e-Learning ..... 
Leading the Future

by
Dr Amir Ali, MD
Director of the e-Learning Unit

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Main Topics

- What is e-learning?
- The evolution of e-learning
- Traditional versus e-learning
- Why e-learning?
- e-learning Delivery Formats.
- Participants and processes of e-learning
- The global and regional status
- Our Medical e-learning Unit
At the end of this presentation you will be able to:

- Capture the main concepts of e-learning?
- Realize our institutional need for e-learning?
- Compare between traditional and e-learning
- Evaluate our current e-learning situation
- Apply the recent technologies in your teaching activities
- Feel the importance of gradual shift to e-learning
What exactly is e-Learning?

- What does “e” mean to you?
  - Electronic
  - Easy
  - Entertaining
  - Enlightening
  - Economical
  - Efficient
  - Educational

Emerging
Eliminates Paper
Engaging
Evaluating
Empowering

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What exactly is e-Learning?

• e-learning is...

   engaging, entertaining, electrifying learning that can be delivered
everywhere and every time in an exciting electronic format to the elated and enthusiastic students.
What is e-Learning definition?

- Hundreds to choose from;
- E-learning is:

"Learning facilitated and supported through the use of information and communications technology (ICT) in a structured instructional form."

Is the use of new multimedia technologies and the Internet to improve the quality of learning.

“It is the technology-based learning”

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Learning through a variety of media

- World Wide Web
- CD-ROM
- E-mail
- Chat rooms
- Videoconference
- Handheld computers
- .....others

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The Concept

education - training - information - technology

learning - knowledge management

E-learning

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The Evolution of e-Learning

- Computer-based Training (CBT)
  - Mainframes (1970s)
  - Personal Computers (1980s)
  - CD-ROMs (early 1990s)
- Web-based Training (WBT)
  - Text-based (mid-1990s)
  - Graphical (late-1990s; low bandwidth)
  - Multimedia (2000+; high bandwidth)
Learning Environments

Past
Instructor Centered

• Lecture
• Student-Listener
• Individual
• Instructor-Source
• Stable Content
• Homogeneity

Future
Learner Centered

• Facilitation
• Collaborator
• Team Learning
• Instructor-Guide
• Fast Pace
• Diversity
Learning Environments

Past

• “Central Nervous System”
• We used to use the book, managed by a teacher, store the knowledge in our memory, and retrieve them as required. It was an educational system of memorization and spoon-feeding of information.

Future

• “Digital Nervous System”
• The knowledge is downloaded. The teacher is a full-time facilitator to manage information and construct knowledge to deliver skills.
Traditional versus e-Learner

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Traditional versus E-learning

Traditional Learning

- Teacher Centered
- Single Media
- Isolated Work
- Information Delivery
- Factual-based Learning
- Bricks & Board
- Push approach
Traditional versus E-learning

**e-Learning**

- Student Centered
- Multimedia
- Collaborative Work
- Information Exchange
- Skills-based learning
- Technology-enabled learning
- Pull approach
## Traditional versus E-learning

<table>
<thead>
<tr>
<th>Place limits</th>
<th>Traditional</th>
<th>E-learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Go to University</td>
<td>Guide by the Side</td>
<td></td>
</tr>
<tr>
<td>Education comes to you</td>
<td>Guide by the Side</td>
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</table>

<table>
<thead>
<tr>
<th>Role of teacher</th>
<th>Traditional</th>
<th>E-learning</th>
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<tbody>
<tr>
<td>Sage on the Stage</td>
<td>The Network</td>
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<tr>
<td>Guide by the Side</td>
<td>The Network</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Organization</th>
<th>Traditional</th>
<th>E-learning</th>
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<tbody>
<tr>
<td>The Pyramid</td>
<td>Data Driven</td>
<td></td>
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<tr>
<td>The Network</td>
<td>Data Driven</td>
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<table>
<thead>
<tr>
<th>Decision Making</th>
<th>Traditional</th>
<th>E-learning</th>
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<tbody>
<tr>
<td>Theory Driven</td>
<td>Bottom up</td>
<td></td>
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<tr>
<td>Data Driven</td>
<td>Bottom up</td>
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</table>

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Traditional</th>
<th>E-learning</th>
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<tbody>
<tr>
<td>Top-down</td>
<td>Flexible</td>
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<tr>
<td>Bottom up</td>
<td>Flexible</td>
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<table>
<thead>
<tr>
<th>Style</th>
<th>Traditional</th>
<th>E-learning</th>
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<tbody>
<tr>
<td>Rigid</td>
<td>Flexible</td>
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<tr>
<td>Flexible</td>
<td>Flexible</td>
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## Traditional versus E-learning

