms of the return on investment [8]. Only with effective use, a VLE can yield a justifiable return on investment considering the costs incurred in implementing it.

A clear vision should be in place at the senior management level so that staff can gain understanding of why change is important and necessary. Strategic planning should be drawn based on institutional experiences of applying e-learning services. This could enable the institution to control the pace of the implementation of a VLE, establishing policy, support services, and evaluative feedback procedures, which lead to a realistic and effective approach to change management [3, 22].

Many studies conclude that the successful implementation of VLEs will ultimately depend on academics agreeing that the proposals are reasonable. For instance, the conclusion of the Goolink [21] study showed that if the concerns of academic staff are acknowledged and their needs appreciated, then e-learning initiatives that are backed up by appropriate range of scalable developmental program opportunities will have a greater chance of gaining success and support. Successful programs are those that acknowledge staff needs and their varying amounts of availability, taking into account the pace of change, development time, staff skills, and taking into account the need for on-going training and development [21]. Oliver [1] argued that for the implementation to be successful, it needs to be driven by the bottom-up forces, by the teachers and students themselves. Moreover, Stiles and Yorke [23] stated that implementing e-learning technology requires a holistic view of staff development and training. The level of training and support available to academic staff has been crucial to the success of such projects, a factor often underemphasized in change, and one that has previously undermined the success of many e-learning projects [3].

Researchers observe that if changes are introduced through modest e-learning policies then VLE in teaching and learning becomes naturally widespread, usually as part of blended traditional teaching methods [3, 22]. Such change was as

much cultural as technical and that for the change to be accomplished; it had to work with the existing culture, rather than trying to change it [11, 15].

Given the complex structure of higher education institutions, implementing e-learning is not always an easy, robust and secure [5]. McPherson and Nunes [17] suggested that if implementation of e-learning is to be successful, the way forward seems to be for the institution to manage the change process by proposing and agreeing goals through consensual debate, supporting strategies appropriately and then realising these through common commitment. Some researchers in organisational change management prefer to view the universities as a living adaptive system in order to build an integrated understanding of individual lecturers, and organizational context and the learning materials' technologies that they are using such as books, notes, blackboard and other advance Web 2.0 tools. Those researchers draw on concepts from physical sciences and evolutionary biology with the purpose of developing models of complex organizational change processes such as universities growth process, and process of change interaction with the forms of learning and teaching. Based on that, they have concluded that change which is harmonized across the institution will always give an improved result over piecemeal change [5].

3.1 The Experience of the Implementation of e-Learning Systems in Higher Education Institutions

In the literature, there has been several research papers that have discussed the experience of a number of universities around the world to implement an e-learning system. There are not many, yet it could be a starting point to look at and benefit from the experience in order to establish a well formed strategy and plans. For instance:

Beastall and Walker [3] have discussed an implementation model based on a change management approach, for the VLE at York University, UK, that involves a 4-year cycle of pilot projects and evaluation, culminating in a full availability rollout at the end of the forth year. Their research suggest that successful change management relies on clear strategic 'top down' management combined with 'bottom up' active involvement in order to successfully implement sustainable change that is clearly focus on the needs of the students.

Sharpe et al. [6] describes the implementation of an e-learning strategy at Oxford Brookes University. Their implementation's strategy focused on the levers used to promote effective uptake and ensure sustainable embedding. In their strategy, the centre of attention was the participation of the academic schools in using a range of change practices. They determined that the key factors were: flexibility in practices that allow schools to contextualize their plans for change, the facilitation of user groups of key staff and creating opportunities for staff to voice and challenge their beliefs about e-learning.

Beckton [11] mentioned that in order to remedy the resistance for change to the adoption of a VLE at Lincoln University, UK, a specialized development unit was created. Their first task was to increase the awareness and use of the VLE across the university. Becton [11] claimed that the greatest key to success in implementing VLE is to focus on what users of the system required and to give them the opportunity to express those needs rather than focussing on what the system could do for them.

