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E-Delivery Training System using Agile Technology

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Abstract :-E-learning represents a wide range of methods in order to provide education or online training of the electronic delivery of information. E-Learning provides interactive technologies and announcement systems to improve the learning experience. It has the potential to transform the way that teach and learn across the board. It cannot replace teachers and lecturers, but alongside existing methods it can enhance the quality and reach of their teaching. Normally speaking, this type of education is carried out during the average of the World Wide Web where the instructive organization construct its programs and materials obtainable on a special website in such a way that students are capable to make use of them and interrelate with effortlessness during closed or shared, networks, or the Internet, and during utilize of e-mail and online discussion groups. This work proposed the Agile technique development process as an iterative method based on collaboration. Agile would focus on version, growing development, hasty prototyping, and constant feedback and evaluation.

Keywords: *E-Delivery, E-Learning, Agile technology, IADIS e-learning.*

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1. INTRODUCTION

E-learning is commonly referred to the teaching and learning within deliberate use of networked information and communications technology . The letter "e" in e-learning stands for the word "electronic". Numerals of other terms are also used to illustrate this mode of teaching and learning. They include *online education*, *virtual learning*, *distributed learning*, *network* and *web based learning*. Fundamentally, they all refer to information and communications technology utilized by learning processes to arbitrate asynchronous as well as synchronous learning and teaching activities. On closer scrutiny, however, it will be clear that these labels refer to a little different learning process and as such they cannot be used synonymously with the term *e-learning*.

Remote education is the most renowned descriptor used when referencing distance learning. It often describes the endeavor of providing access to learning for those who are physically distant. During the last two decades, the relevant literature illustrate that a variety of authors and researchers use inconsistent definitions of distance education and distance learning. As a delivery of education, a anticipated definition identified the delivery of instructional materials, using both print and electronic media done with the involvement of computers.

2. LITERATURE SURVEY

Kidney *et al* (2014) identifies eight quality assurance strategies in use at the University of Houston-Clear Lake. Roche *et al* (2014) introduces the surroundings to ICMs and presents the ICM as a tool that has potential to support professional education. Gold and Steven (2014) describes the rapid growth in e-learning and discusses the demand and supply forces creating that growth. Bell *et al* (2013) review research that shows how these features can be configured to create e-learning programs that help acquire different types of knowledge by different types of learners.

Liaw *et al* (2013) purpose is to investigate learner self-regulation in e-learning environments. Murphy *et al* (2013) tracks the changing attitudes to agile adoption and techniques, within Microsoft. Virani *et al* (2014) presents the current best practices, customization, and the issues of abstraction, design agility, user accommodation, and tradeoffs while using hybrid system engineering approaches. the development of software is now standard practice in many organizations with the approach agile. The wider extrapolation of the results is also discussed by Bustard *et al* (2013).

a project which using the benefits of agile techniques are becoming more commonly understood and accepted. However, most thought about agile focus on the engineering are given by Law and Ali (2013). Agile methods are One of the most important developments in software over the past decades , but also a surprising mix of the best and the worst is proposed by Meyer and Bertrand (2014). Agile approaches have emerged in Software Development projects during the last decade becoming a real alternative for organizations developing software is shown by Torrecilla *et al* (2014).

Frequently, these systems provided by Rosaci *et al* (2010), the learner among a ***student agent*** that interrelates with a ***site agent*** connected with each e-learning site. Santos *et al* (2011), evaluate how recommender systems can be useful to current e-learning systems to show learners in modified inclusive e-learning scenarios. As a requirement for a successful improvement of e-learning systems, it is significant to have certain knowledge about users' opinions and construct an estimation concerning them are given by Kechaou *et al* (2011).

3. METHODOLOGY

This work examines the challenges that software architecture might present for open and agile development processes and explores desirable features that an open agile e-learning system architecture should possess in order to overcome these challenges. Agile practices are evaluated from an architectural perspective for their effectiveness and compatibility within agile and open development processes. This chapter offers insight into how architectural

decisions can be made for e-learning systems that can support these processes.

The emergence of lightweight, agile software development methodologies and principles help address many of the challenges associated with changing requirements. Similarly, the advantages of using open source software and principles to address development and integration challenges.

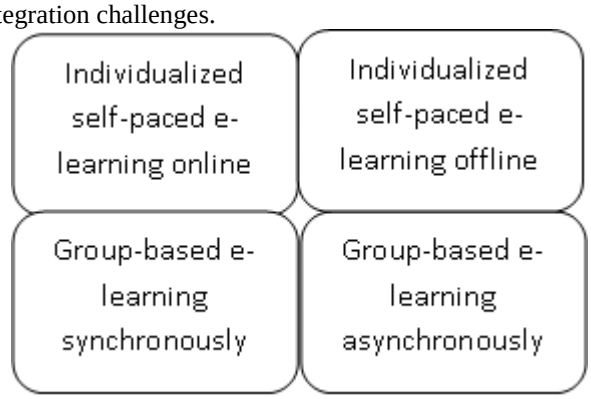


Figure 1: E-Learning modalities

However, the principles and practices associated with the agile and open methodologies present interesting challenges for the software design and architecture.

3.1 IADIS E-LEARNING

This methodology of creating e-Learning systems is proposed through the gained experience in the development of the content of multimedia applications and its use in the elucidation of the analysis model and design processes. The project of engineering teaching content is carried out through a methodology, which divides the production process in different stages and the tasks assign to each member of professional development team. To all of these different stages it is included the investigation on the suitability of e-Learning contents. All these different phases include study on fitness of the content for e-learning, a previous analysis to select multimedia techniques to apply and finally, the contents are developed based on the project design.