<table>
<thead>
<tr>
<th></th>
<th>Local</th>
<th>Global</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Univ. and Class</strong></td>
<td>Local</td>
<td>Global</td>
</tr>
<tr>
<td><strong>Time of Education</strong></td>
<td>Learning up to 23</td>
<td>Life-long learning</td>
</tr>
<tr>
<td><strong>Use of Technology</strong></td>
<td>Automate traditional</td>
<td>Reengineer systems</td>
</tr>
<tr>
<td><strong>Instruction</strong></td>
<td>Mass production</td>
<td>Mass customization</td>
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<tr>
<td><strong>Assessment</strong></td>
<td>Quarterly…..</td>
<td>Real-time</td>
</tr>
<tr>
<td><strong>Source of Strength</strong></td>
<td>Stability</td>
<td>Change</td>
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Main Topics

✓ What is e-learning?
✓ The evolution of e-learning
✓ Traditional versus e-learning

Why e-learning?

- e-learning Delivery Formats.
- Participants and processes of e-learning
- The global and regional status
- Our Medical e-learning Unit
Why e-Learning?

The facts

- Students have changed.
- Knowledge as a competitive tool.
- Evolution of education theories.
- No life-long employment
- Information overflow.
- Technology revolution.
- Globalization.
ICT was the fastest growing technology during the last decades. Internet has reached 25% of the world's population, faster than any other innovation.

<table>
<thead>
<tr>
<th>Innovation</th>
<th>Years</th>
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<tbody>
<tr>
<td>Electricity</td>
<td>45 years</td>
</tr>
<tr>
<td>Telephone</td>
<td>35 years</td>
</tr>
<tr>
<td>Television</td>
<td>26 years</td>
</tr>
<tr>
<td>Radio</td>
<td>22 years</td>
</tr>
<tr>
<td>Cellular</td>
<td>13 years</td>
</tr>
<tr>
<td>Internet</td>
<td>7 years</td>
</tr>
</tbody>
</table>
Why e-Learning?

The facts

• The technologies being used in today's online instructional environment as:

  – Multimedia (formats, protocols, portable devices,…etc)
  – streaming audio,
  – streaming video,
  – instant messaging,
  – hand-held and wireless technologies, and
  – peer-to-peer file sharing.
Why e-Learning?

The facts

New Internet versus Old Internet - The Emergence of Broadband

INTERNET 2 (Israil, Katar)
- Local wireless
- Private networks
- Satellite
- Wide Area Wireless

Bandwidth Doubling every 6 months

CPU Power Doubling every 18 months

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Graduates are exposed to new information in one year than their grandparents in a lifetime.

Memorizing facts will have lower value, than utilizing information for decision-making.

- Multi-career.
- Change of career.
- Lifelong learning.
- Just-in-Time (JIT) learning.
- Career development: learning by the corporate
Why e-Learning?

The benefits

- Less expensive
- Accessible and Convenient
- Self-Directed
- Efficient
- Self-Paced
- Interactive and Collaborative
- Flexible
- Consistent

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e-Learning Delivery Formats

Classification according to time factor and who Leads the learning?

- **Who Leads?**
  - Instructor-led.
  - Student-led (self paced).

- **What Time?**
  - Synchronous (real-time).
  - Asynchronous.

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Blended Learning

It is the “integration between e-Learning and traditional learning” can be categorized into Four Levels:

**Traditional Learning**

**Level 1: Primary Mode of instruction**

**Level 2: Balanced Mode of Instruction**

**Level 3: tightly coupled Mode**

**Level 4: Full Integration Mode**

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Main Topics

✔ What is e-learning?
✔ The evolution of e-learning
✔ Traditional versus e-learning
✔ Why e-learning?
✔ e-learning Delivery Formats.

Participants and processes of e-learning

The global and regional status

Our Medical e-learning Unit

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The Three Participants in e-Learning are

Producer(s) → Host → Learner(s)
Participants and Processes

Producers create eLearning
- Designer
- Author
- Writer
- Illustrator
- Photographer
- Animator
- Videographer

Hosts serve up eLearning
- Over a Network (LAN or WAN)
- Public Institutions
- Private Sector organizations

Learners access eLearning
- Student
- Reader
- User
- Worker
- Consumer

Authors and integrate components. Transfer the eLearning product to the Host.

Locate, download and experience the eLearning.

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Participants and Processes

What do they Need?

Producer

- Multimedia Workstation
- Internet Connection (Broadband)
- Authoring Software
- Media Preparation software

Server

- Network Server
- High Speed
- Web Server software

Learner

- Computer
- Internet Connection (preferably Broadband)
- Browser and Media-players
• Traditional Teaching is a **must** in undergraduate studies of practical disciplines like medicine.

