

E-Learning General, Concept & Mode of Delivery

- ❖ Speaker
 - Hai Duy Nguyen, HUE Online Lecture

E-Learning Outline

- ❖ What is E-Learning?
- ❖ E-Learning Standards
- ❖ E-Learning Cycle (4 Stages)
- ❖ E-Learning in the Workplace
- ❖ E-Learning in the Classroom
- ❖ E-Learning in Vietnam

What is E-Learning?

- ❖ E-Learning is education and training using information technology, such as computers and communication networking.
- ❖ Unlike conventional classroom training, it is possible to learn anytime and anywhere in most types of e-Learning.

E-Learning Model

http://el.dhsphn.edu.vn



EDUCATIONAL DESIGN

- Authentic (Real) Learning Environment
- Learning Objectives and Outcomes
- Learner Assessment Types
- Useful Learning Tools and Resources

NAVIGATION DESIGN

- Use a Site Map to Visualise Course Navigation
- Consistent Entry and Exit Points
- Logical Navigation

ORGANIZATION OF TEACHING CONTENT

- Learners Guide

Train the Trainers
(Regular ICT Training
for Teachers)

Teacher (s)

E-Learning
Support
Team

CLASS - Collaborative Learning
OR
Individual Learning

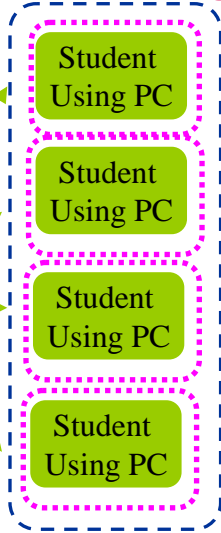
Ensure Reusability & Interoperability
Across Different LMS

SCORM / IMS
Standards

Content Authoring
System (CAS)

Course(s)

Learner Management
System (LMS)



Content Management
System (CMS)

Example:
Lectora, eXe and Lesur CMS

Common Web
Authoring Tools

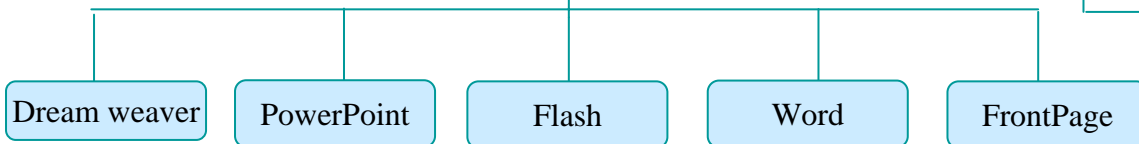
Moodle, ilias

Blackboard

WebCT

Oracle

CMS is a good solution for companies who hope to develop dynamic online courses quickly, at a low cost and enable teachers to develop online courses without technical skills.



E-Learning Standards

- ❖ For an effective, widely used e-Learning environment, standardization in various aspects of e-Learning is required.

- ❖ We will review 4 widely accepted e-learning standards and specifications:
 1. LOM (Learning Object Metadata)
 2. SCORM (Sharable Content Object Reference Model)
 3. QTI (Question and Test Interoperability)
 4. LIP (Learner Information Package)

1. Learning Object Metadata (LOM)

- ❖ A standard specification for metadata to define attributes of various resources (i.e., learning object), in education and training.
- ❖ It is an index information to search and reuse learning objects.
- ❖ By creating a list of Learning Objects:
 - It is possible to classify and select the objects depending on the types of education
 - To systematize the objects accordingly to a curriculum.
- ❖ What is metadata?
 - **Metadata** *describes how and when and by whom a particular set of data was collected, and how the data is formatted.*

2. SCORM (Sharable Content Object Reference Model)

- ❖ A standard specification for Web-based Training contents
- ❖ Developed by ADL (Advanced Distributed Learning), US
- ❖ Compliance with SCORM enables materials to:
 - Run on different LMS
 - Use of Sharable Content Objects in different course structures.
- ❖ SCORM Version 1.3 is currently being developed
- ❖ Integrate IMS Simple Sequencing Specification to define the dynamic behaviour of contents accordingly to the learners' level and comprehension.



3. QTI (Question and Test Interoperability)

- ❖ A specification for a question database for exercise and test questions.

- ❖ Specifies formats for exercise questions.
 - Format
 - question
 - answer
 - Method
 - Grouping

- ❖ Facilitate the creation of questions for certification examinations and preparation examinations.