The e-learning implementation model of Stiles and Yorke's [23] suggests 'integrative development', whereby the implementation team is shaped at the start by a range of experts, involving academics as course leaders, librarians, trainers, and IT Staff from the IT department. However, the authors highlighted that without enough strategic planning that embraces the management of change, any implementation could be susceptible to failure.

In the University of Sydney [27], the e-Learning development processes have followed project management principles to support strategic project-based collaborations between e-learning specialists and a team of academic staff in order to support academics in educational change and to implement innovation. Their main processes included: an extended application and planning period in order to articulate and prioritize needs and requirement that was followed by a conceptual planning process and then finally came the learning and evaluation period.

The experience of implementing a VLE at H.P University in India revealed the need for the institution to reengineer itself, understand how competition will differ in the future and based on that, strategic planning for e-learning implementation must be well designed and it must take into consideration a change management approach in order to gain competitive advantage in the changed educational environment [20].

In summary, successful implementations of VLEs requires careful strategic planning that is based on a change management approach, in order to prepare the users and to ensure their commitment to efficient and proper use.

4. RESISTANCE TO CHANGE TO ADOPT VLE IN HIGHER EDUCATION INSTITUTIONS

Most organizational changes are unsuccessful because of different forms of resistance. Some people within an organization may be against the implementation of the VLE. Therefore, it is important to understand why people may resist the change [20]. People are the most important asset in any organization, and their commitment could be the main factor in determining effective implementation of any IT project [24]. For the implementation team, getting to know reasons behind the resistance could help them in planning to address these issues in order to overcome the resistance to change.

In the literature, there are several reported reasons behind the resistance to adopt a VLE in a higher education institution, or other similar e-learning systems. For instance, Goolnik [21] mentioned that faculty members may feel that they have less control than before over their working lives; they have to change their teaching practices; they feel that it might lower quality of courses; they fear lack of official recognition for work with new technologies; and they worry about intellectual property rights and ownership of materials produced. In addition, lack of time, lack of IT skills; and the feeling that getting involved with VLEs is not part of their specified roles [11]. Salmon [14] mentioned that VLEs present a migration away from existing traditional pedagogy and faculty prefer to preserve their existing and familiar pedagogical approaches. Furthermore, academic staff may fear that it will increase their workload, as it increases the time spent with students online, and the time required for preparing course material [3]. Other factors consist of fear, conflict of interests, misinterpretation, differences in evaluation, inadequate resources, and lack of motivation and commitment from both staff and students [20]. Other general factors behind the resistance to change are: habit, persistence, self-distrust, and insecurity [24].

Oliver [1] suggested that there are also some factors behind the low use of e-learning technologies in universities world-wide such as, the standard assessment measures that do not encourage the use of ICT in course delivery; tutors prefer directed teaching modes; and the limited access to ICT.

Change will not be adopted by all at the same time and at the same level, therefore, a variety of strategies should be called upon to suit the different levels of tendency to change. Some people will be instant adopters. Others may be short term, long term, or may never use VLE in any form. Hence, it is imperative to determine each type of person and design the best methods to overcome any possible resistance [20].

Resistance to change is expected, so preparations must be substantially enough to help individuals to realize changes gradually [6, 17]. Resistance is likely to be overcome if the academic staff are fully involved in the design, development and understanding of the need for change. They need to understand their new roles [21] which ensure their involvement and commitment. Senior management in most organizations expect obedience and loyalty from those who work for them without addressing their wants and needs which is typically the greatest reason behind the failure of commitment and acceptance from employees [24].

Sharma et al. [20] have suggested some actions to be taken to diminish the resistance, which are: (*1*) *educating workforce and other stakeholders; (2) allowing the affected people and other stakeholders to contribute; and (3) bargaining with both internal and external stakeholders*.

In summary, resistance to change is behind the failure of most IT based projects. Therefore, addressing and realizing the factors behind the resistance to change could lead to a better planning of the successful implementation of the VLE strategies.