• Hands on Experience is **crucial**

• Blended Learning “Mixed” is an **optimal** choice “Traditional + e-Learning”
What is going on around us? (Globally, Regionally)
• More than 6.25 million people will learn online at colleges and universities in the 2008-2009 academic year, a number that could double by 2012.

• In 2007 the U.S. represented over 60% of e-Learning market. Europe is the second largest with a share of less than 15%.

• 93% of European Universities Plan to Expand Their Use of E-Learning Over the Next Two Years

• Estimated $560 billion market for online learning by 2010
نكرة على عالم التعليم الإلكتروني

أحد الطرق הילדים للتعلم الإلكتروني توجها في مجال التعليم، والتعلم في العدد الماضي. وقد جاها نموذج التعليم الإلكتروني يشهد على العقول التي يرد لها مثل هذا التنبؤ من التعليم من المرجعية الأولى. أيضًا، التعليم في الورق في الأت، أي مكان، وكليهما مصممي في خلايا تعلم تكامل النشر، وتحديث تعلم واستدامة أعين من طريق تفجير التعلم الإلكتروني عليه وتغييرها من الرؤية.

رغم أن يمكن الدي في مجالنا قد نشط في مجال التعليم الإلكتروني، بل فكر لا يزال نموذج الأولي، وما يمكن أن تكون مثلاً بالنسبة للتعليم الإلكتروني، فإن ناحية أخرى أدرك الشركات والمؤسسات وذلك التعليم الإلكتروني فسارعت في نسبه هذا النتاج من التعليم في مجال تدريب مهنيين وتفور كلاهما.

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Good Indicators in Egypt

• Internet Connectivity is everywhere

• Hands-on experience will be real through the National e-L committee formed in SCU with huge funds

• Distance Learning Programs in MU
  – M.SC in Environmental Engineering

• Virtual courses are offered by Egyptian MOE

• MU has about 16 e-Learning courses
Where is our Mansoura School of Medicine from all that?
وحدة التعليم الإلكتروني

الرسالة:
تطبيق أعلى ومعايير الجودة في استخدام أحدث تقنيات التعليم الطبي على المستوى المحلي والدولي وتطوير خبرات الطلاب وأعضاء هيئة التدريس التعليمية من خلال تكنولوجيا المعلومات وقيادة النمطية في برامج التعليم الإلكتروني بالجامعة.

الأهداف:
- نشر ثقافة التعليم الإلكتروني بالكلية و الجامعة.
- إنشاء موقع إلكتروني لجامعة على أعلى مستوى من التصميم و الفعالية و باستخدام أحدث التكنولوجيا.
- توفير المحتوى الإلكتروني لتلبية نمط الأفكار التعليمية و فعالية.
- إنشاء وتطوير النسخة الإلكترونية من الدورات الطبية لكلية.
- إنشاء أكبر مستودع للوحدات التعليمية الطبية الإلكترونية.
- عم البرامج الإلكترونية والتعليمية بالكلية من خلال تكنولوجيا المعلومات.
- وضع الخطط الاستراتيجية لتطوير أنشطة الوحدة بما يتوافق مع التوجهات العالمية.
- العمل على وضع الظروف اللازمة لضمان الجودة النوعية في جميع البرامج التعليمية والتدريبية.
- الاتصال والتعاون الدولي والإقليمي في مجال التعليم الإلكتروني لمايكريدة تطور المعرفة الطبية والبحث العلمي.

الرؤية:
أن تكون الوحدة في البرز للاكتر جودة وفعالية ونافذة لمركز التعليم الإلكتروني في الجوانب الصحية ومنطقة الشرق الأوسط وصولا إلى الاعتزاز الدولي.

الموقع الإلكتروني:
www.elearningunit.net.tc
We apply the international rules of “Best Practice”

We have the ONLY Internationally Accredited Website among the Egyptian Universities Nationwide

We are the ONLY e-Learning Unit that has a Quality Management System and applies the international standards ISO 9001:
- Quality Manual
- Policy and procedures control system
- Document control system
- Daily performance and adjustment system

We are the largest and most equipped e-Learning Unit among the e-Learning Units in the University.
The unit website

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And now......we have this

DELL POWEREDGE 2900 SERVER

It means an identity in the real world
It is the soul of the e-Learning environment
Unlimited future potentials
Best added value for the future
Main Topics

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Take-home notes

• e-learning is a new culture of learning

• Resistance to e-learning is not because of the product, but simply because human nature is reluctant to innovate and change.

• It is expected that ministry of higher education and government will gradually accredit and recognize large number of e-learning programs in the near future

• It is us who can implant the technology – enabled education among our students

• It is us who can change the rules and implant the culture of e-learning
and remember...... we never give up

Thank you
End of session One
Comments and Discussion