4. LIP (Learner Information Package)

- ❖ A specification that defines the attributes of the learners.
- ❖ Standardizes the format used in exchanging learner information between systems.
- ❖ The system for the curriculum can be constructed accordingly to each learner's:
 - Learning objective
 - Learning situation

Taking into account learner information including:

- Learning objective
- Learning history
- Competency
- Curriculum information described in Learning Object Metadata

E-Learning Cycle (4 Stages)

- ❖ **Stage 1: Skill Analysis**
- ❖ **Stage 2: Material Development**
- ❖ **Stage 3: Learning**
- ❖ **Stage 4: Evaluation**

E-Learning Cycle - Stage 1



Skill Analysis

- Process
 - Identify learners goal
 - Analyze the learner's present skill
 - Search for suitable materials to aid learners bridge the educational gap

E-Learning Cycle - Stage 2

- ❖ **Material development**
 - Process:
 - Create exercise questions and material structure (table of contents) linked with explanatory pages.

E-Learning Cycle - Stage 3

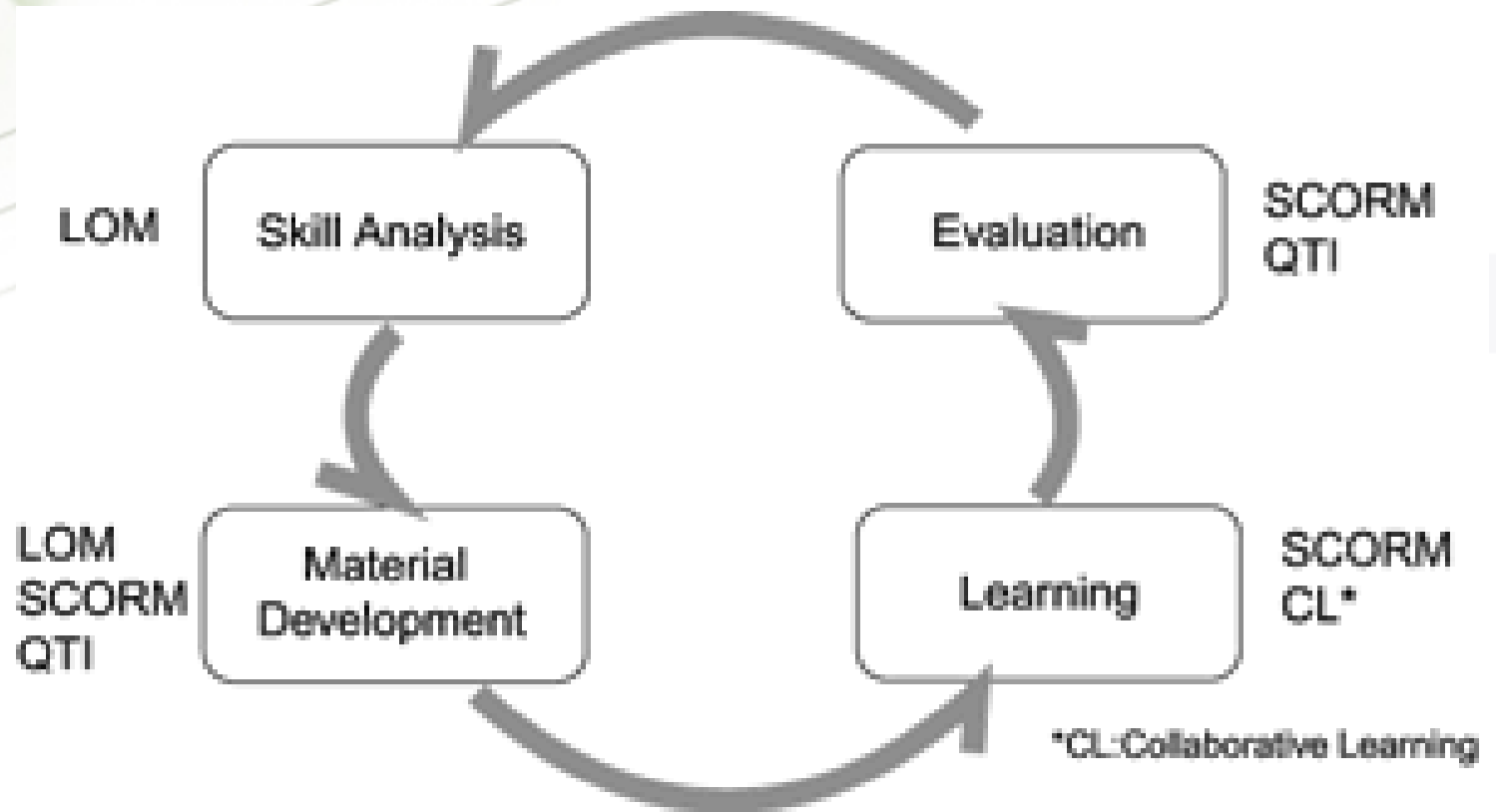
- ❖ **Learning**
 - Process
 - ❖ Individual learning or
 - ❖ Collaborative (group) learning for workshop-type learning.

