E-Learning Tools and Developments

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Abstract

E-Learning is defined as any learning that uses information and communication technologies and is looked at as a way to strengthen the development of the student. The development of technology is placing new demands on expertise and it is also leading to the increasing use of information technology in teaching and learning. E-learning is among the most important explosion propelled by the internet transformation. In the modern ageinformation and communication technology has influenced all aspects of life. This paper discusses on e-learning tools. The paper looked into the three major e-learning tools which are (i) curriculum tools (ii) digital library tools and (iii) knowledge representation tools. The paper resolves that e-learning is a revolutionary way to empower workforce with the skill and knowledge it needs to turn change to an advantage. Consequently, many corporations are discovering that e-learning can be used as a tool for knowledge management.

Introduction

In the last century, we have moved from the Industrial Age through the Information Age and now to the Knowledge Age. Knowledge and its efficient management constitute the key to success and survival for organizations in the highly dynamic and competitive worldof today. E-learning has the potential to transform how and when employees learn. Learning will become more integrated with work and will use shorter, more modular, just in-time delivery systems. E-learning delivers content through electronic information and communications technologies (ICTs). According to, the use of these facilities, involves various method which includes systematized feedback system, computer-based operation network, video conferencing and audio conferencing, internet worldwide websites andcomputer assisted instruction. This delivery method increases the possibilities for how, where and when employees can engage in lifelong learning. Employers are especially excited about the potential of e-learning for just-in-time learning delivery.

Definition of E-Learning

E-learning is not only about training and instruction but also about learning that is ailored to individuals. Different terminologies have been used to define learning that takes place online, a fact that makes it difficult to develop a generic definition. Authors agree that a single definition for e-learning has not yet been found. Terms that are commonly used to define online learning include e-learning, Internet learning, distributed learning, networked learning, tele-learning and telemetric distributed learning , virtual learning, computerassisted learning, Web-based learning, and distance learning. It includes the delivery of content via Internet, Intranet, and Extranet, satellite broadcast, audio-video tape, interactive TV and CD-ROM. Nonetheless, the different terminologies point to a similarly conceived educational experience. All of these terms imply that the learner is at a distance from the tutor or instructor, that the learner uses some form of technology (usually a computer) to access the learning material, and that the learner uses technology to interact with the tutor or instructor and other learners, and that some form of support is provided to learner.

E-learning objects

"Educational objects, content objects, training components, one of the aspects of e-learning are the Learning Objects and the various software tools that aid in the development, storage, use in teaching, and administration. This is because learning is often delivered using specialized software that assists teachers to create their courses, the student to use coursework, and the administrator to make previously developed coursework available for reuse.

A learning object is a type of knowledge object. Objects, by definition, are self-contained And reusable. There are many e-learning tools here below there is a list of tools with their characteristics and specifications in terms of financial investment, pedagogical value and options for use in health promotion. The first tool is supposed to be an easy task for the participant and then it carries on to be more challenging for them to engage and finishing in the tasks.

Types of E Learning

There are a few of the most common types of eLearning. They are as given below;

1. Technology Based Learning (TBL)
2. Web Based Training (WBT)
3. Computer Based Training (CBT)
4. Synchronous and Asynchronous e-learning

These are a few of the most common types of e-learning.

a) Technology Based Learning (TBL)

The phrase, interchangeable with e-learning, technology-based learning includes deployment of method that use recent technological developments such as computer mediated communication, videoconferencing, multimedia, groupware, video on demand, desktop publishing, intelligent tutoring system, virtual reality just to name a few.

b) Web Based Training (WBT)

Generally web-based learning, e-learning uses streaming media, text, and graphic to develop exciting learning environment that is deployed right on the user via the internet. It is a great way to e-learning for the large of group of people scattered across the globe, but it can present the same deployment challenge that the audience encounters in dial-up connecting.

c) Computer Based Training (CBT)

This is great alternative to WBT for graphic or audio rich e-learning, computer elearning, deployed via CD-ROM, which elements the streaming issues that can be associated with WBT.

d) Synchronous and Asynchronous e-learning

With synchronous e-learning, learning and teaching takes place at the same time while the trainer and learners are physically from each other.

Examples of synchronous learning are as follow:

- Internet telephony
- Web conferencing
- Online lectures
- Distance learning via-interactive satellite
- Audio/video conferencing

Asynchronous e-learning means that the user can take the training indent of any schedule. At Resource Bridge it refers to this as "wherever they are whenever they need it," asynchronous e-learning does not need a facilitator or instructor, and is one of the more popular e-learning deployment methods.

Examples of asynchronous e-learning are the following;

a. Self-paced courses taken via internet on CD-ROM
b. Stored audio/video level presentations or seminars.

