The Integration of Learning Management Systems with PLE – a Review Paper

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ABSTRACT

Electronic Learning (E-Learning) evolves consistently. An effective eLearning has unrelenting readiness in integrating new paradigms while the students become the core of the process. In this regard, the current tools are replaced by others, with customization under consideration. Somehow, changes are costly and should not be merely focusing on replacing all past initiatives but also should attempt to combine the new initiatives with the successful ones, in order that the great robustness and effectiveness of learning environments could be assured. Accordingly, the presently available integration initiatives will be reviewed in this paper. A new initiative will be proposed as well.

Keywords: *E-Learning, PLE, M-Learning Learning Management System.*

I. INTRODUCTION

In any society, learning is regarded as an integral process. This is because learning eases individual's change and can also improve the individual's social or business competency. Equally, considering its constant evolvement, learning is a living process. The evolution of learning is impacted by changes of a diverse natures including the sociological, educational or technological [1] natures. Accordingly, the present study will look into one of these changes, especially in regards to the use of technology in learning namely eLearning.

Learning platforms, which are also known as Learning Management Systems (LMS) or Virtual Learning Environments (VLE) are notably among the most demonstrative tools in the eLearning domain. Today, LMSs are popularly accepted in the domains of education [2].

Still, LMS appears to be lacking in terms of improvements [3], and this is primarily due to the following reasons: 1) more focusing on the course and/or the institution rather than on user learning [4], 2) failure in providing support to lifelong learning [5], 3) Failure to don't forget the casual getting to know and the assist of the gear which promote such gaining knowledge of model [6], and 4) failure to evolve with the new technologies [7].

As a solution, Personal Learning Environments (PLE) which Offer getting to know spaces have been added. PLE could cater to all new requirements but there have to be concerns concerning the integration of formal, casual and non-formal propensities. this article will have a look at PLEs and the distinctive integration regulations. therefore, the subsequent section will spotlight the definition of private learning surroundings, followed by using a section which describes the differing tendencies of learning integration. except that, the feasible sceneries of integration might be illustrated as well [8].

II. PERSONAL LEARNING ENVIRONMENTS (PLE)

The concept of PLE is fairly new. Somehow, other notions including learning personalization in which they are grounded on IT, have been around for some time. The concept of PLE first emerged some time in year 2001 [9] but it did not gain considerable interest until November 2004 when it became a topic of discussion in the JISC / CETIS Conference in the same year.

Since then, there have been profuse contributions from numerous authors regarding its definition. However, the definition of PLE has not been completely established and in fact, there are still debates about it. Nonetheless, a not unusual ground in the problem has

been accomplished. many of the capacity definitions can be a difference between the ones emphasizing the importance of the technological concept center to PLE's and people that stresses on PLEs pedagogical benefits.

PLE has been defined by different scholars from the viewpoint of technology. In this study, PLE is regarded as comprising some surroundings in which humans, tools, groups and assets adaptably engage with each other [10]. on this description of PLE, the idea isn't always taken into consideration a software. as a substitute, it fosters an open surroundings for offerings in addition to sources from numerous contexts. similarly, PLE is opened, bidirectional (no longer best eat offerings however are furnished), tailored to the person, makes use of lightweight requirements and interfaces, cooperative and open content material-orientated to both the individual and the community in which they spanned.

In the meantime, at well-defined PLE from a pedagogical attitude. as opined by means of the author, PLE's aren't an application however a novel technique to new technology utilization in getting to know. However, a lot of those elements remain unresolved. Still, the deliberation concerning PLE usage is philosophical, ethical and educational, rather than technical. In the context of learning, PLEs afford students their own space that they could employ in the development and sharing of ideas, by way of learning environments with the capability in linking the resources and contexts that are so far apart.

Definitions of PLE are many but these definitions will not be reviewed in this section. Rather, this section will provide clarification on the concept of PLE so that the present trends of integration could be understood better.

III. INTEGRATION TENDENCIES AND PROPOSAL

The use of PLEs increases the effectiveness of learning management process. In fact, PLEs have been viewed as LMS substitute [11]. Nonetheless, considering the fully developed tools employed in LMS, it remains relevant in the learning domain.

PLEs will soon become an instrument of learning in institutions and for this reason, issues that emerge in integrating both institutional and non-institutional domains must be resolved. In other words, solutions need to be provided to the problems that occur during the merging of formal, non-formal and informal learning. Still, there are issues that need to be taken into account, and this makes the resolution effort a challenging task. Some of the issues are as highlighted below:

A. The inclusion of interoperability standards in LMS is challenging [12];

B. The inadequacy of education sports integration in PLEs due to the fact PLE's are largely for representation, class and monitoring in other platforms [13];

C. There are obstacles of traceability of consumer hobby in PLEs which need to be considered in the formal setting [14];

D. Issues related to single-sign-on implementation [15];

E. Issues related to security of information [16].

Accordingly presented three likely scenarios for the co-existence between LMS and PLE as follows [17]:

A. Parallel lifestyles of PLEs and LMSs, correspondingly as formal and informal environments.

B. LMSs unlock its systems to create interoperability measures with PLEs.

C. LMS contains components of PLE – this limits PLEs' transformative power.

It should be noted that since the first possible scenario takes into account coexistence rather than integration. Hence, this paper will not further discuss the first scenario.

Scenario number two is associated with the opening of LMS by along with web tools and projects of interoperability. this situation may additionally include the subsequent:

A. Interact platform provided by Google (iGoogle),

B. LMS that has a link with social networks,

C. LMS's that support the applications of interoperability specs,

D. PLS that work beside precise protocols of communique,

E. Integration grounded upon the architecture of service oriented [18].

About those initiatives, the institutional problems to the commencement for the formal environment that focus on the facts export in preference to the interplay interchange appear like the key mission.

For scenario number three, it involves the integration of outside tools into LMS. However, user may have difficulty in deciding on the specific tools to be employed. Besides that, the tools will be restricted to institutional decisions only. Nonetheless, in such scenario, some of the possible initiatives are as follows:

A. LMS are specified for external tools integration,

B. The incorporation of Moodle into a new Google tool named Google Gadgets,

C. The PLE's tools are grounded upon records analysis,

D. Actions that follow integration tools based on learning design,

E. Constructions of integration, etc. [19,20]

Based on the initiatives highlighted in this paper, Application of the Moodle Web Services Layer, various dominant links (for information export and interaction) and a new one that follows the IMS-LTI (IMS Learning

IV. CONCLUSION

In essence, PLEs provide new prospects in the processes of eLearning. Accordingly, the 2.0 tools, and social networks (among others) will dictate the future of eLearning. Hence, it is beneficial that they are contained within the actual contexts of learning today. For the purpose, the integration of PLE with the current LMS and the manner of the interchange of the interaction and information need to be ascertained. In fact, a number of initiatives are presently available, but it appears that all of them contain no efficient methods that could assure complete integration and interaction. Hence, a possible solution is presented in this paper. The solution can ease integration while equally promoting a PLE model that is part of the institutional initiatives and can also be completely customized by user.

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Tools for Interoperability) specification, for the purpose of importing activity results.