Knowledge Acquisition and Knowledge Management through E_Learning

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Abstract:

E-Learning has become increasingly hot in the past decade but is still on its way to a new pinnacle and now E-learning comprises all forms of electronically supported learning and teaching. The Information and communication systems, whether networked or not, serve as specific media to implement the learning process. The term will still most likely be utilized to reference out-of-classroom and in-classroom educational experiences via technology, even as advances continue in regard to devices and curriculum.

Key words: E_Learning, Knowledge Management, Knowledge Acquisition,

1. INTRODUCTION

Human beings are designed to learn from one another with both verbal and visual hints in order to retain new knowledge. In this process e-learning has been playing an important part of late. With more and more youngsters using the internet these days, e-learning is becoming popular in countries like India. This seems to be a blessing of the new-generation technology which makes teaching possible anytime and anywhere.

E_learning is essentially the computer and network-enabled transfer of skills and knowledge. E_learning applications and processes include Web-based learning, computer-based learning, virtual classroom opportunities and digital collaboration

In E_learning, small group collaborative learning has been shown to result in higher achievement, less stress and greater student satisfaction, and greater appreciation for diversity. Some educators suggest that it may be particularly important and well suited to the online environment as a way of incorporating the learning process into a virtual environment

2. E-LEARNING

The delivery of a learning, training or education program by electronic means. E_learning involves the use of a computer or electronic device (e.g. a mobile phone) in some way to provide training, educational or learning material.

3. E-LEARNING STANDARDS

Provide fixed data structures and communication protocols for E-Learning objects and cross-system workflows. E-Learning standards can be categorized as:

a) Metadata: how to describe e-Learning resources in a consistent manner

b) Content packaging: how to gather the resource useful bundles

c) Communication Interface or API: how e-Learning resources can exchange information dynamically

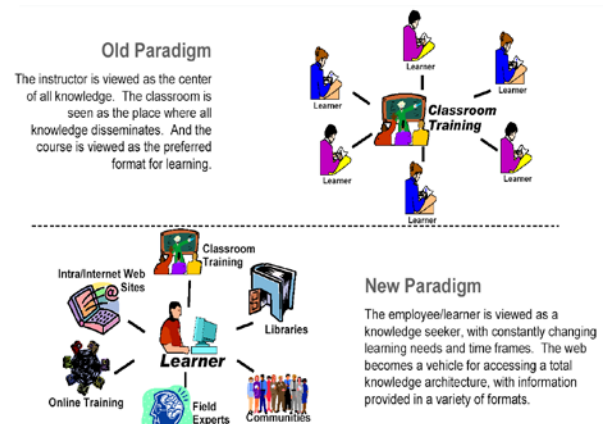d) Learners Profile: how to share information about learners

Figure-1: Learning Paradigm Old Vs New

4. REQUIREMENTS IN E-LEARNING

To assess the knowledge level of the students who are all completed their specific courses through E_Learning methodology. Knowledge acquisition can be achieved rapidly through E_Learning rather than traditional method of teaching.

Employees of any manufacturing companies can easily learn their task within the stipulated time frame and also completed their work with more accuracy. Comparison between traditional class room teaching and online teaching and also analyzing how much the receiver can achieve their goals.

In Expert-driven Knowledge Acquisition experts and/or the knowledge engineer's roles are minimized (or eliminated). They may provide useful preliminary knowledge discovery and acquisition, Increase the productivity of knowledge engineering and Computer support can eliminate some limitations. Students of the educational institutions and an employee of an organization can test their knowledge level and their learning performance through this system.

Dependency is very less whenever they have chosen E_learning methodology for their career. E_Learners are more competent than the traditional method learners. Going forward to overcome the difficulties of knowledge gaining each and every one should adopt E_learning methodology.

5. OBJECTIVES

The main aspiration of this research is to develop an E_learning tool to assess the knowledge level of the students and make the comparative analysis between traditional teaching and online teaching. This research investigates the likelihood of using the E_Learning tool to classify the different categories of students in terms of their knowledge level. The intention of this research is

a) To design an E_learning tool and make it user friendly to learn their task in a short span of time.
b) To establish an E-Learning structure which best go with C# and .Net using class room environment and find the efficient features for improving the performance of E_Learning system.
c) To successfully implement the E_Learning tool in the class room environment and the industry and also identify their performance.
d) To prove that E- Learning gives supporting environment to all individuals for learning methods.
e) To demonstrate that students can learn independently in any time and place. E-

Learning is self-paced and the learning sessions are available all time.
f) To build a database and use this database to store the knowledge level of the user and prepare the comparative chart with traditional teaching
g) To prove that always online teaching is having more value than our traditional method in so many ways.