E-Learning Tools

Here we discuss three types of e-learning tools:

1. Curriculum tools,
2. Digital library tools and
3. Knowledge representation tools.

We can generally say that each type of tool emphasizes different parts of the process.Curriculum tools provide a systematic and standard environment to support classroom learning; their functions are particularly helpful in the initiation and selection stages.Digital library tools facilitate effective and efficient access to resources to support exploration and collection while knowledge representation tools focus on formulation and
representation.

A. Curriculum Tools.

Curriculum tools are widely used in high school and college of education. Materials are selected and organized to facilitate class activities. Additional tools, such as discussion forums and online quizzes, are integrated to support collaboration and evaluation. A typicalcommercial curriculum tool includes three integrated parts: instructional tools, administration tools, and student tools. Instructional tools include curriculum design and online quizzes with automated grading. Administration tools include file management authentication, and authorization. Student tool functions include:

1. Browsing class material: readings, assignments, projects, other resources
2. Collaboration and sharing: asynchronous and synchronous bulletin boards and discussion forums.
3. Learning progress scheduling and tracking: assignment reminders and submission,personal calendars, and activity logs.
4. Self-testing and evaluation: tests designed by instructors to evaluate student performance
5. Web CT and Blackboard are the most popular commercial curriculum tools. A review comparing these two tools suggests that Blackboard's flexible content management and group work support [3] make it more suitable for independent and collaborative learning.

WebCT's tighter structure and fully embedded support tools make it more appropriate for guided, less independent learning. In general, these tools are tailored more to support class activities than independent research or self-study. **A. Curriculum Tools.**

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B. Digital library Tool

While curriculum tools support class functions, digital library tools focus on locating resources. These functions support the exploration and collection phases of information search. Digital library tools help users find the right information amidst a huge amount of digital material. Digital library features usually include search, browsing, and discovering special collections or exhibits. Search and browsing are used to locate resources and explore related topics. Special collections or exhibits contain organized materials representing a unique treasure for interested users.

C. Knowledge Representation Tool

Knowledge representation tool help learners to visually review, capture, or develop knowledge. Curriculum tools rely primarily on a text-based, syllabus approach to describing course content. This approach often fails to delineate the relationship of concepts and skills covered in one course to those covered in another. It also fails to show the knowledge base that a learner will have acquired at the end of his/her course of study. A visualization tool can engage both learners and instructors in an active learning process when they construct spatial semantic displays of the knowledge, concepts, and skills that the learner possesses and acquires.

The e-Learning evolution proposes a good number of tools assisting the instructional designer during the analysis, design, implementation, and delivery of instruction via the Web. If on one side an automated support should be provided by authoring tools, on the other side these tools should implement suitable e-learning process design methodologies.

Developments Of E-Learning Tools

The e-Learning authoring tool market has quietly been seeing a bit of a surge over the last couple of years—a surge that I have been thrilled to see. And we've just seen another huge addition to this trend with the recent release of Articulate Storyline.

The majority of eLearning authoring tools on the market are rapid development tools. These tools, by and large, have evolved to help designers, developers, and SMEs create training content without having any programming skills. Historically, software vendors have created these easy-to-use tools by limiting development options; for example, they might provide a set of pre-defined interaction templates for developers to fill with content.This seems great if those templates reflect exactly the interactions that you want to create,but if you want to customize the output, you quickly see how limiting the tool's power can be. The makers of these rapid tools often market them as replacements for instructional designers or design expertise. I find that foolhardy, having inherited quite enough "eLearning" that needed fixing, but all the same, it happens.

On the other hand, non-rapid tools (such as Flash and, previously, Authorware) are almost unlimited in their power, but they require some combination of programming skills, longer development times, and a much steeper learning curve. This doesn't pose a problem for those who think that development should only be done by developers, but I think we have to recognize that small—even one-person—eLearning teams clearly comprise a huge portion of the learning field, and it's just not practical to expect all of those people to beboth great designers and great programmers. Given the choice, I'd rather see any tool in the hands of a great designer than the best tools in the world in the hands of a developer. But what would serve our industry even better are great designers who have tools that are both easy to use and powerful enough to serve highly interactive designs—even designs that aren't necessarily eLearning "courses."

Rapid Power Tools

Enter the category of tools that I call rapid power tools—the tools that are easy to use and also have some real power behind them to create custom learning experiences. Building on thoughts from Ethan Edwards of Allen Interactions, the tools in this category all have three things in common:

1. A graphical, easy-to-use interface. This is what makes a tool "rapid," both in the sense that it's easy to learn and it shortens development times. Rapid power tools often providethe option to do more advanced scripting or integrate code, but the interface enables the development of highly interactive learning experiences without those features.

2. Customizable actions. Rapid power tools facilitate the development of interactivity by allowing a full range of events that can happen in response to a learner's inputs.