5. PROPOSED FRAMEWORK OF THE SUCCESSFUL IMPLEMENTATION OF A VLE

This section presents a suggested framework of a change management program to implement a VLE effectively in a higher education institution. This framework has been developed based on literature review representing the experience of a number of universities around the world: York University [3]; the University of Lincoln [11]; Oxford Brookes University [6]; and, H.P. University [20]. In addition, a review of change management literature has been referred to as well.

The proposed framework should follow a practical proactive approach. It is found that institutions that are practical in their VLE implementation have fewer problems and are more successful than those that implement a reactive approach [20]. In a practical approach, the change team should gain control of change activities which enhance effectiveness and efficiency by proactively dealing with possible unwanted problems. On the other hand, the actions in a reactive approach will be taken based on issues as they are arising.
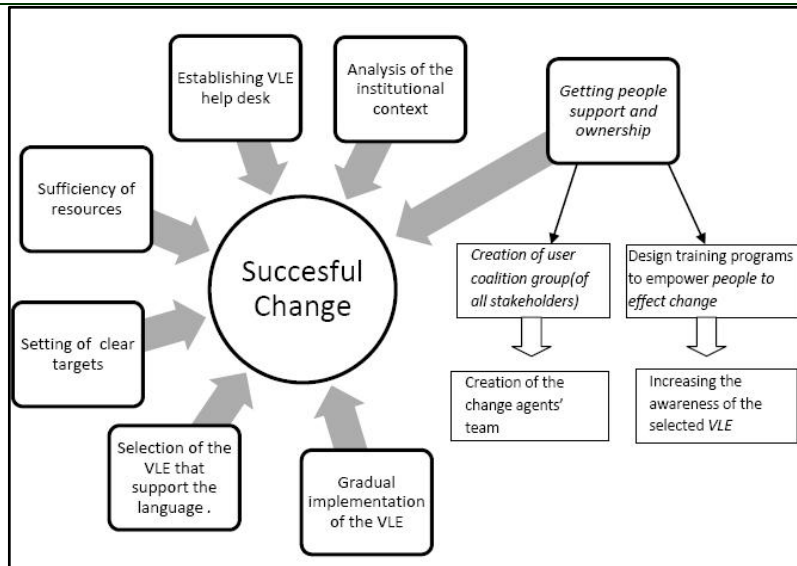
Figure 1: Framework to a successful implementation of a VLE in a higher Education Institution that is based on a change management approach.

Controlled change enables the institution to move into new strategic directions and building a competitive advantage on the foundation of efficient VLE implementation.

This framework is comprised of multiple tasks that ensure successful implementation. Figure 1 presents a visual representation of the framework. The following paragraphs describe each component of this framework in more detail.

Analysis of the institutional context

The consideration of the institution context is essential in the planning of any change program [6, 14]. The institution goals and strategies should be analyzed in the views of its strengths, weaknesses and opportunities; and based on that, change tactics and speed are planned At this stage it is important to work at the departmental level and develop ownership and commitment by involving heads of departments and other senior managers, starting by making them aware of good practices that already exist.

Sufficiency of resources

Resources are very important to the success of any e-learning implementation [17]. Sharma et al. [20] caution that the deficiency of human and infrastructure resources may hinder the implementation of a VLE. Resources should also include training and support funding.

Selection of the VLE that supports the language of academic staff and students

The VLE should support the language of the students and academic staff in universities in countries where English is not the native spoken language. Language barrier could obstruct the appropriate use of the VLE. To illustrate, proficiency in English was a common barrier to an efficient use of the ICT in academic related applications in an Arabic university since most resources were available only in English [25]. The selection of the VLE basic language to be used must take into account the intercultural particularities to promote the use. Electronic translation tools also could be added to convert learning materials that have been created in one language to another language at a relatively low cost [26]. The calendar is another issue that also could be considered as one of the intercultural problems that should be thought of, as recommended by Barajas and Owen [26], due to the official use of different calendars format such as solar and lunar ones in different countries around the world.