6. METHODOLOGY ADOPTED

E_Learning tool was designed in C# and .NET Microsoft SQL Server2008 is the database which is used to store the data whenever the user accesses this tool for their learning purpose.

E_learning technologies are generally categorized as asynchronous or synchronous. Asynchronous activities use technologies such as blogs, wikis, and discussion boards. The idea here is that participants may engage in the exchange of ideas or information without the dependency of other participant's involvement at the same time. Electronic mail (Email) is also asynchronous in that mail can be sent or received without having both the participants' involvement at the same time. Asynchronous learning also gives students the ability to work at their own pace. This is particularly beneficial for students who have health problems. They have the opportunity to complete their work in a low stress environment.

7. BASIC REQUIREMENTS FOR E_LEARNING EVALUATION

The purpose of E-Learning performance evaluation is to promote learning, whose requirements are mainly as follow:

• E-Learning performance evaluation is formative evaluation, which means that the focus of evaluation shifts from the learning results to the learners' learning process. This is the basic idea of E-Learning performance evaluation, which has been widely accepted by the education circle.
• The combination of autonomous evaluation and multi-object, that is, the evaluation of E-Learning performance should focus on the returning of autonomy, combining the self-evaluation with teacher evaluation and group evaluation.
• The content of the evaluation should be comprehensive, that is, increasing the effectiveness of online learning performance evaluation through evaluation of different perspectives and at different levels.
• Emphasize the principle of diverse evaluation technology, combining digitization and humanization.

8. RESULTS AND DISCUSSION

In order to examine the Knowledge level of the student through E_Learning a study was conducted with Computer Science students were involved in this study. Data was collected through the administration of a detailed 40 question survey distributed in-person in hard copy form to 60 students. The survey was designed to assess students' technology access, skills, and usage; prior experiences with e-learning, course delivery preferences, perceived satisfaction with e-learning, and perceptions of, and preferences towards various e-learning components.

Response Category	SA	A	N/U	D
Overall I was satisfied with the course Website.	42.9%	47.9%	8.6%	0.7%
I found the course Website to be a helpful resource.	40.0%	50.0%	9.3%	0.7%
I used the course Website to help me understand course information.	37.0%	39.1%	16.7%	7.2%
I regularly used the course Website to answer my questions.	26.1%	40.6%	23.2%	10.1%
I believe that course Websites enhance learning	25.7%	35%	26.4%	12.9%
I would like to see course Websites added to all of my courses.	44.1%	25%	14%	16.9%
I believe that course Websites will play an important role in college education in the future.	44.2%	40.6%	8.7%	6.5%

SA= Strongly Agree, A=Agree,
N/U=Neutral/Undecided, D=Disagree,
  Table-1: Knowledge level of the student

This study examines student's E_Learning experiences, Knowledge level and their preferences. Overall, students were satisfied with the course Website (47.9% agree and 42.9% strongly agree), found the course Website to be a helpful resource (50% agree and 40% strongly agree), used the course Website to understand course information (39.1% agree and 27.0% strongly agree), and regularly used the course Website to answer their questions (40.6% agree and 26.1% strongly agree). Most students felt that course Websites enhance learning (35.0% agree and 25.7% strongly agree), should be added to all of their courses (44.2% agree and 31.2% strongly agree), and will play an increasingly more important role in college education in the future (40.6% agree and 44.2% strongly agree). These findings are depicted in Table1

Knowledge level of the students from various semester in the department of MCA were assessed through the traditional method and E_Learning method. Chart1 shows the result.
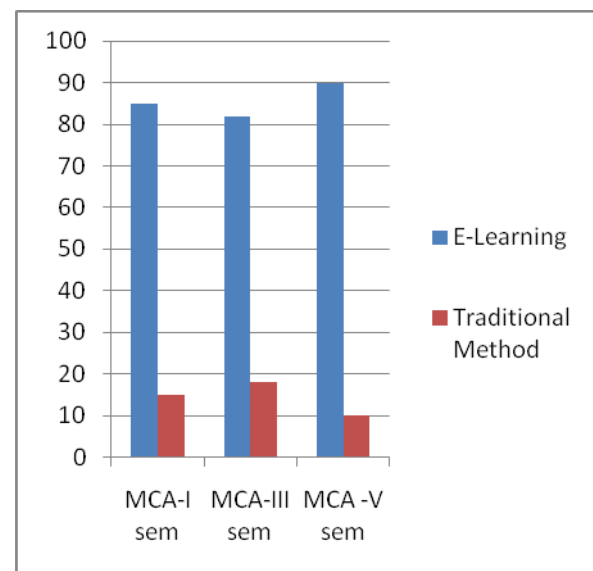