3. Variables. Variables are used as containers, to store something that the learner has input or information about a choice that the learner has made. Variables can also be used in calculations and in conjunction with actions—for example, to determine whether a certaincondition is met in order for an action to be triggered. The combination of actions andvariables allows developers to create learning situations that reflect a wider range of realistic interactions, multi-part decision-making, randomized events, delayed and highlycustomized feedback, or just customizations based on the learners' preferences. These capabilities generally aren't marketed much by tool vendors and some vendors even shy away from promoting them out of fear of intimidating users.

Lectora.

This software is often chosen for its powerful ability to create interactions that many practitioners don't think of it as a rapid development tool; however, the ease with which you can create content in its "book" metaphor definitely puts it in the rapid category. Unfortunately, it lacks much of the graphic development capability of the other tools mentioned below, and though it has always published to HTML, it has not yet been updated to take advantage of many HTML5 capabilities or create optimized content for iOS.

Captivate.

One of the most popular software packages in the eLearning world for software simulations and PowerPoint conversions, Captivate moved into the rapid power tool set as of version 4 with the addition of customizable actions and variables. However, in many ways these newfeatures still feel bolted-on and awkwardly implemented. They're also more limited in scope and power than the tools on this list. Publishing for mobile is in the works.

Tool Book.

Tool Book has been one of the most powerful authoring tools on the market for years, and it has some very desirable features, such as the ability to create browser-specific versions of courses and integrate some HTML5 tags, such as geolocation. The interface is in serious need of an update, though; while it is graphical and no actual programming is required, it can be intimidating and it looks very outdated.

Smart Builder

Did you know that Smart Builder uses variables? Neither did I until Learning Solutions 2012. It had been years since I had tried this tool, so I gave it another shot over the past couple of weeks and have been very impressed with its high-end capabilities and easy learning curve. It's cloud-based, which is not my preference, but it's been very stable as I've tested it. The biggest downside: Right now it only publishes to flash, making it impractical for delivery to mobile devices, though the company reports that it is working on HTML5 output this year. Last but not least: The following two tools are the best win-wins that I've seen in the rapid power tool set; they offer incredible power and unprecedented ease of use. Both of them also offer great support for real-time interactions. And both of their publishers, as of this writing, are working on integration with the Tin Can API to track detailed interaction data.

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Story line

This new offering from Articulate is incredibly easy to get started with, mainly because he interface is based on PowerPoint's design (though Storyline is separate, standalone software) and it builds on that interface in a highly intuitive way. With all of the features I require in a rapid power tool, plus layers, object states, and full-fledged support for branching, this tool has the power to create some very exploratory learning experiences while being extremely easy to use. It also has fantastic screen recording, and it can publish to Flash, to standalone HTML5, or to iOS, requiring learners to download a player, but enabling better user experience. And possibly the most "killer" of its features is the support of a large and enthusiastic user community.

Zebra Zapps

This software is definitely the most powerful tool in this list, and my hat is off to its creators for making such incredible power intuitive to use. You can probably expect ZebraZapps' learning curve to be slightly higher than some of the tools on this list, but that's acceptable given its added capabilities—if those capabilities are ones that you need. Tellingly, there is almost nothing about ZebraZapps that makes it an "eLearning" authoring tool; you could use it to create almost any kind of interaction, including **physics-based simulations**. And that means that no matter what kind of reality you need to simulate, you're going to find very few limitations with this software. The main reason ZebraZapps' interface seems unfamiliar is that it doesn't follow a PowerPoint paradigm; the options are so open that it can be jarring to not have the guardrails we've come to expect in rapid tools. The solution to that, of course, is to design before firing up any authoring tool…and don't be afraid to play with the possibilities.

In an ideal world, designers would only focus on design and they would have a team of developers ready at hand to crank out amazing learning experiences for delivery on any device. But in the real world, with tight budgets, small teams, and increasing demands, I'm thrilled to see more and better competition among tools with the ability to serve interactive designs that reflect authentic situations—no scripting, coding, or advanced development skills needed.

Conclusion

E-learning is among the most important explosion propelled by the internet transformation. This allows users to fruitfully gather knowledge and education both by synchronous andasynchronous methodology to effectively face the need to rapidly acquire up to date knowhowwithin productive environments. E-learning delivers content through electronicinformation and communications technologies (ICTs). According to, the use of these facilities, involves various tools which includes systematized feedback system, computerbasedoperation network, video conferencing and audio conferencing, internet worldwide websites and computer assisted instruction. This delivery method increases the possibilities for how, where and when employees and students can engage in lifelong learning. Finally we conclude that Curriculum tools, Digital library tool, Knowledge representation tools environments to allow for "Any-time" learning model. This environment would be primarily Curriculum tools, Digital library tool, Knowledge representation tools, these tools are very important.

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