Getting people support and ownership

Resistance to change is expected, so the preparations must be substantially enough to help individuals realize changes gradually. Individual lecturers' motivations to make use of technology must be understood and addressed [6]. This task will be covered in two different tasks that will be followed by two other tasks:

❖ *Creation of the user coalition group that covers all stakeholders*

In order to balance the tensions between technical, organizational and pedagogical considerations across the entire institution [11], and to achieve a successful change [17, 18], a user group should be established. This group should

include committed representatives from all interested sectors: technical team, senior management, academic staff from all participating departments, students, and registration staff. Inviting the group's feedback on the planning and rollout of the system could give an excellent perspective on the problems that may arise and what could be done to resolve them [3, 6]. At this group regular meeting, focus should be drawn on what users of the system want and to give them plenty of opportunity to articulate those needs rather than focusing on what the system could do for them [11].

Nevertheless, Ward et al., [27] warned that it could be a challenge to create new teams with members from different specialized knowledge areas, and who are required to share understanding of how their strengths and skills shall interact effectively.

❖ *Design training programs to empower people to effect change*

With the aid of the human resource department, a very comprehensive program of different workshops, seminars and training programs should be developed to equip staff with the required IT skills and introductory courses of how to use the VLE such as using tools; creating the content; and how to create and contribute to discussion groups [23]. Sharpe et al. [6] suggested linking the staff development section to the existing annual staff development planning cycle and its associated funding which will enable planning for VLE to be integrated into existing university systems.

❖ *Creation of the change agents team to communicate the change vision*

Out of the user coalition group, change agents should be selected to facilitate and manage the change in the university. Change agents should plan and monitor the implementation, educate staff and students about the importance of VLE. The team needs to use every possible way to constantly communicate the new vision and strategies and to sell the VLE to all appropriate addressees [18]. They also need to communicate with top management to always gain their approval and support. Furthermore, they need to talk to the end users who are going to use the system. One of the objectives of change management is to ensure that as many people as possible are positive towards the changes.

The adoption of a VLE can be much more successfully diffused within an institution using appropriate communication channels such as change agents and opinion leaders instead of distanced, formalized recommendations from the management [21]. Change agents can be used to

broaden the word about the VLE and its returns for the educational institution. Involving them early in awareness raising can increase the chances of success [20]. Change agents must create credibility and sustaining movement; they must diagnose any problems, providing information and working across traditional boundaries of the institution. In addition, they must understand the situation from a faculty's perspective [21].

❖ *Increasing the awareness of the selected VLE*

After designing programs in the task mentioned above; staff should be encouraged to undertake the personal development of the VLE training that should cover IT skills, and content development in order to develop their understanding of the VLE [6]. Training should include transformation of academic practice in the sharing and collaborative development of learning and teaching resources, as well as attitudes to copyright and accessibility. It should target personalized learning pathways, skills development and student focused activities through online engagement between students and staff [3].Training and support available to staff is crucial to the success of VLE implementation [18].

Setting of clear targets

In change management, it is sensible to set quantitative assessment measures and benchmarks. The easily identifiable target could be that all courses should have some kind of web presence by specific date. Sharp et al. (2006) reported that this was actually the most common type of successful target in implementation strategies. However, such target could result in promoting the use of VLE for its own sake, but not in improving the student experience by incorporating effective use of all functions of the VLE. Other measures could be introduced; for example, interaction oriented measures or content oriented measures. In interaction oriented measures, the frequency of announcements placed, or the rate of activity in discussion boards or forums could be used. In content focused targets, the content placed by instructors could be measured such as the placement of table of content, objectives and lecture notes. . The failure to meet any targets should be analyzed in order to understand why it happened.

Establishing VLE help desk

Help desks should be established in order to provide the required technical help and support for all VLE's users whether academic staff or students. Help desks should provide single point of contact for users for troubleshooting, assistance, and information regarding the VLE.