Figure-2: Comparison from E_learning and Traditional Method

We could see the tremendous changes in the knowledge level of the students those who were completed the specific task in both instructor Led Training method and Web based Tool method. Chart 2 shows the result of the students from various semesters in Computer Science and Engg department.

IJCSI International Journal of Computer Science Issues, Vol. 8, Issue 6, No 1, November 2011
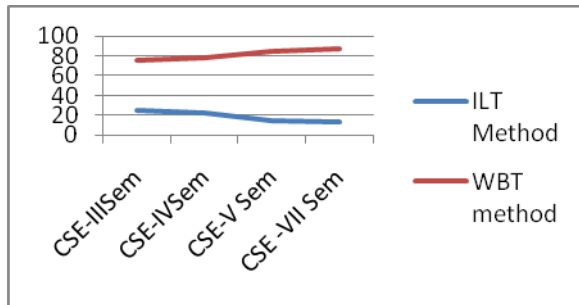ISSN (Online): 1694-0814
www.IJCSI.org

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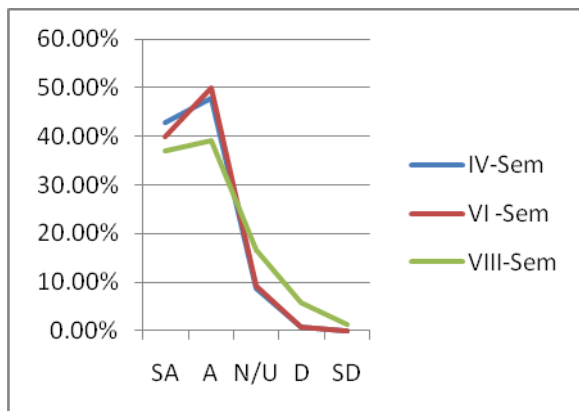Figure-3: Comparison between Instructor Led Training and Web Based Training

Figure-4: Acceptance level of E_Learning

The above chart shows the acceptance level of the E_Learning system by the non computer science students.

Benefits of using E-Learning component are

- Increased interaction by the students with the material outside of class
- Increased access to materials provided to the students
- Increased discussion among students and between students and instructor
- Increased efficiency for the instructor in time management
- Increased creative outlet for the instructor, and increased freedom for instructor to travel or reside away from the home institution.
- One can log-in and get all blended learning courses on the World Wide Web environment.

Students can learn independently in any time and place. E-Learning is self-paced and the learning sessions are available all time. Students can customize the course material as per their own needs. They have added control over their learning process and are able to better understand the subject.

E- Learning gives supporting environment to all individuals for learning methods.

Students get single central location for all course materials. Students get a chance for enhanced exchange with other students and qualified teachers which are based on communication and information technologies.

E-learning provides improved organization for regular studies like meeting assignment deadlines, homework etc. Students can deal with teachers who are highly qualified, but cannot reach because of distance barriers, now with e- learning coming in scene

Interaction with students becomes more appropriate. When students are sharing their problems with teachers, since it's not face to face they fear less and can ask their problems freely

9. CONCLUSION

Teaching aspects completely achieved by virtual teaching. The real teacher profits from the direct physical contact with the student to identify the needs of the latter, to answer these questions, the real teacher, by sharing time and space with the student, may make his course dynamic according to the face-to-face interaction with the student.

The virtual course is, by nature, lifeless if the powers of e-learning are not used. We can call for an invisible teacher who should continuously supervise the scene between the Web-based e-learning platform and its user (student). This teacher, who may be a neural system, provides real-time assistance by offering demonstrations, modifying the course, clarify confusing points, asking question progressing in complexity, reminding fundamental aspects and previous explanations.

We could see a tremendous improvement in the knowledge level of the students when they are using this E_Learning tool for their learning purpose. Thus the system was designed and implemented successfully and proved that always online teaching is more effective than traditional face-to-face teaching method.

ACKNOWLEDGEMENT

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