

Methodological E-learning and E-teaching Techniques

Murali. S, Franklin David. V, Srinivasaragavan. P
Priyadarshini Polytechnic College, Vaniyambadi - 635751
Tamil Nadu, India



ABSTRACT: *Development of information communication Technology, internet and mobile communication, introduction of computers into school and daily use of computers by people of different vocation has made education a very important field to researchers. The new technology and methods like video streaming, new technology techniques and methods inspired us to intensively use new term and way of integration of the computers in education called e-education.*

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1. Introduction

While the term “e-learning” has been thrown around quite a lot in recent years, many are still unaware of what it actually means and how it can help them achieve success in both their professional and personal lives. This short e-book aims to provide an introductory level overview of the e-learning field for those people.

2. The History of E-Learning

The term “e-learning” has only been in existence since 1999, when the word was first utilized at a CBT systems seminar. Other words also began to spring up in search of an accurate description such as “online learning” and “virtual learning”, there is even evidence which suggests that early forms of e-learning existed as far back as the 19th century.

3. Online Learning Today

The first MAC in the 1980s enabled individuals to have computers in their homes, making it easier for them to learn about particular subjects and develop certain skill sets. virtual learning environments began to truly thrive, with people gaining access to a wealth of online information and e-learning opportunities. Technological advancements also helped educational establishments reduce the costs of distance learning, a saving that would also be passed on to the students - helping bring education to a wider audience.

In the 2000s, businesses began using e-learning to train their employees. New and experienced workers alike now had the opportunity to improve upon their industry knowledge base and expand their skill sets.

4. What is E-learning

Physical presence was a no-brainer, and any other type of learning was questionable at best. Then the computer evolution happened and it radically changed the learning landscape. Today e-learning is mostly delivered through the internet, although in the past it was delivered using a blend of computer-based methods like CD-ROM. E-learning offers the ability to share material in all kinds of formats such as videos, slideshows, word documents and PDFs. Conducting webinars (live online classes) and communicating with professors via chat and message forums is also an option available to users. E-learning provides the learners with the ability to fit learning around their lifestyles, effectively allowing even the busiest person to further a career and gain new qualifications. Message boards, social media and various other means of online communication allow learners to keep in touch and discuss course related matters, whilst providing for a sense of community. The e-learning training is being given to employees in a sector where keeping up-to-date on industry developments is of the utmost importance. Traditional learning is expensive, takes a long time and the results can vary. E-learning offers an alternative that is faster, cheaper and potentially better.

E-learning is mostly associated with activities involving computers and interactive networks simultaneously. The computer does not need to be the central element of the activity or provide learning content.

Web-based Learning is associated with learning materials delivered in a Web browser, including when the materials are packaged on CD-ROM or other media. disk.

Online Learning is associated with content readily accessible on a computer. The content may be on the Web or the Internet, or simply installed on a CD-ROM or the computer hard disk.

Distance Learning involves interaction at a distance between instructor and learners, and enables timely instructor reaction to learners. Instructors must be involved in receiving feedback from learners.

5. E-learning Methods and Technologies

There are two general types of Web-based learning environments 1. Synchronous and Asynchronous. A synchronous learning environment is one in which an instructor teaches a somewhat traditional class but the instructor and students are online simultaneously and communicate directly with each other. Software tools for synchronous e-learning include audio conferencing, video conferencing, and virtual whiteboards that enable both instructors and students to share knowledge. In an asynchronous learning environment, the instructor only interacts with the student intermittently and not in real time. Asynchronous learning is supported by such technologies as online discussion groups, email, and online courses.

Examples of Asynchronous and Synchronous Learning

Asynchronous Learning	Synchronous Learning
Fax	Telephone
E-mail	Screen Sharing
Knowledge Base	Chat
Newsgroups	Desktop Conferencing
Computer Based Training	Online seminar
Quick Reference Guide	

6. Communication

Different ways

Within communication we distinguish different directions/ways to communicate

1. One to one
2. One to many
3. Many to one
4. Many to many

6.1 One to One Situation

- Learner to learner
- Learner to trainer
- Trainer to learner

Examples

Chart: Private chat in a chat room or the instant messenger.

E-mail: Send mail to a colleague or ask a question to a trainer.

Screen Sharing: Sharing Microsoft Word, collaborate on a Word document.

6.2 One to many Situation

- Trainer to learners
- Learner to learners

Examples

Chat : Trainer is explaining content to learners.

Video Conference: Trainer is explaining content to learners via web broadcast.

Screen Sharing: Using the net for giving learners a tour through PowerPoint.

Slides or web pages.

Newsgroups: Posting a question in a newsgroup or discussion forum.

E-seminar: Lecture or presentation over the internet.

6.3 Many to one Situation

- Learners to trainer
- Learners to learner

Examples

Chat : Ask or discuss real-time questions or issues to a learning desk.