This methodology is a multimedia one, which makes it useful for media classes where students cannot interact with the presented information to the student. The creation of large-scale e-Learning content requires software developed in order to apply proved techniques of exposition and software development at a high cost, also it requires a multidisciplinary team (group of professionals).

3.2 AGILE TECHNIQUES

The proposed method of Agile technique started as a software development process—a reaction to the cumbersome "waterfall" methodology that had been brought over from older manufacturing practices. Early software development companies had no model for their new trade, so they simply borrowed what had been established for years in other industries where products are made. The problem is that this method is extremely impractical for software development. This is because in order to move to the next stage of development, the stage before it must be 100% complete, perfect, and documented and that's just not how software development works. It has allowed our teams to collaborate a lot more between Instructional Designers and Multimedia

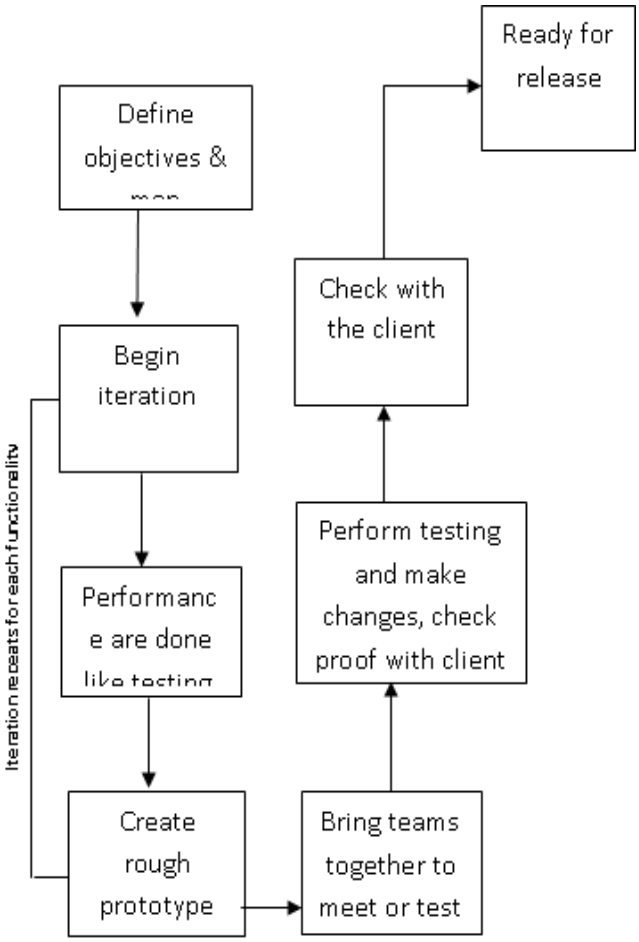


Figure 2: Agile learning design process

Agile learning is design as an extremely iterative process. By using collaborative teams (client collaboration included) and constant iterations and feedback, end up with a faster and more flexible process that arrives at more innovative solutions. The flowchart shows design process for agile techniques.

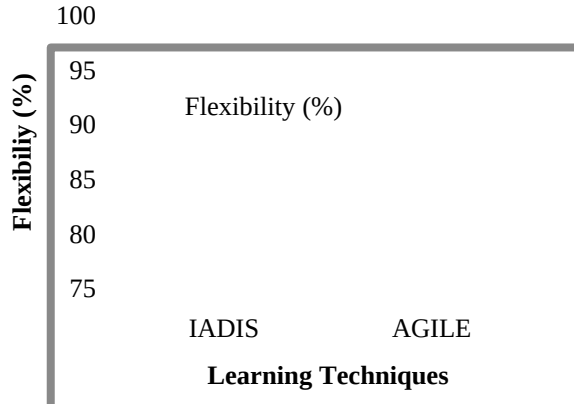
3.3 EXPERIMENTAL RESULTS

The experimental results are done and data's are collected from Moodle software. An example of this is moodle which utilize: conversation board threading, wiki and real time textual chat. However, moodle is referred to a CMS, this is because course material if often video, mp3, text documents, scanned images or links to other web sites. It is also broader than the terms On-line Learning or Online

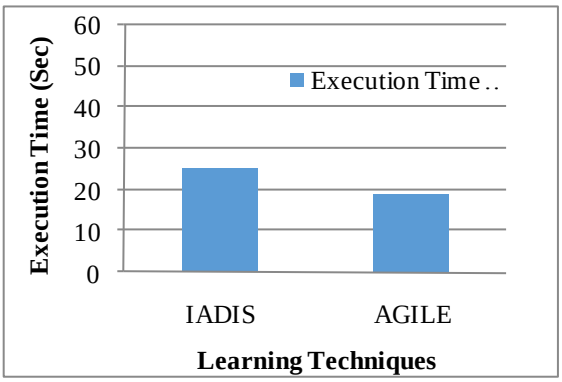
Education which normally refer to entirely web-based learning.

Table 1: Flexibility and Execution time

Learning Techniques	Flexibility (%)	Execution Time (Sec)
IADIS	82	25
AGILE	95	19



(a)



(b)

Figure 3: Flexibility and Execution Time for Learning techniques

Table 1 shows the flexibility and execution time for learning techniques. Figure 3(a) shows the flexibility. The proposed method have high flexible. Figure 3(b) shows the execution time for IADIS and AGILE techniques. The proposed method of AGILE has less execution time with high accuracy.

3.4 CONCLUSION

E-learning is matched to distance learning and flexible education, but it be able to be used in combination with face-to-face teaching, in which container the term combine learning is commonly used. E-learning contains numerous varieties of media that deliver text, audio, images, animation, and streaming video, and contains knowledge applications as well as local intranet/extranet and web-based learning. Information and communication systems, whether free-standing or based on either local networks or the internet in networked information, underly numerous e-learning processes. This AGILE technique is used to minimize the risk by developing software in short term called iteration.

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