E-Learning Cycle - Stage 4

❖ Evaluation

- Process
 - The learner carries out exercises and examinations designed to the learning goal.
 - Evaluation of each learner, using results of exercises and examinations.

E-Learning Cycle



What is e-Learning? < In-House Training >

Employee Training



Plus

Tools Available

Internet

Intranet

CD-ROM

Video Conference Systems

PDA / Cellular Phone

Equal

e-Learning



What's the Advantage?



Companies

Can reduce costs for group training

Can provide their employees with up-to-date training content quickly

Employees

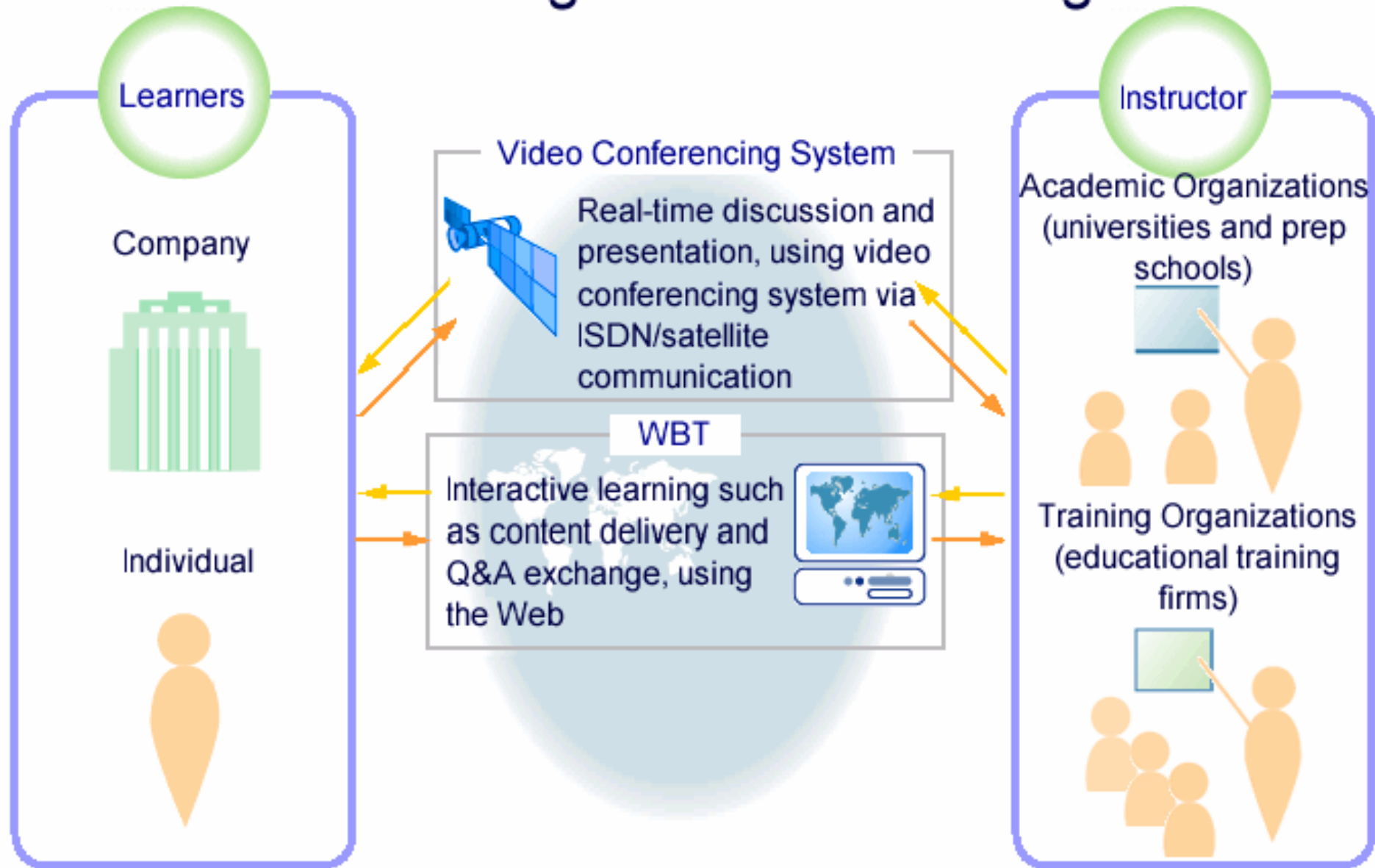
Can learn whenever they like

Can choose a course of an appropriate level

Training costs can be reduced by using IT.