Newsgroup : React on a posted message in a discussion forum.

6.4 Many to many Situation

- Learners to learners
- Learners to learners and trainers Examples

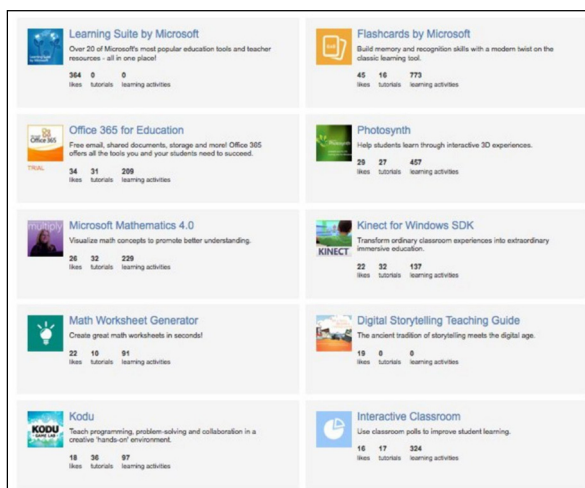
Chat: Discussion where learners can exchange learning experiences or just talk or a discussion led by trainers where students solve a case by collaboration through discussion.

Two-way video conferencing: virtual classroom situation where trainer explains and learners react or meeting where subjects can be discussed.

Telephone Conferencing E-Learning Elements

- Text
- Picture/Image
- Animation Audio
- Video

Microsoft Free Teaching Tools for Educators



Would you like to engage your students with free classroom tools in an active learning classroom environment? In the following list you will find 23 **Free Teaching Tools** that you can use to improve students' learning.

1. **Learning Suite by Microsoft:** Over 20 of Microsoft's most popular education tools and teacher resources - all in one place!
2. **Flashcards by Microsoft:** Build memory and recognition skills with a modern twist on the classic learning tool.
3. **Office 365 for Education:** Free email, shared documents, storage and more! Office 365 offers all the tools you and your students need to succeed.
4. **Photosynth:** Help students learn through interactive 3D experiences.
5. **Microsoft Mathematics 4.0:** Visualize math concepts to promote better understanding.
6. **Kinect for Windows SDK:** Transform ordinary classroom experiences into extraordinary immersive education.
7. **Math Worksheet Generator:** Create great math worksheets in seconds!
8. **Digital Storytelling Teaching Guide:** The ancient tradition of storytelling meets the digital age.
9. **Kodu:** Teach programming, problem-solving and collaboration in a creative 'hands-on' environment.
10. **Interactive Classroom:** Use classroom polls to improve student learning.

11. **Microsoft SkyDrive:** Easily manage, store and securely share thousands of classroom documents all in one place.
12. **Chemistry Add-in for Word:** The simple, easy way to include chemistry information in your Word documents.
13. **Mouse Mischief:** A fun way to keep your students' attention and increase participation in the classroom.
14. **Songsmith:** Help your students 'find their spark' in the classroom with music.
15. **Accessibility Guide for Educators:** Empower all students with accessible technology.
16. **Office Add-in for Moodle:** Manage your courses with Moodle and Office documents all in one place.
17. **Microsoft Mathematics Add-in for Word and OneNote:** Create, calculate, solve and import mathematical equations in Word and OneNote.
18. **WorldWide Telescope:** Explore outer space from your classroom.
19. **Project Tuva:** Make physics fun with a new twist on classic lectures.
20. **Ribbon Hero 2:** Learning Office is a game – really!
21. **Small Basic:** The fun and easy way to learn programming.
22. **Bing:** The Getting Started Guide for Educators Quickly find what you need in a visual, organized way.
23. **Microsoft Digital Literacy Curriculum:** Prepare your students for the digital future.

7. E-learning Trends

7.1 Blended Learning

Blended learning is a combination of offline (face-to-face, traditional learning) and online learning in a way that the one compliments the other. It provides individuals with the opportunity to enjoy the best of both worlds. For example, a student might attend classes in a real-world classroom setting, and then supplement the lesson plan by completing online multimedia coursework. Blended learning is often also referred to as “hybrid” learning, and can take on a variety of forms in online education environments. There are two key principles commonly associated with blended learning (which are the “secrets” to its success): students who can share information and work with other students directly in a collaborative setting have a more enriched learning experience, and collaboration between students can be improved upon if group activities rely on information gathered from online resources or lessons. Tools and platforms that complement blended learning include LMSs and mobile devices such as tablets and smartphones.

8. Conclusion

- ICT and e-learning offers opportunity to raise educational standards in schools.
- Large range of ICT tools is available for teaching and learning.
- Closes the gap of “Digital Divide”.
- Involvement of teachers and parents is important.
- Schools will need funding, access and training.

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