Table 1: A comparison of the carrying out of each task of the framework in four universities VLE implementation cases.

The Task	York University [3]	University of Lincoln [11]	Oxford Brookes University [6]	H.P. University [20]	*The Task*	York University [3]	University of Lincoln [11]	Oxford Brookes University [6]	H.P. University [20]
Analysis of the institutional context			√	√	Creation of the change agents team to communicate the change vision	√		√	√
Sufficiency of resources				√	Increasing the awareness of the selected VLE	√	√	√	√
Selection of the VLE that support the language of academic staff and students.	None of these came across this task, as in all the four universities cases, language was not a problem.				Setting of clear targets			√	*
Getting people support and ownership	√	√	√	√	Establishing VLE help desk	√	√		*
Creation of the user coalition group that cover all stakeholders	√	√	√		Gradual implementation of the VLE across the university	√	*		
Design training programs to empower people to effect change	√	√	√	√					

Gradual implementation of the VLE across the university

The implementation of the VLE should be done gradually to control the pace of the rollout of the VLE, support services and evaluate feedback procedures while gradually scaling up user access to the system [3]. The implementation could start with the some colleges where the use of IT is mature. This provides the ability to try the system and to identify any bottlenecks or problems; and the ability to report such problems to the VLE implementation team. More colleges should be gradually introduced to the system after the initial phase. The phased nature of the implementation will enable the system to be fully tested out with support and training [3, 22].

In order to relate the proposed framework to the experience of universities in implementing VLE, the data covered in these papers have been summarized and consolidated and compared against each proposed task in the framework and then tabulated in table 1. From the table, the reader can notice that all the four implementation strategies have focused on getting people support and ownership in order to facilitate the successful change. Sufficiency of resources was not addressed in three of the cases, however, in different e-learning change management literature, this issue has been emphasized. Setting clear targets have been addressed implicitly by H.P case by providing appraisal performance methods. VLE help desk had not been established in H.P University, however, technical support help for teachers within the educational institution and outsourcing training efforts had been provided. The University of Lincoln was planning to go for "big bang" implementation approach but they founded that Beastall and Walker [3] gradual implementation is safer in order to give their potential users as much opportunity as possible to articulate their needs. However, they did not say that they will follow gradual implementation explicitly.

6. CONCLUSION

The twentieth century has seen a remarkable expansion in student enrolment numbers in higher education which creates greater challenges for institutions. Higher education institutions have

invested in learning technologies, so expectations increase for traditional learning and teaching systems to adapt and change. VLEs are the most common ICT technology that is used world-wide nowadays to support traditional learning in higher education institutions. However, without effective implementation that addresses the users' needs and requirements, failure could be expected. Educational technologies such as VLEs lack sufficient support for change in implementation [16, 17] and there has not been that much attention in the literature of how to support and manage the change to a successful implementation of a VLE in higher education institutions.

Academics are unlikely to simply accept the VLE as imposed from the top without real opportunities for debate and negotiation. Resistance to change could present a great challenge to the effective implementation of VLEs. A number of reasons behind the resistance have been presented in the paper. A carefully designed change management program could help in reducing or even overcoming the resistance.

The implementation plan should be sensitive to the different needs of departments and users with different VLE adoption targets that departments are required to meet, along with different training programs reflecting the broader objectives of the change management process [3].

The proposed framework is developed based on the review of the literature of previous experience of VLE implementation in different universities and on e-learning change management. It offers the capacity for the implementation of change across the institution at an appropriate rate, with stakeholders invited to contribute feedback and shape the adoption process. The implementation of a strategy that is based on a change management approach would increase the uptake of VLE at higher Education institutions, and promote the development of effective usage of VLEs.

The next stage is to test this framework by applying it as a case study to build strong evidence that the proposed approach can provide an added value to the strategies of implementing VLEs in higher education institutions around the world.

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