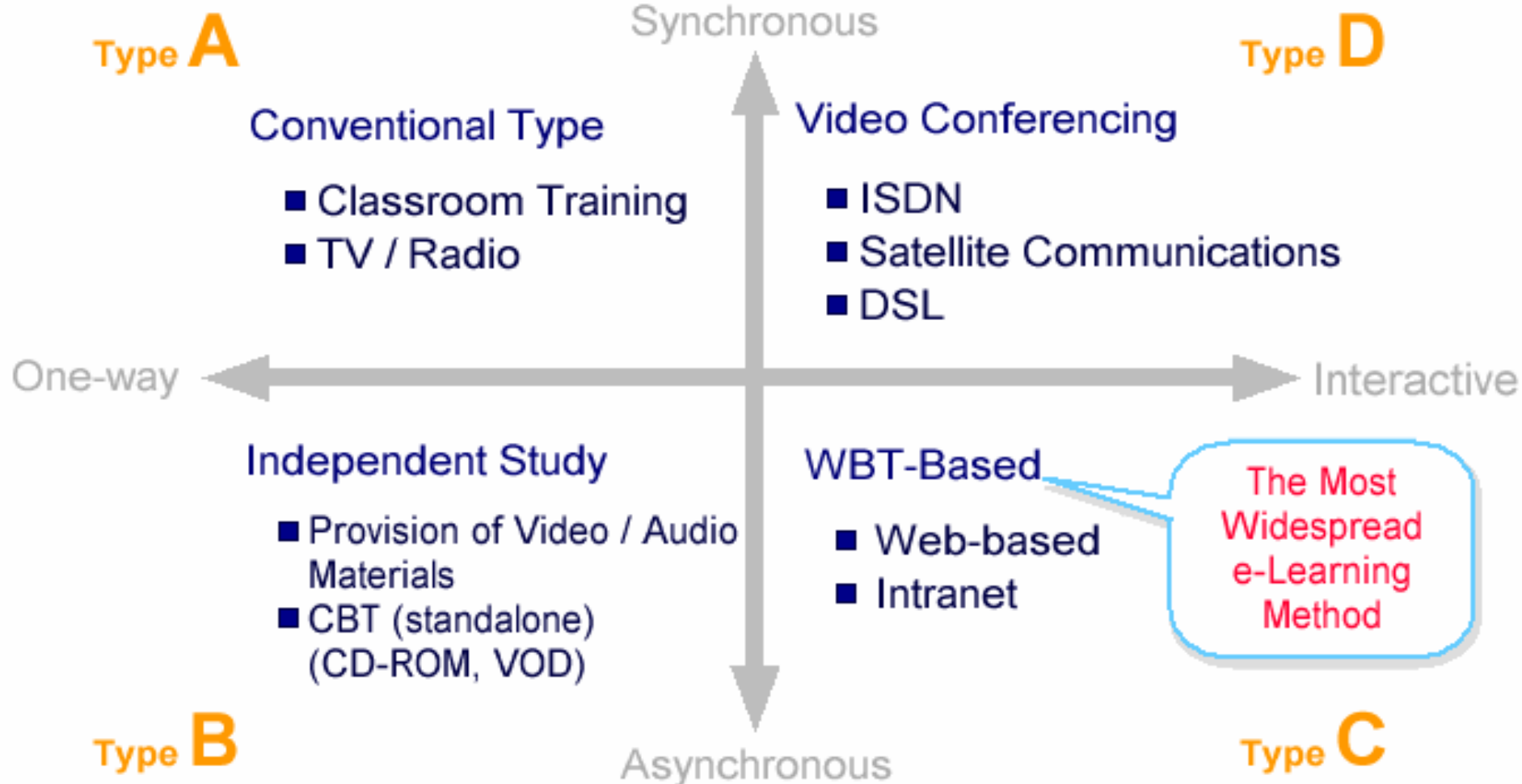
Learners can learn anytime, anywhere.

Basic Diagram of e-Learning



There are various type of e-Learning, with a growing range of study subjects.

Types and Tools of e-Learning



While Asynchronous (on-demand) type is commonly used. Synchronous (real-time) can also be used when taking part in discussion. → **Blending**

E-Learning in Vietnam

- ❖ Most e-learning activities are performed on a project basis
 - Reason:
 - Lack of communication infrastructure environment
- ❖ E-Learning projects at:
 1. Ministry of Education and Training, Vietnam (www.edu.net.vn)
 2. Ha Noi University of Education (www.dhsphn.edu.vn)
 3. Hanoi University of Technology (www.hut.edu.vn)
 4. Can Tho University (www.ctu.edu.vn)
 5. Vietnam National University of Hanoi (www.vnuhcm.edu.vn)